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**Towards urban climate neutrality:
A qualitative exploration of administrative governance and capacity
in European cities**

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To everyone anywhere
who has so far in life suffered the minor but vexing misfortune of
never having a work of writing dedicated to them.

You're welcome.

"I love deadlines. I love the whooshing noise they make as they go by."
— Douglas Adams, *The Salmon of Doubt*

A short word of thanks.

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Abbreviations

AP6	Sith Assessment Report of the IPCC Working Group II
CCC	Climate City Contract
CH ₄	Methane (chemical compound)
CN	<i>here:</i> Climate neutrality
CNT	<i>here:</i> Climate neutrality transition
CO ₂	Carbon dioxide (chemical compound)
CoM	Global Covenant of Mayors for Climate & Energy (city association)
Covid-19	Coronavirus disease 2019
DG RTD	Directorate-General for Research and Innovation (European Commission)
EU	European Union
Cities Mission	<i>here:</i> EU Mission for “100 climate-neutral and smart cities by 2030”
EUCM	<i>here:</i> EU Mission for “100 climate-neutral and smart cities by 2030”
GDP	Gross domestic product
GHG	Greenhouse gas
GSAT	Global surface air temperature
ICT	Information and communication technologies
ICLEI	ICLEI - Local Governments for Sustainability (city association)
IPCC	Intergovernmental Panel on Climate Change
M&A	Mitigation and adaptation
MLP	Multi-Level Perspective
MW	Megawatt (SI unit of power; 1 Megawatt = 1 million Watt)
N ₂ O	Nitrous oxide (chemical compound)
RQ	Research question
The Mission	<i>here:</i> EU Mission for “100 climate-neutral and smart cities by 2030”
TM	Transition Management
UNFCCC	United Nations Framework Convention on Climate Change
VUCA	Volatile, Uncertain, Complex and Ambiguous

Symbols

N_{Cities}	Size of the relevant city-level study population
n_{Cities}	Size of the realized city-level sample
$N_{\text{Respondents}}$	Size of the relevant individual-level study population
$n_{\text{Respondents}}$	Size of the realized individual-level sample

Abstract

In the face of the looming climate crisis, the European Union has launched the EU Mission for “100 Climate Neutral and Smart Cities”, setting cities on a trajectory to climate neutrality by 2030. The governance of such climate neutrality transitions by and in city bureaucracies has not been comprehensively documented yet. This thesis hence presents a qualitative, exploratory investigation of how municipal public administrations govern urban transitions to climate neutrality, and which administrative capacities they need and develop to this end. Relevant civil servants in the mission cities were initially identified through online desk research. Semi-structured exploratory interviews were then conducted with respectively one interviewee from 19 different European cities. This thesis presents comprehensive qualitative descriptions of salient governance and implementation challenges; cities’ adopted governance structures and instruments including used ICT artifacts; cities’ administrative capacity needs and availability; and cities’ capacity building and monitoring measures around urban climate neutrality transitions. A summary of the interviewed civil servants’ provisional assessment of the EU Mission and its impact is further presented. This contribution can aid researchers and practitioners alike in establishing a factful understanding of the urban administrative viewpoint on climate neutrality transitions and provide an analytic entry point for subsequent theory-building research in this domain.

1 Introduction

In the face of looming anthropogenic climate change and its likely severe impact on global environmental, social, and economic systems, recent years have seen new impetus around climate action worldwide. As the consequences of inaction seem to draw ever closer, the international community commitment in the 2015 *Paris Agreement* (UNFCCC n.d.) to limit anthropogenic global warming to 2°C compared to pre-industrial levels. Despite this newfound urgency, the way forward is not self-evident. Turning these high-level commitments into more than mere lip service, calls for tangible and truly efficacious climate action, that reliably transcends policymaking and engenders material change throughout the complex multi-level systems of states, economies, and societies. Anthropogenic climate change, however, constitutes “the ultimate wicked issue” (Pollitt 2016, p. 1), characterized by complex multi-level, multi-sector, multi-dimensional effects with probabilistic causal linkages and impacts that appear far away, both in space and time (Pollitt 2015). For policymakers and managers in bureaucracies alike, such situations are characterized by volatility, uncertainty, complexity, and ambiguity (VUCA) which makes decision-making challenging (Bennett and Lemoine 2014).

As crucibles of horizontal and vertical institutionalization, a central role in tackling this transition hence falls to cities and urban environments. In the EU, cities account for 75% of both citizens and CO₂ emissions (European Commission n.d.a; Fong et al. 2021). As hubs of economy, mobility, housing, infrastructure, and human existence at large, they can be arenas of tangible transformation, and are hence likely to act as lynchpins for overcoming collective action problems and realising large-scale systematic change. This salient role is recognized in many European cities, as can be seen by the prevalence of climate-related city peer networks such as Climate Alliance, the Covenant of Mayors, Eurocities and innovation partnerships such as Climate-KIC. Today, 78% of cities in the Eurostat ‘Urban Audit’ have autonomous emission reduction targets, with 25% aiming to attain *climate neutrality* (Salvia et al. 2021). Climate neutrality is the mainstream objective of climate change mitigation as favoured by the EU and UN (European Commission n.d.b; UNFCCC 2021); While it is a concept in flux, it generally denotes a nominal state of balanced emission accounts, wherein *greenhouse gas (GHG) emissions* are reduced as far as possible, and any unavoidable surplus emissions are ‘offset’, e.g., through investments in carbon sinks such as reforestation or emission reduction elsewhere (Huovila et al. 2022; Wu et al. 2022). The EU committed to attaining climate neutrality by 2050, as set forth in the *European Green Deal* strategy (2019) and codified in the more recent *European Climate Law* (2021). While strong ideational commitment can undoubtedly be observed among many cities (Reckien et al. 2018; Salvia et al. 2021), local governments and municipal public administrations are now faced with the wicked

problem of spearheading the implementation of this systemic climate neutrality transition process within their cities, within current policy horizons ranging from as soon as 2030 to 2050.

As the European Union seeks to strategically set trajectories for the future of Europe it has increasingly adopted mission-driven policy making – a move that originates in the seminal policy manifesto on “Mission-Oriented Research & Innovation in the European Union” (Directorate-General for Research and Innovation (European Commission) and Mazzucato 2018). In September 2021 the EU has launched five EU Missions within the Horizon Europe research and innovation program, one of which is to create “100 climate-neutral and smart cities by 2030“ (European Commission n.d.a, n.d.c)¹, in an attempt to facilitate the transition to and transformation into² a system with net-zero greenhouse gas (GHG) emissions.

A total of 377 cities from all 27 EU member states and nine associated counties submitted *Expressions of Interest* for the EU Cities Mission (European Commission n.d.a). The European Commission subsequently conducted a multi-step selection process, based on the size, typology, diversity, and ambition of applicant cities (European Union 2021). The selection of the 100 participating cities was eventually published in April 2022, including at least one city from each of the 27 EU member states as well as 12 additional cities from Horizon Europe associated countries³ (here: *mission cities*) (Directorate-General for Research and Innovation (European Commission) 2022; European Commission 2022). Through their participation, each of these 112 cities has committed to achieving the mission target of climate neutrality by 2030. Currently, the cities are working on their so-called “Climate City Contracts”; Besides a *2030 climate neutrality action plan* and a *2030 climate neutrality investment plan*, these documents include a legally non-binding ‘contract’, intended to codify the commitment to the mission goal among a consortium of local co-signatories; including, besides the municipality, local companies, universities, hospitals, and other organizations. The establishment of Transition Teams and the alignment of especially structural aspects of local municipal governance systems are likely to be among the first tangible artifacts developed in participating cities following the mission launch in 2021. The EU further offers guidance to participating cities through content on the *mission platform*, a one-stop-shop online portal operated by *NetZeroCities*

¹ Judging by project documents and websites there does not seem to be a consistently used, official name for this mission beyond stating its goal in quotation marks. To enhance the readability of this thesis, it is hereafter referred to as *EU Cities Mission* or *Cities Mission*, in line with *NetZeroCities*’ abbreviation (Prieto n.d.a).

² As explained by Hölscher et al. (2018), the terms *transformation* and *transition* are favoured in different academic circles of sustainability research for related and overlapping concepts. Barring grammatical differences and unless noted otherwise, they are used interchangeably in this thesis.

³ Albania, Bosnia and Herzegovina, Iceland, Israel, Montenegro, Norway, Turkey, United Kingdom

(NZC) as well as through advice by mission advisors (Directorate-General for Research and Innovation (European Commission) 2021).

1.1 Research problem and questions

The goal of attaining climate neutrality by 2030 is an ambitious one. Whether this goal is practically attainable is, arguably, highly uncertain; Ex-ante, it seems likely that not all 112 participating cities will. A pivotal role will fall to municipal public bureaucracies; In their purview lies, based on the EU Cities Missions' mandate, the day-to-day implementation, governance and enabling of the transformation process (Directorate-General for Research and Innovation (European Commission) 2021). While academic literature discusses climate change mitigation policy at length, these realities within the public administration have largely remained unstudied until recently. On the one hand, factors exogenous to public bureaucracies such as political shifts, changing policy agendas, various multi-level coordination issues, external shocks, the distribution of limited resource, and much more could disrupt governance and constrain capacity, and thus need to be coped with by the mission cities. On the other hand, cities' effectiveness in this task has many dependencies *within* the public administration – In this thesis, I want to focus on two of the foremost, which have emerged, among other literature, in NZC's recent focus-group based exploratory research report on climate neutrality transition needs, drivers and barriers among 64 mission cities (Liakou et al. 2022):

Firstly, the role of the employed *administrative governance* configuration, including the chosen governance structures, instruments, and strategies. I define administrative governance as institutionalized regimes of organizational collaboration, control, and decision-making, employed by and in local-level public bureaucracies to steer the local economy and society toward the transition to climate neutrality (derived from Anguelovski and Carmin 2011; Hill and Lynn 2004; Lynn Jr et al. 2001; Peters et al. 2022). Governance issues are among the most critical barriers identified by mission cities; First and foremost, the fragmentation of responsibilities within the administration into 'silos' and the lack of adequate coordination mechanisms hinders climate mainstreaming and complicates the alignment of climate policy, objectives, tools, and indicators within city administrations (Liakou et al. 2022, sec. 3.1). Of the 377 applicant cities to the Mission, 47% highlighted this fragmentation of responsibilities within the municipality as a barrier (p. 12). The impact of lacking multi-level coordination and policy coherence is equally highlighted. While these insights are intriguing, the study's wide scope and predominantly applied aims limited its reflexivity and depth. In this thesis I hence aim for a more focused evaluation, validation, and updating of the mission cities governance needs and barriers is required, asking:

- **RQ 1.1:** Which (if any) are the main challenges that public administrations in mission cities face in governing and implementing the climate neutrality transition?

The Mission Implementation Plan (Directorate-General for Research and Innovation (European Commission) 2021) indeed denotes “innovative city governance models” (p. 16) a core building block of the mission, emphasizing their importance for dissolving silos and fostering trust, legitimacy and inclusiveness. The specifics, however, are up to the cities: While the installation of a *Transition Team* for the creation of the CCCs is recommended by NZC, any fundamental changes to and impact within the factual governance practices are likely to be determined and enacted autonomously and locally within the participating cities. It is therefore crucial to empirically explore the diversity of starting administrative governance configuration that de-facto exist in cities in this early stage of the CN transition, and to the ways in which cities amend their governance practices in favour of advancing climate neutrality:

- **RQ 1.2:** Which (if any) administrative governance structures, instruments, and strategies are public administrations in mission city adopting in pursuit of CN, and why were they chosen?

An aspect of note in both questions is the role and significance of the *smart city* dimension, which, while the term made it into the title of the mission, remains ambiguous. The EU’s Info Kit for the creation of the Climate City Contract does not mention the term at all⁴ and there are no dedicated mission goals for smartness in the sense of ICT use (European Union 2021).

Secondly, this thesis seeks to identify the of city-level *administrative capacity* needed for the transition to climate neutrality. For the time being, organizational capacity can be understood as the sum of resources, processes (capabilities), and skills (competences) an organization needs to effectively act on its objectives (Bryan 2011; Piña and Avellaneda 2017; Vincent 2008; see section 3.2.3). Throughout the report, various capacity shortcomings were mentioned as a barrier to governance and coordination, planning for energy and circular economy systems, emission monitoring and measurement and analysis, the organization of participation processes, interdisciplinary strategic learning, and more (Liakou et al. 2022). Tellingly, out of the 377 applicant cities to the Mission, 45% identified “insufficient administrative and/or operational capacity” (p. 17) and 68% “lack of funding/financing schemes” (p. 17) as barriers to their climate neutrality transition. Furthermore only “12% of the cities believe that their staff is sufficiently

⁴ Aside from its occurrence in the mission title.

trained and skilled to design and implement climate neutral policies at a cross-sectoral level” (p. 18). While “[a]ccelerating and spreading knowledge and capacity” (Directorate-General for Research and Innovation (European Commission) 2021, p. 16) is an aim of the Cities Mission, capacity building measures proposed in the Implementation Plan seem to focus on peer-learning, knowledge sharing and joint action between cities; this seeming emphasis on ‘soft’ measures, aimed at supplementing rather than disrupting existing organizational routines. The administrative capacity needs of municipal public administrations for the local climate neutrality transition currently remain opaque, especially within the Cities Mission cohort. I therefore opted to explore the administrative capacity requirements and capacity building behaviour of mission cities in this thesis, asking:

- **RQ 2.1:** Which administrative capacities do municipal public administrations in mission cities need for the implementation of the climate neutrality transition and are they currently available?
- **RQ 2.2:** How (if at all) are city administrations identifying and building these capacities, and which factors inhibit or facilitate this process?

Following historical institutionalist theory, the current early phase of the Cities Mission could further constitute a critical juncture – i.e., a historically disproportionately crucial moment of institutional plasticity – for inducing these changes. Shortcomings in the currently emerging, initial configuration in the mission cities’ bureaucracies, including governance structures and available capacities, might prove detrimental for medium and long-term outcomes, as institutional path-dependency might constrain future solution spaces in the cities (Capoccia 2016; Moulaert et al. 2007; Sorensen 2015). This line of argument echoes Wittmayer and Loorbach's (2016, sec. 2.3.1) principles for sustainability *transition governance*. Based on a 2016 review of transition governance literature, they postulate that, on the one hand, “the timing of intervention is crucial” (p.5) and, on the other hand, “managing a complex, adaptive system [such as a city] means using disequilibria as well as equilibria. Relatively short periods of nonequilibrium therefore offer opportunities to direct the system in a desirable direction.” (p.18). The initial governance and capacity configuration might thus engender a vicious cycle, that prevents the quick scaling of mitigation solutions: On the one hand, recent academic research has documented that current skill and capacity shortcomings in the mission cities hinder their ability to advance the climate neutrality transition (Maestosi et al. 2021; Giulia Ulpiani and Vettors 2023). This aligns with grey-literature research conducted by NetZeroCities among the mission cities (Heyder et al. 2021; Liakou et al. 2022). The development of feasible and effective climate action plans, emissions accounting, and the governance of

the transition process depends on the availability of commensurate capacities (Huovila et al. 2022, Ulpiani et al. 2023). On the other hand, needs-driven and strategically aligned capacity building actions and strategies are thus potentially hindered by these very shortcomings in governance and capacity. This makes a credible commitment and quick progress towards climate neutrality difficult. However, if cities procrastinate too long on material progress, this could induce undue and half-hearted urgency as the deadline approaches – a circumstance that has been shown to produce sub-par solutions both in mission-oriented innovation during the Covid-19 pandemic (Reale 2021). The same has recently been found for different technical decarbonization pathways in multiple city-level case studies (Linton et al. 2022). A large-n analysis of city-level climate mitigation and adaptation policy in Germany further corroborates this suspicion, showing that today's cohort of climate policy frontrunners have changed little since the 1990s, and have maintained their advantage in part through the path-dependent capacity to coordinate and cooperate continuously with international climate networks (Otto et al. 2021). Overall, more research on this intersection is needed to qualify this hunch into a hypothesis; This thesis therefore investigates:

- **RQ 2.3:** How (if at all) does mission cities' administrative capacity facilitate or inhibit the administrative governance and implementation of the CN transition by city administrations, and vice versa?

Thirdly, this study, conducted about a year after the formal start of the EU Mission, is a timely opportunity to gain critical insight into the status quo of the EU Mission for “100 Climate Neutral and Smart Cities by 2030” from the cities' perspective, and the impact that joining the mission has had on their local CN transition processes. While the study of mission-oriented policy making is not chiefly the aim of this thesis, an assessment of the Mission can provide valuable contextual information; It might aid in the analytical separation of case-specific observations, from ones that might be valid for city-level CN transitions more generally. An empirical snapshot of local public servants' attitudes and thoughts about the EU Mission about one year into its implementation might further yield surprising insights that can serve as reference or entry points for future research. I hence investigate:

- **RQ 3:** How (if at all) has joining the EU Mission Cities influenced the implementation and governance of mission cities climate neutrality transition, and how is it perceived by the civil servants responsible for its implementation?

In sum, in this thesis I investigate the overarching question: *How are local public administrations governing and implementing the climate neutrality transition in their cities, and which administrative capacities do they need to do so successfully?*

Conclusively answering this question will require the collective effort of an entire research field over the coming years and is naturally out of scope of this study. It therefore seeks to provisionally address the above research questions for the case of the EU Mission “100 climate-neutral and smart cities by 2030”.

1.2 Research gap and purpose

In published academic literature, the study of city-level systemic sustainability transitions has recently a diverse and exponentially accelerating field (Köhler et al. 2019, fig. 1). A comprehensive and widely drawn-on research agenda for was presented by Köhler et al. (2019); However, it makes almost no mention at all of either public administrations or organizational capacity. The governance of transitions is predominantly discussed in the context of systems-level paradigms such as Transition Management (Loorbach 2010), Reflexive Governance (Voß and Bornemann 2011), and Strategic Niche Management (Kemp et al. 1998). In my view this is reflective of blind spots in the wider research domain, which might have emerged as the forefront of public governance research has, for good reason, refocused away from new public management towards multi-stakeholder governance systems: The internal viewpoint of municipal public administration as complex organizational actors seems to be underrepresented in recent research. If considered at all, municipal public administration is considered a unitary black-box stakeholder among many, or the implementors of policy. Few studies have explicitly looked at either administrative governance or administrative capacities in the context of the implementation of city-level sustainability transitions. Furthermore, as the EU Cities Mission itself is comparatively new, only a small number of academic studies have researched this case; The ones that have, relied on conceptual desk research (Shabb et al. 2022) or document analysis of mission application documents (Ulpiani et al. 2023; Giulia Ulpiani and Veters 2023), local city climate strategy documents (Maestosi et al. 2021; Salvia et al. 2021, 2022) and climate contracts (Shabb and McCormick 2023). First-hand data collection among mission city public servants, as used here, could lead to yet unexplored perspectives on what is likely to be one of the central policy initiatives for city-level climate neutrality in Europe over the coming years.

In this thesis I intend to address these gaps through qualitative exploratory and descriptive research; it thus does not pursue a representative view of the situation in European or EU mission member cities. Instead, I take a semi-inductive, classical qualitative description approach (Sandelowski 2000) that stays close to the data, provides rich descriptions and seeks qualitative linkages that can provide points of entry for conceptually narrower grounded-theory follow-up research. In their research agenda, Wolfram and Frantzeskaki (2016) identified the need for more such inter-epistemological contributions as well as

the need for comparative, concept-oriented (Jansen 2010), medium-n studies around sustainability transitions in cities. Fischer and Newig (2016) further call for increased emphasis on actors and agency in the research domain – advice, which I also heed in this study. In this thesis I thus present the results of interviews with public servants in 19 mission cities to address the above research questions.

Through the identification of patterns in the gathered data, this research ultimately aims to contribute to theory building, hypothesis generation, and the elicitation of good practices for climate neutrality transition processes in European municipalities. Given that this study would deliberately document the early stage of the EU Cities Mission, it could also provide future researchers with an anchor point for retrospectives on the program’s course and efficacy. I further hope to support cities in their current push for the transition to climate neutrality, seen in the EU Cities Mission and beyond. The findings might create new transparency around shared challenges and prospective solutions within the Mission City cohort and might thereby induce peer-learning and cooperation among cities. This potential and the underlying need are indeed reflected in the fact that most interviewees asked to receive a copy of this thesis once completed.

The rest of this thesis is structured as follows: Chapter 2 outlines essential background information about the EU Mission for “100 Climate Neutral and Smart Cities by 2030” and its context. Chapter 3 presents a short review of pertinent academic literature. Chapter 4 details the employed research design and methods. Chapter 5 presents the empirical findings, which are further interpreted and discussed in Chapter 6. In Chapter 7 I discuss the limitations of this study, as well as personal and generalizable learnings drawn from the process of its creation. Finally, Chapter 8 summarizes and concludes this thesis. Please note that substantial amounts of supporting information can be found in the Appendix.

2 Background

This chapter aims to present the reader with an overview of the status quo and relevant concepts around the topic at hand. It is intended to both illustrate its relevance and lay a foundation for the further reading of this thesis and the interpretation of its results.

2.1 Global anthropogenic climate change and policy

The emission of so-called *greenhouse gasses* (GHGs) such as *carbon dioxide* (CO₂), methane (CH₄) and nitrous oxide (N₂O) into the atmosphere through human activity predominantly the burning of fossil fuels and various kinds of land use has been shown to have triggered ongoing anthropogenic climate change (Intergovernmental Panel on Climate Change (IPCC) 2013; Masson-Delmotte et al. 2021). On a global scale, GHG emissions have not yet peaked. Both the emission of additional GHGs and the atmospheric concentrations of CO₂ are hence on the rise today (Ritchie et al. 2020). Throughout earth's history, a higher concentration of CO₂ in the atmosphere can be linked to increased global temperatures (Lacis et al. 2010). We can today observe a significant rise in average *global surface air temperature* (GSAT) of at least 0.4°C compared to the 1961-1990 baseline, and a rise of at least 1.1°C compared to the 1850-1990 baseline (Ritchie et al. 2020). Scenario-based projections by IPCC Working Group I predict further increases in GSAT to 1.5°C and beyond as a very likely outcome of the current global emission trajectory (Lee et al. 2021). They further expect rising sea levels as a virtual certainty throughout the 21st century, as well as likely severe impacts on arctic ice sheets, precipitation patterns and systems such as the monsoon, and many more major and detrimental impacts on planetary systems over the coming decades. The resulting strain on planetary systems compounds with other dimensions of manmade environmental damage such as unprecedented rates of biodiversity loss (WWF - World Wide Fund 2022) and soil degradation (European Environment Agency 2020). A picture of a humanity hence emerges that collectively exceed the '*planetary bounties*' of Earth through the modes and volumes of material and energy use it practices (see Persson et al. 2022; Steffen et al. 2015; Wang-Erlandsson et al. 2022; Wijkman and Rockström 2012).

As an inhabitant of earth this is a concerning prospect. Evoking international commitment and effective action to mitigate disastrous climatic change has for the longest time been difficult⁵. In recent years however, both political impetus and improved technological means have increasingly coalesced into practically feasible decarbonization pathways (Bataille et al. 2016). The provisional capstone to the long and winding history of global climate change advocacy and policymaking is the ratification of the *Paris Agreement*

⁵ See Mann (2021) for a popular science analysis of 'inactivist' forces constraining climate action.

(Parties to the UNFCCC 2015) in 2015 – an arguably pivotal moment in coordinated and codifying international commitment around global climate policy. As of 2023 the agreement has been ratified by 195 countries (UNFCCC n.d.). The signatory countries committed to “[h]olding the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels” (2015, art. 2.1(a)). The Paris Agreement broke the post-Kyoto deadlock on international climate policy by forgoing binding emission reduction targets in favour of introducing a new governance system of autonomously set, per-country emission reduction targets matched with a system of regular pledges and reviews; as a whole indented to spur action through leadership, domestic accountability, and international peer-pressure (Falkner 2016). Despite its breakthroughs in setting and codifying collective warming limits, weaknesses around international accountability, compliance mechanisms, and institutional effectiveness have been highlighted as shortcomings (Dimitrov et al. 2019; Karlsson-Vinkhuyzen et al. 2018; Voigt 2016). Nevertheless, the desired impetus for triggering domestic climate action arguably manifested itself, as the topic was placed on national policy agendas and major countries and regional entities debated or adopted decarbonization strategies: For instance, the so-called *Green Deal* became a hotly debated policy proposal in the United States; China adopted a long-term low GHG development strategy (People’s Republic of China 2021), aiming to reduce its ‘carbon intensity’ by 65% compared to 2005 levels by 2030 (Erbach and Jochheim 2022). The likely most ambitious policy developments can be observed in the European Union: In 2019, as part of the definition of the strategic priorities of the von der Leyen commission (European Commission n.d.d), the European Commission presented the *European Green Deal* strategy (*The European Green Deal* 2019); It proclaims the aim of making Europe the “first climate-neutral continent by 2050 [and reaching] at least 55% less net greenhouse gas emissions by 2030, compared to 1990 levels” (European Commission 2021). These goals were written into law as an EU Regulation through the *European Climate Law* in June 2021 (“European Climate Law” 2021).

2.2 Adaptation, mitigation, and the dream of climate neutrality

Action in the face of climate change can broadly be grouped into two overlapping domains (VijayaVenkataRaman et al. 2012): Firstly, adaption measures aim at coping with detrimental consequences of climate change on human civilizational and environmental systems. Secondly, mitigation measures aim at altering or reversing the trajectory of climate change itself, usually though the reduction or elimination of GHG emissions or the installation of natural or artificial carbon sinks. The extent to and means by which this is feasible is a topic of diverse, politically and philosophically charged

debate that exceeds the scope of this thesis.⁶ Within the paradigm adopted by the European Union – one conceptually allowing for possibility of ‘*green growth*’ – the configurational goal pursued by the EU is that of a climate neutral (CN) European Union (“European Climate Law” 2021, art. 2)⁷. Alternative wordings such as *net-zero greenhouse gas emissions* (European Commission n.d.b), or *deep decarbonization* (Geels et al. 2017; Linton et al. 2020) are occasionally and inconsistently used – for the purposes of this thesis the term ‘climate neutrality’ refers to the latent concept underlying all these terms. As evaluated by Huovila et al. (2022), climate neutrality is an ambitious but not yet consolidated concept. Operationally it hinges on the approach of preventing GHG emissions where it is deemed feasible and offsetting any remaining emissions through the formation of additional carbon sinks, to thus create an overall balanced – ‘net-zero’ – account of carbon emissions and removal (Huovila et al. 2022). One should note, however, that the exact definition, including the scope of meaning and the applied reporting standard, has major material consequences. The classification of GHG emissions within three ‘Scopes’⁸, as used in the World Resource Institute’s ‘*Global Protocol for Community-Scale Greenhouse Gas Inventories*’ (Fong et al. 2021), is one of the most widely used frameworks of emissions accounting in cities (Chen et al. 2019; Huovila et al. 2022). This standard is employed by C40 and ICLIE. Especially in non-scientific circles, terms such as *carbon neutrality* (European Parliament 2019) are further inconsistently used; as yet another synonym of climate neutrality, or a literal conceptual limitation of balanced CO₂ emission accounts only. As e.g. demonstrated in the case of aviation biofuel uptake, this difference can matter with regard to feasibility and outcomes (Krammer et al. 2013). In many use cases, the material meaning of the CN concept wholly depends on the choice of emission accounting methods and measurement specifications

⁶ The major cleavage concerns the extent to which economic growth can be decoupled from resource use and the resulting environmental and climatic degradation. *Degrowth* (see Kallis 2018; Kallis et al. 2018) and *post-growth* (see Jackson 2016; Millward-Hopkins et al. 2020; Steinberger et al. 2020) schools of thought reject this premise, advocating instead for various degrees of sufficiency, collective self-limitation, redistribution, a reorientation towards non-material goods and values, and novel modes of governance (see Johnsen et al. 2017; Kostakis and Bauwens 2014; Schismenos et al. 2020). This can be contrasted against the currently de-facto mainstream paradigm of *green growth* or *decoupling* – a stance adopted also in the European Green Deal, which “aims to transform the Union into a fair and prosperous society, with a modern, resource-efficient and competitive economy, where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use.” (“European Climate Law” 2021)

⁷ European Climate Law, Article 2: ‘Climate-neutrality objective’: “Union-wide greenhouse gas emissions and removals regulated in Union law shall be balanced within the Union at the latest by 2050, thus reducing emissions to net zero by that date, and the Union shall aim to achieve negative emissions thereafter.” (“European Climate Law” 2021, art. 2)

⁸ “Scope 1: GHG emissions from sources located within the city boundary. Scope 2: GHG emissions occurring as a consequence of the use of grid-supplied electricity, heat, steam and/or cooling within the city boundary. Scope 3: All other GHG emissions that occur outside the city boundary as a result of activities taking place within the city boundary”(Fong et al. 2021, p. 11)

This very ambiguity can, however, allow room for collaboration between actors adhering to fundamentally different narratives around climate neutrality (Tozer and Klenk 2019).

2.3 Cities

Cities are both actors and locations of sustainability transitions (Loorbach and Shiroyama 2016). They furthermore face a unique set of climate-change induced risks and challenges, as detailed in Chapter 6 of the IPCC Working Group II's Sixth Assessment Report (AR6) (Dodman et al. 2022). They hence take on a unique and multidimensional role in adapting to and mitigating climate change. There is no single definition of the term 'city'. As special entities, cities and settlements have been defined by the IPCC as "concentrated human habitation centres along a dynamic continuum from rural to urban [...] that are fundamentally inter-connected to other urban centres and rural areas as nodes within broader networks." (Dodman et al. 2022, p. 10). Especially metropolitan areas can hence extend beyond and overlap with the formal jurisdictions of municipalities, sub-national regions, and even countries. As of 2021, an estimated 4.45 billion people, 56% of the global population, lived in urban environments, with an annual growth rate of 1.6% (United Nations Population Division and World Bank 2018). These urban environments occupy only approximately 2% of Earth's total land area, while accounting for 70% of global GDP, over 60% of global energy consumption, 70% of GHG emissions and 70% of global waste (HABITAT III 2016). The distribution of cities' sized in terms of population varies strongly by world region: In geographical Europe the relative importance of small cities below 300,000 inhabitants is comparatively high (Dodman et al. 2022, p. 10).

The 'urban context' constitutes a unique environment characterized by high geographic proximity compared to e.g. the regional or national scale: special proximity, multiscale interaction of nested subsystems; multidomain interactions between e.g. energy, mobility, and construction; personal and social proximity; formal and informal institutional proximity (Wittmayer and Loorbach 2016, fig. 2.1). Top-down and bottom-up directions of climate action frequently meet in cities (Green et al. 2014; Homsy et al. 2019; Loorbach and Shiroyama 2016). In urban climate governance, "horizontal networked forms of authority and vertical divisions of responsibilities" (Bulkeley 2010, p. 237) hence meet: Vertically, municipalities are usually the lowest level in global climate governance regimes and multi-level governmental structures, with limited, domain-specific autonomy and dependence on regional and national authorities (Bulkeley 2010; Loorbach and Shiroyama 2016). Horizontally, many municipalities engage in networked forms of climate governance without the direct exercise of authority, but instead cooperate with other actors to leverage learning, funding and solution scaling opportunities (Bulkeley et

al. 2003; Kern and Bulkeley 2009). One such city peer-network briefly relevant to this thesis is Eurocities; A network of currently 206 published member cities⁹ located throughout geographical Europe (see EUROCITIES n.d.) cooperating in multiple areas such as joint policy advocacy and representation, knowledge sharing and support, and shared goal-setting in certain urban development domains (Eurocities 2020, 2022). Many stakeholders meet in the urban context, some of which are municipal governmental actors such as city councils, mayors, municipal infrastructure companies, agencies, and different branches of the municipal public line-administration – all of whom might be regarded as one unitary ‘black-box’, or diverse actors, depending on the kind any level of analysis. This thesis will do the former, and explicitly acknowledge the internal configurations and contradictions within municipalities.

2.4 The EU Mission for “100 Climate Neutral and Smart Cities by 2030”

The focus of this thesis lies on the EU Mission Cities as its central study case. The following section will summarize relevant contextual details and concepts.

2.4.1 Mission-driven policy and EU Missions

The climate crisis coincides with a resurgence of certain heterodox schools of evolutionary economic and political thought which argue for greater and more deliberate involvement of states in the direction of economic and technological development; prominent domains are innovation and industrial policy, developmental economics, entrepreneurial states, and techno-economic paradigms (Mazzucato 2016). A core notion in all of these is that there are alternative trajectories of change that can and should be picked by states and other governing entities to guide economic and technical development in a preferred direction (Mazzucato and Perez 2015). One proposed tool for realizing such directional change and thus attaining the associated long-term strategic outcomes are so-called policy *missions* (Mazzucato 2021).

The contemporary conception and debate of such missions has decidedly been shaped by Marianna Mazzucato, who defines missions as “concrete targets within a [grand] challenge that act as frames and stimuli for innovation” (Mazzucato and Dibb 2019, p. 2). Such “missions [hence] do not specify how to achieve success” (2019, p. 2), but rewards risk-taking and experimentation across various different solutions. When applied as policy tools, Mazzucato’s missions are intended to be a) inspirational and societally relevant; b) provide a clear direction; c) balance ambitious yet realistic innovation; d) integrate across disciplines, sectors, and actors; and e) leverage many bottom-up solutions

⁹ as of 20th June 2023. Number aggregated from the number of city entries on the Eurocities website.

(DG RTD and Mazzucato 2018, pp. 14–15). The mission-driven policy paradigm argues for systemic research, innovation, and investment policy that emphasises concepts such as ‘market creation’ (Mazzucato 2016, 2016; Robinson and Mazzucato 2019), the ‘entrepreneurial state’ (Mazzucato 2011), ‘innovation bureaucracy’, and ‘agile stability’ (Kattel et al. 2019, 2022).

As touched upon, the large-scale strategic application of this policy toolkit on EU level was first outlined in a policy manifesto by the EC Directorate-General for Research and Innovation (DG RTD) and Mazzucato in 2018; this document already featured a proto-version of the eventual EU Mission Cities (pp. 22-13). Missions were subsequently integrated as a new element into *Horizon Europe* (European Commission 2023, n.d.c); *Horizon Europe* is the successor of *Horizon 2020* (2014-2020) and thus the current research and innovation funding program of the EU for the period 2021-2027, with a total budget of €95.5 billion (DG RTD 2021a). A total of five such EU Missions were proclaimed, four of which directly relate to different aspects of addressing the climate crisis; climate adaptation and resilience, restoration of ocean and waters, soil health, and climate neutral and smart cities (DG RTD 2021b).

2.4.2 The EU Cities Mission

The EU Cities Mission hence is a relatively new and ongoing EU policy program which has officially launched in late 2021 (European Commission n.d.a), and with a nominal duration of at least seven more years, until 2030. Following a call for expressions of interest by the EC in November 2021, 377 cities submitted applications, 362 of which were found eligible, covering all 27 EU member states as well as nine *Horizon Europe* associated countries (European Union 2022). In April 2022, the 112 cities selected by the EC for mission participation – 100 EU cities and 12 further cities from associated countries – were publicly announced (European Commission 2022).

The Mission’s objectives, key activities, and EU-level governance mechanisms were described by DG RTD in their implementation plan (DG RTD 2021c).¹⁰ The mission has two declared objectives: Firstly, to bring about the titular ‘100 climate-neutral and smart cities by 2030’. Secondly, to utilise them as “experimentation and innovation hubs to put all European cities in a position to become climate neutral by 2050” (DG RTD 2021c, pp. 13–14). The underlying ‘systemic’ and ‘interactive’ transition methodology, visualized in the so-called *Climate Transition Map*, aims at a ‘just climate transition’; It envisions a

¹⁰ As it is unfeasible to represent all potentially relevant aspects of this policy initiative here, I recommend interested readers familiarize themselves with the mission on the dedicated websites by the European Commission (n.d.), the Implementation Plan (DG RTD 2021c), as well as the website and ‘Mission Platform’ web application by NetZeroCities (NetZeroCities n.d.a, n.d.b)

six-stage cycle of 1) ‘building a mandate’, 2) ‘understanding the system’, 3) ‘co-designing a portfolio’, 4) ‘taking action’, 5) ‘learn & reflect’ and reflecting, and 6) ‘making it the new normal’ (NetZeroCities n.d.a).

The two central artifacts of the mission’ implementation are the Climate City Contracts (CCC) and the one-stop-shop online Mission Platform (pp. 16-17). The Implementation Plan further envisions a range of complementary activities, including bespoke investment agendas for each city, a ‘*Mission Label*’ for cities with approved CCCs, and joint development trajectories; Notable examples are R&I pilots, joined capacity building, and the development of shared governance, monitoring and reporting frameworks (p. 16). The executive hand of the EC within the Cities Mission is *NetZeroCities* (NZC); A typologically indeterminate, project-oriented, multi-stakeholder organization that is operatively coordinated by *EIT Climate-KIC* and jointly sponsored by an international consortium of 33 city networks and research-oriented institutions (Prieto n.d.b). *EIT Climate-KIC*, in turn, is a public-private ‘Knowledge and Innovation Community (KIC)’ co-founded by the EU and supported by the *European Institute for Innovation & Technology*, an EU body within Horizon Europe pursuing public private-partnerships (PPP) for innovation (*EIT Climate-KIC* n.d.; *European Institute of Innovation and Technology* (EIT) n.d.). NZC professedly “assists cities to overcome the current structural, institutional and cultural barriers they face in order to achieve climate neutrality by 2030” (Prieto n.d.b). Its portfolio of activities is dominated by its engagement for the EU Cities Mission, but also includes the related but formally separate *Pilot Cities Programme* and its *Twinning Programme* (Prieto n.d.c, n.d.d). These projects align closely with the Cities Mission but are open to applicants outside the pool of 112 participants. Within the Mission, NZC oversees the implementation process and provides supportive services: Among other things, NZC operates the aforementioned mission online platform with various social functions (*NetZeroCities* n.d.c); provides a knowledge repository with strategic, operational, financial and technical guidance for cities (*NetZeroCities* n.d.d, n.d.e); provides mission cities with City Advisors who serve as consultants and points of contact for city administrations (*NetZeroCities* n.d.f); and host regular webinars and events.

The current, early work phase of the Cities Mission is intended to see cities develop their CCCs; conceived as a multi-part document enshrining both a strong (though legally non-binding) commitment by cities and other local actors as well as a feasible roadmap to reach climate neutrality by 2030 (pp. 19-21). Cities develop their CCCs from templates for the contracts’ three central components: 1) a ‘contract’ for the *2030 Climate Neutrality Commitment* signed by all involved local parties, 2) a *2030 Climate Neutrality Action Plan*, and 3) a *2030 Climate Neutrality Investment Plan*. These and over a hundred other

documents and assets are accessible to cities via the NetZeroCities Mission Platform (see: <https://netzerocities.app/>). Among the most notable is the ‘Transition Team Playbook’ (Wainwright et al. 2022), which offers guidance on how to establish governance structures and mechanisms for leading and implementing the Mission.¹¹

As of the time of writing in spring and summer 2023, the mission cities have been announced for a little over a year. cursory online searches, and the findings of this thesis, suggest that few cities’ CCCs have been finished and published yet. Most recently, in late June 2023, the representatives from Mission Cities held a conference (DG RTD 2023).

¹¹ Note that direct links are not technically supported by the mission platform. Anyone interested can, however, create an account and access material at <https://netzerocities.app> (as of 30/06/2023).

3 Literature Review

The climate neutral city concept resides in the intersection of multiple research disciplines and paradigms. In this chapter I briefly review the relevant literature around the administrative governance and implementation of climate neutrality transitions in cities as well as their required administrative capacities and further seek to define the analytical lens taken throughout this thesis.

3.1 Review method

The review process followed a pragmatic, iterative, semi-structured modus operandi. While a full systematic literature review was not deemed feasible within the scope of thesis, established methods for such reviews were drawn upon as inspiration (especially Hopia et al. 2016; Xiao and Watson 2019). First, core concepts and terms were identified through exploratory reading and my existing understanding of the core subjects. Based on these initially insights, structured search queries were formulated and searched for in Google Scholar; they consisted of search terms embedded into a hierarchical logical structure using parenthesis and logical operators (AND, OR). The results were initially screened through the evaluation of publication titles. They were further evaluated based on, in order of reading, their abstracts, their conclusion sections, key-word searches in the text, and finally the full paper. New points of note from these readings were then iteratively fed into refined search queries, and the process repeated. Relevant references in read publications were followed in a ‘snowball’ reading pattern. This process was continued until, by my personal assessment, the soft stop conditions of a) frequent circular references between readings were found, and b) and new readings were theoretically or empirically redundant with prior readings. As new theoretical aspects came into focus throughout the writing process, the literature review process was stopped and resumed multiple times. Due to the conceptually wide multi-faceted nature of this complex topic and the limited page count available, the review presents a non-representative selection of the relevant literature.

3.2 Review

3.2.1 The Climate Neutral City

The concept of the climate-neutral city as a vision and policy goal has evolved beyond the general urban climate domain into a emergent yet distinct concept (Huovila et al. 2022). It lies at the root of climate policy networks such as the Covenant of Mayors, C40, and the EU Cities Mission. Nevertheless, its definition varies. A comprehensive review of the concept based on the comparison of academic literature, climate policy documents,

and interviews with cities' climate experts has been published by Huovila et al. (2022): 'Climate neutral' GHG emission reduction targets in cities were found to be between 60-80%, while literature usually employed an 80-100% range – hence the role, kinds and efficacy of carbon offsetting are a crucial component of the concept. The conceptual scope of included emissions varies and reflects cities' local contexts; this is strongly linked to the respectively used methods of carbon neutrality assessment and reporting. Whichever share of emissions cannot be prevented, is usually 'offset' in a variety of ways, as already mentioned above.

The emission reduction targets, timelines, and contingencies in local climate policy within Europe has been extensively researched in recent years, including large-n comparative studies that provide an overview of the policy-level state of affairs: In their analysis of 885 EU-28 cities, Reckien et al. (2018) found that “approximately 66% of EU cities have [...] [an autonomous] mitigation plan, 26% an adaptation plan, and 17% a joint adaptation and mitigation plan, while about 33% lack any form of stand-alone local climate plan” (p1.). Salvia et al. (2021) found that while among 327 cities, selected as a representative sample of EU-28 cities, 78% of cities have climate mitigation plan, only 25% have committed to climate neutrality in line with the Paris Agreement. An analysis of 104 German cities using a novel climate neutrality ranking framework found distinct clusters of climate policy maturity (Otto et al. 2021). All three studies align in their conclusions, strongly linking high ambition in climate targets to city size, but also the membership in climate networks, joint action on climate change mitigation and adaptation (M&A), distinct local motivation, resource availability, and positive path dependency. The creation of local climate plans is further facilitated by national legislation (Reckien et al. 2018) Additional city-level drivers are GDP per capita, and the cities' adaptive capacity (Reckien et al. 2015); i.e. the cities' capacity to adapt to climate change induced vulnerabilities of urban systems (Engle 2011; Smit and Wandel 2006). The mutable nature of the term 'climate neutrality' can hence obscure major differences among the socio-technical configurations that are de-facto institutionalized in transition processes (Tozer and Klenk 2018). A *configuration* in this sense denotes “any multidimensional constellation of conceptually distinct characteristics that commonly occur together” (Meyer et al. 1993, p. 1175); i.e. a reoccurring empirical island of stability within a system. In the case of the *Carbon Neutral Cities Alliance* (CNCA) for instance, three distinct 'building and energy configurations'¹² were identified, with cases of yet again deviating configurations in specific locations (Tozer and Klenk 2019).

¹² Respectively titled “(1) The District Energy City, (2) The Zero Net Energy City and (3) The Natural Gas Transition City” by the authors. (Tozer and Klenk 2019)

Emerging technical pathways to urban climate neutrality lie in the key domains of electricity, buildings, transportation, waste, and carbon sinks and storage – the discussion of which is notably pioneered in grey literature (Linton et al. 2022). These and further climate-relevant domains, such as heating and land use, are strongly linked to local infrastructure and lie within the classic self-sovereign jurisdiction of cities, hence giving city governments a high degree of both the autonomy and responsibility to act (Bulkeley 2010).

3.2.2 Local administrative governance of CN transitions

3.2.2.1 Defining Governance

The latent concept behind the term governance is difficult to pin down. Countless definitions have been employed by different authors and institutions (see Kirschke and Newig 2017, p. 7; Lynn Jr et al. 2001, p. 7; OECD 2001, p. 9). A comprehensive and contemporary of the governance concept is provided by (Peters et al. 2022). They conceptualize governance as “steering the economy and society toward collective goals” (Peters et al. 2022, p. 1; Peters and Pierre 2016) within the fundamental dichotomy of control and collaboration¹³. Both approaches to governance are unified by the need for decision-making about goals and means, which is where the domains of governance and public policy intersect (p. 2). The conception of administrative governance has changed throughout historic paradigms, notably those of Traditional Public Administration, New Public Management, Network Governance, and Self-Governance (Nederhand and Klijn 2019). The governmental, control-oriented paradigm reflects in the public management literature of the early 2000s; There, following Hill and Lynn (2004), governance has been defined as “regimes of laws, rules, judicial decisions, and administrative practices that constrain, prescribe and enable the provision of publicly supported goods and services” (Lynn Jr et al. 2001, p. 7). The contemporary meaning of the term governance is shifting to no longer endow state actors with a privileged role among other actors (p.1), and thus away from the state-centric, hierarchical, command-and-control mode of governance historically exercised by bureaucracies (Peters et al. 2022). Other authors distinguish

¹³ It should further be noted that this characterization is based on the implicit presumption of *democratic* governance (Peters et al. 2022, p. 1f.). This corresponds to their origin in western research and practice and aligns with the empirical realities in most European cities, which are focus of this thesis. In contrast, a mostly utilitarian perspective on governance has in recent years been emphasised, for instance, in Chinese governance literature: Here, the emphasis lies on the, somewhat elusive criterion-set of *good governance* (Keping 2018; Nanda 2006; Rotberg 2014). Input legitimacy, as originally put forth by Scharpf (1972) – operationalized, for instance, through the use of elected representatives – is relegated to an arguably optional feature of successful governance systems. The quality of governance systems is instead measured by output legitimacy, their factual ability to engender transparency, accountability, rule of law, responsiveness, effectiveness and (perceived) legitimacy (Keping 2018, p. 5).

these modes by delineating the concepts of *governance* and *government*. Following the synoptic framework set out by Keping (2018) there are two primary differentiators: Firstly, governance is, semantically, a broader concept, in which authority is not exclusively or necessarily derived from the state. It thus includes formal and informal institutions in civil society, the private sector, and other non-government organizations – hence relying on authority embedded in a collaborative network of actors (p.3-4). Secondly, governance considers “power to be multi-directional and two-way, rather than unidirectional and top-down” (p.4). Governance by itself, however, is a neutral term, and needs to be qualified by adjectives (Peters et al. 2022, p. 2). Climate change governance is characterized by unique requirements and challenges: It needs to be comprehensive across boundaries, levels, and sectors; it faces a high diversity of stakeholders; it is inherently long-term in nature; and it faces a domain of high uncertainty (Fröhlich and Knieling 2013). In meeting these challenges, the networked-based and multi-level nature of urban climate governance has led to an reworking of the state and state authority (Bulkeley 2010; While et al. 2010). Despite such changing roles, city administrations remain central actors within urban climate governance. A workable definition of governance for this thesis thus needs to integrate systemic ambitions with the managerial and organizational viewpoint of municipal public administrations. For the purposes of this thesis, I hence examine configurations of *local administrative governance for the climate neutrality transition*; as mentioned above it is defined here as institutionalized regimes of organizational collaboration, control, and decision-making, employed by and in local-level public bureaucracies to steer the local economy and society toward the transition to climate (derived from Anguelovski and Carmin 2011; Hill and Lynn 2004; Lynn Jr et al. 2001; Peters et al. 2022). When talking about governance throughout this analysis, I hence deliberately place the municipality and its self-governance within its local context at the centre of the analysis.

3.2.2.2 Governing local climate neutrality transitions

Various ontologies of socio-technical transitions to sustainability exist (conflict and power struggle, evolution theory, functionalism, interpretivism, rational choice, relationism, structuralism), each with their own conceptions of causal agents (Geels 2010), with varying applicability. Academic literature on urban climate and sustainability transitions adopts multiple salient theories of systemic change, most notably the *Multi-Level Perspective* (MLP), *Transition Management I*, resilience and adaptive capacity, innovation systems, and social innovation (Wolfram and Frantzeskaki 2016, fig. 1). The MLP, is an analytical perspective that understands socio-technical transitions by making entire systems providing societal functions (e.g., heating, mobility) the unit of analysis (Geels 2010; Geels et al. 2017). Transition Management (Loorbach 2010; Wittmayer and

Loorbach 2016), in contrast, is an application-oriented approach that consists of an integrated suite of “of principles, a framework, instruments, and process methodologies to analyse as well as systematically organise and facilitate such social learning and innovation processes” (Wittmayer and Loorbach 2016, p. 13), which so-called frontrunners to come together jointly, tackle transition challenges through innovation, and thereby develop strategies and solutions that can further be disseminated. Across approaches, sustainability transitions generally (Grin et al. 2010; Loorbach et al. 2016) constitutes a salient paradigm, hinging on the premise that “fundamental shifts are required towards different cultures, structures, and practices that are inherently sustainable rather than less unsustainable.” (Loorbach et al. 2016, p. 4). The essential network-based nature of climate transition governance in cities has further been summarized by Bulkeley (2010): As lowest level of the state, cities sit at the intersection of multi-level vertical governance on the one hand, and local horizontal governance on the other hand. Mutual opportunities are the glue that holds networks together and sets incentives to join; Especially expertise, funding, and best practice dissemination through transnational networks is valuable for cities (Bulkeley 2010).

Several independent frameworks describing of the governance of city-level climate and decarbonization governance have further emerged over recent years: Nguyen et al. (2018) employed a an updated version of the analytical framework proposed by Gleeson et al. (2004), wherein they consider governance to be one “heuristic theme” (Nguyen et al. 2018, p. 941) alongside climate policy, distribution, democracy, and finance. This governance theme is characterized through constituent attributes: power dimensions, vertical integration, internal and external coordination, governance modes, governance scale and regional diffusion. Other dimensions sometimes associated with governance, such as accountability, reflexivity and budgeting were assigned to different themes. Linton et al. (2021) – further summarized below – suggested a taxonomy of subcategories for both the strategy and governance; it is unclear whether it was derived only from literature or inductively from their exploratory case study; The ‘governance’ pillar consists of the following dimensions: Coordination, oversight & reporting, communication, cross-sector collaboration, multi-level integration, funding, and modes of governance. Four modes of governance, as included in the above-mentioned frameworks by Linton et al. (2020) and Nguyen et al. (2018), have originally been proposed by Kern and Alber (2009): *Self-governing*, *governing through enabling*, *governing by provision*, and *governing by authority*. Power and Knowledge have further been suggest as a meaningful analytical dimensions (Vink et al. 2013). Authority imbalances between governance levels have further been shown to cause subpar outcomes in environmental policy network (Di Gregorio et al. 2019). Qi et al. (2008) proposes a general behavioural model of local government, suggesting that they act

“operate according to motivation (M), power (P) and capacity I“ (p. 389). Other relevant theoretical frameworks revolve around governance strategy (Van Assche et al. 2021), the governance of complexity (Kirschke and Newig 2017; Rotmans and Loorbach 2009) and governance of uncertainty and risk (Dewulf and Biesbroek 2018; Renn and Klinke 2013, 2015). Recent years have further seen the publication of two new, application-oriented frameworks for the organization and institutional design of climate neutrality transitions in cities: Firstly, Vanhuysse et al. (2023) developed a framework based on urban climate mitigation literature and policy documents from nine Swedish cities; in their own words their “framework is built up of five pillars that are described as essential: having a vision and political will; goals or targets; elaborating on plans and strategies; designing actions or instruments that support the plans; and an overarching institutional capability pillar, comprising resources, collaboration, and knowledge” (p. 4). Secondly, Göpfert et al. (2019) propose the *Adaptigation Institutionalization Framework*, an “instrument for assessing the joint institutionalization of climate adaptation and mitigation (*adaptigation*) and its hierarchical and sectoral position in the city administration, based on four organizational features (structure, visions/goals, actors, and technology)” (p. 4).

3.2.2.3 Empirical insights

Many empirical case and other studies have been conducted over time regarding sustainability transitions in cities which cannot be summarized (see e.g., Foray 2018; Hölscher et al. 2016; Hölscher, Frantzeskaki, McPhearson, et al. 2019; Koop et al. 2017; Nevens and Roorda 2014); This section draws from selected studies with immediate relevance to this thesis without any ambition of comprehensiveness.

3.2.2.3.1 Governance and implementation challenges

Echoing this thesis’ RQ1.1, a forthcoming pioneering analysis of the 362 eligible cities’ EU Mission applications documents is being published by G. Ulpiani and Veters (2023)¹⁴ (available online since 20th June 2023). They analysed and clustered cities’ self-assessed risk factors from open-ended written statements across a range of risk categories: leadership, planning and political; financial; regulatory; operational; organizational; stakeholder; social; environmental; and security risks. Within each category, keyword-based k-means clustering was used to computationally identify cohesive issue clusters. The findings include many challenges relevant to administrative governance and capacity

¹⁴ G. Ulpiani and Veters (2023) provides broad qualitative insight into some of the same topics discussed in this thesis, especially regarding RQ1.1. It is highly recommended to the earnestly interested reader to review this paper. Their employed data source, the EU mission application documents, likely deserves further investigation, as it contains unique and extensive self-reported information from a diverse sample of cities about their climate transition plans and prospects. Due to its current day of publishing, this paper’s findings could unfortunately not be integrated in the choice of research questions.

as discussed in this thesis: In G. Ulpiani and Vettters' leadership category, the most salient cluster concerned volatile, fragmented, and nationally misaligned multi-level governance and political priorities. A second cluster centred around short-term ownership and leadership changes on the managerial level. Key operational risks were identified as "long, inefficient, and innovation-averse public procedures[,] lack of financial and human resources [and] inadequate contracting management" (p. 7). Further salient operational risks revolved around public procurement, highlighting "time-consuming, litigation-prone, and innovation-poor" (p. 7) processes, as well as inaccuracies in drafting tenders and legal documents. Key organizational risks clustered around "inadequate governance structures[,] scarcity of human resources[,] miscommunication[,] and unclear allocation of managerial responsibilities" (p. 8). A second organizational cluster highlighted, internal silos, lacking knowledge transfer and management, and inadequate recruitment of specialists. Beyond these comprehensive findings, a crucial risk factor in transition governance processes is timelines: Past city case studies suggest that short to medium-term timelines for reaching climate neutrality (2030 or earlier) can engender actions that incrementally reduce emissions while not breaking carbon lock-in on a fundamental level (Tozer 2019). Long-term timelines, in contrast, face fundamental commitment and collective action problems rooted in uncertainty, incentive structures, and power (Ostrom 1990; Tozer 2019; Underdal 2010). Climate governance on all levels has historically been confronted with characteristic collective action challenges around the "long time-lags between human action and environmental effect, embeddedness in highly complex systems [...], and provision of [...] collective goods" (Underdal 2010, p. 1).

3.2.2.3.2 Governance structures and instruments

How cities govern and implement the transformation to climate neutrality on an administrative level is an academically little explored subject. Linton et al. (2020) conducted a descriptive qualitative study of eight cities in Canada, the USA, Finland, and Norway¹⁵. Through document analysis and stakeholder interviews they inductively identify actions taken by the cities in area of strategy and governance respectively in service of urban deep decarbonization. They found that "[l]ocal governments are increasing their internal capacity for action and collaborating both internally and externally" (Linton et al. 2021, p. 17). The governance setup of all eight analysed cities featured a centralized sustainability department, interdepartmental collaboration, some form of overseeing board, a regular internal reporting system, internal and public

¹⁵ This is part of a series of papers published since 2020 by scholars at the University of Toronto and University of Waterloo (S. Linton, A. Clark, L. Tozer, N. Klenk). They are seemingly spun off from the same underlying multi-case study of eight cities: Bridgewater (Canada), Guelph (Canada), Vancouver (Canada), Toronto (Canada), Park City (USA), Lahti (Finland), Oslo (Norway), and New York (USA) (Linton et al. 2021, tbl. 1). Their body of work are cited throughout this review.

communication structures, and partner engagement. A majority of cities were further found to use the climate ‘lens’ in all departments, engage in multi-stakeholder committee for sectoral collaboration, display two-way multi-level integration, use private sector investment partnerships, and the use innovative investment mechanisms (Linton et al. 2021, tbl. 3). A comparative case study of London and Melbourne identifies the employment of a governing through enabling mode of governance, the use of explicit monitoring frameworks, and the integration with higher institutional levels in both cities’ climate plans – although the specific institutional configuration, scale, regionalism and more differed (Nguyen et al. 2018). A comprehensive analysis of the modes of governance (see Kern and Alber 2009) as reported in over 12000 policies within the CoM’s Monitoring Emission Inventories (MEI) by 315 cities shows that *municipal self-governing* (39.9%) and *governance by enabling* (22.7%) are the most frequently used, policy tools, though the highest carbon reduction potential can be found in *regulation* and *other* policies (Palermo et al. 2020). Based in the analysis of the novel Climate City Contracts developed in Swedish municipalities now in the other EU mission cities, *governing by contract* has been suggested as an additional mode of governance (Shabb et al. 2022). Structurally, three types of integration configurations were previously observed in case studies of in city administrations during climate transitions by (Kern et al. 2021): “In the full *integration model* climate mitigation and adaptation tasks are concentrated in the same organizational unit or strategy, in the *pillarized model* they are allocated to several organizational units or strategies, and in the *project-based integration model* they are integrated at the operational level only“ (p. 8).

3.2.2.3.3 Governance in the EU Cities Mission

Due to its novelty as a public policy initiative, there have been barely any peer-reviewed academic publications, yet which analyse the Cities Mission directly. Previously, the cohort of mission city applicants has increasingly be studied through their application documents (Reckien et al. 2015; Salvia et al. 2022; Ulpiani et al. 2023; G. Ulpiani and Veters 2023) – this is a rich and likely not yet exhausted data source from early 2022. The Cities Mission itself (Kern 2023; Shabb et al. 2022) and the governance framework it proposes for cities (Maestosi et al. 2021) have been critically analysed in literature on a theoretical basis“. A first empirical studies have started appearing in spring 2023: Shabb and McCormick (2023) analyse the municipal commitments and development process of the Climate City Contacts (CCCs) of nine participating Swedish municipalities¹⁶. These contracts were developed prior to the start of the EU mission as part of Sweden’s Viable Cities initiative. Document analysis of the CCCs and five qualitative interviews were

¹⁶ Enköping, Gothenburg, Järfälla, Lund, Malmö, Stockholm, Umeå, Uppsala and Växjö (Shabb and McCormick 2023, p. 4)

employed in the study. Linton et al.'s (2020) framework – introduced above – was furthermore used for their analysis. Shabb and McCormick (2023) find that all municipalities describe actions in all the framework's dimensions; however, the info provided is generally found to be minimal. None of the cities explicitly adopt a preferred mode of governance, or a governance strategy. They furthermore consider the CCCs to be an experimental and new “contract-based mode of urban climate governance” (p.7). Other research specifically addressing governance in the Cities Mission case was, as of the time of writing, not identified.

3.2.3 Municipal administrative capacities for CN transition

3.2.3.1 Defining Capacity

As applied to local public administrations and governments, the term *administrative capacity*, has previously been used synonymously with organizational-, management- and government capacity (Piña and Avellaneda 2017). The terms *capacity*, *competence*, and *capability* have also been used interchangeably or with ambiguous conceptual distinction (Vincent 2008). Given this ambiguity, the construct of ‘capacity’ has been criticized as being a potentially vague and abstract metaphor for ‘bureaucratic quality’, that holds little analytical value without further specification (Williams 2021), and hence requires a stringent definition. Three dominant perspectives on organizational capacity in academic literature were identified Bryan (2011): “capacity as resources, capacity as organizational capabilities[,] and capacity as organizational outcomes” (p. 7). These perspectives seem to align with the three analytical lenses of the I-P-O model (input-process-output), a heuristic model frequently used in organizational system analysis (McGrath 1984; Steiner 1972). Vincent (2008) in turn proposed differential definitions of this triad, wherein “[c]ompetence is the quality or state of being functionally adequate or having sufficient knowledge, strength, and skill. [...] Capability is a feature, faculty or process that can be developed or improved. [...] Capacity is the power to hold, receive or accommodate. Capacity is really about ‘amount’ or ‘volume.’” (p. 1). Taken together, these distinctions provide a useful and intuitive disambiguation of the concept of organizational capacity, which this paper will generally follow; *a* (indefinite) *capacity* will consequently refer to the combination of organizational resources, capabilities, and competences sufficient for an organization to perform effectively within a specific domain. *The* (definite) capacity, denotes the total ‘volume’ of such capacities.

Depending on their adopted viewpoint and examined subject, different authors have proposed many frameworks for the conceptual structure of public administrations’ capacity, some of which are outlined below: A resource-oriented institutional capacity

framework developed by Kuzemko and Britton (2020) and further applied by Wade et al. (2022) within the energy sector groups organizations' through their available amount or degree of formal *responsibility, finances, political authority, material circumstances, personnel capacity* and *knowledge*. Etongo and Gill (2022) conceptualised a similar quantity-based framework of local governments' resource needs for local climate change adaptation, including *social, political, human, financial* and *environmental capital*. For Vanhuysse et al. (2023) institutional capabilities, broken down as *collaboration, knowledge*, and *resources*, underpins their sustainable transitions in cities. Other frameworks take a more purpose-oriented approach, delineating along capabilities or functions that administration need to fulfil: Bryan (2011, pp. 15–17) proposes the *infrastructure, management, knowledge and learning* and *collaboration* subdimensions of public sector organizational capacity. Lodge and Wegrich (2014) groups administrative capacities for problem-solving as: *delivery capacity, coordination capacity, regulatory capacity*, and *analytical capacity*. Conceptualized from the policy-perspective, the concept of 'policy capacity' frequently subsumes policies' operative implementation through public administrations as one sub-dimension; Wu et al. (2015), for instance, distinguishes analytical, operational and political competences, respectively on the individual, organizational, and systemic level – with organizational operational capacity resembling what is elsewhere distinguished as administrative capacity.

3.2.3.2 Capacity need for local climate neutrality transitions

Willems and Baumert (2003) characterized the inherent complexities around institutional capacity for climate action in a report to the OECD: Such capacities are subject-specific, non-linear, and systemic, and emerge from the interrelation of diverse factors on different institutional levels. In recent years, first attempts were made at describing the higher-order capabilities cities need within their transition to climate neutrality. Hölscher, Frantzeskaki, and Loorbach (2019) developed a literature-derived set of four meta-level functional governance capacities cities need for *transformative climate governance*: “responding to disturbances (stewarding capacity), phasing-out drivers of path dependency (unlocking capacity), creating and embedding novelties (transformative capacity) and coordinating multi-actor processes (orchestrating capacity)” (p. 1). The authors emphasise the role of these abilities over and above structures and resources: “While institutional and organisational conditions (e.g. institutional settings, rules and regulations, networks), knowledge resources and discourses are important components of governance capacity, building-up capacities for urban transformation governance ultimately depends on the abilities of actors to mobilise, create and remove governance conditions“ (Hölscher, Frantzeskaki, McPhearson, et al. 2019, p. 187). A similar class of transformative capacity is elsewhere termed *dynamic capabilities*, which does not seem

to be a salient concept in transition management literature (see e.g., Barreto 2010; Eisenhardt and Martin 2000; Guenduez and Mergel 2022; Kattel and Mazzucato 2018). Public institutions further need both *climate-specific* and supporting *climate-relevant* capacities. Kern (2023), situated within the TM paradigm, sees strengthening strategic, integrative, adaptive, and innovative governance capacities as key priority for the cohort of the Mission Cities in particular: The capacity for horizontal and vertical integration is needed in city administrations, as coming tasks likely require reorganization, or at least deeper integration on project level. Innovative capacities are important to overcoming local path dependencies; partnerships with local companies and universities as well as innovation incubators and labs are means of disseminating technological innovation (Kern 2023). On the resource level, a recent study among nine Swedish cities committed to CN found no lack in knowledge in city administration, indications that investment requirements exceed the financial resource capacity of cities (Vanhuysse et al. 2023). A literature review of the role of knowledge in climate transitions found that it is ascribed very different roles by different branches of literature, including, for instance, a role as motor, consultant, or emancipator (Hjerpe et al. 2017). Please note that many more potentially relevant administrative capacities are described in literature, most of which can unfortunately be summarized here.

3.2.3.3 Capacity monitoring and building

Wretling and Balfors (2021) models cities institutional capacity building process for climate planning and governance using a model by Healey et al. (1999). It distinguishes three dimensions which together make up local public authorities' institutional capacity: *knowledge resources*, *relational resources*, and *mobilization capacity* (Healey 2020; Healey et al. 1999; Wretling and Balfors 2021). These capacities are “simultaneously generated and moulded” (p.3) as they are drawn upon in governance and planning activities; The capacity dimensions are hence dynamically changing under the influence of *external forces* and *internal evolutions* (Wretling and Balfors 2021). Innovation and the capacity to generate novel knowledge and mitigation solutions is further a transition engine (Hjerpe et al. 2017; Loorbach and Rotmans 2010; Mulder 2007). From an evolutionary perspective, the policy capacity for novel creation has three crucial elements: “(a) organizational routines, (b) search and selection processes and the endogenous and exogenous sources of novelty creation, and (c) selection and feedback environments” (Karo and Kattel 2018, p. 145).

3.3 Analytical lens

This thesis adopts the following analytical lens: *The local climate neutrality transition is considered from the viewpoint of non-political administrative agents within the municipal bureaucracy, who are professionally and chiefly responsible for governing and implementing the climate neutrality transition within their city by leveraging their available administrative capacities.* Being mindful of this viewpoint, I selected a heuristic and non-exhaustive set of analytical dimensions. For the administrative governance domain, these were initially drawn from Linton et al. (2021) and Nguyen et al. (2018) but substantially adapted throughout the research process. It is important to that they were chosen as meaningful delineations within the subject matter that would aid interviewees and survey respondents in reasoning and structuring their thoughts and replies, while also covering the conceptual space identified in literature. I explicitly do not adopt or propose them as a theoretical framework, and no explanatory and predictive power is presumed. They were subsequently used to structure the data collection tools, aid in content mapping during interviews, and as seed categories in the analysis and presentation of the collected data. For the second domain of administrative capacity, the previously mentioned triad of heuristic concepts by Vincent (2008) – *competences, capabilities and capacity* – were used to structure the analysis. In any assets presented to research subjects, these were translated into the more colloquial triad: *Skills, Processes, Resources*.

Table 1 – Analytical lens | Governance dimensions

Admin. Governance Dimension	Characterization
Organizational structures and scale	The formal structure of the organisational configuration and the location, granularity, and distribution of subject matter responsibilities therein.
Oversight and reporting	The organizational controlling and reporting pathways. The means of reflection and iteration. The employed evaluation and goal-setting frameworks and performance indicators.
Internal coordination, cooperation, and communication	Coordination, cooperation, and communication routines, structures, and behaviours among stakeholders within the cities' municipal administration.
External coordination, cooperation, and communication	Coordination, cooperation, and communication routines, structures, and behaviours of the municipal administration in relation to any external stakeholders.
Funding and finances	The municipal administrations' means, modes, and methods of raising and spending funds for the climate neutrality transition.
ICT and technical infrastructure	Hardware, software, and other material ICT and general technical artifacts employed by cities in support of governance activities, and the applications thereof.

4 Methods

This chapter describes this thesis' research strategy, the employed methods for data collection and analysis, and reports on their respective successes and limitations.

4.1 Research paradigm

This thesis was conceived as a qualitative exploration and description (Sandelowski 2000) of cities' challenges in governing and implementing climate neutrality. It does not explicitly subscribe to one epistemological paradigm advanced by any of the different traditions of qualitative research (see Alvesson 2003; Langley and Meziani 2020; Ormston et al. 2014). Nevertheless, it can be said to have a fact-based starting point, rooted in its ambition to elucidate intersubjective information through self-reported statements by city expert administrative employees. Any such 'facts' must, however, necessarily be contextualized by the constructivist, interpretative dimension of qualitative research, which emphasises interviewees' subjective constructs and narratives. The ultimate ambition is to paint a wholistic yet precise and contextually situated picture of situation in city administrations that can be interpreted in conjunction with other research to build towards application-oriented theories and formulate hypotheses about their role in urban climate neutrality transitions.

I further took a predominantly inductive approach to the above research questions, that could be described as grounded-theory-like, as it makes as few assumptions as possible and is executed in a theoretically open, iterative, and reflexive manner (Ritchie and Lewis 2003). However, as seen in the above review, academic literature has suggested relevant conceptual dimensions and frameworks for climate neutrality transition governance and administrative capacity. Many are, however, of an ad-hoc nature and have not been demonstrated to hold validity beyond the scope of the single study they were originally employed in. Deductive study designs furthermore are not yet common in the relevant branch of literature. This compounds with the general VUCA nature of local climate transition, and the absolute lack of scientific insight into the on-the-ground realities within the municipal public administrations. For exploratory research in such a domain, the adoption of an otherwise unvalidated framework might inadvertently introduce blind spots and biases that would detract from the contribution to the emerging research domain. After due consideration, I therefore decided to not limit the data collection of this exploratory study by an ex-ante restriction to presumed causal mechanisms. Instead, the overall inductive approach was partially structured, but not consciously limited, by the relevant theoretical dimensions identified in the above analytical lens.

4.2 Study population and case

As stated, this thesis investigates climate-neutrality transition related governance systems and administrative capacities in city-level municipal public administrations. While many cities worldwide are faced with this transition, its qualitative empirical exploration likely is most fruitful in cities with an explicit, known, programmatic, feasible, and sincere ambition to transform in favour of climate neutrality. This is the target population of this study. To limit the dilution of any prospective findings by considering cities in overly diverse global contexts, this study further narrows in on cities in the EU or associated with the EU through Horizon Europe. The emphasis lies on participants of the EU Cities Mission, as it provides such a strong (and highly contemporary) policy frame: By having passed through the application and selection process conducted by the EC, a basic level of feasible CN transition planning can be presumed, as this was a central application criterion. On paper, they have further adopted the same ambitious goal of climate neutrality by 2030, are receiving the same governance guidance from the mission program, will employ the same operationalization of the net-zero GHG goal. From a comparative viewpoint (Collier 1993; Lijphart 1971) this limits and specifies the number of potential confounding variable and thereby improves the internal validity of conclusions drawn about the populations. A similar case can be made for city peer networks and other sustainability-oriented city initiatives such as the Covenant of Mayors, C40 or Eurocities, which frequently overlap considerably.

However, cities and their public administrations constitute complex and abstract entities with overlapping legal, social, and organizational dimensions; It is hence necessary to operationalise the study of these concepts through an observable data source. I therefore define the empirical target entities of interest as (1) non-political (2) professional public servants (3) within the cities' municipal public administration (4) with substantial and immediate operative or strategic responsibility (5) for the governance and/or high-level implementation (6) of the local climate neutrality transitions or local climate protection efforts generally (7), preferably those immediately responsible for enacting the EU Cities Mission (e.g. the head of the cities' 'Transition Teams').

I seek to address the above research questions by collecting and analysing self-reported, qualitative, individual-level data directly from these subjects. As seen in similar prior studies (e.g. Linton et al. 2021) they can serve as efficacious sources of informal lived experiences and tacit knowledge around climate neutrality governance and capacities; They can thus elucidate operative challenges and interactions unlikely to be documented in official and written data sources such as cities' climate transitions plans.

4.3 Research design and strategy

A research strategy conducive to enabling this study's aims had to primarily tackle the current *ex-ante* uncertainty regarding the range and variation of situations within cities' municipal administrations. Holistic single-case and low-n case studies on governing city-level climate neutrality transitions exist but are faced with the challenge of relating and extrapolating their insights to cities' administrative behaviour more broadly (Hölscher et al. 2016; Hölscher, Frantzeskaki, and Loorbach 2019; Hölscher, Frantzeskaki, McPhearson, et al. 2019; Linton et al. 2021; Nevens and Roorda 2014)¹⁷. Conversely, some large-n studies, employing e.g. opportunistic sampling on city cohorts such as the *Eurostat Urban Audit*, have been conducted using deductive comparative policy and document analysis (Reckien et al. 2018; Salvia et al. 2022), but have largely kept the organizational realities within administrations in a black box. To complement this status-quo in a meaningful way, I aimed for a meso-level research strategy that enables both (1) the surveying of the qualitative variation (breadth) of assorted climate neutrality governance and capacity configurations among mission cities as well as (2) probing the underlying complexities and causal dynamics in individual notable cases (depth) (Palinkas et al. 2015).

Please note that the research design was substantially altered during the data collection phase due to the lacking efficacy of the survey initially employed for data collection; In the interest of transparency, I decided report here on both versions and the underlying rationale for any changes made. This thesis' research design (RD) thus went through two iterations, subsequently denoted as RD-1 and RD-2 (see Figure 1). This challenge became apparent in early June 2023, which is when RD-2 was developed on an ad-hoc basis.

4.3.1 Research Design 1 (RD-1)

In RD-1 I initially pursued a sequential mixed-method strategy using stratified purposeful sampling between stages, as described by Palinkas et al. (2011, 2015) for use in implementation research. It sought to realize a two-stage 'funnel approach' or 'Multistage Type I' design as described by Palinkas et al. (2015, p. 540; see also Spradley 2016). It consists of the temporally staggered application of two data collection methods (see Figure 1, RD-1). This was preceded by a preliminary concept identification stage: Through the desk research presented in the above literature review (see Chapter 3), relevant theoretical constructs and their conceptual dimensions were identified, in an

¹⁷ This is compounded by the fact that this area has so far been researched by a small number of researchers, who seem to base multiple publications on the same underlying data collection process. This limits the overall number of different cases studied in the literature further.

effort to achieve comprehensive thematic coverage in subsequent phases. The following are the main components of RD-1:

- [Implemented] **Method A: A predominantly qualitative online survey**, conducted to capture the variability of governance and capacity configuration among the population. The survey was distributed through a climate-transition relevant internal email distribution list of 183 recipients of the Eurocities city network by collaborators at a member city, a large minority of which participates in the EU Cities Mission.

Note: This step was fully implemented as described in Section 4.4.1. However, due to a yield of only $n = 4$ full responses after a fielding period of four weeks, two of which were not part of the Cities Mission, RD-1 was aborted at this stage.

- [Not implemented] **Stratified purposeful sampling**: Based on the survey results a *stratified purposeful sampling* step was planned, a technique intended “to capture major variations rather than to identify a common core, although the latter may emerge in the analysis” (Palinkas et al. 2015, tbl. 2). According to Palinkas et al., this type of analysis mixes typical and deviant cases within its sample, thus combining aspects of the *maximum variation* and *typical case* sampling strategies. To implement this, the textual survey results would have been analysed through one round of inductive coding using the survey’s embedded conceptual dimensions as seed codes, as well as one round of axial coding to consolidate emerging patterns and cleavages structuring the cities’ CN governance and capacities (van Thiel 2021). Each such strata would then have been sampled (likely non-probabilistically) for the proposed in-depth Stage II case studies.
- [Not implemented] **Method B: City case studies** of these selected cities realized through in-depth follow-up interviews with survey respondents and other interviewees identified through snowball sampling and desk research. Complemented by document analysis, e.g., of the cities’ local climate transition plans.

Such funnel mixed-methods designs are popular in policy implementation research, as they can be utilized to address both variety in the population and case-based complexities within one wholistic research design (Palinkas et al. 2011, 2015). It was selected to maximise the chance of yielding an appreciable proximity of ‘theoretical saturation’ from

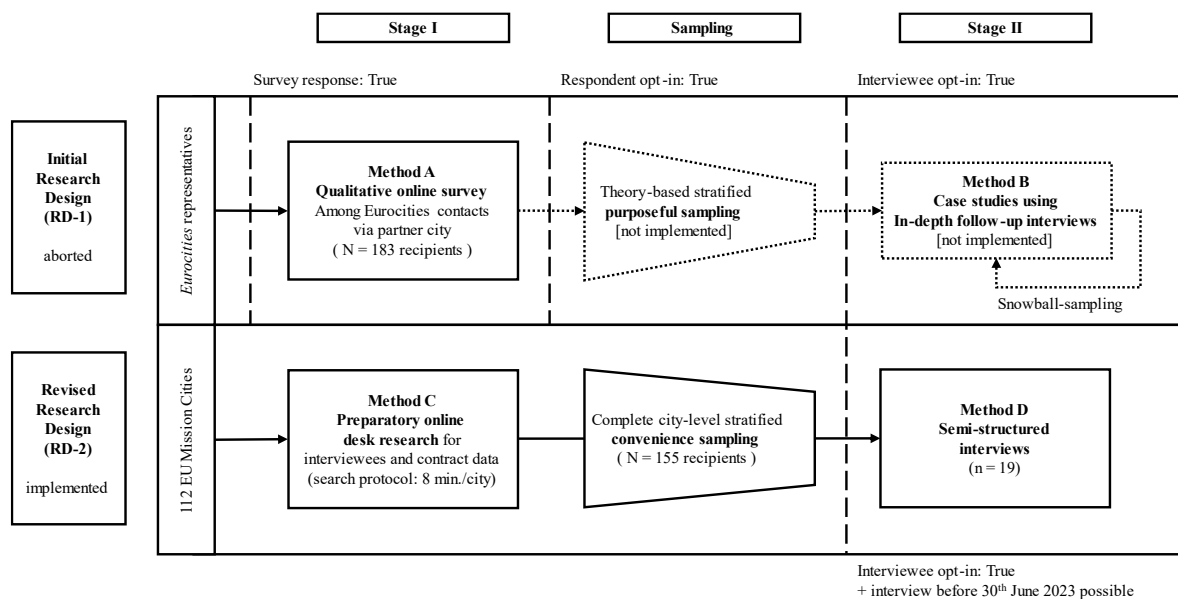


Figure 1 - Structure of the initial research design (RD-1) and revised research design (RD-2).

Note: Dashed lines denote exogenous filters within the respondent selection funnel. Dotted lines denote steps that were planned but ultimately not implemented.

the collected data – a concept from grounded theory, traditionally understood to denote “the point at which no new information or themes are observed in the data”¹⁸ (see Glaser and Strauss 1967; Guest et al. 2006, p. 59).

4.3.2 Research Design 2 (RD-2)

After multiple salvage attempts, this approach was de-facto aborted during the survey fielding phase in early June 2023 due to forbidding non-response rates on the survey. The research design was hence revised. Key learnings from the failure of RD-1 were that (a) indirectly reaching out to subjects via a city partner might not be necessary or expedient, as relevant contact data can be gathered online, and coordination issues avoided through direct communication with subjects; and (b) that, at least in this case, the survey was not the most reliable way to achieve either depth nor breadth in qualitative data collection. The revised research design, RD-2, was hence partially born out of pragmatism, forgoing deep case studies and an interposed purposeful sampling stage in favour of directly approaching the full Mission City population (see Figure 1, RD-2). RD-2 consists of the following main components:

- **Method C: Preparatory online desk research** – By reviewing information on the mission cities’ public websites (e.g., organigrams of the municipal administration or climate-neutrality indicative landing pages), I sought to identify

¹⁸ This definition of ‘saturation’ has recently been come under attack as reductionist by Low (2019) who instead argues for a pragmatic definition: stopping sampling when the emergent theory explains the observed phenomenon. This is, however, not feasible within this thesis.

at least one member of the target population (see section 4.2) and their email address, or a comparable topical email address, in each city. A manual search protocol was used, with predetermined steps and eight minutes of search time per city (see Appendix B.b for the search protocol).

- **Complete city-level stratified convenience–sampling** - The maximum number of cities for which contact data was found ($n_{\text{Cities}} = 95$) was contacted, using the available contact data ($N_{\text{Recipients}} = 155$ recipients). For any city volunteering to participate, exactly one interview was scheduled.
- **Method D: Semi-structured interviews** – Using interview guides adapted from the Method B survey and follow-up question based on survey replies, semi-structured online interviews were conducted, recorded, transcribed, and analysed using both manual and AI-driven coding techniques.

As this is an exploratory study and the defining theoretical cleavages in the population are unknown, I deemed this to be an appropriate and pragmatic method to realize the initial aim of capturing both the variability of governance and capacity configurations within cities and a sufficient degree of depth within each case to capture aspects of underlying causal dynamics. The data collection for both designs and their involved methods are described below (Section 4.4). The data collected through Methods A and D was jointly analysed as described in Section 4.5.

4.4 Data Collection

De-facto, two acts of data collection were implemented: (1) The RD-1 qualitative online survey entered the fielding period as planned but did not yield sufficient responses to continue this strategy as planned. (2) In RD-2, semi-structured interviews adapted from the survey’s contents were instead employed to realize the intended mixture of population coverage, conceptual breadth, and depth. The subsequent section describes these two data collection steps in detail.

4.4.1 RD-1 | Method A: Qualitative Online Survey

The first data collection method of RD-1 was a mixed qualitative and quantitative online survey among the target population, strongly relying on the use of open-ended questions presented in text boxes. The qualitative survey “analyses the diversity of member characteristics in a population” (Jansen 2010, p. 1) as opposed to a quantitative focus on

frequency. As argued by Braun et al. (2021)¹⁹, there are pragmatic advantages to this heterodox method: It allows access to a relatively large, dispersed and difficult to interview survey population through a temporally asynchronous response mode; invokes the perception of anonymity in the respondent; and has high cost- and time-effectiveness for research done by small teams or individuals. Considering the scope of a master's thesis and my initial assumptions that scheduling interviews would be difficult, these arguments carried weight. Personally, I further hoped that it would allow for the elegant conjunction of Stage I's dual role: Broadly exploring relevance of literature-derived theoretical dimensions on the one hand and providing semi-standardized baseline data for the subsequent purposeful sampling step. Qualitative surveys have further been highlighted for their potential in capturing diversity within the target population and elucidating the logic inherent to non-standard cases within the population (Braun et al. 2021; Jansen 2010). This seems like an especially pertinent perspective in a field where default and best practices have not yet been established. Despite the non-quantitative ambitions, a survey promised to realize a medium-n study with a modicum of external validity within the cohort of 112 mission cities.

There are, nevertheless, considerable trade-offs. Interview-like reactive probes and adaptation of questions are obviously not feasible (Braun et al. 2021). The researcher further lacks the lived experience of conducting the interview and interfacing with respondents directly. Crucially, through their reliance on text typed by the respondents, qualitative online surveys can take comparatively long to fill, and the time needed to do so might vary strongly between respondents – as seen in the case of this thesis, this can contribute to considerable non-response rates. It has further been called into question, whether they are suitable stand-alone tools to generate rich qualitative data (LaDonna et al. 2018).

4.4.1.1 Sample

The top priorities for the survey's distribution were to reach a reach a large cohort of valid target subjects (see section 4.2) with invitation email while also maximising the likelihood of response. Though desk research to identify subjects within EU Mission Cities was initially considered, I ultimately took the opportunity to collaborate with a member city of the Eurocities city network (see eurocities.eu) for survey pretesting and distribution - this hence constitutes *opportunity sampling* (Palinkas et al. 2015, tbl. 1), a non-probabilistic method of respondent selection that leverages unique exogenous

¹⁹ Braun et al. (2021) draw their lessons from practical experiences made in the field of sociology, sexology, and gender studies. Upon review, their advice nevertheless appears transferrable to other social sciences research applications. It is furthermore the most widely cited contemporary methodology paper on qualitative surveys and has seen successful use in different fields.

circumstances. The Eurocities network currently has 210 member cities throughout geographical Europe (Eurocities 2023). According to official sources, 71 Eurocities members are participating in the EU Cities Mission (Eurocities 2022). The accessed here consisted of $n = 183$ “city representatives, mainly officials responsible for international relations or EU affairs” (*Personal Correspondence* 2023), though I was verbally assured that this cohort encompassed the correct city stakeholders for local sustainability topics.

4.4.1.2 Survey Design

The employed survey is my original contribution. The survey consists of the following main sections: (1) Introduction and user guidance, including information about the research, informed consent, and opt-in for follow up interview; (2) Demographics and case context; (3) Topic: Employed governance frameworks, structures, instruments, and strategies in the local CN transition, featuring questions about changes in the dimensions of governance; (4) Topic: Administrative capacities for the local CN transition, featuring questions about capacities required for the CN transition, capacity needs, capacity lacks and ongoing capacity building measures in four capacity areas. For respondent comprehension, capacity was characterized as ‘skills, processes, and resources’, as a colloquially worded variant of the previously identified conceptual lenses on capacity: ‘competences, capabilities, and resources’ (see section 3.2.3); (5) Topic: Tangible administrative implementation measures, featuring questions about process changes and concrete examples; (6) Topic: Impact of joining the EU Cities Mission on the local CN transition; (7) Concluding probe for any further comments; (8) Final page with expression of thanks and a second prompt to opt into follow-up interviews.

4.4.1.2.1 Design considerations

The content of the survey sought to operationalize the different theoretical dimensions of the analytical lens presented in section 3.3.

The survey methodologically followed Braun et al. (2021)’s recommendations for qualitative survey structure and question design, including the advice to adapt interview question design methods (p. 647); The methods handbook by Ritchie and Lewis (2003, pp. 148–165) was hence drawn from the wording of survey questions²⁰. By nature of the medium, however, an ad-hoc adaption of questions to respondents’ replies and reflexivity through iterative in-depth probing (Ritchie et al. 2013, pp. 52–57) are lacking in surveys. This places a disproportional responsibility for the eventual focus and

²⁰ The authors have since published a second edition of this widely cited methodology textbook (Ritchie et al. 2013). This version can unfortunately not be accessed online through any of the Pioneer consortium universities. Upon review of the book’s first edition (Ritchie and Lewis 2003) I deemed its advice timeliness and decided to proceed based on its guidance.

depth of replies on the ex-ante wording of questions. Where appropriate, questions were hence amended by additional explanations, definition, or secondary instruction (e.g., ‘What led to these changes? Please briefly explain why you think so.’) (Braun et al. 2021). Critical realist wording was occasionally employed to favour factual over subjective-interpretative responses (Brönnimann 2022). Although preambles and double questions are usually avoided in interviews Ritchie and Lewis (2003, p. 155), I deemed this to be a sensible adaption to the written context; it reduced the number of questions, avoids ambiguity in a context where clarifying questions cannot be asked, and emulates a ‘probe-like’ component. Questions were further worded to be as short, clear, and unambiguous as possible under the circumstances (Ritchie and Lewis 2003, p. 155). Potentially leading questions were avoided or neutralized through contingencies (‘Which methods (if any) were applied ...?’) or anticipatory negations (‘Are you, or are you not, ...?’) (Ritchie and Lewis 2003, p. 154). Within questionnaire sections, specific questions were furthermore presented before general ones to discourage the use of redundant cross-question references such as ‘already answered’ or ‘see above’.

The landing page introduced the context and purpose of the research project as well as the informed consent to applicable data privacy terms²¹. A succinct and readable secondary disclaimer, titled ‘How to take this survey’, provided programmatic instructions and nudged participants into a responsive mindset, by establishing that “there are no right or wrong answers” (Ritchie and Lewis 2003, p. 156) and expressing interest and gratitude. The first page of the questionnaire body surveyed the basic professional context of the respondent. The further questionnaire featured a battery of 5-point Likert-scaled questions (‘Agree Completely – Agree not at all’) at the start of each topical section, intended to provide an easy-to-interpret quantitative triangulation of aspects likely to emerge in open answers; they mostly encoded general judgments about the respective city’s general maturity regarding CN governance, capacities, tangible implementation, and the EU mission. All remaining questions were open-ended, presented in text boxes with a default character limit of 1000 and a desktop display area of 680x200px. Both the first and, if not already provided, the last page of the questionnaire asked respondents to volunteer for prospective follow-up interviews as part of the case studies in RD-1 Method B.

²¹ Adapted from standard *Informed Consent* forms provided by KU Leuven (KU Leuven, Faculty of Social Sciences, Dean’s Office 2021, 2023; KU Leuven, Social and Societal Ethics Committee (SMEC) 2022). Slight alterations for readability and comprehensiveness were made. To anticipate the possible use of algorithmic third-party analysis features such as Atlas.ti’s ‘AI Coding’, the following disclaimer was incorporated: “In case a third party acts as a processor of the collected data, it can be requested at any time to have the processing of the data stopped and, where appropriate, have the collected data deleted.”

4.4.1.2.2 Pre-Testing

A series of four versions of the survey were iteratively drafted and validated; this included multiple cycles of conceptual feedback by my supervisor and another academic at TalTech, as well as peer feedback by other graduate students. The final draft was subsequently implemented into the online survey form²² and provided to two staff members at the aforementioned Eurocities member city, who are themselves part of this research's target population. They tested and reviewed the survey both with regard to pragmatic factors (length, readability, wording) and conceptual coverage. Based on this aggregated feedback, a final draft was constructed. The full content of the survey form is enclosed in print-appropriate formatting (see Appendix B.a). This process aimed to test reliability and validity criteria as understood in qualitative research, implying trustworthiness, rigor and quality (Golafshani 2003). It thus aimed a conscious, precise and consistent decisions around wording, as well as transparency to the respondent through conceptual clarity, conciseness, and readability of the survey questions and accompanying descriptions.²³

4.4.1.3 Fielding

The survey was distributed on 16th May 2023 to the previously mentioned 183 recipients in the Eurocities distribution list through an appropriate staff member at the partner city. To maximize the likelihood of response and take advantage of the partner city's in-group standing among Eurocities peers, the project was presented as a research partnership with TalTech and part of the city's initiative to build a sustainability governance framework. The full initial invitation email text is enclosed (see Appendix A.a). The provisional deadline was set for 26th May 2023, but subsequently extended in multiple steps as the response rate remained low. At least one known reminder was sent by the partner city, and participation was verbally promoted by agents of the partner city in a virtual meeting of a sustainability-focused consortium on 30th May 2023. Through indirect communication of prospective subjects with the partner city, multiple interested subjects requested the survey in the form of a Microsoft Word-compatible or PDF file. A form fillable .docx file was subsequently provided to the partner city and distributed to anyone requesting it. No requests by a prospective respondent ever reached me, although my email was prominently included in the online form and all email, although some recipients had supposedly sent emails; A technical malfunction in the TalTech email system thus

²² This was a modified pre-test version of the survey's first iteration. Each page was amended with an additional question and text box at the bottom of the page: 'Do you have any feedback, concerns, or suggestions on how to improve the contents of this page?'

²³ Formalized evaluation methods with numerical indicators (e.g., Cronbach's Alpha) exist for quantitative surveys, but are not applicable here, as they presuppose a fundamentally different research paradigm.

seems likely²⁴. The cause could unfortunately not be established, and any such requests remain list to date. The survey was ultimately kept open until 30th June 2023.

Despite all mitigation efforts, as indicated above, the response rate on Method A was insufficient to implement the purposeful sampling intended in the RD-1 research design. The combined click-through-rate of all reminder emails was 3.8%²⁵, and the overall response rate 2.7% or recipients. Four complete responses were provided by respondents in Bratislava (Slovakia), Bydgoszcz (Poland), Vilnius (Lithuania), and later Tallinn (Estonia); Largely unusable, incomplete responses were received by respondents in three additional cities. Five cities (Bratislava, Bydgoszcz, Vienna, Vilnius, Tallinn) denoted that they would be available for follow up interviews. See Table 1 for an overview of all collected survey responses.

Table 2 – RD-1 | Overview of survey responses

City		Survey			Follow-up interview ²⁶		
Name	Country	EU Mission	Submission Date	Survey Completed	Willing to interview	Invited to interview	Interview conducted
Grenoble	FR	x	17/05/2023				
Kungsbacka	SW		22/05/2023				
Vienna	AT		23/05/2023		x	x	
Vilnius	LT	x	24/05/2023	x	x	x	x
Bratislava	SK	x	26/05/2023	x	x	x	x
Bydgoszcz	PL		26/05/2023	x	x	x	
Tallinn	EE		30/06/2023	x	x	x	x

RD-1 was thus deprioritized in early June 2023, when the transition to RD-2 occurred. Interviewees volunteering for RD-1 were interviewed within the scope of the RD-2 interviews as described below. The complete replies of the submitted surveys can be found in Appendix F.

²⁴ This might have caused by TalTech's recent switch from the ttu.ee web domain to taltech.ee.

²⁵ This indicates that the survey design itself was likely not the reason for the lack of responses, as most recipients never clicked the questionnaire link. The cause hence presumably lies in either the drafting of the invitation emails, or some confounding circumstances exogenous to the RD-1 research design.

²⁶ Volunteers were invited to follow-up interviews as part of the revised RD-2 Method D.

4.4.2 RD-2 | Methods C and D: Semi-structured interviews

The methodological approach to interviewing as a data collection technique was guided by the advice presented in the well-regarded academic handbooks for qualitative interview research by Ritchie and Lewis (2003)²⁷ and Gubrium et al. (2012) as well as practical advice presented by Alvesson (2003) and Langley and Meziani (2020).

4.4.2.1 Sample and Candidate Selection

Faced with the lacking efficacy of the indirect distribution of the RD-1 survey within the Eurocities network, I opted for directly soliciting interviews from members of the target population or the organizational units they are part of. The selection of interviewees was conceived as a complete, city-level stratified convenience sample; Each city was thus considered a stratum, with the aim of sampling at least one conveniently accessible member of the target population in as many as possible of the $N_{\text{Cities}} = 112$ mission cities. Naturally, a relatively high non-response rate was expected, which is why I considered this method to be feasible for one researcher in the first place. Nevertheless, I deemed it most appropriate to use a non-probabilistic sampling method that targeted the complete mission cities cohort, using a standardized procedure – This gave each city in principle an equitable baseline chance of being part of an interview. I sought to prevent researcher-induced selection and theoretical biases and improve rigour, by minimizing the variation arising from the interviewee selection method and being transparent about any variation introduced by city properties such as the quality and ease of use of city websites.

The search process, denoted in RD-2 as Method C, was conducted by manually identifying prospective targets and their contact data in each city through desk research. For this process I drafted and used a structured search protocol, that provided a comparable yet pragmatic method for reviewing city websites (enclosed in Appendix B.b). The protocol is my own ad-hoc creation and was iteratively refined based on practical observations from the first ten cities reviewed in the process and aimed to identify relevant interviewees as defined in Section 4.2. Valid contact data was found for $n_{\text{Cities}} = 95$ out of $N_{\text{Cities}} = 112$ mission cities (85.7%), with the remainder yielding either no contact data of sufficient quality (e.g., only personal social media profiles of employees) or specificity (e.g., only a general-purpose email address or contact form). All identified recipients were contacted within each city, with a total of $N_{\text{Recipients}} = 155$ invitation emails sent in both German²⁸ and English, all on 13th June 2023²⁹. Copies of

²⁷ A new edition from 2013 is available but was not accessible (Ritchie et al. 2013).

²⁸ Email correspondence and interviews were held in German for any respondents in Germany or Austria, and in English for everyone else.

²⁹ This was achieved through the mail merge feature in Microsoft Word and Outlook. The Sent emails were largely identical, but customized regarding the mentioned city name, recipient name and greeting.

the employed email templates are enclosed in Appendix A.b (EN) and Appendix A.c (DE). Depending on the quality of contact data, as assessed during data collection, the invitation email was adapted to request an interview from the recipient directly, or a referral to whoever in the municipality would best fit the topic – respectively for an interview before 30th June 2023. An anonymized overview of the contacted entities can be found in Appendix C.a.

As of 5th July 2023, subjects from 30 cities responded to the invitation and indicated their willingness to participate. Interviews were opportunistically scheduled with any member of the study population (see Section 4.2) that made themselves available first and most quickly from each city; This process did not involve major trade-offs though, as usually only one subject accepted in nearly all cities that replied in the first place. In total, three interviews were planned but cancelled for scheduling reasons, eight more interviews were denied as they would have been possible only after the cut-off date of 30th June. The remaining $n_{\text{Recipients}} = 19$ interviews were scheduled and conducted as described below (city-level response rate: 26.7%; contact-level response rate: 19.6%; city-level interview rate: 17.0%; contact-level interview rate: 12.3%). By my best assessment, this is a sufficient number of interviews for a rigorous qualitative study; As e.g. demonstrated by Guest et al. (2006), saturation regarding theoretical themes and variability can be established after twelve interviews, with first metathemes emerging after as few as six interviews; by this standard, both should be feasible given the realised sample size of 19 interviewees. The matter has, however, been actively discussed in methodological literature in recent years, though no clear best practice has emerged yet (see Braun and Clarke 2021; Guest et al. 2020; Hennink and Kaiser 2022; Vasileiou et al. 2018).

4.4.2.2 Interview preparation and interview guides

Semi-structured interviews with a target length of about one hour were chosen as the default format for Method D data collection. The interviews were structured using previously prepared interview guides. For any interviewee who had not previously filled the RD-1 Method A survey, these guides were initially created by adapting the questions of the survey, retaining the same structure and content described in section 4.4.1.2, and reflecting the analytical lens in 3.3 – This was the most internally consistent and pragmatic choice, as the overall aim of the study had not changed. Alternations were then made to adjust wording and scope to the in-person interview setting, including the addition of broad and interpretative questions about the role of the interviewee and the municipality in the CN transition as well as challenges, needs, best practices, prospective solutions, and more, around CN governance and administrative capacities. Further alterations were made iteratively throughout the first three interviews based on practical

learnings, which included avoiding probes for difficult to comprehend, abstract clusters of capacities, and adding reoccurring probes from prior interviews to the interview guide. The English and German version of the interview guide template are enclosed (Appendix B.c and B.d). The interviews with subjects from Bratislava, Tallinn and Vilnius were conducted with the same people who had previously filled the survey. Bespoke guides were hence created for these three interviews based on a preliminary analysis of the survey replies (see Appendix 0 - 0); they generally emulated follow-up questions, clarifications and probes as described for in-depth interviews by Legard et al. (2003).

Ahead of the interview, subjects were further asked to sign an *Informed Consent* form they receive as a PDF, the content of which was adapted by me from multiple available templates from KU Leuven, as already described in Section 4.3.1 for use in the survey. See Appendix A.d for the employed template. All participants returned signed copies of the form, thus ascending to GDPR-compliant processing of the data and its scientific use, including audio and video recording and transcription. The signed forms will be retained by me for privacy reasons but can be made available to the universities should any issues arise.

4.4.2.3 Conduct

The execution of the interviews was completely digitally mediated. The coordination (e.g., scheduling and exchange of consent forms) was conducted by email³⁰. All 19 interviews were conducted and recorded online at an agreed-upon date and time, using the Microsoft Teams video conferencing software³¹.

I began each interview with the same protocol of preliminary steps: (1) audio and video check, (2) greetings and personal introductions, (3) agenda for the upcoming call, (4) reintroduction of the research project and aims, (5) informing the interviewee about the means and purpose of the recording, (6) prompting the interviewee to ask any open questions. The recording and body of the interview commenced after verbal assent by the interviewee.

My behavioural and tactical approach to the interviews followed the advice by Legard et al. (2003) and McGrath et al. (2019). As these are exploratory interviews, I orchestrated the interviews non-linearly, to leverage the interviewees organic train of thought. The topical emphasis usually progressed from the general context to CN governance in the city, to administrative capacities, and finally to the EU mission. In each area I structured

³⁰ This communication was conducted via my email account at WWU Münster (domain: uni-muenster.de).

³¹ The Microsoft Azure instance provided to students by WWU Münster was used for this.

Table 3 – RD-2 | Overview of interviews

Ref. ID	City	Country	Dur.	Lg.	No. Att.	Role and professional responsibility
[1]	Aarhus	Denmark	55 min.	EN	1	Non-leadership role in a climate unit, responsible for fund raising
[2]	Barcelona	Spain	56 min.	EN	1	Leadership role in a unit for technical planning around municipal strategies
[3]	Bratislava	Slovakia	58 min.	EN	1	Non-leadership role in a unit for climate, responsible for climate strategy
[4]	Copenhagen	Denmark	41 min.	EN	1	Non-leadership role in a climate unit, responsible for energy planning
[5]	Gävle	Sweden	55 min.	EN	1	Non-leadership role in a support unit for governance, responsible for climate strategy
[6]	Gothenburg	Sweden	60 min.	EN	1	Leadership role in a unit for the local climate program
[7]	Guimarães	Portugal	53 min.	EN	1	Non-leadership role in a unit for energy efficiency, responsible for project management and emission accounting
[8]	Heidelberg	Germany	40 min.	DE	1	Leadership role in a unit for climate affairs
[9]	Klagenfurt	Austria	34 min.	DE	1	Leadership role in a department for climate affairs
[10]	Leipzig	Germany	58 min.	DE	1	Leadership role in a unit for climate and sustainability, responsible for coordination functions
[11]	Ljubljana	Slovenia	32 min.	EN	1	Non-leadership role in an unspecified unit, responsible for circular economy
[12]	Reykjavik	Iceland	31 min.	EN	1	Leadership role in a unit for climate affairs
[13]	Stockholm	Sweden	45 min.	EN	1	Non-leadership role in an executive staff unit, responsible for climate coordination functions
[14]	Tallinn	Estonia	55 min.	EN	1	Independent advisory role for sustainability governance
[15]	Tartu	Estonia	56 min.	EN	1	Non-leadership role in a department for urban design, responsible for climate fund raising
[16]	Umeå	Sweden	50 min.	EN	1	Non-leadership role in a department for strategic development, responsible for climate strategy planning
[17]	Velenje	Slovenia	20 min.	EN	1	Non-leadership role in a unit for economic development and transition, responsible for EU project application and implementation
[18]	Vilnius	Lithuania	53 min.	EN	4	Leadership and non-leadership roles in a unit for climate neutrality
[19]	Warsaw	Poland	32 min.	EN	2	Leadership and non-leadership roles in a unit for climate policy and consultation

Key: Ref. ID = Reference ID, used as a cross-reference marker for statements made by the respective interviewee throughout the text; Dur. = Duration of the interview; Lg. = spoken language during the interview; No. Att. = Number of interviewees participating in the given interview. An extended summary table of interviews can be found in Appendix C.b.

content mapping using the interview guide, and transitioned to *content mining* on a section-by-section basis through both planned and ad-hoc follow-up questions (Legard et al. 2003)³². Questions in the guide were skipped, merged or re-worded ad-hoc, as deemed appropriate in the interview situation, both with regard to topical coverage and the available time of the interviewee. Occasionally, content mining around an artifact mentioned by the interviewee was prioritized.

Most interviews (n = 16) were conducted in English. All these interviewees displayed basically functional to native-level English proficiency. While interviewees' language proficiency occasionally detracted from their ability to precisely express complex or difficult to translate concepts and ideas, there generally was no language barrier that interfered with the execution of the interviews. A subset of interviews with interviewees in Germany and Austria (n = 3) was conducted in German language, as it constituted our shared native language. These language permutations did, by my subjective assessment, largely did not interfere with the organic flow of the interviews themselves. However, a certain degree of survivorship bias seems likely, presumably caused by the fact that recipients of the invitation email with confidence in their verbal English skills were more likely to agree to respond or agree to an interview in the first place.

See **Error! Reference source not found.** for an overview of all interviewees. Note that, even if not explicitly reiterated in their role descriptions, all interviewees are actively and directly responsible for aspects regard professionally responsible to the EU Cities Mission. **Error! Reference source not found.** hence specifies their role, without restating this point. To protect participants' privacy, the description was furthermore anonymized generalising from interviewees formal unit names and job descriptions.

4.5 Data Analysis

The interviews were conducted and digitally recorded via the Microsoft Teams videoconferencing platform, using its inbuilt functionalities. The interview coding process was preceded by multiple steps of data pre-processing. (1) First, the video recorded via MS Teams were downloaded to local storage. (2) The .mp4 video files were then transcribed into text format using the GDPR-compliant³³ automatic transcription service *f4x speech recognition*. The results were exported as .rtf files, which include an automatic mapping of and timestamps for the different speakers in the audio track. The accuracy of this transcription is imperfect, presumably due to the non-native English and

³² Compared to RD-1, the realized depth of content mining was limited, as the interviews did not build on a dedicated first content mapping stage such as the RD-1 survey (Method A).

³³ f4x is a German SAAS online audio transcription service by *dr.dresing & pehl GmbH* that provides GDPR-compliant audio transcription (see: <https://f4x.audiotranskription.de/>). End users have the inbuilt option to explicitly and in due legal form enter a *data processing agreement* (DPA) with f4x.

regional German accents of the various speakers. Considering the number of interviews and their respective lengths, manual transcription or a full correction of these automated errors was not deemed feasible; I hence chose this as the most pragmatic yet appropriate measure to ensure that full transcripts of the interviews could be enclosed in this document³⁴. (3) A round of manual editing on these raw transcripts was conducted to fix blatant errors in speaker recognition, the recognition of special vocabulary, and surplus filler words. These transcripts, with some additional intermittent manual editing done during the analysis process, are enclosed in Appendix E. Please note that parts of the transcripts, especially personal job descriptions, are redacted to ensure interviewee confidentiality. (4) The original-language transcripts and audio files were next imported into Atlas.ti, a software for computer-assisted qualitative data analysis. For coding and analysis, they were combined into so-called *multimedia documents*, an Atlas.ti function that allows for parallel work on both the video and corresponding text files. These steps were not necessary for the results of the survey responses (Method A); this data was directly imported into Atlas.ti using its survey response import feature, that allows for the mapping of questions, their question types, and the response text.

The analysis of this text data drew on relevant methodological literature for guidance (Castleberry and Nolen 2018; Charmaz and Belgrave 2012; Low 2019; Mayring 2015; van Thiel 2021), based on which a pragmatic research protocol implemented:

- (1) The first and primary round of analysis was conducted through continuous, iterative, and dialectic writing and clustering of memos and notes combined with the manual semi-open thematic coding on the original-language transcripts and survey responses. A code tree representing the theoretical dimensions previously embedded into the survey questions and the interview guides was used for seed codes (enclosed in Appendix D.b). Additional emergent codes pertaining to the research questions were created on all levels of the code tree as needed during this process. Throughout this process, some automated transcription errors were corrected based on the manual comparison with the corresponding video recording³⁵.
- (2) The corrected German-language transcripts were translated to English using the DeepL translation software. As an experimental addition to the manual extraction of insights, the recently Beta-released Atlas.ti AI-supported analysis tools *AI Coding*

³⁴ I will retain the original audio files until the end of the grading process. Should there be any doubt about the exact statements made by interviewees, a revised version or an anonymized audio track can be made available upon request.

³⁵ After initial testing of the Atlas.ti AI Coding and AI summary features with the raw transcripts, I concluded that refined transcription corrections done throughout the first coding cycle are required before the transcripts are either machine-translated to English or machine-coded. Their application on the raw text produced subpar results – following the AI principle ‘garbage in, garbage out’.

and *AI Summary* (ATLAS.ti Scientific Software Development GmbH 2023, 2023) were subsequently used to generate an supplementary open inductive coding of the entire data set as well as a brief machine-generated summary of each interview.

- (3) The results from steps (1) and (2) were integrated into the results as presented in section 5 through the incremental manual combination, clustering and consolidation of memos and codes.

4.6 Methodological Limitations

I will subsequently reflect on some methodological limitations of RD-2 as they are relevant for the sound interpretation of the findings presented below. Please see Appendix D.a for some further notes on the limitations of the qualitative survey, which have been omitted here.

As RD-1 was unfeasible, some of its upsides were unfortunately not realized in RD-2; Notably, the initially intended comparative case studies in method B would have attempted to triangulate for selected cases through complementary data sources such as city policy documents. Triangulation of methods, data, investigators and theories is a key technique to foster validity in qualitative analysis (Carter et al. 2014); In RD-2, internal data and theoretical triangulation is partially achieved through data collection in an open, overlapping conceptual space from different cities. Each included city was studied through the perspective of a single interviewee which, though purposefully selected for their role within the city, leaves room for considerable personal biases and contingencies, thus limiting per-case reliability. This is compounded by trade-offs in the protocol for identifying interview subjects (Method C), e.g., city website structure and quality, accessibility of the respective language to the researcher, diverging local traditions in advertising personal contact data of administrative employees, and many circumstantial factors influencing the baseline opt-in rate of invited subjects. Furthermore, the interviewee search method (C) has no explicit theoretical basis and might possess embedded biases in its ex-ante assumptions, e.g., about where in the municipal organization knowledge about the research subject is located, who to interview, how to navigate city websites, and more. The baseline likelihood of identifying quality contact data of study population subjects might further vary with local factors, such as city website structure and quality, accessibility of the respective language to the researcher, diverging local traditions in advertising personal contact data of administrative employees, and many circumstantial factors. Due to the funnel design, such biases would carry over into the interviews. The results should thus not be considered valid for any given city, but rather for conceptual dimensions across the cohort of respondents; A case-based interpretation of the results should thus be avoided. Methodological triangulation

using multiple intersecting data collection methods, although initially intended in RD-1, was furthermore not feasible in RD-2 for pragmatic reasons. Investigator-triangulation through multiple researchers was inherently not possible, as this master thesis is a one-person research project.

The interview guides and their underlying analytical lens were constructed from only an unstructured literature review; it might hence also possess embedded blind spots, which might originate, e.g., in my personal selection and confirmation bias, structurally disconnected segments of literature, overlooked relevant keywords, technical search engine features, and more. Any degree of theoretical saturation can thus only be approached in the theoretical dimensions that were explicitly included in the measurement instruments. Not all questions from the interview guides were further asked in each interview (due to, e.g., time-limitations or interviewees personal speech patterns and preferences), and the comprehensiveness of responses differed substantially, depending on how familiar and knowledgeable each interviewee was with which topic. A direct comparison of cases regarding topic coverage should be avoided.

Interviewees further displayed various degrees of formality, verbal and reasoning skills, and confidence. Although one-on-one interviews were requested, interviewees from Vilnius and Warsaw invited additional participants from their working environment of their own accord, respectively with at least one supervisor in the call (see extended interview overview in Appendix C.b) From my point of view as the interviewer, this added noticeable interpersonal power-dynamics to the call and might have limited how freely participants were willing to speak. Although advice on critical-realist question wording was consulted (Brönnimann 2022), interviewees likely tended to report on facts based on their fallible personal memory, present personal opinions as objective analysis and inherently possessed different predispositions to engaging with the interview questions in a precise, analytical and reflexive manner; all of which might detract from the validity of any non-interpretative details. The relative yield fluctuated considerably between interviewees, with experienced interviewees and interviewees in leadership roles conveying more dense and precise information.

I further ended up conducting an unexpectedly high number of interviews due to the high interviewee opt-in rate. This pushed the total to-be-analysed content beyond what was easily feasible within the given time and my personal capacity. The final analysis protocol reflects this circumstance; it relies on iterative case-by-case reading and writing of memos, AI-supported text analysis tools in Atlas.ti, and only limited, ad-hoc coding. This mode of analysis is suboptimal when weighed against a more rigorous two-step coding process, but given the large amount of text and lack of time towards the end of the work

period, I nevertheless deemed it to be an appropriate combination of sufficient analytical rigour while providing a actionable analysis method. While this certainly entail trade-offs in the case-based comprehensiveness and the hypothetical re-code reliability of the analysis, the chosen analysis protocol should have been able to realise a comprehensive concept-oriented mapping within the largest available sample. Nevertheless, it likely introduced its own path-dependency in the analysis, in the form of a bias towards those cases which were analysed first. This reflects in the relatively high prevalence of the first few analysed cases among the illustrative case examples used in section 5. To maximise transparency, the order of analysis is disclosed in Appendix C.b.

5 Findings

The following chapter presents the findings of this study. Please note that, interviewees are subsequently referenced using angular brackets in the same mode used for academic citations. The reference numbers for each interview can be seen in Table 3 – RD-2 | Overview of interviews (see p.43).

5.1 RQ 1.1: Governance and implementation challenges

This section presents findings regarding RQ 1.1: *Which (if any) are the main challenges that mission city administrations face in governing and implementing the climate neutrality transition?*

Most cities mention challenges related to horizontal integration and alignment between different parts of the municipal administration, with a range of underlying reasons: Firstly, interviewees report *diverging and incompatible priorities and mandates* within the public administration. Municipalities have different branches with regular, legally mandated tasks and responsibilities that they usually have been fulfilling for a long time. From the viewpoint of CNT units³⁶, the objective of climate neutrality frequently has a comparatively lower priority in other branches of the municipality [1,8,10,19]. Integrating climate goals into all branches' day-to-day activities is a major governance challenge [1,4,8,16,19]. As the Leipzig interviewee explained by way of example, if business development departments' goal is economic and employment growth, that might be incompatible with climate goals [10]; or the energetic restoration of buildings might lead to gentrification of city districts and rental price hikes [10]. Striking a socially just balance between the municipalities different mandates is difficult [10]. Some such hurdles are embedded in law and not easy to change, such as laws for the protection of historic buildings, which interferes with solar panels and energetic refurbishment [10].

More fundamentally, cities report *lacking internal agreement about whether change is needed in the first place*. On the leadership level, CNT units struggle with convincing politicians and top administrative decision makers that various climate actions are sensible [9,15]. In the municipal administration more widely, CNT units face a lack of understanding and acceptance of the need to change current processes [8,13,15,17] – operative-level civil servants reportedly do not have the correct mindset for the climate neutrality transition [17] and frequently do not share the same view on its urgency and priority as department leaderships and CNT teams [8]. In some places, fundamental climate-scepticism exists in parts of the administration [19]. Brining about attitude

³⁶ 'CNT unit', short for *climate neutrality transition unit*, is used here as a generic descriptor for the organizational unit whose central responsibility is the management of the climate neutrality transition.

changes in employees is highlighted a big challenge [17]. This has been linked to the *generally bad communicability of the underlying problem*: The magnitude of the climate crisis is difficult to heuristically understand as there are missing intuitive reference points, e.g., for whether a certain amount of CO₂ is significant [1]. The problem area has the connotation of being confusing and expensive [15]. The interviewee from Tartu notes that more communication personnel is therefore needed [15].

Finally, there are *structural inhibitors to horizontal coordination and communication*; The inhibiting effect of formal, vertical, siloed, and hierarchical organizational structures is mentioned as preventing or dissuading contract on the working level [8,19]. In some cases, interviewees further report redundant and of overlapping organizational structures [1,2]. In Aarhus, for instance, the parallel application of the MSP program-based management framework in parallel with existing line structures produced too many redundant meetings and steering committees on program level; the model will now be discontinued in favour of a re-focusing on existing structures [1]. Barcelona, similarly, describes conceptually overlapping formal steering committees for the EU mission and the local 2030 agenda [2].

Furthermore, a series of governance challenges related to administrative working methods and processes were highlighted: Some cities emphasised the *need for simplification* of internal coordination practices and processes, with too many unnecessary or complex processes and meetings [1,2,8]. Especially procurement processes are currently too complex and cumbersome [2]; An interviewee from Barcelona laments that some processes, especially procurement ones, are supposedly designed in a way that suspects everyone of corruption, which is “frustrating” and “brings the administration to a halt” [2].

Interviewees further report that *innovative or ICT-supported governance capabilities, where applied, have not always brought the desired improvements*. For instance, digitalization has not improved the effectiveness of processes in Barcelona [2]. An interviewee from Leipzig suggested that politicians rarely engage in data-driven policymaking, even when climate analytics and planning tools exist [15]. In Tartu, the problem lies not primarily in the availability of specific tools, methods, and resources, but in the fact that they remain unused [15]. One interview notes a general method-impact disconnect: There are many “fancy” methods and tools out there, but in practice they make little to no difference [1].

Furthermore, echoing a multi-level analytical lens, interviewees described various implementation and governance challenges related to municipal administrations’ relation to their external political, legal, and institutional environment: Multiple cities noted

tensions between autonomous local climate actions plans and the EU mission's requirements [2,10,19]. Barcelona, for instance, was reluctant to apply for the mission, as it had just approved its own Vision 2030 and the mission framework required recalculation of their emission goals and metrics [2]. Leipzig also had just committed to climate neutrality by 2040 before joining the mission; The resulting revision caused confusion and a sense of arbitrariness among citizens and was supposedly a threat to the credibility of climate action planning generally [10].

Interviewees further states that *municipalities are lacking the legal autonomy and sovereignty to make ambitious changes*. Municipalities have limited legal powers and responsibilities in their territory [3] but need the legal purview to make major trade-off decisions locally [10]. In Germany this is being escalated through a German national city association but a difficult and deeply institutionalized hurdle to overcome [8,10]. This is juxtaposed by some cities' *lacking national-level policy intervention* in some countries, such as a *legal obligation to pursue climate neutrality*: Spain, for instance, has no national law for city-level climate neutrality, which causes implementation difficulties and uncertainties in Barcelona [2]. In Germany, climate protection and neutrality are not a necessary legal obligation for municipalities from the national level; where that the case, cities would incur penalties or mandatory mitigation action if the climate goals were not reached [10]. This is, in contrast, the case for other environmental objectives such as local air quality [10]. In contrast Gävle emphasises that coordination with higher levels of government is beneficial and create a more supportive policy environment, but they are ultimately not dependent on them [5].

This the resulting dependence on higher levels of government is magnified by *diverging political interests exist in multi-level political systems*; It is difficult for cities to coordinate and assert themselves with regional and national governments [2,3,17,19]. For Spanish cities, at least five superseding governmental levels are involved, with frequently unaligned goals, which is further reinforced by the political conflict between Spain and the Catalonia region [2]. The respondent from Bratislava laments a chronically difficult relationship with the national government due to different political leanings [3].

The effect of *political uncertainty and volatility* seems to be especially pronounced on the *local political level*. Any administrative actions are ultimately up to the local political approval [5]. Municipal administration finds it difficult to adapt to changing political requirements, especially following a prior period of policy stability; For instance, a change in government composition or a new mayor can radically shift government priorities, including climate targets and underlying values [2]. Elections or similar political changes can further disrupt internal coordination structures, such as meting

cadence or reporting methods and recipients [2]. Unless mandated by law, especially on higher level of state, a new local government could easily dissolve the climate unit [10]. Insufficient and volatile local political support is hence a risk factor for CNT units. Uncomfortable and zero-sum decisions are only possible with active political support [9]. Otherwise, city administrations might risk immediate public backlash and bad press, for instance, when parking spaces are lost [9]. For the same reason, ambitious concepts such as the car-free city need to be explicitly politically supported and enacted; It is insufficient to advance them on the administrative level, one interviewee claims [10].

Additional complexities are introduced in metropolitan regions through a supralocal governance level. The City of Barcelona, for instance, is city is part of an urban continuum. A self-governing organization exists for the functional coordination of different metropolitan municipalities; it is presided over by the Barcelona city council and involves 36 local authorities and the Catalonia regional government [2]. The interviewee states that considerable work is put into coordination on this level, as many domains (labour market, housing, ...) do not make sense on city level anymore [2].

Another set of mentioned challenges is related *inadequacies around the available capacities within the city administration*. These capacity-related aspects are further elaborated on below, in sections 5.3.

Furthermore, some interviewees emphasise that the importance of the choice and efficacy of the *mitigation measures and policy*: Matters of governance are secondary to the technical problem of materially reaching climate neutrality [1]. Many internally consistent measures will not deliver a meaningful contribution to GHG reduction, even if implemented and governed correctly [1]. The scale of policy tools, so far, is not appropriate to the task: If the transition is taken seriously, the supposed constant debate about small technicalities will not lead to climate neutrality [10].

5.2 RQ 1.2: Governance structures and instruments

This section presents findings regarding RQ 1.2: *Which (if at all) administrative governance structures, mechanisms and strategies are public administrations in mission city adopting in pursuit of CN, and why were they chosen?*

5.2.1 Organizational structure and scale

A dedicated permanent organizational unit or department for central internal and external coordination and implementation of climate strategy and action seems to exist in almost all cities [e.g.:1,2, 10], some of which have been created in recent years [13,15,18],

or is in the process of being created (e.g., from Q4 2023 in Bratislava) [3]. Multiple cities report having dedicated deputy mayors for climate or transition affairs [3,4,15,19]. These structures seem to usually emerge in a confluence of various locally distinct triggers; for instance, in Leipzig climate topic was upgraded following “declaration of climate emergency” in 2016, but it has its status as an independent unit only since 2021 [10]. In Guimaraes, permanent public-academic synergetic structures were established after the city actively sought academic support in 2013 [7]. In some settings, overcoming the political, financial, and institutional inhibitors to establishing such an organizational unit was challenging [3,18]. In almost all cities, some local law, policy document, or executive strategy for sustainable urban development (framed, e.g., as a 2030 agenda, smart city strategy, climate action plan, etc.) serves as the umbrella policy framework that enables, guides, and mandates the work and existence of a climate unit or department [e.g., 1,2,8,10,12,17].

The organizational unit responsible for climate transition planning, coordination and implementation is typically *located* either in the urban planning branch [1,15], environmental branch [2,3,8,10], a combination of the two areas [12], a dedicated strategic management department [14], or within the proximity of the mayor’s office [14,15], e.g., in the form of a staff office. Sometimes there are multiple competing climate-change-related units or centres of control for the governance of technical (e.g., emissions accounting) and non-technical topics [2], or conceptually similar line and staff units, such as in Tallinn [14]. Some CNT units additionally have ‘satellite’ officers of the central climate unit stationed in different divisions of the municipality [10] or intend to do so [12].

The *team size* of these transition varies, but the CNT coordination unit seemingly tends to be within the single to low two digits: The Aarhus Climate Secretariat, for instance, has twelve members, but is set to grow to 17-18 in 2024 [1]. By the interviewers estimate, around 100 people are working on climate-related topics in the Aarhus municipality [1]. Barcelona initially had a team of three employees, now there are five, but is merging with a larger strategy unit elsewhere in the administration [2]. Similarly, Tartu has twelve people for the entire department of Urban Design, wherein climate neutrality transition functions are located [15]. Before climate emergency was declared Leipzig had two dedicated staff in the CNT unit, now there are eight in the core CNT unit and six additional “satellite” climate-protection managers in other branches, especially in those related to procurement [10].

Such climate-action oriented structures seem to have been generally present in cities’ municipal organization before joining the EU mission and continue to exist independent

of the EU mission [1,2,4,7,10,13]; The mission seeming has not induced major procedural and structural changes in cities with an active pre-existing climate change mitigation program [4,7,13]. The EU Mission sometimes started not in a climate unit but in fundraising or EU-project related functions around the application to the EU call [1, 2] as some cities have specialized such functions. As advised by the EC and NZC, all cities set up a form of multi-disciplinary, cross-departmental [7], ‘Transition Team’ or similar steering-committee for the Cities Mission [e.g.:1,2,7,10,11,12], that coordinates the mission activities externally and within the municipality [7,10]. As described by an interviewee from Guimarães, this team is responsible for managing and governing the EU Mission, currently especially the creation of the CCCs [7]. The transition teams seemingly tend to form from existing staff [1,2,7,10] that was sometimes also engaged in the mission application phase [1,2,10]. In other cases, the creation of this transition team constituted the initial formation of a CN work group and might transition into a more general working structure going forward [11]. After successfully joining the Cities Mission some transition teams were expanded to the creation of the climate city contract [1,2,]. In other cases, mission application and implementation are predominantly handled within existing climate and sustainability units in the line hierarchy [1,9,10,15], with the CCCs potentially constituting additional workload without added resources [10]. In these cases, collaborators around the mission do not form a permanent structure but a project-oriented working group [1, 10].

Within cities’ municipal administration more generally, *different climate action-relevant implementation responsibilities seem to be distributed* among traditionally reoccurring subject-specific organizational branches, relating to material domains of responsibility (e.g., departments for energy, housing, mobility and transport, environment, waste management, water management etc.) [1,3,2,9,10,14]. Other cross-functional specialized units tend to exist and be involved in transition governance, e.g., for EU affairs, citizen engagement [8], IT [1], digitalization [10], data and innovation [3]. In Leipzig, for instance, the Smart City unit is involved in the creation of the CCC [10]. In German and Austrian cities, municipal utility companies further seem play an important role for the provision of heating and traffic, making them close partners of the central climate governance unit [10, 9, 6]. The central transition unit usually interfaces between these functional areas, overseeing horizontal integration, self-governance measures and processes such as procurement standards, special project-based work, etc. [10,15]. In multiple cities, the organizational units responsible for the CNT were moved within the organigram [10, 15], responsibilities reallocated to different units [14], or teams merged into existing structures across domains [2]. In Barcelona, for instance, the technically oriented climate governance department, which applied to the cities mission, is being merged into an existing unit controlling climate policy and strategy [2].

Such permanent organizational structures are usually supplemented *by semi-permanent, cross-departmental forums and steering groups* for internal horizontal coordination and cooperation (see below). Stockholm, for instance, put in place such a group for horizontal collaboration with department and company representatives [13]. In other cases, branch officers exist in relevant other departments to support horizontal coordination [10].

Another salient structural artifact are examples of *public-public outsourcing* into municipality-owned companies or agencies [2,4,9], which might be autonomously responsible for parts of cities' mitigation policies and implementation, such as the energy agency in Barcelona [2]. An innovative use of such public-public outsourcing and an example of the resulting configuration can be seen in the case of Klagenfurt: The city has multiple municipality-owned companies that are executively managed by the head of the climate division; This includes a project management agency (IPAK) used to flexibly acquire project-based personnel and train new employees outside of normal PA hiring structures [9]. Besides project management, the IPAK is offering climate grant and funding management services for public and private stakeholders in the city and is furthermore launching a Climate Lab [9]. Similar innovation 'labs' (laboratories) are mentioned by multiple cities as structurally spun-out prospective incubators of innovative policies and technologies [1,4,9]. Klagenfurt further has outsourced all public transport into a municipality-owned company managed jointly by the local utility company and the climate department [9]. This was in part done to circumvent requirements for EU-wide procurement [9]. Thirdly, to energetically upgrade public roof spaces in an efficient and pragmatic manner, the city transferred these roof spaces into yet another public company [9]. The head of the climate unit acts as the CEO of these public companies [9]. While establishing these companies took about one year each, the interviewee reports long-term payoffs, as these company structures are much less rigid and slow than public administration structures [9].

5.2.2 Oversight and reporting

Interviewees state that there either is some form of existing *operative reporting for climate action*, or a controlling process directed at the city council or government [1,7,10,15] or that there should be [12]. Operative progress reports towards executive decision-makers, for instance, are made on a monthly basis within the standard procedures [7] as well as through the corresponding department's general annual reporting [15]. In Leipzig, implementation reports are released publicly with every two-year household towards the city council and interested public, reporting on the state of work and problems [10].

Where interviewees reported that the *emission accounting and reporting processes* are actively and consistently employed, they seem to differ locally. In Leipzig, for example, the digital ‘Climate Planner’ tool, implementing the BSKO reporting standard (see Hertle et al. 2019), is the key GHG monitoring and reporting tool, the results of which are publicly published through the above-mentioned progress [10]. Tartu reports emissions only through the Covenant of Mayors and ICLEI reporting schemes to said institutions, which is described by the interview as tedious – emission reporting towards the city government is not done [15]. Multiple cities mention using the CoM emission accounting framework (Global Covenant of Mayors 2018). Conversely, in Aarhus, each department of the municipal administration receive yearly sovereign targets and must report on three factors: Implementation of projects from the climate plan, the amount of money invested in climate action, and the CO₂ emissions saved thereby [1]. Upcoming changes are set to make these currently soft targets very specific and quantifiable [1]. This model apparently reflects deliberately distributed responsibility and power structures, where each department has its own goals [1].

Both the interviewees from Leipzig [10] and Klagenfurt [9] further highlighted the use of *climate-impact assessment schemas* (DE: ‘Prüfschema’) – audit forms to be filled by all departments during the submission of proposals to the city council. These are Excel-based tools that assess the prospective climate impact through a traffic-light-system [10, 8]. ‘Red’ proposals are then reviewed with the climate unit and amended [9]. This reportedly has a signalling function towards the city council on whether something should be funded [10, 8]. The system has limitations though: Interviewees reflect that there is no way around necessary infrastructure repairs, and generally no binding consequences for a negative assessments [10]. Nevertheless, the absence of such a control mechanism on municipal spending and procurement was negatively noted by Tartu [15].

5.2.3 Internal coordination, cooperation, and communication

Most cities report having some form of CNT-related *internal communication and coordination structure* in place, with some few exceptions [e.g.:15,18]. Some cities mention the general intention or vague plans to reform their internal steering models and ways of working [5,17] or internal communication process [11]; other do not see this as a priority or practical possibility [8], or simply do not have any established climate transition-related coordination processes yet [18].

Effective horizontal linkages, integration, and the overcoming of organizational silos between different municipal departments are considered of utmost importance by many interviewees, and touched upon, directly or indirectly, by all. Horizontal communication and coordination with other departments is considered a prime managerial task for the

permanent climate transition unit [3,5,9,15,17] or similar consortium [7]. One interviewee in a leadership role emphasised the informal communication between decisionmakers as ultimately the most important channel [9]; a sentiment echoed by others for the working level [3]. Another one states that outside consulting can aid in facilitating collaboration in the city administration [12].

Additionally, one or multiple *horizontal coordination group* exists in most cases [e.g.: 2,10,13,16]; There is gradient in used formats: from working groups and regular meetings for pragmatic technical-level collaboration [3,7,13] to high-level formal forums for interdepartmental coordination and deliberation around organizational politics [2,8], usually with the involvement of a mayoral-level decisionmaker [8]. An illustrative example of such a formal forum can be found in Barcelona, termed ‘co-responsibility spaces’: It is a public affair, with formal protocols, a strict agenda, formal departmental representation, and a regular meeting cadence [2]. The integration of the EU Mission in this format is still in flux; the interviewee reflects that a joint forum for the EU Mission and the local Agenda 2030 might be overloaded but would also heighten the political value of participating, thus improving chances of broad participation [2]. The interviewee describes intense negotiations in the spaces, but that they ultimately delivered good success in designing agenda 2030; The same might thus be needed for EU Mission, as it involves the core distributional issues of finance and funding [2]. In contrast, less formal cooperation and working groups between companies, academia, and administrative departments exists, for instance, in Stockholm and Guimarães [7,13]. These are pragmatically organized as periodic meetings [7]. Such low-formally communication formats are introduced to improve interdepartmental coordination and collaboration, the scalability of solutions, and effective implementation [13]. On this level, ordinary project-management methodologies are commonly employed [7]. Some cities support such decision-oriented formats with broad, information-oriented internal communication measures, such as townhall-style internal information and education sessions [11,17] and newsletters [11]. Generally, flat and horizontal organizational and communication structures are seen as benefitting direct communication to higher administrative levels [1,9] and reportedly ensure that best ideas end up in local decision-making arenas, thereby benefitting a fact-based mode of collaboration [1]. Breaking up silos can further improve communication flow, aid in build networks, and thereby improve collaboration [7]. In day-to-day work this takes the shape of direct person-to-person information exchange outside formal structures [2,7]. One interviewee stated that it would be good if this mode of communication was more engrained in work practices, but this change is limited by regulatory constraints [7].

Outside decision-oriented, permanent organizational and coordination structures, various other interesting *configurations of steering and coordination models* were described on the operational level. Firstly, project-based administrative cooperation [1,7,8,10]: In this mode, temporary and purpose-specific collaboration structures are created on the basis of specific projects [1, 10]. The coordination and communication between branches of the municipality occurs within these structures and the specific scope of the project [1, 10]; Examples are upcoming EU grants and calls [1], or large municipal projects such as the ongoing municipal thermal design initiative in Germany [10]. One interviewee from Leipzig states that usually no central orchestration of different projects occurs [10]. However, each CN-relevant project has a project coordinator, who is delegated from the climate transition unit and applies standard project-management practices following a default municipal project management method or standard [7,10]. Secondly, a reoccurring alternative model is the semi-permanent arrangement of the climate transition subject area, and municipal development activities more broadly, into overarching portfolios or programs. Aarhus tested the MSP ('Managing Successful Programmes') method to coordinate activities through a system of nested programmes and projects [1]. This model, however, will likely be decommissioned due to excessive coordination overhead and the resulting need for simplification [1]. The reverse was reported for Stockholm: A cross-departmental 'portfolio approach' is currently being introduced in lieu of the current line-management-based decentralized one [13]. Each such portfolio will have one coordinator, who creates a core group of collaborators from different departments and companies [13]. Thirdly, Guimaraes reportedly has been practicing a unique networked ecosystem-based governance model since 2013, which has integrated actors from public administration, academia, and local companies around a 2030 city development agenda [7]. Operative work is done in multiple different function-oriented multi-stakeholder cabinets (e.g., for energy efficiency), orchestrated by a local university professor, and advised by an external council with representatives from the local stakeholder ecosystem [7].

Interviewees mention no clear-cut examples of specific procedural adaptations in favour of internal governance. Processes, workflows, and decision-making mechanisms are generally formalized and inherently part of constitutional and democratic administrative action – hence there is little room for innovation [8,10]. One interviewee finds it is difficult to say what climate neutral processes are, as one is supposedly bound to existing processes, and only the content of processes can feasibly change [9].

5.2.4 External coordination, cooperation, and communication

Actively managing relations with outside stakeholders is emphasised as very important by most cities [e.g.:1,8,9] for the PA to secure formal mandates, funding, and general support [9].

Local cooperation with *companies and non-profit organizations* is a salient topic among interviewees [e.g.:1,2,10]. Interview report engaging with such stakeholders under different degrees of formality: Climate units sometimes have good and informal pre-existing relations with local environmental organizations and grass-roots environmental movements [2, 10]. The Mission, conversely, calls for more formalized relation with and commitment by a larger group of stakeholders through the Climate City Contract (CCC) [2, 10], which provides a new vehicle to involve additional stakeholders outside the domain of the city (e.g., hospitals, companies, universities, ...) [10]. In some cities, formal consortiums are being organized [2] and external organizations and companies are being reached out to for individual commitment [2,10].

Another crucial dimension of external coordination is *city networks and inter-city collaboration*. City cooperations exist on multiple institutional levels: Frequently noted are European-level umbrella organizations (such as Climate Alliance, Eurocities, ICLEI, EU Cities Mission) as well as national city associations and cooperation with other cities participating in the EU Mission [1,2,4,5,10]. Such national and international cooperation can reside in different units, e.g., Leipzig handles Eurocities via their unit for international cooperation and national and regional cooperation via climate protection unit [10]. Denmark [1], Spain [2], Sweden [4,5] and Germany [8,10] have national networks of mission cities with different degrees of formality: The so-called Climate Alliance exists in Denmark, which takes joint decisions such as the use of the C40 reporting format. ‘City-ES’ (spelling unclear) is an informal such format in Spain, mediated through Polytechnic University of Madrid via EU Klimate-KIC to foster cooperation between mission cities: Seven Spanish mission cities have been coordinating a talking almost every week and a summer school was organized in the same context [2]. The interviewee from Heidelberg mentions that, through the EU Mission, the German group of mission cities has gained direct access to relevant personnel at the responsible German federal ministry – A novel coordination and escalation channel which is now continued through a representative [8]. The value of city peer networks for knowledge sharing seems to partially derive from personal interaction, experience and learning of the individuals involved [13].

Interviewees emphasise the important role of *communicating with citizens* around the implementation of climate actions [4,8]. In public communication, usually success stories

are emphasised [10]. In their relationship with citizens, interviewees report that municipality communicates to citizens, but also the other way around: Some departments receive frequent citizen questions around CN-related issues (e.g., in Aarhus recently around a harbour enlargement) [1]. Leipzig notably employs a deliberately constructed brand – ‘Leipzig ist Klimabewusst’ (en: ‘Leipzig is climate-conscious’) – for its public communication, which is used to frame all municipal actions related to climate neutrality across departments (e.g., the opening of a new bike lane) [10]. The local public transport advertises with climate neutrality [10].

The interviewee from Aarhus poignantly notes the dual nature of good external stakeholder relations: For the moment, the unification behind one plan is a desired success criterion, and most local stakeholders support climate action; But, by his assessment, there must be a point where this is no longer viable, as universal support it is an indicator that truly effective GHG mitigation measures have not yet been deployed [1].

5.2.5 Funding and finances

Municipal budgets seem to play a comparatively static role for the funding of the climate neutrality transition; Interviewees consider them limited and inflexible [1,9,10]. Spending reportedly follows the prescriptions of a local climate action plans and is prioritized by the city council based on suggestions and advice from the municipal administration [1,15]. In contrast, CNT funding and financing sources outside the municipal budget - e.g., from the EU, national level, or companies - were highlighted to play crucial or even dominant role in almost all cities to realised and scale GHG mitigation measures [e.g., 1,6,15,17]. Academic and city network cooperations can ease and enable access to such funding [6]. In some cities, third-party fundraising is the core job activity of the person managing the EU Mission [1,15]. A notable governance artifact was described for the Aarhus municipality, where CNT funding takes a mixed and diversified approach with high autonomy and responsibility within departments: one third of the budget needed to implement the local climate strategy is directly dedicated by the city council, one third autonomously reallocated by branches of municipality from their usual budgets, one third acquired through external fundraising by climate office (e.g., EU grants) [1]. Thereby, Aarhus has reported over-funded individual projects – but the interviewer acknowledges that this is an abnormality rooted in the cities’ privileged socioeconomic situation [1].

An increasingly important role seems to fall to *Public Private Partnerships (PPP)*. Cities are currently actively developing such co-investment mechanisms with third parties [2,6,10] such as companies [3]. PPPs, and the leveraging of private funds generally, are recommended by NZC as part of EU mission [2,10], but are traditionally and currently not common in the cities whose interviewees addressed the topic [2,3,10]. Nevertheless,

especially for large scale projects, in interviewee from Gothenburg considers it reasonable that investment risks need to be shared by the municipality [6]. In Leipzig, PPPs are also approved of on paper but not yet used in practice; The city usually employs only normal loans are used, not financial instruments suitable to leverage public investment, such as contributions by funds or large investors [10]. To raise the large investment sums needed for the climate neutrality transition, it is nevertheless seen as necessary to leverage public funds with private funds [10]. Expected levers seem to lie between 1:3 [2] and 1:9 [10]. In Barcelona, they are seen as successful recent administrative innovation, as much fewer public seed money than expected was needed to attract significant private capital - private capital is supposedly highly willing to invest in the climate neutrality domain [2]. Such public-private financing partnerships are thus a way of accelerating climate action [6] and to raise funds in cases where cities receive little financial support from national and regional sources [3].

The *strategic use of procurement* is furthermore mentioned as an important governance tool for achieving climate neutrality [3,12] by including sustainability aspects in tendering decisions. Barcelona has previously used a *Call for Innovation/Innovation Challenge* to tender problem-based solution development instead of procuring an off-the-shelf solution in search of cost-effective but powerful EV charging stations [2]. In Tartu, coordinated via the Estonian national government, pre-commercial procurement was used to elicit the development of market-ready of prefabricated roofs for use on municipal buildings [15].

5.2.6 ICT and infrastructure

Different cities mentioned ICT use-cases and commensurate applications used by their municipal administrations in support of governing the climate neutrality transition: Velenje is introducing a digital platform for both internal and external use, on which climate actions, their respective work progress, and their timelines are visualized [17]. The platform will aid both in horizontal internal and public communication [17]. Cities mention a broad list of sensor-supported digital monitoring and real-time analysis tools: In Leipzig, Digital Twins are being built for traffic and energy systems, incorporating geographical information system (GIS) applications [10]. They are intended to provide a better overview, and make project execution more efficient, especially when working with third parties (e.g., in thermal design) [10]. Energy potential and requirements analyses are hence conducted digitally [10]. Innovative applications for monitoring of smart grid and smart energy buildings are explored within the ICT branch of the Aarhus municipality, also relating to an EU call [1]. Tartu has city-wide sensors and a public data platform, tracking the flows and modal split of citizens' mobility in the city [15]. However, it has been emphasized by one interviewee that data-driven decision-making

does not follow automatically from its availability; in convincing politicians, it can – for tactical reasons - be more practical to use reputable outside intelligence [15]. Specialized commercially available software solutions are furthermore used to support emission accounting (e.g., ‘Klima-Planer’ in Leipzig [10]) and the mapping of land use (e.g., ‘Climate Atlas’ in Umea [16]). The previously mentioned climate-impact assessment tools used in Leipzig and Klagenfurt for procurement and investments are also digitally enabled [9,10]. Basic digital office tools are now commonly used in Leipzig for workshops, meetings, and engagement; This, however, supposedly changes little about the processes and content of administrative action [10].

The deployment of these tools seems to be a collaborative effort: In Leipzig, the data needed for reporting and decision-making is being digitalized in collaboration with Digital City unit [10]. Bratislava has a dedicated Data and Innovation department which develops such solutions in-house [3].

5.3 RQ 2.1: Capacity requirements and availability

This section presents findings regarding RQ 2.1: *Which administrative capacities do mission cities need for the climate neutrality transition and are they currently available?*

5.3.1 Role of the municipality:

To contextualized administrative capacity needs, interviewees were promoted to characterize the role they see for their municipality in the transition to climate neutrality. Some interviewees affirm that municipalities and climate transition units within them play a n important role [1,4,17]; This role entails to organize and steer the transition, coordinate with different departments and external partners, ensuring that initiatives are implemented effectively, reporting and monitoring progress climate goals [4] and public communication and engagement [8]. Cities can be a frontrunner and role model through their own procurement [8,10, 12], transportation initiatives [12], collaboration with businesses [12,17], and operation of its buildings [10].

However, inherent contradictions and limits were indicated my two interviewees from Aarhus and Leipzig: Municipalities can influence only a small share of emissions directly, such as those produced by municipal operations, and hence have a limited potential impact on decarbonization [1,10]. Municipality can try to sensitise and mobilise the public around climate change mitigation actions, but this has limited effectiveness [10]. They hence emphasise that a big part of responsibility lies in the consumption and general behaviour of citizens and companies [1,10].

5.3.2 Capacity needs

This section delineates the capacity needs addressed by the interviewer along the trinity of competences, capabilities and capacities as proposed by (Vincent 2008).

5.3.2.1 Skills and competences

Universally, cities seem to link competences and skills to individual staff members possessing those skills; they hence characterized various persona-like personnel skillsets that are particularly needed for the implementation and governance of the CNT: Firstly, Stockholm emphasises the value of, i.e., bureaucratic hackers (Nitze and Sinai 2022): *Innovative thinkers among municipal bureaucrats* are needed, who both understand administrative processes and policies well enough to “stretch” them, hand have the assertiveness to make use of this skill [13]. Secondly, staff members with *project management skills* are important for the operative implementation of climate neutrality projects [4,11] and are important for coordinating the actions of different actors [4]. Project managers particularly need the ability to operationalise climate actions and objectives, and to break them down to the level of individual employee [9]. Thirdly, individuals with soft skills such as *leadership abilities, confidence and communication skills* were further mentioned as crucial [18]. The interviewee from Bratislava emphasises that especially the combination of technical and leadership skills within key individuals is important; They have sufficient competence in each domain but lack integrative actors who simultaneously have deep technical knowledge and are good leaders, strategists, and communicators [3].

A range of generally required skills and competences were mentioned beyond these specific skill profiles: In terms of planning and coordination competences, integrative and system-level analytical skills are needed in energy and mobility management, emissions reporting, and the integration of the economy and climate domains [15,16]. Barcelona highlights that the filling of the Climate City Contract templates is demanding, requiring both conceptual and technical knowledge [2]. More generally, the interviewee from Stockholm mentioned that city administrations need appropriate and innovative working methods and collaborative capacity for the climate neutrality transition [13].

Interviewees put a strong emphasis on *application-oriented domain and technical competences*, which are needed in areas such as urban planning, green and blue infrastructure, transportation, waste management, circular economy, data and innovation, and finance and funding [3]. Up-to-date technical knowledge and skills are especially needed to conceive contemporary solutions using new and contemporary technologies in mobility, building, energy production [2,3]. Corresponding technical competences for

concrete climate action implementation are needed in municipal street-level technical staff, for example for the redesign of road crossing, the installation of photovoltaics on public buildings, energy-efficient construction etc. [10]. In Klagenfurt, this is an evident shortcoming: Certain in-house GHG mitigation actions, such as smart streetlights, have proved impossible after several attempts due to the internal absence of the needed technical skills [9]. However, such specialized and technical skills are not easily available on the labour market [2,15].

Different cities further have an acute demand for specific skills characteristic of their needs in local climate action plans: Tartu seeks mobility managers who not only have technical knowledge about construction but understanding mobility on a systemic level, as this is the area that the municipality has the most influence over. [15]. Bratislava, similarly, seeks energy managers [3]. Leipzig needs climate-aware procurement competences; Although there are ongoing efforts to sensitize procurement staff for climate-relevant tender assessment factors, this competence is generally not yet well developed - substantial additional know-how is needed [10]. In Copenhagen, specialized frontier knowledge is further needed to holistically understand and plan consumption-based (scope 3) mitigation measures [4]. Aarhus seeks to develop climate-transition specific quantitative and qualitative analytics competences [1]. Stockholm seeks innovation leadership competences [13].

One interviewee notably relativised that, within the context of the Cities Mission or other EU projects, the municipal administration does not need all required knowledge in-house, as some are made available by outside partners such as the European Commission and NetZeroCities [7].

5.3.2.2 Processes and capabilities

Interviewees described or alluded to several aggregate-level abilities that their municipal administrations need and should develop at large: Firstly, interviews note the importance of effective procurement processes [2]. The Barcelona interviewee, for instance, emphasises the need to improve his city's procurement capabilities, as an accelerated pace be required to scale mitigation solutions over coming years [2]; Easier and less cumbersome processes would allow for faster work [2]. Cities furthermore seem to benefit from the ability to develop and execute funding and financing plans for projects: Since Klagenfurt has developed the capability to not only identify viable projects but plan their financing, involving other stakeholders and proceeding to implementation has reportedly been considerably easier [9]. Interviewees further highlight city administrations' ability to productively work in public-private partnerships as important: Stakeholders such as private investors and consultants are crucial to raise funds and

leverage private-sector technical skills [2]. This puts certain demands on the municipal organizations: For PPPs, the need for mechanisms to balance the public interest with a fair and legitimate partnership are highlighted [2]. Municipal public servants are generally very inexperienced in the PPP and private financing area, reportedly, so no one dares to touch the subject in Leipzig [2,10]. For the work with consultancies, the internal capability, based in in-house competence and experience, to criticize and evaluate the work results of external consultancy on equal footing [7]. Lastly, to tackle the climate crisis, city administration needs the capability to handle wicked issues [2]: One interviewee states that his organization's agility hits limits when they are confronted with wicked issues that lie outside the scope of well-known routines and don't have known answers. To overcome the resulting blockage, the administration needs the ability to – despite all uncertainty - conduct diagnostics and search for solutions [2].

Furthermore, there are certain capabilities that seem to be of notable value especially within cities' climate transition unit: As explained by the interviewee from Guimarães, these units primarily need the ability to dynamically disrupt structures and processes in the municipality, break open silos, and coordinate horizontally instead of vertically [7]. The transition team is the core motor for this disruption, which, in Guimarães, happens predominantly ad-hoc [7]. In their opinion, this ability is acquired by team members through experience on the job [7]. Climate transition units need the ability to 'mainstream' climate concerns in as many processes and documents as possible by being present in other departments and finding compromises [3,19]. Warsaw, to this end, developed the capability to provide internal consulting and actively support other departments in integrating emission mitigation concerns in their work [19]. This is further echoed by the Umea, who highlights the ability to integrate a climate perspective in economic policy and planning, specifically through associated climate controlling roles and functions in the economics department [16]. CNT units' ability to horizontally mediate and integrate between actors is crucial to striking a balance between having everyone on board and not wasting resources [3].

5.3.2.3 Resources and capacity

Lastly, interviewees emphasised important resources and capacity needs – here used in the sense of required quantitative amounts or volume – that cities need for their transition to climate neutrality.

Almost all cities emphasise that a substantial amount of money - and universally more than currently available - is needed for a successful transition to climate neutrality. Large sums are especially needed to fund infrastructure changes and the development of the underlying technical capability to provide climate neutral public services [1,2,3,10]; A

municipal district heat-pump, which is under construction in Aarhus, for example, will cost about two billion Krona [1]. According to the interviewee from Leipzig, an internal estimation by the European Commission, shared in the context of the EU Mission, allegedly sees a funding requirement of ca. 1 billion € for each 100,000 citizens to reach climate neutrality [10]. In contrast, the climate plan in Leipzig is funded with only ca. 300 million in total [10]. Considerable additional funding is thus needed to scale decarbonization to a meaningful level [1,4,10,12]. Interviewees explain that the difference cannot be locally raised through tax-based municipal households, budget redistribution or the profit earned by public companies [9,10]; Another interview claims that all cities in the mission face such financial constraints [7]. From the perspective of the interviewees, a sharing of the financial burden with higher levels of government and third-party investments is thus required [3,10]. In Bratislava, however, EU funding is not sufficient for the climate neutrality transition, although it already predominantly relies on this source of funding [3]. Cities this has substantial need for bolstered monetary resources and financial capacity.

Cities further report lacking human resources. The additional demands of the climate neutrality transition increase the workload for individual employees, an interviewee in Velenje notes [17]. The Leipzig interviewee demands that the quantity of available human resources, i.e., the number of available working hours, must hence scale across functions in proportion to raised funding and newly entered projects [10], or instance, for the planning and implementation of infrastructure processes, or the handling of administrative approval and procurement processes – i.e., to spend the raised money [10]. Currently, there are not sufficient personnel resources in Leipzig to make use and spend all the available funding; They are generally considered far from sufficient to reach climate neutrality by 2030 [10]. Some interviews further lament that their climate transition unit has disproportionally low human resources when compared to other branches of the municipality and compared to the topic's nominal salience: Although the topic is considered important politically it usual has much less staffing than other areas [1,10,13]. The interviewee from Leipzig states that, if taken seriously, 200-300 people should work in the area instead of 12 [10]. In Tartu, the available staff barely gets around to working on the CCCs [15]. Various degrees of staff shortages are also mentioned in other cities [e.g.:3,8]. However, staff shortages are not universal: Some cities report that there are sufficient personnel in strategic on coordinating functions [1,10]. What is instead needed is a higher number of engineers and technical personnel for the implementation of projects [10,18], such as architects [10], civil engineers [10], energy engineers [3], etc.

Furthermore, some cities report that a sufficient amount of quality data and the capacity to analyse in reliably is an important capacity [7,18]. A sufficiently scaled combination

of analytical models (e.g., digital twins) and sensors in the field (e.g., smart meters) are needed to have an accurate overview of the state of things [10,15]. While mature analytics capacity exists in Guimarães, it reports being stretched thin and that the municipality's climate analytics function could use more manpower [7].

Finally, insofar as it can be characterized as a resource, Vilnius emphasises that sufficient will is needed for the transition [17].

5.3.3 Capacity availability

Where addressed, cities report that especially the needed administrative capacities are available regarding strategy and coordination competences and capability [1,9,10]. After changes over recent years, some cities are very confident in their current administrative capacity [4,9], saying that no capabilities are lacking [7]. However, all competences, capabilities and capacities named above are currently reported to be lacking in a least some cities. The true bottle seems to lie with the enormous amounts of money needed for a degree of material change in the urban infrastructure systems that is sufficient to contribute a meaningful reduction in GHG emissions [1] as well as the specialized personnel needed to implement scale these solutions [10]; The corresponding technical skills are not readily available in some municipalities [2] but more in others [17].

5.4 RQ 2.2: Capacity monitoring and building

This section presents findings regarding RQ 2.2: *How are city administrations identifying and building these capacities, and which factors inhibit or facilitate this process?*

5.4.1 Capacity building practices

Many interviewees do not name concrete actions for capacity building or identification, but instead talk about general responsibilities and shortcomings. By one interviewee's own statement, "not much is done" [2] - explicitly. Implicitly, however, many cities describe instances and methods capacity building that are seemingly taken in reaction arising demands to ensure the municipal administration' ability to effectively act on climate protection policies.

Some cities reportedly seek to instil certain *desirable mindset and value-changes* in their staff. Stockholm, for instance, aims to foster 'portfolio thinking' as well as the strategic reflection on projects' priority and prospective GHG reduction impact among public servants [13]. Different cities emphasise this push for prioritization and outcome-orientation, i.e., a refocusing on actions creating actual GHG emissions reduction [1,13].

The interviewee in Aarhus hence promotes the cultivation of a “factfulness³⁷ mindset”: The employed tools should be appropriate to the problem at hand. An understanding of the scale and scope of the climate crisis is therefore crucial [1]. Gälve reports a purposeful shift away from the exclusive consideration of economic values [5]. The Barcelona municipal administration is hiring according to so-called “public management by values” [2], namely “agility, flexibility, clarity, morality or kindness, and co-creation” [2] to instil personnel with desired value set from the start – this was commented by the interviewee as inherently right, but not entirely fitting with the outlook of employees on the labour market [2].

Several cities report implementing different *educational and individual-level upskilling measures* [13,17], such as presentations, rewards, sports activities, workshops, study visits, and a digital platform in Velenje [17]. In Guimaraes, staff gets a certain number of hours of mandatory continuous job training per year [7]. On the organizational level, the roles of *inter-organization knowledge transfer* were favourably mentioned: Both vertical connections with higher governmental levels [5] and horizontal connections with other cities in city networks [2,5,6] can benefit cities by sharing knowledge, best practices, and resources. Guimarães reportedly had positive experiences insourcing knowledge through a strong local ecosystem, especially with the involvement of academic [7]. The potential of learning through practical experience from prior projects and the experience from other cities is highlighted by Bratislava [3].

A substantial role in capacity building seems to fall to hiring; The hiring of additional staff, equipped with desirable skill sets based on prior education and experience, is one of the salient³⁸ capacity building approaches in most cities. Copenhagen, for instance, hired a new team to acquire the competences needed to work on consumption-based emission policy [4]. No city’s interviewee has reported a wholistic or dedicated hiring strategy for climate transition skills. However, hiring-related measures were frequently mentioned in different contexts. In some cities, the CNT units attempt to actively shape hiring practices: In Leipzig, the Climate and Sustainability Unit lobbies other administrative departments for the establishment of CN-transition relevant positions in their organizational divisions [10], for instance, to establish dedicated capabilities for climate-neutral procurement of buildings in departments of education and sport [10]. The climate department in Klagenfurt reports actively lobbying political decision makers for more IT personnel resources; this is characterized as difficult but without alternatives [9].

³⁷ The term *Factfulness*, while it is not proper English, was popularized by Hans Rosling’s famous book of the same name (Rosling et al. 2018). It refers (in my own words) to an objectivist, sceptical, and fact-based mode of understanding the state of the world, wherein one makes a dedicated effort to overcome one’s mental perception biases through the consultation of empirical data and other observable facts.

³⁸ By my subjective assessment, this intuitively seems to be the first thing that interviewees thought of in the capacity building area. Many semantically seemed to equate capacity building with hiring.

The interviewee in Tartu, in contrast, is looking for external financing from INEREG and Horizon Europe to fund the hiring of needed staff [15]. Lacking success in building required capacity through hiring must be compensated through external consultants [2].

Some cities emphasise the important role of universities and public research institutes for mitigation planning expertise, diffusing, and making available knowledge, and in mediating between stakeholders [2,3,7]. A notable example for capacity building through public research institutes was described in Bratislava [3]: The Metropolitan Institute of Bratislava conducts applied research on local sustainable urban development, contributed to the city's sustainable development plan, and creates complex technically sophisticated assessments and simulations for urban and climate planning [3].

Structurally, cities have been raising the political profile of climate action in their cities and enabled administrative action by institutionalizing climate action high within the city hierarchy, e.g., through a dedicated department [1,9] or a vice mayor [3].

Finally, administrative capacity is built through literal construction of infrastructure that underpins and subsequently enables the provision of certain public services, such as the construction of municipal energy, housing, and mobility infrastructure. The city of Aarhus, for example, is currently constructing a large (ca. 110MW) geothermal district power plant [1].

5.4.2 Capacity monitoring practices

No interviewees report that there is a consistent system or strategy for the active identification and development of needed administrative capacities. Where interviewees had concrete responses, they usually referred to standard processes: In Leipzig, each unit request budget for additional roles from the public household as it sees fit internally but should expect to not get funding for most of them [10]. Public reports further highlight missing human and financial resources towards the city council [10]. In Tartu, the administrative leadership monitors operative staff needs based on employee workload [15]. In Umea, the need for certain skills emerges reactively in day-to-day work [16]. Beyond these, only vague and subjective mechanisms were described: The interviewee from Ljubljana emphasises that there is a constant desire to iteratively learn and adapt processes as needed based on employee feedback [11]. The interviewee in Aarhus hopes to understand capacity needs incrementally better in the course of understanding the climate crisis [1].

5.4.3 Inhibitors

However, interviewees identified a range of challenges and inhibitors that might moderate to capacity building in their municipal administrations:

Firstly, capacity building itself requires resources such as money and personnel [10,15]. Especially small teams are too busy with project work to actively reflect on capacity development beyond the reactive, individual level [2]. The needed deployment of resources is hence a matter of political prioritization, which reportedly tends to be low [10]; The interviewee in Leipzig gives the example weighing the funding of smart energy monitoring against fixing school windows [10].

Secondly, it has been suggested that municipalities are not seen as an attractive employer by the young, technically skilled workforce [2,10]. By law, hiring, evaluating, recognizing, rewarding, promoting employees in the public sector is a complicated process [2,7]. Young people are dissuaded by the public administrations' recruiting methods [2] and pay [7] and would rather go abroad, work in and into more flexible employments [2], such as real estate companies and project developers [10]. Reportedly, few applications are submitted for open job positions [7]. Tartu, for instance, has been trying to hire a mobility manager for over a year, but no suitable applicants with the needed skills and experience can be found on the local labour market [15]. Bratislava is struggling with hiring Mobility Managers for the same reasons [3]. This is seen as a systemic problem in Bratislava, as “universities are weaker than in other EU countries and many Slovaks go study abroad” [3]; the Bratislava public administration is hence “experiencing a serious brain drain hampering [its] development” [3].

Problems arising from generational conflict and change were further highlighted [2,10]. In Barcelona, many upcoming retirements in the next years will create need for replacement of staff [2]; This is compounded by changes to the structure of public households, which does not ensure that these roles will be replaced at all [2]. This can be contrasted against suggestion that older public servants tend to not include sustainability factors in their thinking by default [10]. One interviewee laments that “old habits are difficult to change” [7]; In Guimarães, innovative practices and disruptions of existing processes are attempted but usually remain contained within the transition team [7].

Some further challenges were mentioned once: Firstly, the development of specific, digitally supported capabilities requires prerequisite physical infrastructure (e.g., smart metres) [10]. Secondly, not many other municipalities have reached climate neutrality yet, which makes it difficult for Gävle to find positive examples to learn from [5]. Lastly,

administrative capacity and resources tend to stagnate while cities grow, which can even lead to an indirect relative decline of capacity over time [10].

5.4.4 Facilitators

Likewise, interviewees identified a range of beneficial factors that might enable or facilitate capacity building in their municipal administrations:

Interviewees suggested that attributes of the *organizational and local culture* might facilitate capacity building: A particular work culture might make it attractive for certain people to work in city administration, if fostered correctly [1,2]. For interviewees, the advantages of their work culture are an extraordinarily pleasant cooperation among colleagues [1], and a sense of professionalism and public interest [2]. The interviewee from Aarhus further described a learning-oriented work culture, that allows for open posing of questions [1]. A potential interconnection with general national or local culture was further suggested; The Danish culture, for instance, was mentioned as exclusive and difficult to enter, but also nurturing and trust-based community for the in-group [1]. Barcelona's local culture was described as particularly proactive and innovative [2].

It was further proposed that high motivation and dedication of the staff aids capacity building [11]. On the individual level, motivated employees are asking for courses and continuous training [2].

The interviewee from Velenje describes that new capabilities are developed, and processes and routines are changed due to constituting policy, notably the adoption of climate action plans [17] or other ambitious urban development agendas. Though not specifically evaluated in this analysis, a similar sentiment about the catalytic effect of local climate action plans was mirrored by many respondents.

Another highlighted factor was the role of a supportive public. The public in Leipzig is described as motivated and reportedly supports and encourages the city in improving its processes [10]. Similarly, the public in Ljubljana reportedly proactively demands various "green" public services [11].

Lastly, the beneficial effect of the passage of time and gradually acquired experience was mentioned. Assessing and understanding the nature of the challenge is described as the foundation for capacity development [7]. In Guimarães climate transition capacities iteratively matured over a decade as the underlying problem are understood by public servants and they learn new skills, form well working teams, etc. [7]. Similar long-term efforts can be seen in cities like Aarhus and Swedish cities like Stockholm and Gävle, all of which described a relatively mature state of administrative capacities [1,5,13].

5.5 RQ 2.3: Interaction of administrative capacity and governance

This section presents findings regarding RQ 2.3: *How (if at all) does mission cities' administrative capacity facilitate or inhibit the administrative governance and implementation of the CN transition by city administrations, and vice versa?*

In line with my expectations, some instances of path-dependent effects were described by various interviewees. Some interviewees give examples wherein the use of certain modes and means of governance or implementation of climate actions was precluded by the absence of specialized knowledge and supporting capabilities: In Reykjavik, for instance, the city is lacking the competences needed to for emission accounting and climate budgeting [12]. Lacking competence, experience, and self-confidence of staff around financial matters precludes the use of alternate sources of private funding and PPPS generally [10]. The Leipzig interviewee further reports that lacking expertise in different technical domains and in public-private financing preclude a set of governance tools from being used in Leipzig [10]. On the interpersonal level, interpersonal capacities have a direct effect on coordination: One interviewee states that a big part of effective internal coordination is made possible by interpersonal relations, open work culture, and trust [1]. Personal ability for communication and teamwork are the keys to making use of the structures and meetings [7]. In some cases, the lack of underlying material-technical capabilities and infrastructure furthermore seems to cause causal constraints in the use of certain means of governance: The ICT infrastructure (e.g., public WLAN, 5G, broad band, etc.) needed as a foundation for future CN actions such as IOT emission monitoring or self-driving cars are lacking in Klagenfurt [9]. Similarly, in Leipzig the lacking smart meter infrastructure precludes to capability to measure and quantify electricity and gas use digitally, and thus constraints reporting on the efficacy of policy measures [10]; For instance, no one knows how much gas was saved last winter [10]. The other way around, interviewees also described situations where the availability of certain capacities the enabling factor for successful administrative governance: Additional management staff improved the intra-organizational communication around and organisational visibility of CN projects [11]. The presence of sufficient analytical capacity allows the building of a factful understanding of problems, and thereby improves operative prioritization of activities [1]. The Barcelona interviewee notes that high capacity can sometimes compensate for unresolvable governance challenges: Political challenges on higher levels of government are not resolvable but can be compensated through rationality on administrative level and solid technical work [2]. Generally, the organizational ability to

continuously improve and adapt was highlighted as crucial for effective climate transition governance [11].

Interestingly, the interviewee from Barcelona [2] gives several examples where, conversely, governance changes engender or limit certain capacities in an ambivalent fashion: For instance, it is hoped that the upcoming merger of two organizational units might transport certain new capacities into the existing structures, such as the introduction of a more technical lens by the new technical staff into a strategic climate planning unit [2]. This politically initiated reorganization, however, also disrupted the capability of working on the Barcelona's CCC; When the contract will be submitted in autumn, it will therefore likely be in a subpar state that needs follow-up work [2]. In second example, the interviewee states that the communication in the Spanish mission city network about how to tackle the CCCs induces a positive "common learning process" [2]. Simultaneously, in their small team, and the same coordination processes uses up limited time resources [2]. The same causal direction is implied by the Reykjavik interviewees, who criticised that existing routines and budgets limit acting on learnings from previous projects [12]

5.6 RQ 3: The impact of joining the EU Mission

This section presents findings regarding RQ 3: *How (if at all) has joining the EU Mission Cities influenced the implementation and governance of mission cities climate neutrality transition, and how is it perceived by the civil servants responsible for its implementation?*

Most cities have not yet submitted their Climate City Contracts, and report being in various work phases. Barcelona emphasises the technical nature of the process and the team required to complete it [2]. While Swedish cities developed a similar contract for the national Viable Cities initiative, the CCC puts a stronger emphasis on integrating local stakeholders and financial planning [3,4]. Some cities stated that they plan to submit their CCCs autumn 2023 [2] or spring 2024 [10]. Elsewhere, such as in Bratislava, one year into the program, the CCC has not been started, as the Covenant of Mayors' *Sustainable Energy and Climate Action Plan* (SECAP) had priority [3].

Most interviewees have a generally positive attitude about joining [1,6,7,8,9,10,12,17]. Cities report that spirits were high immediately afterwards and that joining the mission got high-profile exposure within the city [1]. Joining the Mission has created improved political and public recognition and visibility for CN transition efforts [6,8,9], reinforced political commitment in cities [3,7,8] and provided cities with an impetus to take action [3]. Other say that not much – both regarding governance changes and more generally -

has changed since joining [2,4,5,15], e.g., as the moment was overshadowed by local political turmoil [2], or because the cities in question were already a climate action frontrunner with an established governance system at the time of joining [4,5,13]. Cities nevertheless mention diverse benefits of joining, though with notably little overlap between cities in the most salient benefit, indicating the potential role of local differences: Regarding internal municipal governance, joining the mission is said to have induced a more strategic and coordinated approach to climate action in some cases [6,12]; Especially the CCCs can provide baseline for policy-oriented discussion in the city [2] and set clearer targets and timelines [6]. The guidance provided by NZC is said to have provided confidence and security in decision-making [12] and can encourage public servants to be innovative and ambitious [6]. The mission further provided the occasion for the creation of a climate steering committee in Reykjavik [12]. In Bratislava, joining the mission has strengthened the mandate for the creation of the climate office within the administration [3], generally garnering attention by managerial and political decision-makers [2,8,10]. In Vilnius, the EU Mission and other programs have supported the deployment of additional human and other resources to the climate transition [18]. Conversely, joining the mission has shortened work timelines and has made work more stressful [5]. Externally to municipalities, the Mission furthermore provides a framework for contact and alignment with the EU level [2,6], the national ministerial level [8], and experts; a fact relevant in Barcelona especially in the face of politically paralyzed national and regional politics [2]. Cities report that it has also triggered an increased interest by companies to collaborate with the city [7,9], but Klagenfurt notes that not yet to the same extent with academic [9]. Cities furthermore report that the mission provided an impetus to establish connections and discuss issues with other cities [3,6,13,17], especially the other mission cities within the same country [2,8,10]. In Gothenburg, this new arena has led to greater cooperation and knowledge exchange with other cities [6]. This is further aided by the support of the NZC city advisors [6]. Multiple cities also mentioned that joining the mission has aided in pushing for the creation of a climate investment plan in particular [7,13]. The mission has further enabled access to additional grants, funding opportunities, co-financing partnerships, and other resources [6,9,17], enabling investments in additional mitigation measures and infrastructure [6]. Although there is not yet broad support within the city administration for the CN transition, this has aided Klagenfurt in building support for the mission [9].

However, interviewees also offered various critiques of the EU Mission, both regarding its implementation and its general viability as a policy tool for the attainment of climate neutrality: While some see in it potential for fundamental structural change [7], others report a degree of disillusionment in their cities [1,10], and not seeing much tangible change yet [5]. The abstract, bureaucratic and process- rather than solution-oriented

nature of the mission were criticized [1,15]. The interviewee from Tartu pointed out that innovation is expected of cities, while the projects is, supposedly, run in a similar bureaucratic way as other EU projects [15]. They further mentioned that the term ‘climate neutrality’ has a negative and technocratic connotation that can be weaponized by its opponents [15]. The respondent from Bratislava calls for more funding opportunities for basic infrastructure by both the Slovakian national government and the EU, as they do not qualify for advanced research and innovation projects usually funded by the EU [3]. Leipzig echoes that, if a road to climate neutrality until 2030 is promoted by the EC without providing the needed financial and human resources, the mission ultimately just becomes a marketing tool [10]. The interview from Aarhus criticized that no one has an overview of viable GHG mitigation solutions; They instead called for a systematic domain-wise mapping of problems and feasible mitigation solutions, which could then be the basis of city collaboration [1]. Other suggested that the Mission’s success should not be measured in terms of the achieved GHG emission mitigation at all, but actions initiated along the way [15]. Yet others believe that the EU mission is a generally good policy tool for creating communication between different levels of society [5] and information sharing between cities, but that it will ultimately not substantially alter the cities’ approach to the climate neutrality transition [4].

As an ad-hoc extension of the above research question, interviewees were further asked whether they consider the mission objective feasible. Most interviewees state that their city will not manage to become climate neutral by 2030, in line with the mission targets, but that they will try their best to get as far as possible [1,2,3,6,7,8,10,12,15] – usually with the disclaimer that this is their private opinion only. Interviewees note, however, that not climate neutrality itself is the goal, but the decisions made along the way; Moving into the right direction by making the right investments is the most important thing now [2,15]. Their goal is not to meet the 2030 target for its own sake, but to set and institutionalize the right trajectory now, so that there is no way back [7,9,15]. Leipzig states that 2030 seems like a political target that is intended to put pressure on cities to act but has little bases in technical reality [10]; As, for instance the planning and construction of a tram line takes up to 15 years, it’s they consider it unrealistic to be climate neutral in seven years [10]. Aarhus second this, putting in contrast the overwhelming magnitude of still existing emissions compared to the remaining time [1,15] – there, the 2030 climate neutrality target was set in 2008 and is nevertheless unlikely to be reached [1]. In Reykjavik and Umea, emissions from the transport sector are seen as the key obstacle [12,16]; In Velenje, those of a local coal power plant [17]. Much stricter laws from the national levels would be needed to meaningfully accelerate the transition [1,8]. However, the Barcelona interviewee has hope that the mission will accelerate development [2]; even if the goal is not reached by 2030, he is confident that

it will be before 2050 [2]. Reykjavik deems 2040 achievable [12]. Other cities are optimistic that it is feasible [4,8,13,17,18]. Klagenfurt sees balanced emission accounts on paper as very feasible and expects quick progress through virtuous cycles once a critical mass of important stakeholders is committed – e.g., commitment by large companies pulls in their supply chain, and thus creates visible success stories in the public and the labour market [9]. Copenhagen plans to be climate-positive by 2035 [4]. This optimism is conditional though, and considered possible only provided that the scale of efforts is drastically increased and hindering policies are abolished [13] and barring any external shocks like war or another pandemic [9]. Multiple cities emphasise the need to think in terms of consumption-based emissions (Scope 3) for true climate neutrality [1, 13].

6 Discussion

Many individual observations presented above speak for themselves and are not explicitly addressed again in the subsequent discussion, as they would not be valorised by being restated. In the spirit of an exploratory analysis, this section instead seeks to distil, integrate, reflect, and contextualize some of the key findings from the data, with the aim of highlighting prospective causal linkages, formulating hypotheses, and proposing future research avenues that could contribute to theory building.

Taken together, the overlapping and interacting nature of the challenges described in response to RQ 1.1. illustrate the character of climate change mitigation in cities as a wicked issue. Thematically, three broad clusters of challenges emerge in the data: Challenges related to internal horizontal integration and collaboration within the municipal administration; challenges related to the multi-level political system; and challenges related to capacity constraints including the quality and quantity human and financial resources. The governance and implementation challenges raised in the interviews are qualitatively all reflected among the risks recently identified by G. Ulpiani and Vettors (2023) through the analysis of mission application documents. They further generally align with those challenges identified in NZC's the focus-group based study (Liakou et al. 2022). My findings can nevertheless serve as a valuable contribution, as they frame challenges through interviewees' individual-level viewpoint as personally involved practitioner, which coloured by their own agency, relations, and stake in the described challenges. For instance, the organisational-level factor termed 'unclear priorities' (G. Ulpiani and Vettors 2023), might be experienced differently by the staff in a climate transition units, e.g., as a lack of understanding and interpersonal disagreements with colleagues in other departments, as described above (see section 5.1). I argue that such characterisations, which takes the agent-based viewpoint of the civil servants facilitating the CNT, can be a valuable addition to this existing research.

Regarding the employed governance structures as per RQ1.2, cities tend to anchor a climate-neutrality-relevant unit with a low number of dedicated personnel somewhere in their organisational structure as a central coordinating agent for the topic, which is usually supplemented by integrative, cross-departmental arenas for horizontal collaboration, such as the mission-specific *Transition Teams*. In some cities with weaker ex-ante governance systems, these transition teams seem to have upgraded the administrative governance setup around the CNT by enforcing inter-departmental horizontal coordination that was sometimes not present before. While variations in the organizational configuration of cities evidently exist, the choice of organizational structures seem to rarely follow a deliberate strategy that can be explained and justified by interviews; few interviewees

could give a concrete rationale for why local CN governance structures are set up the way they are. The data collected here is not detailed enough to identify valid and distinct governance configurations. However, based on examples such as Aarhus and Klagenfurt, one could hypothesise that a flat organizational hierarchy wherein a climate unit has an even standing relative to other departments is beneficial. Observational ethnographic research in municipal organisational configurations around the CNT might further illuminate open questions around the specifics of the horizontal coordination and governance dynamics used by these seemingly pervasive central coordination units to diffuse climate action into line organizations within the city organigram.

Regarding R2.1, the capacities most stressed as qualitatively indispensable for the CNT are the monetary and human resource for the scaling and implementation of mitigation actions and to hire people with the required competences. The identified cluster of desirable capabilities around grant applications and fundraising, working in public-private or public-public partnerships, and investment planning arguably derives in parts from this simultaneous shortage of funds and need to scale solutions. Another driver of this emphasis among the mission cities is the Climate Investment Plan required by the EC and NZC as part of the cities' CCCs. It hence seems important to acknowledge that administrative governance challenges might be addressed outside the municipal administration, and critical capacities might develop on a co-productive basis with other actors in the urban arena such as academic partnerships and public research institutes.

One of the arguably most noteworthy findings regarding RW 2.2 is that the strategic planning of capacity building for CN transitions seems to be a generally neglected domain for most cities. For hiring-related topics, there were multiple references to HR departments and formal personnel request by department leaderships. Beyond the existence of such one-off reactive escalation mechanisms for hiring needs, no city reported having a monitoring system to identify required competences and capabilities or knowing of one elsewhere of their organisation. No city further reported having a dedicated climate-mitigation oriented capacity building, monitoring, or assessment strategy or roadmap within their CNT unit. These teams seem to work mostly within the available means to the best of their ability. Especially the abstract strategic reasoning about capacities and capabilities, i.e., the aggregate ability of the organization to perform certain functions, was rare – statements about capacity needs seemed to stay mostly in the realm of tangible skills and resources. This seems notable, as most interviewees had difficulty envisioning the role the municipality should take in the CNT, potentially due to their pragmatic-realistic outlook. The absence of a sharp and internalized vision of the municipality as a driving force for the CNT might lead the development of capabilities to be a more reactive and vague endeavour and seems to clash with foundational aspects of

the mission-driven paradigm. Literature provides such abstract categories, e.g., in Hölscher, Frantzeskaki, McPhearson, et al. (2019)'s stewarding, unlocking, transformative, and orchestrating capacities for urban transformation governance. From an application-oriented research viewpoint, capacity monitoring and planning tools based on this framework or a similar one could aid cities in strategically reasoning about their capabilities, and lead to improved capacity monitoring and building outcomes. Future design-science research could focus on creating and testing such a tool.

So far, where observable at all, the capacity building activities induced by the Cities Mission seems to remain in the limited area of inter-city exchange of experiences and knowledge, e.g., through advice by NZC advisors and national mission city networks. This clashes with the fact that key capacity needs apparently centre around the quantity of human and monetary resources, or capabilities derived thereof. Even in cities where the quality of personnel is a constraint, it is apparently not a matter of lacking education and continued training but hiring complications. The City Mission's peer-learning oriented capacity building might arguably have higher efficacy regarding mitigation policy choice and design, but the results indicate that – so far - they likely make little difference regarding administrative governance and implementation capacities. It is further striking that, across governance and capacity, few bottom-up administrative innovations were mentioned; This is a notable juxtaposition of the Mission's ambition to create capacity through local innovation.

Concerning the interaction of capacities and governance queried in RQ2.3, the study delivers only anecdotal results. As expected, multiple examples were given in which specific capacities give rise to or prevent the use of certain governance instruments [10,12]. In other instances, the reverse relationship seems to exist, where governance configurations induce or hamper certain capacities [1,2,9,10], such as flat hierarchies in Aarhus that benefit factful decision making through short vertical linkages to the mayor and department leaders [1]. However, no interviewee directly raised these interactions as salient or important dynamics - potentially because they are too abstract to observe on a day-to-day basis. Interestingly, there was no indication given by interviewees, that the current phase of the mission start constitutes a critical juncture on the way to climate neutrality, as initially hypothesized. While the time-critical nature of the mission and the transition to net-zero emissions was acknowledged, interviewees seem to, implicitly, consider the relationship between their organisations' available capacity and governance and implementation effectiveness to be linear. Conversely, although effective mitigation policy implementation was not a core concept discussed in this thesis, it was salient in the interviews, and seems to be highly dependent on administrations' capacity: The compounding shortcomings in competences, capabilities and resources qualitatively

interfere with cities' ability to implement especially technically demanding GHG mitigation actions.

The mission cities furthermore seem to govern the CNT in the intersection of implementation-level autonomy and capacity-level dependence on outside actors. For civil servants this seems to engender a challenging discordance of nominal responsibility constraint by lacking resources. Subjectively, the interviewees conveyed an air of resigned, technocratically professional pragmatism; There were indeed, mostly in off-the-record side conversations, profusely and universally appreciative that someone is shining light on their viewpoint and their problems in the climate neutrality transition. Regarding the EU Mission, interviewees seem display that same state of cognitive dissonance: Many believe in mission's goal as worthwhile but do not believe the in attainability of that goal.

Finally, the results indicate that local context matters - for both the configuration of the status quo and the kind of unaddressed needs of both governance and capacities. Many cities in the sample are, for instance, starting the mission in the middle of an ongoing and continuing CN transition trajectories. They hence possess preexisting and institutionalized CN governance structures, transition strategies, and processes, independent of the EU mission [1,4,7,9,10,13]. While the study was not designed to delineate geographic clusters, it is, for instance, striking that climate transition unites in Central and Eastern European cities (e.g., Tartu, Bratislava, Vilnius, Velenje, Ljubljana) seem to struggle with personnel shortages and, as far as this can be deduced from the data, a relatively more marginalized position within their local administrations. Future research should thus assess the various governance and capacity patters in the light of plausible confounding factors of effective governance and capacity building, such as national and regional context, different administrative traditions, local sociopolitical and economic context, and path dependencies around climate network membership, local institutionalization, and more. This could be done, for instance, through large-n comparative case studies using partially quantitative mixed-methods designs that allow for some statistical control; the application documents cities submitted for the Cities Mission, although they are about two years old at this point, present a unique and serendipitous data source for such analysis, and has already been used for similar studies (Ulpiani et al. 2023; G. Ulpiani and Vettors 2023). Multiple of the city cases presented here may furthermore deserve mixed-method follow-up case studies, which triangulate between additional data sources and methods (esp. document analysis of climate action plans). Other case studies might adopt more rigorous comparative designs (see Collier 1993; Lijphart 1971) among a smaller number of cities that allow for the identification of common governance and capacity configurations and their properties.

7 Limitations and Reflections

Though I attempted to conduct rigorous research within the means available, I want to briefly reflect on limitations to the interpretation of these findings (see section 4.6 for methodological limitations) as well as learnings from this thesis and its creation process:

7.1 Limitations

This thesis presents descriptive and exploratory research with the ambition to map empirically realities, provide research entry points and inspire hypothesis formulation, and should be read as such. It further is a study among the current EU mission cities only; the findings should thus not be unreasonably extrapolated beyond said cohort. The qualitative-descriptive methods are not suitable to make statements about the relative magnitude and prevalence of each observation in either the cohort or among European cities more broadly. While some conceptual generalization of the results among the mission cities might be justifiable, RD-2 nevertheless employed convenience sampling among and within strata, i.e., each city. Hence, although the EU Mission participants are a purposefully diverse set of cities, it is important to note that the RD-2 sampling did not actively control for factors previously shown to correlate with cities' climate change mitigation policy, ambition, and behaviour, such as city population and GDP, peer-network membership, geographical location, and other local attributes (Reckien et al. 2015). While these cities have all spent the same time within the mission program, each one works within the historical path dependency of its own past urban climate governance. This naturally creates diverging initial conditions for the mission membership and diverging implications for a 2030 climate neutrality goal. The presented diagnosis about the state of the EU Mission should thus also not be generalised without accounting for local context. Further, while the mission cities cohort is diverse, it should be noted that it is constituted of cities that showed both the independent ambition to apply to the Mission and the general advanced level of preparedness and ambition that were necessary for selection (European Union 2021). It should thus be assumed that this cohort likely includes some of Europe's most progressive cities on the subject of CN transition – a similar exploratory study among a sample more representative of the average municipality might thus be advisable.

7.2 Reflections

I finally want to reflect on the research process. The defining complication was the failure of the qualitative survey and subsequent abortion of RD-1. Personally, this was a valuable lesson that, while planning a rigorous research strategy is important, executing said strategy in an agile and reflexive way is as well. Nevertheless, this mode of working has

partially led to theory-method-analysis alignment challenges, which I did my best to address. The obvious question to address is, why Method A failed. As mentioned previously, the combined click-through-rate of all invitation and reminder emails to the first page of the survey form was 3.8%. This indicates that the problem likely lay in the circumstances of distribution, e.g., the wording of the emails and the information contained therein. Likely factors were the length of the email with an extensive preamble by the city partner, the very long estimated survey duration of 30-60 minutes, as well as the short deadline that was extended only in increments of a week. While I doubt this reflects on the efficacy of qualitative surveys generally, it seems to indicate that they cannot reliably replace qualitative methods such as interviews or focus groups, even in breath-oriented research, as the correlation between survey duration and a high share of open-ended questions seems difficult to decouple in practice. This mirrors doubts put forth in some literature, as expanded on in Appendix D.a.

Due to the failure of the initial RD-1 data collection methods described above, data collection was furthermore finished comparatively shortly before the submission of this thesis. Nevertheless, the amount of collected interview data in RD-2 is rather extensive – this reflects an attempt at the time to mirror the analytical breadth originally pursued in the Method A survey. Although scientific rigour was a priority in the subsequent data analysis and discussion of the results, my available working time and the space in this document were ultimately limited, and further constrained by my personal inexperience with the qualitative analysis of a large data set. My thesis hence strikes the balance between ambition and scientific rigour not as well as I had hoped – sacrificing some of the latter for the former. Compared to the initial exposé, the thesis experienced additional scope-creep towards the administrative capacity topic, which unfortunately constrained the feasible degree of analytical and conceptual depth explored for each of the given concepts; The data may therefore contain yet unexplored relevant aspects and deserves subsequent analysis that allows for a deeper re-reading of the transcripts. All transcripts are enclosed (Appendix E) and I invite any interested researcher to reexamine them for further insights they may contain. This thesis project nevertheless served as a valuable teaching experience and window to the scientific profession.

8 Conclusion

In the face of the looming climate crisis, the European Union, in spring 2022, has launched the EU Mission for “100 Climate Neutral and Smart Cities”, setting 112 cities on a trajectory to pursue climate neutrality by 2030 program: A potentially pivotal step for the advancement of climate neutrality ambitions in Europe, due to central role of cities as hubs of both greenhouse gas emissions and human existence. The governance of such climate neutrality transitions by and in city bureaucracies has not been comprehensively documented yet. This thesis hence set out to qualitatively explore and describe how municipal public administrations govern urban transitions to climate neutrality, and which administrative capacities they need and develop. To this end, civil servants in the mission cities were identified through online desk research, and semi-structured exploratory interviews were conducted with respectively one interviewee from 19 different mission cities. The core contribution of this thesis is a comprehensive qualitative description of salient governance and implementation challenges; cities’ adopted governance structures and instruments including used ICT artifacts; cities’ administrative capacity needs and their availability; and cities’ capacity building and monitoring measures around urban climate neutrality transitions. Cities tend to anchor a climate-neutrality-relevant units somewhere in their organisational structure as a central coordinating agent, which is usually supplemented by integrative, cross-departmental arenas for horizontal collaboration, such as the mission-specific *Transition Teams*. Various governance challenges oppose city administrations, revolving around internal organizational silos, external multi-level political circumstances, and capacity shortcomings. Crucial capacities are competences for the implementation of technical mitigation projects; new capabilities around public-private partnerships, investment, fundraising, and organisational disruption; and substantial additional monetary and human resources. Most cities surprisingly do not have an active capacity building strategy, and none report having a monitoring mechanism to identify needed capacities. In some circumstances, administrative capacity and governance further seem to evoke and inhibit each other. Furthermore, the interviewees’ provisional assessment of the EU Mission and its impact on local climate neutrality transitions was documented. A substantial number of interviewees does not believe in the feasibility of its 2030 climate neutrality objective but intends to nevertheless to set the course for climate neutrality now. This contribution can aid researchers and practitioners alike in establishing a factful understanding of the urban administrative viewpoint on climate neutrality transitions and provide an analytic entry point for subsequent theory-building research in the urban administrative climate governance and capacity domains.

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Declaration of Authorship

I hereby declare that, to the best of my knowledge and belief, this Master Thesis titled “Towards urban climate neutrality: A qualitative exploration of administrative governance and capacity in European cities” is my own work. I confirm that each significant contribution to and quotation in this thesis that originates from the work or works of others is indicated by proper use of citation and references.

Pfinzal, 1st August 2023

Dominik Braun

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A Subject communication

NOTE: [...] denotes that the respective text was not included in the respective respondent's view. This document's formatting (font size, alignment, spacing) was further altered for improved readability. Any emphasis (bold and cursive text) was included in the field version.

A.a RD-1 | Method A | Survey invitation email

Dear Colleagues,

You are invited to participate in a research survey. Your expertise helps to identify the skills and resources European cities need to govern and implement the sustainable transition.

[REDACTED] – is working on developing a sustainability governance framework for bridging the action gap between the global and European sustainability ambitions (e.g. UN SDGs, European Green Deal), and needed policy actions. We strongly believe that this is a topic that is common for all European cities. To shed light upon the common challenges in sustainability governance we have partnered with Tallinn University of Technology to map the most urgent topics that we as European cities share. The research is part of the [REDACTED]'s initiative to establish an international sustainability governance peer learning hub. The research project is being implemented by Dominik Braun, a graduate student in the Erasmus Mundus M.Sc. in Public Sector Innovation and e-Governance (PIONEER) degree program. The program is jointly hosted by three leading European universities in public governance research: KU Leuven (Belgium), WWU Münster (Germany) and Tallinn University of Technology (Estonia). The project is supervised by Dr. Veiko Lember (Senior Research Fellow, Ragnar Nurkse Department of Innovation and Governance, TalTech, and Visiting Professor, KU Leuven).

The goal of this study is to understand how cities govern and implement their transition to climate neutrality and the role it plays in wider sustainability governance. A special emphasis lies on the role of cities' administrative capacity – their institutional processes, skills, and resources.

Completing this survey **will take approximately 30 - 60 minutes** – about the same length as a typical research interview. It consists predominantly of **open-ended questions**, allowing participants to provide meaningful answers in their own words. You can stop and continue at any time within the same browser.

Please click the following link to participate:

[SURVEY LINK]

If you want to participate, **please try to submit your reply by 26th May 2023**. If you are interested in the results of this study, you will be able to leave your email in the survey form.

Thank you in advance for your support. It plays an indispensable role in establishing best practices for an effective urban sustainability transition and climate neutrality governance.

If you have any questions or concerns specifically related to the survey, please feel free to contact Dominik Braun (doibr@ttu.ee). If you have general questions regarding [REDACTED] initiative about sustainability governance, please contact [REDACTED].

Best Regards,

[REDACTED]

A.b RD-2 | Method D | Interview invitation email template [EN]

[SUBJECT LINE]

Invitation: Research interview on governing the climate neutrality transition in your city

[EMAIL BODY]

Dear [SUBJECT NAME] ,

I hope this finds you well.

I am reaching out to you regarding **a short research interview**.

We would like to draw on **your expertise regarding the governance and implementation of the climate neutrality transition in Helsinki**. Of particular interest are the **administrative capacities** - institutional processes, skills, and resources - the city needs to do so successfully. Helsinki could be a leading study case, as you have recently joined the EU Mission for “100 Climate Neutral and Smart Cities by 2030”.

For context: This is part of my thesis research in the Erasmus Mundus M.Sc. in Public Sector Innovation and e-Governance (PIONEER) graduate program, jointly hosted by KU Leuven, WWU Münster, and Tallinn University of Technology.

Interview Outline:

Duration:	20 – 60 minutes (depending on your availability)
Period:	15 th June 2023 – 30 th June 2023 (depending on your availability)
Format:	Semi-structured online research interview
Technical platform:	Microsoft Teams (or comparable video meeting software)
Interview language:	English or German
Documentation:	Following academic reporting standards, I would like to record and transcribe the conversation. If you have any concerns or wishes regarding this, I would be happy to discuss this openly.
Topic:	The goal of this study is to understand how the city of Helsinki governs and implements its transition to climate neutrality. A special emphasis lies on the role of administrative capacity (institutional processes, skills, and resources), how it is built, and how it inhibits or facilitates Helsinki’s ability to govern and implement the climate neutrality transition. We further seek to understand the impact that joining the EU Mission for “100 Climate Neutral and Smart Cities” has had on all these factors.

Your participation would support important research on the governance of climate neutrality transitions. The result may help to identify shared challenges, critical capacities, and future best practices for cities across Europe.

Unfortunately, due to an upcoming deadline, we would need to conduct this interview before the end of June. Please excuse this short lead time.

If you are available for an interview, **please feel free to suggest dates and times that would work for you.**

Please also feel free to forward this invitation to any colleagues working in this thematic area.

Thank you in advance for your time.

Best regards

Dominik Braun

Dominik Braun

PIONEER M.Sc. in Public Sector Innovation and e-Governance, candidate

Tallinn Technical University, KU Leuven, WWU Münster

Email: dominik.braun@uni-muenster.de

Mobile: [MY PHONE NUMBER]

About this project: This research project is being implemented by Dominik Braun, a graduate student in the Erasmus Mundus M.Sc. in Public Sector Innovation and e-Governance (PIONEER) degree program – a program jointly hosted by three leading European universities in public governance research: KU Leuven (Belgium), WWU Münster (Germany) and Tallinn University of Technology (Estonia). The research project is supervised by Dr. Veiko Lember (Senior Research Fellow, Ragnar Nurkse Department of Innovation and Governance, TalTech, and Visiting Professor, KU Leuven). This project is furthermore part of the City of Tallinn's initiative to establish an international sustainability governance peer learning hub.

A.c RD-2 | Method D | Interview invitation email template [DE]

[SUBJECT LINE]

Anfrage: Forschungsinterview zur Governance des Übergangs zur Klimaneutralität in Ihrer Stadt

[EMAIL BODY]

Sehr geehrter [SUBJECT NAME],

Ich wende mich an Sie wegen **eines kurzen Forschungsinterviews**.

Wir würden gerne **Ihr Fachkenntnis über die Governance und Umsetzung des Übergangs zur Klimaneutralität in Dortmund in Anspruch nehmen**. Von besonderem Interesse sind die **Verwaltungskapazitäten** - institutionelle Prozesse, Fähigkeiten und Ressourcen - die die Stadt benötigt, um dies erfolgreich zu tun. Dortmund könnte als wertvolle Fallstudie dienen, da Sie sich kürzlich der EU-Mission für „100 Climate Neutral and Smart Cities by 2030“ angeschlossen haben.

Zum Kontext: Dies ist Teil meiner Abschlussarbeit im Rahmen des Erasmus Mundus M.Sc. in Public Sector Innovation and e-Governance (PIONEER), das gemeinsam von der KU Leuven, der WWU Münster und der Tallinn University of Technology ausgerichtet wird.

Überblick über das Interview:

Dauer:	20 - 60 Minuten (abhängig von Ihrer Verfügbarkeit)
Zeitraum:	9. Juni 2023 - 30. Juni 2023 (abhängig von Ihrer Verfügbarkeit)
Format:	Halbstrukturiertes Online-Forschungsinterview
Technische Plattform:	Microsoft Teams (oder vergleichbare Videokonferenzsoftware)
Sprache des Interviews:	Englisch oder Deutsch
Dokumentation:	Entsprechend wissenschaftlichen Berichtsstandards möchte ich das Gespräch aufzeichnen und transkribieren. Sollten Sie diesbezüglich Bedenken oder Wünsche haben, bin ich gerne bereit, diese offen zu besprechen.
Thema:	Das Ziel dieser Studie ist es, zu verstehen, wie die Stadt Dortmund ihren Übergang zur Klimaneutralität steuert und umsetzt. Ein besonderer Schwerpunkt liegt auf der Rolle der Verwaltungskapazität (institutionelle Prozesse, Fähigkeiten und Ressourcen), wie sie aufgebaut ist und wie sie die Fähigkeit Dortmunds, den Übergang zur Klimaneutralität zu regeln und umzusetzen, behindert oder erleichtert. Außerdem wollen wir herausfinden, wie sich die Teilnahme an der EU-Mission für "100 Climate Neutral and Smart Cities" auf all diese Faktoren ausgewirkt hat.

Ihre Teilnahme würde wichtige Forschungsarbeiten zur Steuerung des Übergangs zur Klimaneutralität unterstützen. Die Ergebnisse können dazu beitragen, gemeinsame Herausforderungen, kritische Kapazitäten und zukünftige Best Practices für Städte in ganz Europa zu identifizieren.

Leider müssen wir dieses Interview aufgrund einer bevorstehenden Abgabefrist vor Ende Juni durchführen. Bitte entschuldigen Sie diese kurze Vorlaufzeit.

Wenn Sie für ein Interview zur Verfügung stehen, können Sie uns gerne Termine vorschlagen, die Ihnen passen.

Bitte leiten Sie diese Einladung gerne an Kollegen weiter, die in diesem Themenbereich arbeiten.

Ich danke Ihnen im Voraus für Ihre Zeit.

Mit freundlichen Grüßen

Dominik Braun

Dominik Braun

PIONEER M.Sc. in Public Sector Innovation and e-Governance, candidate

Tallinn Technical University, KU Leuven, WWU Münster

E-mail: dominik.braun@uni-muenster.de

Mobile: [MY PHONE NUMBER]

Über dieses Projekt: Dieses Forschungsprojekt wird von Dominik Braun durchgeführt, einem Doktoranden im Rahmen des Erasmus Mundus M.Sc. in Public Sector Innovation and e-Governance (PIONEER) - einem Programm, das von drei führenden europäischen Universitäten im Bereich der Public-Governance-Forschung gemeinsam ausgerichtet wird: KU Leuven (Belgien), WWU Münster (Deutschland) und Tallinn University of Technology (Estland). Das Forschungsprojekt wird von Dr. Veiko Lember (Senior Research Fellow, Ragnar Nurkse Department of Innovation and Governance, TalTech, und Gastprofessor, KU Leuven) geleitet. Dieses Projekt ist außerdem Teil der Initiative der Stadt Tallinn, eine internationale Peer-Learning-Drehscheibe für Nachhaltigkeitsmanagement einzurichten.

A.d RD-2 | Method D | Informed Consent Template

Note: The version distributed to recipients had a different formatting.

Please read this informed consent document carefully. Make sure to pose all your clarifying questions about the research before participation.

Information about the research project

Provisional title: The role of administrative capacity in the governance and implementation of mission-oriented climate neutrality transitions in European cities

Institution(s): Tallinn University of Technology, KU Leuven, WWU Münster

Researcher: Dominik Braun (Erasmus Mundus M.Sc. in Public Sector Innovation and e-Governance (Pioneer), Graduate Student)

Contact: [OMITTED]

Supervisor: Dr. Veiko Lember (Senior Research Fellow, Ragnar Nurkse Department of Innovation and Governance, TalTech, and Visiting Professor, KU Leuven)

Research objectives and methodology

This study aims to understand how cities govern and implement their transition to climate neutrality. Special emphasis is placed on a) the measures taken by city administrations to this end; b) the role of cities' administrative capacity (institutional processes, skills, and resources); and c) the impact of joining the EU Mission for "100 Climate Neutral and Smart Cities by 2030".

Research intervention

I am aware that I am asked to participate in a semi-structured interview that will take approximately 20-60 minutes. The interview will be held online, using video conferencing software. The interview will follow an interview guide assembled by the researcher but may include additional ad-hoc questions that arise during the interview.

Information

I have received sufficient information about its purpose and methods of this research.
I understand what is expected of me during this study.

Recording

I consent to the interview being audio/video recorded and transcribed into writing to facilitate data processing and analysis.

Voluntary participation

I understand that my participation in this study is voluntary. I have the right to stop participating at any time. I do not have to give a reason for this, and I know that it will not have any negative repercussions for me. Taking part in this study does not involve known risks or inconveniences.

Compensation

My participation offers a voluntary contribution to scientific research and advancement. I know that I will not receive any further reward or compensation for my participation.

General Data Protection Regulation (GDPR)

Under the GDPR, the data collected during the study will be processed on the grounds of public interest. This implies that when you withdraw from the study, any previously collected data can still be lawfully processed and do not need to be deleted by the researchers. In case a third party acts as a processor of the collected data, it can be requested at any time to have the processing of the data stopped and, where appropriate, have the collected data deleted.

I understand that some of the data collected for the purposes of this study might be classified as 'sensitive personal data' under the General Data Protection Regulation. I hereby expressly consent to the collection of these data for the purposes of this study.

Confidentiality

The results of this study can be used for scientific goals and may be published. My name will not be published. The confidentiality of the data will be protected in all stages of the research.

In the context of transparency in scientific research, the data of this study may be shared with others, such as researchers from different universities. In that case, only non-identifiable data will be shared. It will not be possible for others to know that I have participated in this study or to know which data belongs to me.

Dissemination of results

In case you wish to remain updated on any published results of this study, please provide the researcher with an e-mail address to contact you at: _____

Contact details

For any questions, concerns, or to exercise your rights (access to or the correction of data, etc.) after participating in the study, you can contact:

- a) The researcher at: [OMITTED]
- b) The supervisor at: [OMITTED]

For any complaints or other concerns about ethical issues relating to this study, I can contact KU Leuven's Social and Societal Ethics Committee: [OMITTED]

I have read and understood the information above. I received answers to all my questions regarding this study. I agree to participate in this study under the conditions set out in this document.

[To be filled out by the respondent]

[To be filled out by the researcher]

12th June 2023

76327 Pfinztal, Germany

B Data Collection Instruments

B.a RD-1 | Method A | Survey form

NOTE: The below content is equivalent to the survey used for data collection. Its formatting was, however, adapted for the presentation in this document.

[Section 0 – Disclaimers]

[Page 1: Intro & Informed Consent]

Thank you for taking the time to participate in this research survey!

By doing so, you will contribute to identifying common challenges and best practices in sustainability and climate neutrality governance.

About this research

Cities across Europe and worldwide have declared their ambition for a more sustainable future. Many members of the Eurocities network have committed to climate neutrality by 2050, in line with EU targets. The new EU mission to deliver “100 Climate Neutral and Smart Cities” further calls for participants to achieve this target by 2030.

The goal of this study is to understand how cities govern and implement their transition to climate neutrality and the role it plays in wider sustainability governance. A special emphasis lies on the role of cities’ administrative capacity – their institutional processes, skills, and resources. **We seek to identify shared challenges and future best practices for cities across Europe.**

We do this by collecting qualitative first-hand accounts directly from city representatives such as yourself, using this online survey. These findings will be complemented by follow-up interviews with selected respondents.

This research project is part of the City of Tallinn’s initiative to establish an international sustainability governance peer learning hub. It is being implemented by Dominik Braun, a graduate student in the Erasmus Mundus M.Sc. in Public Sector Innovation and e-Governance (PIONEER) degree program - program is jointly hosted by three leading European universities in public governance research: KU Leuven (Belgium), WWU Münster (Germany) and Tallinn University of Technology (Estonia). The research project is supervised by Dr. Veiko Lember (Senior Research Fellow, Ragnar Nurkse Department of Innovation and Governance, TalTech, and Visiting Professor, KU Leuven).

About the Survey

Completing **this survey will take approximately 30 - 60 minutes** – about the same length as a typical research interview. It consists predominantly of **open-ended questions**. This allows you to provide meaningful answers in your own words. The actual duration will hence vary based on the amount of time you are willing to invest. You can stop and continue at any time within the same browser.

This survey will close on **26th May 2023**

This survey is **intended for public servants and government officials responsible for governing the transition to climate neutrality and sustainability in cities** across Europe. It specifically targets cities participating in the Eurocities network and/or the EU Mission “100 Climate Neutral and Smart Cities by 2030”.

Please feel free to forward this survey to any colleagues and collaborators if they fit this description!

Informed Consent

Please read this informed consent section carefully. Make sure to resolve any open questions about the research before participation.

Information

I have read the above description of this study and have received sufficient information about its purpose and methods. I understand what is expected of me during this research.

Voluntary participation

I understand that my participation in this study is voluntary. I have the right to stop participating at any time. I do not have to give a reason for this, and I know that it will not have any negative repercussions for me.

Compensation

My participation offers a contribution to scientific research. I know that I will not receive any further reward or compensation for my participation.

General Data Protection Regulation (GDPR)

Under the GDPR, the data collected during the study will be processed on the grounds of public interest. This implies that when you withdraw from the study, any previously collected data can still be lawfully processed and do not need to be deleted by the researchers. In case a third party acts as a processor of the collected data, it can be requested at any time to have the processing of the data stopped and, where appropriate, have the collected data deleted.

I understand that some of the data collected for the purposes of this study might be classified as ‘sensitive personal data’ under the General Data Protection Regulation. I hereby expressly consent to the collection of these data for the purposes of this study.

Confidentiality

The results of this study can be used for scientific goals and may be published. My name will not be published. The confidentiality of the data will be protected in all stages of the research.

In the context of transparency in scientific research, the data of this study may be shared with others, such as researchers from different universities. In that case, only non-identifiable data will be shared. It will not be possible for others to know that I have participated in this study or to know which data belong to me.

Contact details

For any questions, concerns, or to exercise your rights (access to or the correction of data, etc.) after participating in the study, you can contact Dominik Braun (dobrau@taltech.ee).

Consent

[TO BE CHECKED BY RESPONDENT BEFORE SURVEY CAN BE STARTED] I confirm that I have read and understand the information above and have received answers to all my questions regarding this study. I agree to participate in the study.

Follow-up research

In the second phase of this research, likely in June 2023, we aim to conduct in-depth interviews with selected participants of this survey. If you would be willing to support a subsequent study, please enter your email address below:

I would like to be contacted for a follow-up interview under the following email address:

I would also like to receive the published results of this study via email to the above email address.

[Page 2: How to take this survey]

How to take this survey.

This research survey might differ from others you have seen before. It relies on **open-ended questions** that you can **answer in your own words**.

- There are no right and wrong answers.
- Please feel free to go into as much detail as you want.
- A short answer is better than no answer at all.
- Spelling and grammar errors are NO concern. There is no need to refine your text.
- You can amend prior answers by navigating back to the previous page.

Your effort is appreciated! **Each text will be carefully read and analysed.**

You can continue the survey at any time within the same browser.

Please note that this requires the setting of cookies in your browser.

[Section 1 – Demographics & Context]

[CITY] – (Dropdown, Single Choice)

Which municipality, city, or metropolitan area are you professionally affiliated with?

[COUNTRY] – (Dropdown, Single Choice)

Which country is this city located in?

[MISSION] – (Multiple Choice)

Which of the following initiatives is your municipality, city, or metropolitan area participating in?

- 1) Eurocities
- 2) EU Mission for "100 climate-neutral and smart cities by 2030"
- 3) Other initiatives pursuing climate neutrality (please specify)
- 4) None of the above

[TARGET GROUP: ORGANIZATION TYPE] – (Dropdown, Single Choice)

Which type of organization or department are you primarily employed in?

- 1) Municipal government or administration
- 2) State or regional government or administration
- 3) National government or administration
- 4) European Union (EU) or other supranational institution
- 5) University or other research institution
- 6) Non-government organization (NGO)
- 7) Consultancy, law firm, or another services provider (e.g., ICT)
- 8) Other (please specify)

[TARGET GROUP: JOB CONTENT] – (Single-line form field, 100c limit)

Please briefly name your usual professional tasks and responsibilities. This helps us understand your point of view.

[KEY ACTORS] – (Text Box, 1000c limit, 680x100px)

Which (if any) organizations, departments, and roles are responsible for planning, governing, and implementing the transition to neutrality in your city?

Please briefly explain how they relate and what their responsibilities are.

[Section 2 – Governance]

[GOVERNANCE DISCLAIMER]

Section 1: Governance of Climate Neutrality and Sustainability

The following section of this survey contains questions about **how your city decides to govern the transition to climate neutrality** and climate change mitigation generally.

‘Governance’ refers to how your city makes decisions to achieve the collective goal of climate neutrality, and how it **coordinates and controls its decision-making and implementation processes**. Your city might use a range of different organizational structures, processes, and strategies to achieve this.

[Question Type: 5-point Likert Scale (Agree Completely – Agree not at all)]

Do you agree with the following statements?

[STATUS QUO: GOVERNANCE]

My city HAS the governance structures, processes, and strategies in place that it will need for its transition to climate neutrality.

[AWARENESS: GOVERNANCE NEEDS]

The government of my city KNOWS which governance decisions need to be taken to successfully transition to climate neutrality.

[AWARENESS: INCLUSION]

The city HAS the governance structures, processes, and strategies in places that it needs to ensure a JUST climate transition.

[Question Type: Open (1000c textbox, 680x200px)]

[SUSTAINABLE DEVELOPMENT: FRAMEWORKS]

Which (if any) are the key reference framework(s)* your city government is using to address sustainable urban development in the broader sense?

Please describe how (if at all) these frameworks relate to any climate neutrality ambitions in your city.

* Think for instance of the United Nations’ *Sustainable Development Goals (SDGs)*, the *Leipzig-Charter*, local green deals, etc.

[ORGANISATIONAL STRUCTURES]

How (if at all) is your city changing its **organisational structures** to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

[OVERSIGHT AND REPORTING]

How (if at all) is your city changing its **oversight and reporting mechanisms*** to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

* Think for instance of reporting processes and formats, reporting frequency, evaluation methods, used indicators and benchmarks, etc.

[COORDINATION: INTERNAL]

How (if at all) are your city administration and government **changing its ways of communicating and coordinating internally** to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

[COORDINATION: EXTERNAL]

How (if at all) is your city changing its **ways of communicating and coordinating with external stakeholders*** to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

* Think for instance of other cities and levels of government, citizens, organizations, and policy networks.

[FUNDING]

How (if at all) is your city changing its **funding mechanisms** to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

[INFRASTRUCTURE AND ICT]

How (if at all) is your city changing its **ICT* infrastructure and use** to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

* ICT = Information and Communication Technology

[Section 3 – Capacity]

[DISCLAIMER: CAPACITY]

Section 2: Administrative Capacity

The following section of this survey contains questions about **administrative capacity** in your city.

‘Capacity’ refers to the **skills, processes, and resources** your city government and administration need to both govern and implement the transition to climate neutrality.

This includes human and technical capabilities, funding, knowledge and data, formal and legal authority, and anything else that is required for effective administrative action.

[Question Type: 5-point Likert Scale (Agree Completely – Agree not at all)]

Do you agree with the following statements?

[AWARENESS: CAPACITY NEEDS]

My city government and administration **KNOW** which skills, processes, and resources are required to successfully govern and implement the transition to climate neutrality.

[STATUS QUO: CAPACITY]

My city government and administration **HAVE** the required skills, processes, and resources to govern and implement the transition to climate neutrality.

[Question Type: Open (1000c textbox, 680x200px)]

[BASELINE RELATION: CAPACITY → GOVERNANCE & IMPLEMENTATION]

How (if at all) have your city administration's available skills, processes, and resources influenced its ability to advance the climate neutrality transition?

Please briefly explain why you think so.

[Question Type: Open (1000c textbox, 680x100px)]

[IMPORTANT CAPACITIES]

Which are the most important skills, processes, and resources your city **needs** to successfully govern and implement the transition to climate neutrality?

Feel free to consider both current and potential future needs.

[CAPACITY SHORTCOMINGS]

Which (if any) of these skills, processes, and resources is your city currently **lacking**?

[CAPACITY BUILDING: SKILLS]

Which (if any) new **human, organizational, and technical capabilities** is your city administration developing to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

[CAPACITY BUILDING: KNOWLEDGE]

Which (if any) new **knowledge, analytical, and data capabilities** is your city administration developing to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

[CAPACITY BUILDING: RESPONSIBILITY]

Which (if any) new **formal responsibilities or political authority** is your city administration seeking to gain, to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

[CAPACITY BUILDING: FUNDING]

Which (if any) new **types, sources, and amounts of funding** is your city administration seeking to access, to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

[Section 4 – Implementation]

[DISCLAIMER: IMPLEMENTATION]

Section 3: Implementation of climate policy

The following section of this survey contains questions about how your city's government and administration **implement** the transition to climate neutrality and climate change mitigation generally.

'Implementation' refers to **how climate neutrality policies are put into action**. We are seeking to understand the concrete operational changes (e.g., in skills, processes, ...) that occur within your city's government and administration.

[Question Type: 5-point Likert Scale (Agree Completely – Agree not at all)]

Do you agree with the following statements?

[STATUS QUO: POLICY EXISTENCE]

My city has an explicit strategy in place that describes how my city will achieve climate neutrality.

[AWARENESS: IMPLEMENTATION NEEDS]

The government and administration of my city know how to implement their climate neutrality or climate change mitigation strategy successfully.

[STATUS QUO: POLICY IMPLEMENTATION]

My city has taken actions to implement its climate neutrality or climate change mitigation strategy in a way that produces concrete and tangible results.

[Question Type: Open (different formats)]

[OPERATIVE CHANGES (1000c textbox, 680x200px)]

How (if at all) is your city's administration **changing its processes and routines** to govern and implement the climate neutrality transition?

Please highlight which changes you consider most important and urgent.

[OPERATIVE CHANGES: EXAMPLE (1000c textbox, 680x150px)]

Please give a short **example** (if available) of a recent **project that your city's public administration is undertaking** to pursue climate neutrality and sustainability in your city.

If applicable, feel free to reflect on the project's success or failure.

[ADMINISTRATIVE INNOVATION (1000c textbox, 680x150px)]

Please give a short **example** (if available) of a recent **administrative innovation*** your city is implementing to pursue climate neutrality and sustainability.

If applicable, feel free to reflect on the project's success or failure.

** Think of novel or experimental methods, for instance in budgeting, procurement, human resource management, project management, process management, etc.*

[Section 5 – EU Mission]

NB! This section is only displayed for EU Mission Participants.

[DISCLAIMER MISSION]

Section 4: EU Mission

This is the last section of this survey. Thank you for making it all the way here!

The following short section contains questions about the EU Mission for “100 Climate Neutral and Smart Cities by 2030”, which your city joined last year.

[Question Type: Open (1000c textbox, 680x200px)]

[CRITICAL JUNCTURE / PUNCTUATION] – (Text box, 1000c)

It has now been about one year since the participants of the EU Mission have first been publicly announced in April 2022.

How (if at all) has joining the mission influenced the way climate neutrality is discussed, governed, and implemented in your city?

[Question Type: 5-point Likert Scale (Agree Completely – Agree not at all)]

Do you agree with the following statements about the EU Mission for “100 Climate Neutral and Smart Cities by 2030”?

Since my city joined the EU Mission, it has been easier to...

[MISSION → GOVERNANCE]

...improve the structures, mechanisms, and strategies my city uses to govern climate neutrality.

[MISSION → IMPLEMENTATION]

...take concrete and tangible actions toward achieving climate neutrality.

[MISSION → CAPACITY]

...develop new skills and resources related to achieving climate neutrality.

[Section 6 - Other Issues]

[Question Type: Open (1000c textbox, 680x200px)]

[ANYTHING ELSE]

You are almost at the end of this survey.

Is there anything else you would like to add about how climate neutrality and sustainability are governed and implemented in your city?

[Section 7 - Thanks & Follow-up]

[VERSION 1: IF CONTACT DATA FOR FOLLOW-UP INTERVIEW WAS INITIALL PROVIDED]

Thank you for completing this survey!

Your participation supports important research on how the transition to climate neutrality is governed in cities across Europe. The result may help to identify shared challenges, critical capacities, and future best practices.

In the second phase of this research, we aim to conduct in-depth interviews with selected participants of this survey. If you would be willing to support a subsequent study, please enter your email address below.

I would like to be contacted for a follow-up interview under the following email address.:

I would also like to receive the published results of this study via email to the above email address.

[VERSION 2: IF CONTACT DATA FOR FOLLOW-UP INTERVIEW WAS NOT INITIALLY PROVIDED]

Thank you for completing this survey!

Your participation supports important research on how the transition to climate neutrality is governed in cities across Europe. The result may help to identify shared challenges, critical capacities, and future best practices.

Should you be selected for a follow-up interview, you will be contacted within the coming weeks under the email address you left at the beginning of this survey.

B.b RD-2 | Method C | Interviewee search protocol

Target information:

- (Primary) Names and department-level contact data (preferably email) of team, unit, department, or other organizational entity responsible for climate, environmental and urban development topics.
- (Primary) Names and individual-level contact data (preferably email) of any people in or around those departments most closely related to the governance of the climate neutrality transition, as assessable through the available information.
- (Secondary) Subjective impression of the state of the case regarding climate neutrality transition behaviour (salience of climate neutrality on websites, positioning on municipal agenda, ...)
- (Secondary) Websites and PDF documents relevant to local climate policy and action.

Process: If any stop conditions (see below) are met, the documentation of the results was finished, the 8-minute timer reset, and the process was started over with Step 1 for the next city. The list of 112 EU Mission Cities was reviewed in alphabetical order.

Step 1 – Open website: Navigate to the next city website which linked for the respective city on the NetZeroCities overview: <https://netzerocities.eu/mission-cities/> (*Note: This represents a good starting point, as these sites were presumably deliberately picked by cities as the preferred destination for incoming traffic relating to the EU Cities Mission.*)

Step 2 – Translate website: Unless the native language of the website is English, German, or French (languages, I, as the researcher can reliably read), the Google Chrome inbuilt site translation features (Right Click → “Translate to English”) is used to translate the native-language website. (*Note: Even if the site offers an on-site English version, I avoided it, as only a small part of native-language content was usually translated.*)

Step 3 – Search in website: Search the website for...

- ...an overview of departments/municipal organisational structure/municipal working area
 - Identify most likely departments (In order of priority: Environment; City Planning & Development; Mayor’s Office; Energy; Mobility)
 - Search for lists of functionaries or relevant contact person.
- ...any topical/program-level landing pages relating to environmental and climate transition topics.
 - Identify any listed contact person or department.
- ...a dedicated ‘Contact’ sections or contact register in site header or footer.

This search is conducted by navigating through the available menus and searching the resulting sites visually and through in-browser search. The search process was structured as set out here, but implemented through my personal best judgement of the material at hand.

Step 4 – Search in relevant documents: Look at website, for...

- ... any published climate policy documents or similar and check PDFs for references to their authors, as these presumably would be people working in topical proximity to the target population (*Note: Contacts of external consultants were ignored*):
 - Search in documents for @ and (at) to find email addresses.
 - Check imprint, executive summary and last page for contact sections and names.

Step 5 – Search externally for EU Cities Mission information:

→ *If previous steps did not yield at least one usable contact with certain responsibility for the EU Cities Mission*

Google: “[CITY NAME] + climate OR climate neutrality OR 100 climate OR EU Mission” and look for...

- ...any previously missed pages or EU Mission-related press-releases, and indication of the person responsible, including their email address.

Step 6 – Search externally for specific contact data:

→ *If Step 3, Step 4 or Step 5 yielded the names of contact persons, but not their email address:*

Google: “[CONTACT PERSON NAME] + [CITY NAME]” and look for...

- ...any mention of contact persons’ emails in other contexts (e.g., city press releases)
- ...LinkedIn profiles or other professional contact listings

Stop Conditions:

- At least one instance of *primary* information was found

+ any obvious leads for further *primary* information have been exhausted

- 8 minutes have passed reviewing the city at hand

(Note: This time was iteratively fixed over the first ten cities that were checked, based on my experience, to prevent extensively deep and imbalanced searches and make the plan of reviewing each city each mission city feasible.)

B.c RD-2 | Method D | General-purpose interview guide [EN]

	Question	Notes
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Topic 1: Setting the scene

X	Could you please briefly explain what your day-to-day work looks like and what your usual task and responsibilities are around the climate neutrality transition?	
---	---	--

Topic 2: Policy Frameworks

X	Which frameworks are you using to address sustainable urban development and climate neutrality?	
	<ul style="list-style-type: none"> How are they used? 	
	<ul style="list-style-type: none"> If multiple: How do they relate to each other? 	
X	<p>As part of the EU Mission for 100 Climate Neutral and Smart Cities your city will develop a Climate City Contract.</p> <p>What is the current status of the CCC?</p>	

	<ul style="list-style-type: none"> • Why? 	
--	--	--

Topic 3: Governance of the climate neutrality transition

X	Which organizations are responsible for governing and implementing the transition to neutrality in your city?	
	<ul style="list-style-type: none"> • Why has [CITY] chosen this organizational setup? What are its benefits? 	
	<ul style="list-style-type: none"> • How do you know this setup is effective? 	
	<ul style="list-style-type: none"> • Any recent/upcoming changes to organizational structures? → Why? 	
	<ul style="list-style-type: none"> • Which rights and responsibilities does the leading organizational body have? → Why? 	
	<ul style="list-style-type: none"> • How is the city overcoming silos? / Are silos an issue? • How is the governance system changing to make sure climate strategy arrives in other departments? 	
	Which oversight and reporting mechanisms is [CITY] using for climate neutrality the climate neutrality transition?	
	Why these? How do you know?	

X	How is your city administration communicating and coordinating internally as part of the transition to climate neutrality?	
	<ul style="list-style-type: none"> • Why was this communication model chosen? 	
	How is your city administration communicating and coordinating externally as part of the transition to climate neutrality?	
	<ul style="list-style-type: none"> • To what extent are you dependant on other levels of government to advance climate neutrality in [CITY]? 	
	How is your city using funding mechanisms and financial tools to govern the transition to climate neutrality?	
	How is your city using information technology to govern the transition to climate neutrality?	
	<ul style="list-style-type: none"> • Are there any current projects or changes? 	
	<ul style="list-style-type: none"> • Is new infrastructure being developed? 	
X	Thinking about all these governance issues we discussed, what are the biggest challenges you are facing in governing the climate neutrality transition?	
X	What would you need to overcome these?	
X	What is your biggest success in governing the climate transition?	

Topic 4: Capacities

X	<p>How would you describe the role the municipal public administration plays in advancing climate neutrality in [CITY]?</p> <p>If you think about the climate neutrality transition in your city, how would you define the role?</p>	
	<ul style="list-style-type: none"> • Does [CITY] have the skills, processes, and resources to fill this role? 	
	<ul style="list-style-type: none"> • Do you have all the capabilities you need to govern the CNT transition? 	
X	<p>Which skills, processes, and resources does your city need to advance climate neutrality?</p>	
	<ul style="list-style-type: none"> • Could you explain why? 	
X	<p>Which (if any) of these skills, processes, and resources is your city currently lacking?</p>	
	<ul style="list-style-type: none"> • How has this lack presented itself in your day-to-day work? 	
	<ul style="list-style-type: none"> • Are these lacks being addressed? 	

X	How is the city of [CITY] identifying which administrative capacities and capabilities it needs to advance the climate neutrality transition?	
X	What is [CITY] doing to build the capacities it needs?	
	<ul style="list-style-type: none"> • Is this a concerted effort? • Does a capacity management process and strategy exist? 	
X	Which (if any) new capabilities is your city administration developing to advance climate neutrality and sustainability?	
	<ul style="list-style-type: none"> • Which (if any) new human, organizational, and technical capabilities is your city administration developing to advance climate neutrality and sustainability? 	
	<ul style="list-style-type: none"> • You mentioned you are looking for [TYPE OF PERSON]. Why is this combination of traits so important? What role would these people fill? 	
	<ul style="list-style-type: none"> • Which (if any) new knowledge, analytical, and data capabilities is your city administration developing to advance climate neutrality and sustainability? 	
	<ul style="list-style-type: none"> • Which (if any) new formal responsibilities or political authority is your city administration seeking to gain, to advance climate neutrality and sustainability? 	
	<ul style="list-style-type: none"> • Which (if any) new types, sources, and amounts of funding is your city administration seeking to access, to advance climate neutrality and sustainability? 	

Implementation

x	How is your city's administration changing its processes and routines to govern and implement the climate neutrality transition?	
	<ul style="list-style-type: none"> • How has this fact impacted your work? 	
	<ul style="list-style-type: none"> • For which activities should processes be created / improved? 	
x	If you can, could you please give a short example of a recent project that your city's public administration is undertaking to pursue climate neutrality and sustainability in your city.	
	<ul style="list-style-type: none"> • Was this a success/failure? Why? 	
	<ul style="list-style-type: none"> • If no: Are there any ideas floating around? Why have they not been implemented yet? 	
	<ul style="list-style-type: none"> • If you can, could you please give a short example (if available) of a recent administrative innovation your city is implementing to pursue climate neutrality and sustainability. 	
	<ul style="list-style-type: none"> • Was this a success/failure? Why? 	
	<ul style="list-style-type: none"> • You mentioned [XYZ]. Could you expand on this? Why was this done? Have you seen any impact yet? 	

EU Mission

X	<p>It has now been about one year since the participants of the EU Mission have first been publicly announced in April 2022.</p> <p>How, if at all, has joining the mission influenced the way climate neutrality is discussed, governed, and implemented in your city?</p>	
	<ul style="list-style-type: none"> • Why did this change occur? What was the mechanism? 	
X	<p>Do you think [CITY] will be able to attain climate neutrality by 2030, in line with the EU Mission goal?</p>	
	<ul style="list-style-type: none"> • Why? Why not? • Which is the biggest bottleneck or constraint you are facing in becoming climate neutral by 2030? / What will you need to make it happen? 	
X	<p>What are your thoughts on the EU mission as a policy tool for achieving climate neutrality in [CITY]?</p>	

End

X	<p>We have reached the end of this interview.</p> <p>Is there anything else you would like to add?</p>	
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B.d RD-2 | Method D | General-purpose interview guide [DE]

Thema 1: Einführung

X	Could you please briefly explain what your day-to-day work looks like and what your usual task and responsibilities are?	Könnten Sie bitte kurz erläutern, wie Ihr Arbeitsalltag aussieht und was Ihre üblichen Aufgaben und Verantwortlichkeiten sind?
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Thema 2: Policy Frameworks

X	Which frameworks are you using to address sustainable urban development and climate neutrality?	Welche Frameworks nutzen Sie, um nachhaltige Stadtentwicklung und Klimaneutralität zu erreichen?
	How are they used?	Wie werden diese genutzt?
	If multiple: How do they relate to each other?	Falls mehrere: Wie hängen sie miteinander zusammen?
x	As part of the EU Mission for 100 Climate Neutral and Smart Cities your city will develop a Climate City Contract. What is the current status of that?	Als Teil der EU-Mission für 100 klimaneutrale und intelligente Städte wird Ihre Stadt einen Klimastadtvertrag entwickeln. Wie ist der aktuelle Stand der Dinge?
	Why?	Warum?

Thema 3: Steuerung des Übergangs zur Klimaneutralität

x	Which organizations are responsible for governing and implementing the transition to neutrality in your city?	Welche Organisationen sind für die Steuerung und Umsetzung des Übergangs zur Klimaneutralität in Ihrer Stadt verantwortlich?
	Why has Heidelberg chosen this organizational setup? What are its benefits?	Warum hat Heidelberg diese Organisationsform gewählt? Was sind seine Vorteile?
	How do you know this setup is effective?	Woher wissen Sie, dass diese Struktur effektiv ist?
	Any recent/upcoming changes to organizational structures? → Why?	Gibt es aktuelle/künftige Änderungen in den Organisationsstrukturen? → Warum?
	Which rights and responsibilities does the leading organizational body have? → Why?	Welche Rechte und Pflichten hat das leitende Organisationsorgan? → Warum?
	How is the city overcoming silos? / Are silos an issues? How is the governance system changing to make sure climate strategy arrives in other departments?	Wie überwindet die Stadt Silos? / Sind Silos ein Problem? Wie verändert sich das Governance-System, um sicherzustellen, dass die Klimastrategie in anderen Abteilungen ankommt?
	Which oversight and reporting mechanisms is Heidelberg using for climate neutrality the climate neutrality transition?	Welche Aufsichts- und Berichterstattungsmechanismen nutzt Heidelberg für die Klimaneutralität und den Übergang zur Klimaneutralität?
	Why these? How do you know?	Warum diese? Woher wissen Sie das?

x	How is your city administration changing its ways of communicating and coordinating internally as part of the transition to climate neutrality?	Wie verändert Ihre Stadtverwaltung ihre Art der internen Kommunikation und Koordination als Teil des Übergangs zur Klimaneutralität?
	Why was this communication model chosen?	Warum wurde dieses Kommunikationsmodell gewählt?
	How is your city administration changing its ways of communicating and coordinating externally as part of the transition to climate neutrality?	Wie verändert Ihre Stadtverwaltung im Rahmen des Übergangs zur Klimaneutralität ihre Art der Kommunikation und Koordination nach außen?
	To what extent are you dependant on other levels of government to advance climate neutrality in Heidelberg?	Inwieweit sind Sie von anderen Regierungsebenen abhängig, um die Klimaneutralität in Heidelberg voranzutreiben?
	How is your city using funding mechanisms to govern the transition to climate neutrality?	Wie nutzt Ihre Stadt Finanzierungsmechanismen, um den Übergang zur Klimaneutralität zu steuern?
	How is your city using information technology to govern the transition to climate neutrality?	Wie nutzt Ihre Stadt die Informationstechnologie, um den Übergang zur Klimaneutralität zu steuern?
	Are there any current projects or changes?	Gibt es aktuelle Projekte oder Veränderungen?
	Is new infrastructure being developed?	Wird eine neue Infrastruktur entwickelt?
x	What are the biggest challenges you are facing in governing the climate neutrality transition?	Was sind die größten Herausforderungen, denen Sie sich bei der Steuerung des Übergangs zur Klimaneutralität gegenübersehen?

x	What do you need to overcome these?	Was brauchen Sie, um diese zu bewältigen?
x	What is your biggest success in governing the climate transition?	Was ist Ihr größter Erfolg bei der Bewältigung des Klimawandels?

Topic 4: Verwaltungskapazitäten

x	If you think about the climate neutrality transition in your city, how would you define the role of city administration?	Wenn Sie an den Übergang zur Klimaneutralität in Ihrer Stadt denken, wie würden Sie die Rolle der Stadtverwaltung definieren?
	Does Heidelberg have the skills, processes, and resources to fill this role?	Verfügt Heidelberg über die Fähigkeiten, Prozesse und Ressourcen, um diese Rolle auszufüllen?
	Do you have all the capabilities you need to govern the CNT transition?	Verfügen Sie über alle Fähigkeiten, die Sie benötigen, um den CNT-Übergang zu steuern?
x	Which skills, processes, and resources does your city need to advance climate neutrality?	Welche Fähigkeiten, Prozesse und Ressourcen braucht Ihre Stadt, um die Klimaneutralität voranzutreiben?
	Could you explain why?	Können Sie erklären, warum?
x	Which (if any) of these skills, processes, and resources is your city currently lacking?	An welchen dieser Fähigkeiten, Verfahren und Ressourcen mangelt es in Ihrer Stadt derzeit (wenn überhaupt)?
	How has this lack presented itself in your day-to-day work?	Wie hat sich dieser Mangel in Ihrem Arbeitsalltag gezeigt?

	Are these lacks being addressed?	Werden diese Defizite behoben?
x	How is the city of Heidelberg identifying which administrative capacities and capabilities it needs to advance the climate neutrality transition?	Wie stellt die Stadt Heidelberg fest, welche Verwaltungskapazitäten und -fähigkeiten sie benötigt, um den Übergang zur Klimaneutralität voranzutreiben?
x	What is Heidelberg doing to build the capacities it needs?	Was unternimmt Heidelberg, um die benötigten Kapazitäten aufzubauen?
x	Which (if any) new capabilities is your city administration developing to advance climate neutrality and sustainability?	Welche neuen Fähigkeiten entwickelt Ihre Stadtverwaltung, um Klimaneutralität und Nachhaltigkeit zu fördern?
	Which (if any) new human, organizational, and technical capabilities is your city administration developing to advance climate neutrality and sustainability?	Welche neuen personellen, organisatorischen und technischen Fähigkeiten entwickelt Ihre Stadtverwaltung, um Klimaneutralität und Nachhaltigkeit voranzutreiben?
	You mentioned you are looking for [TYPE OF PERSON]. Why is this combination of traits so important? What role would these people fill?	Sie haben erwähnt, dass Sie nach [ART DER PERSON] suchen. Warum ist diese Kombination von Merkmalen so wichtig? Welche Rolle würden diese Personen ausfüllen?
	Which (if any) new knowledge, analytical, and data capabilities is your city administration developing to advance climate neutrality and sustainability?	Welche neuen Wissens-, Analyse- und Datenkapazitäten entwickelt Ihre Stadtverwaltung, um Klimaneutralität und Nachhaltigkeit zu fördern?
	Which (if any) new formal responsibilities or political authority is your city administration seeking to gain, to advance climate neutrality and sustainability?	Welche neuen formalen Verantwortlichkeiten oder politischen Befugnisse möchte Ihre Stadtverwaltung erlangen, um Klimaneutralität und Nachhaltigkeit zu fördern?

	Which (if any) new types, sources, and amounts of funding is your city administration seeking to access, to advance climate neutrality and sustainability?	Auf welche neuen Arten, Quellen und Beträge von Finanzmitteln möchte Ihre Stadtverwaltung zugreifen, um Klimaneutralität und Nachhaltigkeit zu fördern?
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Thema 5: Umsetzung

x	How is your city's administration changing its processes and routines to govern and implement the climate neutrality transition?	Wie verändert die Verwaltung Ihrer Stadt ihre Prozesse und Routinen, um den Übergang zur Klimaneutralität zu steuern und umzusetzen?
	How has this fact impacted your work?	Wie hat sich diese Tatsache auf Ihre Arbeit ausgewirkt?
	For which activities should processes be created / improved?	Für welche Aktivitäten sollten Prozesse geschaffen/verbessert werden?
x	If you can, could you please give a short example of a recent project that your city's public administration is undertaking to pursue climate neutrality and sustainability in your city.	Wenn Sie können, könnten Sie bitte ein kurzes Beispiel für ein aktuelles Projekt nennen, das die öffentliche Verwaltung Ihrer Stadt durchführt, um Klimaneutralität und Nachhaltigkeit in Ihrer Stadt zu erreichen.
	Was this a success/failure? Why?	War dies ein Erfolg/Misserfolg? Warum?
	If no: Are there any ideas floating around? Why have they not been implemented yet?	Wenn nein: Gibt es irgendwelche Ideen, die im Umlauf sind? Warum wurden sie noch nicht umgesetzt?

	If you can, could you please give a short example (if available) of a recent administrative innovation your city is implementing to pursue climate neutrality and sustainability.	Wenn Sie können, geben Sie bitte ein kurzes Beispiel (falls vorhanden) für eine neuere Verwaltungsinnovation, die Ihre Stadt im Hinblick auf Klimaneutralität und Nachhaltigkeit umsetzt.
	Was this a success/failure? Why?	War dies ein Erfolg/Misserfolg? Und warum?
	You mentioned [XYZ]. Could you expand on this? Why was this done? Have you seen any impact yet?	Sie haben [XYZ] erwähnt. Könnten Sie dies näher erläutern? Warum wurde dies getan? Haben Sie schon irgendwelche Auswirkungen gesehen?

Thema 6: EU Mission

x	It has now been about one year since the participants of the EU Mission have first been publicly announced in April 2022. How, if at all, has joining the mission influenced the way climate neutrality is discussed, governed, and implemented in your city?	Es ist jetzt etwa ein Jahr her, dass die Teilnehmer der EU-Mission im April 2022 erstmals öffentlich bekannt gegeben wurden. Wie, wenn überhaupt, hat die Teilnahme an der Mission die Art und Weise beeinflusst, wie Klimaneutralität in Ihrer Stadt diskutiert, geregelt und umgesetzt wird?
	Why did this change occur? What was the mechanism?	Warum hat sich dieser Wandel vollzogen? Was war der Mechanismus?

x	Do you think Heidelberg will be able to attain climate neutrality by 2030, in line with the EU Mission goal?	Glauben Sie, dass Heidelberg in der Lage sein wird, die Klimaneutralität bis 2030 zu erreichen, wie es das Ziel der EU-Mission vorsieht?
	Why? Why not? Which is the biggest bottleneck or constraint you are facing in becoming climate neutral by 2030? / What will you need to make it happen?	Warum? Warum nicht? Welches ist der größte Engpass oder das größte Hindernis, dem Sie sich gegenübersehen, um bis 2030 klimaneutral zu werden? / Was brauchen Sie, um dies zu erreichen?
x	What are your thoughts on the EU mission as a policy tool for achieving climate neutrality in Heidelberg?	Was denken Sie über die EU-Mission als politisches Instrument zur Erreichung der Klimaneutralität in Heidelberg?

End

x	We have reached the end of this interview. Is there anything else you would like to add?	Wir haben das Ende dieses Interviews erreicht. Gibt es noch etwas, das Sie hinzufügen möchten?
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B.e RD-2 | Method D | Follow-up interview guide Bratislava

Topic 1: Setting the scene

Q1	<p>You mentioned in the survey that you are working on the EU Mission for “100 Climate Neutral and Smart Cities by 2030” and the Sustainable Energy and Climate Action Plan of Bratislava.</p> <p>Could you please briefly explain what your day-to-day work looks like?</p>
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Topic 2: Governance: Organisational structure and coordination

	<p>How will the current organizational setup be shifted to form the new one?</p>
Q2	<p>In the survey you explained that Bratislava is establishing a Climate Office under the supervision of a new vice-mayor position for climate.</p> <p>Why has Bratislava chosen this particular organizational setup to govern the climate transition?</p>
Q3	<p>You mentioned that this new setup will hopefully provide more horizontal governance and open silos.</p> <p>What gives you the confidence that this new setup will be able to do so? How will this new organizational setup aid the governance process?</p>
Q4	<p>How did you determine the responsibilities and resources the Climate Office will have?</p>

Q5	You also mentioned that many other departments will play an important role. How would you describe the roles and responsibilities of the different departments in this new setup?
Q6	You mentioned that Bratislava will develop a new coordination and communication system based on a mapping exercise you have already completed. Could you give an impression of what this might be like in practice? What will change, and why?
Q7	<p>You also highlighted the importance of the establishment of the Metropolitan Institute of Bratislava on multiple occasions.</p> <p>Could you please elaborate on why this change was so important? What does the MIOB do that was previously not possible? What capabilities does it provide to the city?</p>
	How would you characterize the general mode of governance you are using to coordinate and control the transition to climate neutrality in Bratislava?

Topic 2: Policy Frameworks

Q8	<p>I would like to turn to the different frameworks you mentioned for a moment: the SDG framework, SECAP, and the NetZeroCities framework including the CCCs.</p> <p>How do these frameworks used in Bratislava? How do they relate to each other?</p>
Q9	You mentioned that you have not yet started to work in the CCC. Why is that?
Q10	You outlined a few ongoing projects in your survey response but mentioned that they are not explicitly considered as aiming at climate neutrality.

	Which role does the concept of climate neutrality play in your work?
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Topic 3: Politics and funding

Q11	<p>You mentioned on multiple occasions that there are political and financial tensions with other levels of government.</p> <p>To what extent are you dependant on other levels of government to advance climate neutrality in Bratislava?</p>
Q12	<p>In your response you mentioned that cities in Slovakia have limited competences over their territory .</p> <p>Which formal competences in particular are you lacking, that would enable you to advance the climate neutrality transition?</p>

Topic 4: Process and implementation

Q13	<p>You mentioned that there are no established processes around the climate neutrality transition yet.</p> <p>How, if at all, has this fact impacted your work?</p>
Q14	<p>Would the implementation of climate neutrality in Bratislava benefit from more formalized administrative routines and processes? Why do you think that is?</p>

Q15	For which topic or area would you want to create or improve processes?
Q16	You mentioned that there are no notable administrative innovations implemented yet. Are there any ideas floating around? Why have they not been implemented yet?
Q17	You mentioned that you introduced green public procurement. Could you expand on this? Why was this done? Have you seen any impact yet?

Topic 5: Administrative Capacities

	How have you noticed this brain drain in your operations?
	How would you describe the role the municipal public administration plays in advancing climate neutrality in Gävle?
Q18	You mentioned that climate-mainstreaming into all municipal projects and actions has not happened yet. Which are the most important barriers in this regard?
Q19	In the survey you mentioned that you are lacking people who unite both technical knowledge in a climate-neutrality relevant area as well as leadership and communication skills. Why is this combination of traits so important? What role would these people fill?

Q20	<p>You briefly mentioned in the survey that the development of human and technical capabilities will hopefully follow from the organizational changes.</p> <p>Could you elaborate on this point?</p>
Q21	<p>How is the city of Bratislava identifying which capacities and capabilities it needs to advance the climate neutrality transition?</p>
Q22	<p>How is Bratislava building these capacities? Is this a concerted effort? Does a capacity management and strategy exist?</p>
Q23	<p>Is there any major climate-relevant capability the Bratislava city administration is lacking?</p>

Topic 6: The EU Mission for “100 Climate Neutral and Smart Cities by 2030”

Q24	<p>You mentioned that joining the mission has given climate issues increased legitimacy as well as managerial and political support.</p> <p>Could you explain how this happened?</p>
Q25	<p>Which if any of the governance or capacity changes you described now or in the survey were triggered by Bratislava joining the EU Mission?</p>
Q26	<p>You mentioned that you are lacking the time, resources, and capacities to achieve climate neutrality by 2030.</p>

	Which is the biggest bottleneck or constraint you are facing in becoming climate neutral by 2030?
Q27	What are your thoughts on the EU mission as a policy tool for achieving climate neutrality in Bratislava?

Topic 7: End

Q28	Is there anything else you would like to add? Its so complex that it cannot be summed up
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B.f RD-2 | Method D | Follow-up interview guide Tallinn

Topic 1: Setting the scene

	Could you please briefly explain what your day-to-day work looks like and what your usual task and responsibilities are?
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Topic 2: Governance: Organisational structure and coordination

	You mentioned that the strategic management office is the central coordinator for sustainability. Could you elaborate a little on its structure and purpose within the wider city administration?
	You mentioned the “development planning unit and green transition unit” – what role does it play?
	Why were this setup chosen?
	You mentioned that the organizational structures were changed with the introduction of the strategic management office. Could you explain what changed in comparison to the previous setup any why?
	You mentioned that you are in the process of designing both reporting and funding mechanisms. Could you describe what this process looks like? Which principles do you seek to implement?
	You mentioned a ‘Climate Assembly’ in autumn and that it will be important for stakeholder engagement and communication practices. Could you elaborate what this is?

Topic 2: Policy Frameworks

	Why is Tallinn not participating in the EU Mission for 100 Climate Neutral and Smart Cities?
	Why have the SDGs been put in such a central place in the sustainability governance structure?

Topic 3: Politics and funding

	None
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Topic 4: Process and implementation

	You mentioned that there are still processes that work against climate neutrality – could you give an example of such a process?
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Topic 5: Administrative Capacities

	You mentioned that leadership skills are improving but still lacking. Could you elaborate what leadership skills are to you and why they are important for the CN transition?
	You mentioned that in your opinion there currently is a waste of manpower on certain processes – could you explain why you think so and give an example?
	You also wrote that there is a lack of strategic planning and results-oriented capacities – could you explain what those are any why they are important?

Topic 6: The EU Mission for “100 Climate Neutral and Smart Cities by 2030”

	None
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Topic 7: End

	We have reached the end of this interview. Is there anything else you would like to add?
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RD-2 | Method D | Follow-up interview guide Vilnius

Topic 1: Setting the scene

X	Could you please briefly explain what your day-to-day work looks like and what your usual task and responsibilities are?	
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Topic 3: Governance of the climate neutrality transition

	You mentioned that an institution called Climate Neutral Vilnius is coordinating CN issues. Could you elaborate a little on its structure and purpose within the wider city administration? What are its tasks?	
	Why has Warsaw chosen this organizational setup? What are its benefits?	
	How do you know this setup is effective?	
	Any recent/upcoming changes to organizational structures? → Why?	
	Which rights and responsibilities does the leading organizational body have? → Why?	
	You mentioned that an independent institution was established to coordinate CN. Is this the Climate Neutral Vilnius organization? Why was this change made? Are there any other changes upcoming?	

	You mentioned the oversight and reporting process is still in development. Could you explain where development is at right now, and what you are currently working on?	
	You said that the internal communication and coordination processes still need to be developed. Are these actively being developed? What are the requirements?	
	You noted in the survey replies that citizens involvement in implementation and planning is critical. Could you elaborate on why you think so?	
	You mentioned that you are more ambitious than the national government. Could you explain how this impacts climate neutrality governance efforts in Vilnius?	
x	What are the biggest challenges you are facing in governing the climate neutrality transition?	
x	What do you need to overcome these?	
x	What is your biggest success so far in governing the climate transition?	

Topic 4: Capacities

x	How would you describe the role the municipal public administration plays in advancing climate neutrality in Vilnius?	
	You mentioned in the survey that participation in initiatives helped to build human and other capacity. Could you elaborate on this? Which other capacities?	

	You mentioned citizens trust is one of the key capacities to improve. Why is that? What are you doing to improve it?	
	You mentioned that in Climate Neutral Vilnius you are focusing on building capacities. Could you elaborate on this point?	

Implementation

	None	
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EU Mission

	You mentioned the establishment of a new institution because of joining the EU Mission. Is this Climate Neutral Vilnius? How did joining the mission influence its establishment?	
x	Do you think Warsaw will be able to attain climate neutrality by 2030, in line with the EU Mission goal?	
	Why? Why not? Which is the biggest bottleneck or constraint you are facing in becoming climate neutral by 2030? / What will you need to make it happen?	

x	What are your thoughts on the EU mission as a policy tool for achieving climate neutrality in Warsaw?	
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End

x	We have reached the end of this interview. Is there anything else you would like to add?	
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C Study population and sample reference data

C.a Contact data of entities in EU Mission Cities invited to a research interview as part of RD-2.

For formatting reasons, please see the next page for the table.

Abbreviations:

- LNG: Language
- SUR: Contact acquired via the Method A survey (no initial invitation sent via email)
- PRS: Email sent, asking recipient *personally* for an interview.
- REF: Email sent, asking recipient to *refer* me to anyone in the organization fitting the searched-for profile.
- GEN: Email sent, asking a group of recipients (e.g., a department) *generally* for interview opportunities.
- SKIP: No email sent due to inadequate contact quality or channel.

Country	City	LNG	SUR	PRS	REF	GEN	SKIP	Comment: Contact type and quality	Status
Austria	Klagenfurt	DE		x				Topical Department-Level + Personal contact	Sent (13.06.2023)
Norway	Stavanger	EN		x				EU Mission, person responsible	Sent (13.06.2023)
Germany	Aachen	DE				x		Topical Department-Level	Sent (13.06.2023)
Netherlands	Amsterdam	EN			x			Contact Form or Press Office	Sent (13.06.2023)
France	Angers	EN				x		Topical Department-Level, not available online but on last page of the recent report	Sent (13.06.2023)
Belgium	Antwerp	EN				x		Sustainability Initiative Level	Sent (13.06.2023)
Denmark	Arhus	EN			x			General Department-Level	Sent (13.06.2023)
Greece	Athens	EN			x			City development agency, press contact	Sent (13.06.2023)
Greece	Athens	EN			x			City development agency, press contact	Sent (13.06.2023)
Spain	Barcelona	EN				x		Sustainability Initiative Level (2030)	Sent (13.06.2023)
Spain	Barcelona	EN				x		Sustainability Initiative Level (2030)	Sent (13.06.2023)
Italy	Bergamo	EN				x		Topical Department-Level, personal contacts of leadership available	Sent (13.06.2023)
Italy	Bergamo	EN		x				Topical Department-Level, personal contacts of leadership available	Sent (13.06.2023)
Italy	Bologna	EN		x				Topical department, personal contact + General Department-Level, personal contacts of leadership available	Sent (13.06.2023)
Italy	Bologna	EN		x				Topical department, personal contact + General Department-Level, personal contacts of leadership available	Sent (13.06.2023)

France	Bordeaux	EN		x	Topical department, personal contact, LinkedIn Only!	Not contacted
Slovakia	Bratislava	EN	x		Interview confirmation received through survey	Sent (June 2023)
United Kingdom	Bristol	EN		x	Initiative-level	Sent (13.06.2023)
Belgium	Brussels	EN		x	None found on website or online	Not contacted
Romania	Bucharest	EN		x	Department vacant, no website found	Not contacted
Hungary	Budapest	EN		x	Topical department, personal contact	Sent (13.06.2023)
Hungary	Budapest	EN	x		Topical department, personal contact	Sent (13.06.2023)
Romania	Cluj-Napoca	EN		x	None found on website	Not contacted
Denmark	Copenhagen	EN		x	Contact Form	Not contacted
Denmark	Copenhagen	EN		x	Topical Department-Level	Sent (13.06.2023)
Republic of Ireland	Cork	EN		x	Topical Department-Level	Sent (13.06.2023)
Luxembourg	Differdange	EN		x	Topical Department-Level	Sent (13.06.2023)
Luxembourg	Differdange	EN		x	Related role in topical department, personal contact (LinkedIn)	Not contacted
Luxembourg	Differdange	EN		x	Related role in topical department, personal contact (LinkedIn)	Not contacted
Luxembourg	Differdange	EN		x	Related role in topical department, personal contact (LinkedIn)	Not contacted
Luxembourg	Differdange	EN		x	Related role in topical department, personal contact (LinkedIn)	Not contacted

Luxembourg	Differdange	EN		x	Topical department, personal contact (LinkedIn)	Not contacted
France	Dijon	EN		x	Unspecified development department + Public admin personal contact (LinkedIn)	Sent (13.06.2023)
France	Dijon	EN		x	Unspecified development department + Public admin personal contact (LinkedIn)	Not contacted
Germany	Dortmund	DE		x	Topical department, personal contact	Sent (13.06.2023)
Germany	Dortmund	DE		x	Topical department, personal contact	Sent (13.06.2023)
Germany	Dortmund	DE		x	Topical department, personal contact	Sent (13.06.2023)
Germany	Dresden	DE		x	Topical Department-Level, multiple	Sent (13.06.2023)
Germany	Dresden	DE		x	Topical Department-Level, multiple	Sent (13.06.2023)
Germany	Dresden	DE		x	Topical Department-Level, multiple	Sent (13.06.2023)
Germany	Dresden	DE		x	Topical Department-Level, multiple	Sent (13.06.2023)
Republic of Ireland	Dublin	EN		x	None found on website or online	Not contacted
France	Dunkirk	EN		x	Unsure, some available but relevance hard to assess	Sent (13.06.2023)
France	Dunkirk	EN		x	Unsure, some available but relevance hard to assess	Sent (13.06.2023)
France	Dunkirk	EN		x	Unsure, some available but relevance hard to assess	Sent (13.06.2023)
France	Dunkirk	EN		x	Unsure, some available but relevance hard to assess	Sent (13.06.2023)
Netherlands	Eindhoven	EN		x	Topical Department-Level	Sent (13.06.2023)

Netherlands	Eindhoven	EN		x	Topical Contact Form	Not contacted
Israel	Elat	EN		x	None found on website or online	Not contacted
Albania	Elbasan	EN	x		Sustainability-specific Contact Form	Sent (13.06.2023)
Albania	Elbasan	EN	x		Sustainability-specific Contact Form	Sent (13.06.2023)
Finland	Espoo	EN		x	Exact topical department	Sent (13.06.2023)
Finland	Espoo	EN	x		Topical department, personal contact	Sent (13.06.2023)
Finland	Espoo	EN	x		Topical department, personal contact	Sent (13.06.2023)
Italy	Florence	EN		x	Topical department	Sent (13.06.2023)
Italy	Florence	EN	x		Topical department, Personal address of city department head	Sent (13.06.2023)
Germany	Frankfurt	DE		x	Personal addresses + Topical department + Phone	Sent (13.06.2023)
Germany	Frankfurt	DE		x	Personal addresses + Topical department + Phone	Sent (13.06.2023)
Germany	Frankfurt	DE	x		Personal addresses + Topical department + Phone	Sent (13.06.2023)
Bulgaria	Gabrovo	EN	x		Individual contacts in topical department, responsibility uncertain	Sent (13.06.2023)
Bulgaria	Gabrovo	EN	x		Individual contacts in topical department, responsibility uncertain	Sent (13.06.2023)
Sweden	Gavle	EN	x		Individual contacts in topical department, responsibility uncertain	Sent (13.06.2023)
Sweden	Gavle	EN	x		Individual contacts in topical department, responsibility uncertain	Sent (13.06.2023)

Sweden	Gavle	EN	x	Individual contacts in topical department, responsibility uncertain	Sent (13.06.2023)
UK	Glasgow	EN	x	Initiative-level	Sent (13.06.2023)
Sweden	Göteborg	EN	x	Topical Department-Level	Sent (13.06.2023)
Malta	Gozo	EN	x	Cabinet level	Not contacted
Malta	Gozo	EN	x	Cabinet level	Sent (13.06.2023)
France	Grenoble	EN	x	Individual contact in topical department, responsibility uncertain	Sent (13.06.2023)
Netherlands	Groningen	EN	x	Initiative-level, responsibility uncertain	Sent (13.06.2023)
Portugal	Guimaraes	EN	x	Multiple personal addresses on multiple levels in topical department	Sent (13.06.2023)
Portugal	Guimaraes	EN	x	Multiple personal addresses on multiple levels in topical department	Sent (13.06.2023)
Portugal	Guimaraes	EN	x	Multiple personal addresses on multiple levels in topical department	Sent (13.06.2023)
Germany	Heidelberg	DE	x	Multiple (almost too many) personal addresses + exact topical department	Not contacted
Germany	Heidelberg	DE	x	Multiple (almost too many) personal addresses + exact topical department	Sent (13.06.2023)
Germany	Heidelberg	DE	x	Multiple (almost too many) personal addresses + exact topical department	Sent (13.06.2023)
Germany	Heidelberg	DE	x	Multiple (almost too many) personal addresses + exact topical department	Sent (13.06.2023)
Germany	Heidelberg	DE	x	Multiple (almost too many) personal addresses + exact topical department	Sent (13.06.2023)
Sweden	Helsingborg	EN	x	Contact form for topical department, responsibility uncertain	Not contacted

Finland	Helsinki	EN		x	Topical Division-level + two personal contacts in different divisions	Sent (13.06.2023)
Finland	Helsinki	EN	x		Topical Division-level + two personal contacts in different divisions	Sent (13.06.2023)
Finland	Helsinki	EN	x		Topical Division-level + two personal contacts in different divisions	Sent (13.06.2023)
Greece	Ioannina	EN		x	Mayor-Level	Sent (13.06.2023)
Turkey	Istanbul	EN			x None found on website or online	Not contacted
Turkey	Izmir	EN			x POC name found, but no contact data	Not contacted
Greece	Kalamata	EN		x	EU Mission Initiative-Level	Sent (13.06.2023)
Austria	Klagenfurt	DE		x	Topical Department-Level + Personal contact	Sent (13.06.2023)
Slovakia	Kosice	EN			x None found on website or online	Not contacted
Greece	Kozani	EN		x	Topical Department-Level	Sent (13.06.2023)
Poland	Kraków	EN		x	Topical Department-Level	Sent (13.06.2023)
Slovenia	Kranj	EN			x Contact Form or Press Office	Not contacted
Belgium	La Louviere	EN		x	Initiative-level	Sent (13.06.2023)
Finland	Lahti	EN			x None found on website or online	Not contacted
Finland	Lappeenranta	EN	x		Initiative-level personal contacts	Sent (13.06.2023)
Finland	Lappeenranta	EN	x		Initiative-level personal contacts	Sent (13.06.2023)

Germany	Leipzig	DE		x	Topical department-level + personal contact	Sent (13.06.2023)
Germany	Leipzig	DE	x		Topical department-level + personal contact	Sent (13.06.2023)
Germany	Leipzig	DE	x		Topical department-level + personal contact	Sent (13.06.2023)
Cyprus	Lemesos	EN		x	Related Department-Level	Sent (13.06.2023)
Cyprus	Lemesos	EN		x	Related Department-Level	Sent (13.06.2023)
Belgium	Leuven	EN		x	Related Department-Level	Sent (13.06.2023)
Belgium	Leuven	EN		x	Related Department-Level	Sent (13.06.2023)
Czech Republic	Liberec	EN		x	Related Department, Individual Level	Sent (13.06.2023)
Czech Republic	Liberec	EN		x	Related Department, Individual Level	Sent (13.06.2023)
Czech Republic	Liberec	EN	x		Topical Department, Individual Level	Sent (13.06.2023)
Czech Republic	Liberec	EN	x		EU Mission, person responsible	Sent (13.06.2023)
Latvia	Liepaja	EN		x	Related Department, Individual Level, responsibility uncertain	Sent (13.06.2023)
Latvia	Liepaja	EN		x	Topical Department, Individual Level	Sent (13.06.2023)
Portugal	Lisbon	EN			x Contact Form	Not contacted
Slovenia	Ljubljana	EN		x	Topical Department-Level + department head personal contact	Sent (13.06.2023)
Slovenia	Ljubljana	EN	x		Topical Department-Level + department head personal contact	Sent (13.06.2023)

Slovenia	Ljubljana	EN	x	Head of Related Department, responsibility uncertain	Sent (13.06.2023)
Poland	Łódź	EN	x	Public Municipal Inbox	Sent (13.06.2023)
Sweden	Lund	EN	x	Topical Department-Level + department head personal contact	Sent (13.06.2023)
Sweden	Lund	EN	x	Topical Department-Level + department head personal contact	Sent (13.06.2023)
Sweden	Lund	EN	x	Person responsible for EU Mission, Email guessed	Sent (13.06.2023)
Sweden	Lund	EN	x	Person responsible for EU Mission, Email guessed	Sent (13.06.2023)
France	Lyon	EN	x	Initiative-Level	Sent (13.06.2023)
Spain	Madrid	EN	x	Topical Division-level	Sent (13.06.2023)
Sweden	Malmö	EN	x	Public Municipal Inbox	Sent (13.06.2023)
Germany	Mannheim	DE	x	Local Green Deal Initiative, individual Level	Sent (13.06.2023)
Germany	Mannheim	DE	x	Local Green Deal Initiative, individual Level	Sent (13.06.2023)
Germany	Mannheim	DE	x	Local Green Deal Initiative, individual Level	Sent (13.06.2023)
France	Marseille	EN	x	Contact Form	Not contacted
Italy	Milan	EN	x	Topical department, individual contact	Not contacted
Italy	Milan	EN	x	Topical department, individual contact	Sent (13.06.2023)
Hungary	Miskolc	EN	x	None found on website or online	Not contacted

Germany	Munich	DE		x	Topical Department-Level	Sent (13.06.2023)
Germany	Münster	DE	x		Topical department, individual contact	Sent (13.06.2023)
Germany	Münster	DE	x		Topical department, individual contact	Sent (13.06.2023)
Germany	Münster	DE	x		Topical department, individual contact	Sent (13.06.2023)
France	Nantes	EN		x	None found on website or online	Not contacted
Norway	Oslo	EN		x	Contact Form	Not contacted
Italy	Padua	EN	x		Public Municipal Inbox	Sent (13.06.2023)
Italy	Padua	EN	x		Mayor-Level, but responsibility certain	Sent (13.06.2023)
France	Paris	EN		x	Topical department, individual contact, LinkedIn only	Not contacted
France	Paris	EN		x	Contact Form	Not contacted
Italy	Parma	EN	x		Topical department, individual contact	Sent (13.06.2023)
Hungary	Pecs	EN	x		Mayor-Level, but responsibility certain	Sent (13.06.2023)
Montenegro	Podgorica	EN	x		Related department-level	Sent (13.06.2023)
Montenegro	Podgorica	EN	x		Related department-level	Sent (13.06.2023)
Montenegro	Podgorica	EN		x	Topical Department-Level	Sent (13.06.2023)
Portugal	Porto	EN	x		Press Office	Sent (13.06.2023)

Italy	Prato	EN	x	Contact Form or City Inbox (likely same destination)	Sent (13.06.2023)
Iceland	Reykjavík	EN	x	Topical Department-Level	Sent (13.06.2023)
Latvia	Riga	EN	x	Related department-level, responsibility uncertain	Sent (13.06.2023)
Latvia	Riga	EN	x	Related department-level, responsibility uncertain	Sent (13.06.2023)
Italy	Rome	EN	x	General Department-Level	Sent (13.06.2023)
Netherlands	Rotterdam	EN	x	Sustainability-specific Contact Form	Not contacted
Poland	Rzeszów	EN	x	Mayor-Level, secreteriat, but responsibility certain	Sent (13.06.2023)
Bosnia and Herzegovina	Sarajevo	EN	x	Topical, personal contact	Sent (13.06.2023)
Spain	Seville	EN	x	Topical Department-Level	Sent (13.06.2023)
Bulgaria	Sofia	EN	x	No topical found online, municipal contact only via citizen login or phone	Not contacted
Denmark	Sonderborg	EN	x	Climate Neutrality Initiative, initiative-level	Sent (13.06.2023)
Sweden	Stockholm	EN	x	Topical department, individual contact	Sent (13.06.2023)
Sweden	Stockholm	EN	x	Related department-level, responsibility uncertain	Sent (13.06.2023)
Romania	Suceava	EN	x	Related department-level, responsibility uncertain	Sent (13.06.2023)
Romania	Suceava	EN	x	Related department-level, responsibility uncertain	Sent (13.06.2023)
Romania	Suceava	EN	x	Related department-level, responsibility uncertain	Sent (13.06.2023)

Finland	Tampere	EN	x		Topical department (email guessed)	Sent (13.06.2023)
Finland	Tampere	EN	x		Topical department, personal contact	Sent (13.06.2023)
Estonia	Tartu	EN	x		Topical, personal contact	Sent (13.06.2023)
Estonia	Tartu	EN	x		Topical, personal contact	Sent (13.06.2023)
Lithuania	Taurage	EN	x		Topical, personal contact	Sent (13.06.2023)
Netherlands	The Hague	EN		x	Sustainability-specific Contact Form	Not contacted
Greece	Thessaloniki	EN		x	Public Municipal Inbox	Sent (13.06.2023)
Greece	Trikala	EN	x		Related department, personal contact, responsibility uncertain	Sent (13.06.2023)
Norway	Trondheim	EN		x	None found on website or online	Not contacted
Italy	Turin	EN		x	Topical Department-Level, potentially outdated	Sent (13.06.2023)
Finland	Turku	EN	x		Climate Neutrality initiative, individual contact	Sent (13.06.2023)
Finland	Turku	EN	x		Climate Neutrality initiative, individual contact	Sent (13.06.2023)
Finland	Turku	EN	x		Climate Neutrality initiative, individual contact	Sent (13.06.2023)
Sweden	Umeå	EN	x		Climate Neutrality topic, individual contact	Sent (13.06.2023)
Sweden	Umeå	EN	x		Climate Neutrality topic, individual contact	Sent (13.06.2023)
Sweden	Umeå	EN	x		Climate Neutrality topic, individual contact	Sent (13.06.2023)

Netherlands	Utrecht	EN		x	Topic, public inbox	Sent (13.06.2023)	
Netherlands	Utrecht	EN		x	Related topic, public inbox	Sent (13.06.2023)	
Spain	Valencia	EN		x	Topical, personal contact, responsibility uncertain	Sent (13.06.2023)	
Spain	Valencia	EN			x	Topical, personal contact	Not contacted
Spain	Valencia	EN			x	Topical, personal contact	Sent (13.06.2023)
Spain	Valencia	EN		x	General mayor-level, responsibility uncertain	Sent (13.06.2023)	
Spain	Valladolid	EN		x	Topical department-level, personal contact leadership	Sent (13.06.2023)	
Slovenia	Velenje	EN		x	Related department, personal contact, responsibility uncertain	Sent (13.06.2023)	
Slovenia	Velenje	EN		x	Related department, personal contact, responsibility uncertain	Sent (13.06.2023)	
Slovenia	Velenje	EN		x	Related department, personal contact, responsibility uncertain	Sent (13.06.2023)	
Lithuania	Vilnius	EN		x	Interview confirmation received through survey	Sent (June 2023)	
Spain	Vitoria	EN			x	Contact Form	Not contacted
Poland	Warsaw	EN			x	Topical Department-Level	Sent (13.06.2023)
Poland	Wrocław	EN			x	Topical Department-Level	Sent (13.06.2023)
Croatia	Zagreb	EN			x	Topical Department-Level	Sent (13.06.2023)
Croatia	Zagreb	EN		x	Topical Department, individual contact	Sent (13.06.2023)	

Spain	Zaragoza	EN	x	Deputy Mayor-level, personal	Sent (13.06.2023)
Spain	Zaragoza	EN	x	Topical Department-Level	Sent (13.06.2023)

C.b Extended overview of conducted interviews

Ref. ID	City	Country	Date	Time (CEST)	Dur.	Lg.	EU C.M.	O.A.	No. Att.	Role and professional responsibility
[1]	Aarhus	Denmark	26.06.2023	14:00	55 min.	EN	X	1	1	Non-leadership role in a climate unit, responsible for fund raising
[2]	Barcelona	Spain	29.06.2023	15:00	56 min.	EN	X	2	1	Leadership role in a unit for technical planning around municipal strategies
[3]	Bratislava	Slovakia	16.06.2023	10:00	58 min.	EN	X	18	1	Non-leadership role in a unit for climate, responsible for climate strategy
[4]	Copenhagen	Denmark	28.06.2023	14:00	41 min.	EN	X	17	1	Non-leadership role in a climate unit, responsible for energy planning
[5]	Gävle	Sweden	15.06.2023	14:00	55 min.	EN	X	9	1	Non-leadership role in a support unit for governance, responsible for climate strategy
[6]	Gothenburg	Sweden	29.06.2023	9:00	60 min.	EN	X	7	1	Leadership role in a unit for the local climate program
[7]	Guimarães	Portugal	16.06.2023	11:00	53 min.	EN	X	13	1	Non-leadership role in a unit for energy efficiency, responsible for project management and emission accounting
[8]	Heidelberg	Germany	22.06.2023	11:00	40 min.	DE	X	14	1	Leadership role in a unit for climate affairs
[9]	Klagenfurt	Austria	22.06.2023	15:30	34 min.	DE	X	6	1	Leadership role in a department for climate affairs

Ref. ID	City	Country	Date	Time (CEST)	Dur.	Lg.	EU C.M.	O.A.	No. Att.	Role and professional responsibility
[10]	Leipzig	Germany	29.06.2023	11:00	58 min.	DE	X	3	1	Leadership role in a unit for climate and sustainability, responsible for coordination functions
[11]	Ljubljana	Slovenia	30.06.2023	9:00	32 min.	EN	X	10	1	Non-leadership role in an unspecified unit, responsible for circular economy
[12]	Reykjavik	Iceland	29.06.2023	16:30	31 min.	EN	X	5	1	Leadership role in a unit for climate affairs
[13]	Stockholm	Sweden	22.06.2023	10:00	45 min	EN	X	4	1	Non-leadership role in an executive staff unit, responsible for climate coordination functions
[14]	Tallinn	Estonia	26.06.2023	15:00	55 min.	EN		12	1	Independent advisory role for sustainability governance
[15]	Tartu	Estonia	22.06.2023	14:00	56 min.	EN	X	11	1	Non-leadership role in a department for urban design, responsible for climate fund raising
[16]	Umeå	Sweden	20.06.2023	16:00	50 min.	EN	X	15	1	Non-leadership role in a department for strategic development, responsible for climate strategy planning
[17]	Velenje	Slovenia	20.06.2023	9:00	20 min.	EN	X	8	1	Non-leadership role in a unit for economic development and transition, responsible for EU project application and implementation
[18]	Vilnius	Lithuania	28.06.2023	15:00	53 min.	EN	X	19	4	Leadership and non-leadership roles in a unit for climate neutrality
[19]	Warsaw	Poland	29.06.2023	13:00	32 min.	EN	X	16	2	Leadership and non-leadership roles in a unit for climate policy and consultation

Key: Ref. ID = Reference ID, used as a cross-reference marker for statements made by the respective interviewee throughout the text; Dur. = Duration of the interview; Lg. = spoken language during the interview; O.A. = Order of Analysis, i.e., the randomized order in which interviews were coded and memos written; No. Att. = Number of interviewees participating in the given interview.

D Data Analysis

D.a Supplementary notes on the methodological limitations of online surveys for qualitative social science research

The use of online surveys to gather rich textual data is a rare practice in qualitative social sciences research. The emotional, reactive, and interpretative role of the interviewer within the social interview situation has been highlighted as one central source of insight and understanding for the researcher, specifically regarding subtext and nuances in the interviewees responses (Ritchie and Lewis 2003, p. 156 ff.; Rubin and Rubin 2011). Per the nature of the medium, this aspect is lacking in online surveys. Consequently, the research subject's affect cannot be directly observed by the researcher. The online survey furthermore lacks the possibility of ad-hoc reflexiveness such probes and other types of questions that are chosen on the spot and based in the interviewee's prior answers. These questions are usually common and integral in research interviews.

The survey was published only in English but almost exclusively addresses recipients with a wide variety of different native languages. More so than closed-ended surveys, it required recipients to demonstrate very good English language writing comprehension. This likely introduced a difficult to quantify sampling bias. The likelihood of both item and unit non-response as well as the quality of the responses were presumably contingent on local confounding factors. This might include the level of English fluency in the respective country generally, its role in local public sector hiring practices, individual aptitude, and more.

Various features of the employed survey itself as well as the chosen delivery method are furthermore likely to induce certain sampling biases, some of which are common in surveys generally but specifically pronounced here due to features of the research design: Firstly, coverage bias. Only a small percentage of EU Mission participants are network members cities – hence, reliable findings about Mission participants generally are ex-ante not possible, as part of the population is categorically not part of the sample. Further sampling biases compound on top of this: Mission and Eurocities membership are unlikely to be independent variables. Neither is furthermore randomly distributed among European cities generally. Any suggestions that this thesis' findings are quantitatively representative for the populations the examined cities are a part of should be avoided.

Secondly, non-response bias. Although statistical significance was by no means the aim of this survey, this is only a small percentage of the prospective sample, that does not necessarily align with my initial ambitions to gather responses from a subset of mission

cities sufficient to illustrate the breath and variability of street-level contingencies around governing and implementing climate neutrality in cities. This thesis cannot offer an explanation for the, likely varied, reasons for the majority of invited cities' non-responsive behaviour. While the survey itself was unusually long, featuring an untypically high number of open-ended questions, this seems unlikely to be the main contributing factor to non-response, as the click-through-rate from the initial email was only 3.8%, and thus constituted the by far largest loss in the conversion funnel.

Thirdly, there are unmeasured confounding factors inherent to distributing the survey via the City of Tallinn to the Eurocities network plausibly influence unit non-response rates; for instance, the relative standing of Tallinn in the network, prior and informal social relations between the Tallinn officer sending the email and various recipients, and many more – all of which have not been accounted for in this design. My communication with prospective respondents was furthermore exclusively indirect during the survey phase, mediated via partners in the Tallinn city government. I hence only have second-hand information about the timing and framing of the invitation emails, reminder emails or any further in-person prompts issued by Tallinn city officers, which might have introduced variation to the baseline unit response rate.

In sum, despite the delivery of the questionnaire as an online survey, the de-facto output of the data collection efforts put this study in line with other qualitative low-n interview-based case studies, rather than a broad, medium-n survey.

A further challenge lies with the fundamental efficacy of open-ended questions in qualitative online research surveys themselves. I have tentatively suggested the use of such questions to support the exploratory ambition and inductive design of this study. However, inherent problems with the scientific rigour of results from such questions have been reported (Gillespie et al. 2021; LaDonna et al. 2018). There is a body of literature dedicated to best practices of analysing such data (Elliott 2022; Feng and Behar-Horenstein 2019), and it has been rightly pointed out that “the text associated with any single individual is likely to be modest and lack the context and richness usually associated with qualitative research” (Elliott 2022, p. 1).

D.b Seed Codes

- Role of the municipality in CN transition
- Governance
 - Governance: Used policy frameworks
 - Governance: Challenge
 - Governance: Best Practices
 - Governance: Change Driver
 - Governance: Change Inhibitor
 - Governance: Governance adaptations
 - Governance: Governance adaptations: Organisational Structures
 - Governance: Governance adaptations: Oversight and Reporting
 - Governance: Governance adaptations: Internal coordination & communication
 - Governance: Governance adaptations: External coordination & communication
 - Governance: Governance adaptations: Finance and funding
 - Governance: Governance adaptations: ICT use and infrastructure
- Capacity
 - Capacity: Current capacity shortcomings
 - Capacity: Capacities needed for CN transition
 - Capacity: Capacity building practices
 - Capacity: Capacity requirements monitoring
 - Capacity: Capacities under development

- Capacity: Type
 - Capacity: Type: Human
 - Capacity: Type: Organizational and governance
 - Capacity: Type: Technical and infrastructure
 - Capacity: Type: Knowledge, analysis, and data
 - Capacity: Type: Formal responsibility and authority
 - Capacity: Type: Funding
 - Capacity: Type: Processes and Routines
- Capacity: Administrative Innovations
- Mission
 - Mission: Status Quo
 - Mission: Impact of joining
 - Mission: Feasibility
 - Mission: Efficacy as a policy tool

E Interview Transcripts

E.a Aarhus

P1: Yes, that looks good. Perfect. All right, then let's jump right in, as you suggested. Could you please briefly explain what your day to day work looks like and what your usual tasks and responsibilities are relating to the climate neutrality transition?

P2: So I'll just focus on my my own work, right?

P1: Yeah.

P2: Yeah. Just to put it in perspective. Well, I'm working at the City of Aarhus, the municipality of Aarhus, which is divided into various branches, five branches, one of them being focusing on on all the technical stuff and the environment. And then as part of that branch of the municipality we have. Now another branch which is looking into, you know, city planning and stuff like that. And as a branch of that, we have the Climate Secretariat. So that is where I'm situated. So we have the oversight and your view of the entire climate mitigation program, We can get back to that program. But what this is just to say where I'm situated, I'm at the Climate Secretariat and and what I'm working on together with my colleague [NAME] is that we are the fundraisers. And actually, our scope is a bit broader than just climate mitigation because we are looking into fundraising for climate mitigation, adaptation and biodiversity. So that's what I'm working on and it's a pretty new unit. We were set up, established two years ago now. And together with our colleagues that are into the subject matter, we're quite successful in attracting... It's primarily EU funds, right, from from the Horizon program and from life and from intellect. So in short, it's fundraising in favor of climate mitigation and adaptation and biodiversity. That's what I'm doing.

P1: All right. Very interesting. You already mentioned a couple of different things that I want to touch upon. Let's maybe start with the fact that you said it's not only about climate neutrality, etc.. I would be interested in which governance frameworks are you using to address sustainable or urban development in general, which are important aspects, maybe also beyond the city contracts and the mission.

P2: In the city of Aarhus? I mean, it's a setup.... It's a quite I wouldn't say funny, but but special setup in the sense that we have the mayor, the overall mayor, so to speak, but then the other branches have their own mayor. So there's a certain Danish name for that. I won't bother you with that. But but but in that sense, it's it's a system. It's a governance structure where where all these mayors, of course, coming from various political parties,

they have very much forced to work together. Right. So it is not the case that you have, for instance, the Social Democrats, which is the party of overall mayor, so to speak. It's not the case that although they have the majority in the city council, it is not the case that they run the city entirely. So they have to work together with you know, it's a conservative mayor for for all branch of the municipality. So so that's it's a working together spirit, I would say. And yeah, of course there are some challenges with that. But I would say at the end of the day, I mean. This is a local peaceful community. Right? So. So it works. It works.

P1: You. Very interesting. And could you? Maybe. Briefly touch upon the role that the EU mission for 100 climate neutral Smart Cities plays in all of that.

P2: Yeah. I mean, two years ago, two and a half year ago, um, the mayor's department, actually. And they are not normally involved in specific climate related topics and issues like that because that's more in the branch of the municipality where I'm situated. And this idea came up that we should try to get on board in the in the city mission. And I was part of, of the group. We were, I think, three civil servants entitled to work on the application, which we did. It was very time consuming and it played quite a big role. And and it was very much celebrated once we we made it, you know, and, and where on the list, You know, we have 100 cities within the EU and then 12 cities come from outside the EU. So it was very much celebrated. And the mayor himself actually was very glad and and took part in the celebration. We, you know, this group of people that were involved in the application, we had a I wouldn't call it a party, but we had a segment and a glass of wine and the mayor took part in that. So so in that sense, it was high profile. And then what happens afterwards, I think. People are having mixed feelings about it. Right? Because what happened in reality was that, well, I've used the phrase that the EU city mission has transcended or transformed itself into a process and meeting and paper generation thing. Right. It's not it's not it has not developed into a problem solving generator. To be honest. It's it's it's way too abstract and. What we should have done within the mission is I think can easily be described in saying that we should have or the mission should have provided an overview of the missions from every single city divided into the mission domains. And once you had that overview of the mission from every single city divided into the mission domains, we should, on a European level, have developed a gross list of of solutions. And once you had that gross list, the cities would have the ability or could have developed a net list of solutions. And once once the cities would have the net list of solutions, they could start collaborating between the cities. Unfortunately, today this is an overview nobody has. It doesn't exist. And as a consequence, these meetings and then the papers originating from the 100 city mission tends to be very abstract and overall and very process oriented. Which is such a pity

because, I mean, those people are steering the 130 mission are super nice and knowledgeable people. So yeah, I think it's quite a pity. But but this is the status. And as a consequence of that, you would also see that at the outset of the mission, many of these teams meetings we had, I mean, there were. Maybe 150 people attending these meetings. And now, step by step, this number, that number is dropping down to, what, maybe 20 or 25. So people are voting with their feet, right, because nobody wants to waste that time. So I guess that's a consequence of of the lack of focus and and the 100 city mission not being a solution generator because we have the problems that we face in the cities are very, very tangible problems. Right. I mean, here now, if you just take the transportation sector, we have missions at 600,000 tons of CO₂, Right? All in all, we have emissions. It's 1.2 million tons of CO₂. If you divide that into shipping containers, it's 10 million containers, 10 million containers. And if you put them side by side, they will they will go around the globe two times and go from always to Paris and back again. So it's a huge problem. We need we need tangible solutions. (...) And unfortunately, that is not what the 130 mission is providing. I'm afraid.

P1: (...) Very interesting. (...) So. I was about to ask what you think of the mission as a policy tool. You explain that. So how would you say the mission could improve?

P2: Take a turn to describe the problem. I mean, get an overview of the problem. What are the emissions from the cities? How how can these missions be divided into the mission domains, energy, transportation flow, industrial processes and waste? And once you have that overview, you can start tackling the problem and come up with some tangible solutions a gross list and then a net list and then start collaborating. And figure out because once you have the Met list and you start collaborating. City to city, city to to the you, you can pinpoint where are the stumbling blocks and are the places where the European Union needs to adjust sort of to to forward. But it must be it will have to be a tangible discussion. It cannot go on as just an abstract discussion.

P1: Interesting. So maybe looking back at the city itself, what would you say has how has joining the mission influenced the way that climate neutrality is discussed, governed and implemented in the city?

P2: Where we experience that on a daily basis is more us as fundraisers because we have specific calls from the EU. Typically that would be Horizon Europe calls where it says in the headline... You know, these calls, they have their own code language, right? And if it's a mission call, it will say MIS. And there's no doubt that we have been capable of applying some of these funds and that that is a consequence of our participation in the mission. I mean, if we were not a member, so to speak, of the mission, I don't think we would respond to these calls. And we also get many well, many we get some requests

from other cities that have seen, experienced, that we are Mission City. And the, in their email to us, they kind of say: Well, we can see you are a Mission City; We would like to collaborate? So in that sense, it's it's a huge advantage to be part of the mission. And this is also one of the reasons why we have already entered the climate adaptation mission and will now enter the mission soil, soil mission. And I think we will also enter the the mission ocean at some point. So those are four of the five missions, right? So missing cancer is not, I'm afraid, relevant for city.

P1: Very interesting. Okay, so maybe then shifting away from the EU mission so much just the way that neutrality is governed in the city? Yes. You already touched on the organizations that are involved, the different departments. I would be interested to learn why was this organizational setup chosen? What are its benefits and drawbacks?

P2: Yeah, so we have a climate action climate action plan and it link us to to our climate strategy, and what the politicians and the top civil servants have said is that we need to integrate these policies, these climate policies, into to what the municipality in every single branch do on a daily basis, because they have various tasks with which they have been occupied with for, if not centuries, then at least decades. Decades. And now the task is to to integrate climate action into these actions and policies so that that climate action will be considered part of what you do on a daily basis besides, you know, making sure that that the streets are clean and, you know, all the all the things the municipality is doing. No, also education, all the things we are doing side by side with that integrated in that we should have climate action. That's the idea. So because it's otherwise it's a risk that that everybody will just pay lip service to to our actions and say, yeah, yeah, we will do this and that. But at the end of the day, they are so busy with what they usually do that that climate action will be sidetracked. So but now it's, it's getting more and more and application from our politicians and our top civil servants that. You need to integrate climate action in your daily, daily doings, daily based and you will be measured as to what extent you deliver what you are supposed to deliver.

P1: Interesting. To follow up questions on that. Maybe the first one. Could you elaborate on what gets measured and in that regard?

P2: Yeah. Yeah, that's CO2 emissions. At the end of the day and this is something. So, so we have various actions in our climate action plan. We have about 60 actions that and this is a shared responsibility of the various branches in the municipality. So what you measure, I wouldn't say in all 60 actions, but in most of them would be CO2 emissions mitigations. So and I think it has maybe the numbers have been a little bit vague and stuff, but I think in the next climate action plan, which will which will come into place in 2025, it will be even more precise than described the tonnes of CO2 that you have to deliver, so

to speak. So yeah, that's one measurement. And then you have the investments. I mean, money spent, right? I mean, so you have you have an action. It says how much mitigation would that lead to? And money, money, money, money you can spend or invest in the project. That is kind of the triangle project money and CO2 emissions.

P1: Okay. Interesting. And you? Mentioned that the structure that you described is meant to kind of deliver all of that into the different branches of the government. How does this structure lead to this diffusion?

P2: How the structure...? Well, it's just I'm not sure I understand the question, actually. How...? So we have this distributed power, you could say distributed power structure. Right. And distributed the responsibility. And I think it continues to be an open question whether we deliver enough. And I mean, it's very hard to get your head around the scope and scale of of the challenge here. It's very hard for people to understand what I mean. Transportation, 600,000 tons of CO2. What what is that? Is that a lot or isn't it? It's hard to to grab for for most people. So what our director have now said is that we need to be more focused instead of having many projects going on in the various branches, we should now start focusing on those projects that can deliver a drop in CO2 emissions. So he wants he wants more clear, clear targets to be described and also to make it clear, more clear what are the responsibilities. And so he wants to have the director in every single branch committed to a very, very specific target in terms of CO2 emissions. And that that is also the case today. But it might be a little bit more vague. Right. You can you can kind of sneak around it, but I don't think that will be possible in the future. You will have to to deliver what you're supposed to deliver.

P1: (...) Are there any recent or upcoming changes to the organizational structures around?

P2: Yeah, I would say so, yes. Because we have had something called. I don't know how that would translate into. It's a it's a system called MSP. What does it stand for? Something like it's a program because you, you distinguish between a program and a project, right? So a program, as I understand it, a program is an overarching thing. And then you have lots of projects beneath. I think the program, the programing governance structure will be dismissed. I don't think we will continue with that. My personal opinion is that it's led to too many steering committees and too many meetings, more or less in parallel with the system that we have already. So. Yeah, it turned out to be an eye with an extra dot, but I think that's the analysis also from our director. So I think that will be more or less skipped and then we will just make use of the structure we have already with the branches and the directors and the sub directors and stuff and integrate integrate the Climate action Plan into that hierarchy that I think that's the change we will see. And then even more focus

on projects that can deliver. Because it's a general problem when you when you talk about climate change and stuff like that. There are many of these there are many ideas, ideas out there that sounds fancy and nice and good. And if you then scratch the surface, you will see that in real life, it really doesn't make a difference. Right. And. And I mean, it takes a lot to to undertake projects that will make a difference in terms of terms of climate change. It takes a lot. I mean, one example could be some would say, oh, we need to raise the kids so that they will take that back to school. Right? Which is a good idea for many purposes. But if you do the math, and if we had all 60,000 pupils taking their bikes to the to the school every day, let's say 20,000 of them would. Would ride the bike five kilometers every day. If you do the math and run the numbers, it sounds like a lot. But at the end of the day, it's peanuts, right? It's just from a climate perspective, it doesn't make any difference.

P1: Interesting. Okay. So then maybe moving on with awesome eye on the time. From the governance structures may be more to the kind of ways of collaborating. How is your city administration changing its ways of communicating and coordinating internally as part of the climate transition process?

P2: I think it's fair to say that we have a nice way of communicating here in the city of Aarhus. It's a it's a very flat structure. Of course, we have our mayors and the politicians and various levels of of directors and stuff. But still, it's a very flat structure. I mean, it's very easy for me to if I meet my director in the canteen or in the cafeteria, it's no problem at all. I can I can sit down with him and have a chat and say, well, hey, like I thought about what you said yesterday. I think we could also look at it from from the other side, you know, and that would be no problem at all. So it's a very flat structure and it ensures that the good, the best, the best solutions are put on the table in and and we don't do stuff just because some of the one of the directors said that we should do it. But we will do stuff because reality tells us that this is the role and in fact, it's a very fact, fact based system, I would say. So yeah, it's a low key, low key way of communication and trust based. I would say actually I would say that it is trust based. Very much trust based. So it's a nice place to work. Actually, it's I in my previous life, I mean, I was in I was in politics and also in the business sector and stuff like that. And it's kind of a rough environment to some extent. I mean, this is not that's not the case here at the city of all. It's a nice place to be around. Hang around.

P1: That's nice to hear. Like, how is this communication organization organized? Like who talks to who when?

P2: Yeah, that was kind of... It ties back to what I just said about the program. I don't know if that's the right word, actually... Program... Governance... You have these

programs and and I mea... The consequence of that was that it led to too many meetings, if you ask me, too many meetings and too many processes, it kind of it was too complicated somehow. So we need to simplify that.

P1: Yeah. Maybe then following up on the cover of processes, which or how's the city administration changing its processes and routines around governing and implementing the climate neutrality transition?

P2: Yeah, that would be. I think we will skip the programing approach and then get back to our traditional way of of governing stuff with a traditional hierarchy with a difference that will now integrate, find the mechanisms to make sure that we integrate climate action in the traditional hierarchy. And the way that that is supposed to pan out will be that that the directors and each branch will get very specific obligations in terms of climate mitigation, something that can be measured.

P1: How long was this programing system in use?

P2: Well, two years and four years. I mean, it's since its inception. Two years have gone and we have two years left. So, yeah. (...)

P1: Then maybe regarding governance more externally, how is your city administration changing its ways of communicating and coordinating externally, meaning networks, other cities, levels of government, etc. as part of this climate neutrality transition?

P2: Well, it plays a huge role. You know, engaging citizens is a big thing, you know? Then. So we. Yeah. And that's that's a big thing. And we even have a branch in the municipality which is in charge of engaging citizens. So that's point number one. Then we have another branch of the that's actually the mayor's department that takes care of something called the Climate Alliance, where we have some of the biggest companies involved. Some of them are even known abroad. Know when the Windmill factory or company Vestas or stuff like that. The Maersk Shipping Company, they are they are part of the Climate Alliance. And it will now be broadened to also include, at least in some cases, include the SMBs. So we have a strong tradition for that. And then also internationally, and that is also something I've been taking care of. I mean, and some of my colleagues, we make sure to be part of of the right collaborations on a European level. So we are a member of Eurocities and ICLEI and Climate Alliance. A handful of these umbrella organizations, city umbrella organizations and climate kick. We are part of that and we discussed the missions already. So we also a municipality and a city which is out outwards looking right? It's not only looking at ourselves internally, we also trying to collaborate as much as we can locally and and on a European level, but also in Denmark

we have something called. Actually that's also now called the Climate Alliance, which is an alliance of we have 98 municipalities in Denmark, and 96 of them are part of the Climate Alliance. (...) So so we have 96 cities or municipalities that have described after a certain scheme, a specific scheme, have described the Climate action plans using a format originating in the C40. This is called C40. C40. The Simple Framework. Yeah.

P1: (...) Then they'd be moving on to the next dimension. Which role does information and communication technology play in the. Role in the transition to climate neutrality.

P2: To take the latter first. I mean ICT and technology. We have. I've just attended a meeting at the harbor area this morning where another branch of the municipality, the ICT folks, are situated and they are very advanced. And what we discussed this morning was an EU call looking into smart. What was it called? Smart. Ready. Smart grid energy buildings or something like. Yeah. So it plays quite a huge role. We have a very strong team on those matters. So, so that was the technical side. What was the other part of the equation you mentioned? The first part was that information.

P1: That's it. This domain generally.

P2: But I think we it plays quite a big role that we communicate what we are doing to have some of course, we do have an office in the municipality that takes care of communicating what the municipality do to the citizens. So and it also works the other way around. I mean, this is not the case for me, but many of my colleagues, they get lots of lots of questions from from from citizens that want to know this or that or we have a critical opinion about stuff we're doing. We've just had it has just been decided that the harbor (...) should be bigger or enlarged in the city. And that was a very, very controversial issue. So lots of lots of citizens on the barricades, so to speak. And so I would say that it's quite a vibrant local community where we have these discussions going on all the time. So but it's a two lane road. It's not only, you know, communicating with the citizens, it's certainly also the other way around.

P1: Very interesting. And then maybe yet another dimension. What is the role of funding mechanisms in governing the climate neutrality transition?

P2: Yeah. So the city council decided that that means that that one third of the budget for the climate action should come originate from the from the City council itself. So they, they allocated funds for for one third of the Climate action plan. And then they told the various branches in the municipality, you also need to come up with one third. Then my unit was initiated to come up with a final third of the funding. Mm hmm. So So it has now turned out that that that that some of the projects have been too well funded. So

there's a surplus on, on the account in some cases. So now the city council just decided that they want to grab part of that surplus and and reinvest them in in other climate action projects which so far has been underfunded.

P1: Interesting.

P2: I mean, to be honest, we are. I wouldn't say that we are wealthy city, but on the other hand, we're not poor. I mean, we are very we are very privileged. You know, it's like most of the German cities, we are quite privileged. So. (...) We shouldn't complain at all.

P1: Yeah. Yeah. Sorry.

P2: No, no, it's just the other side of the medal is that once you are pretty wealthy and well-off, you also consume a lot. And if you consume a lot, you have a lot of CO2 emissions. (...) Want.

P1: So considering this entire domain that you described, the governance of climate neutrality, governance in your city, what are the biggest challenges that you're facing with regard to climate neutrality governance?

P2: It's not the governance structure as such. It's the problem as such. The fact that. And I mentioned that that our emissions and this is just scope one and two right. Our emissions are 1.2, 1.3 million tons of CO2 every year. And that is even if you allow yourself to to calculate and assess biomass as a climate neutral source of energy, which is what we do in August, we find a lot of wood and wood pellets. And in accordance with international rules and and stuff and standards, we claim that as climate neutral. So still our emissions at 1.2 and 1.3 million tons of CO2. And as I said earlier on, that's that's 10 million shipping containers. So that's a lot. That's our big biggest challenge. I mean, in 2008, our politicians set the target of becoming climate neutral in 2030, which is good and fine. But now 23rd is just around the corner, and it's a huge challenge. And honestly speaking, in this closed room, most people have realized that. That being climate neutral in 2030. I mean, no chance. It just won't happen. No chance. And that that will be the case for all cities in the EU, not least due to transportation.

P1: What would it take to make that happen? After all.

P2: What it would take.

P1: To make climate neutrality happen by 2030.

P2: (...) You would have to close down traffic in the city. Not even in the city, but in the municipality. Yeah, I mean, electric vehicles, I think it's it's 3 or 4% of the fleet. And so

it takes a lot. I mean, yeah, you can do some calculations here. You say that that one a car CO2 emissions from a car, an ordinary car is 130g of CO2 per kilometer. So. So you can you can take 600,000 tonnes of CO2, multiply by 1000. Then you have kilos, multiply by 1000 and you have grams. And divided by 140, which is the emission per kilometer, and you would see the number of kilometers that you would have to save. It's in the billions. It's in the billions. So, I mean, that's not easy. And if you look into scope free, it's even harder. I mean, our world and our modern way of life is so fossil fuel dependent that it's it's very, very difficult to dial it back. Yeah. With the risk of of, um, of getting sidetracked. I mean, there was a guy, one of the guys I follow on on YouTube, he said the other day that which I think is very true indeed the energy transition. We talk about the energy transition all the time. And he said, well, we have had an energy transition since since dawn. I mean, since. Since we invented fire. And the only thing that has energy transition is that once you have an energy source, I mean, at the outset it was wood. Then we invented coal, discovered coal. We put that on top of burning bush. Right? Then we discovered oil and we put oil on top of wood and coal. So. And now we have wind and solar and stuff like that. We don't use those new energy sources to replace what we have already. We just put it on top of what we have already. And so energy transition is just adding new energy sources on top of those that we had already. So so that and that's that's kind of the baseline, right? And that's the conditions that we have have to deal with also in cities like.

P1: (...) The. Other personal interest which YouTubers that.

P2: Oh, if you want some good names, you should follow Nate Hagans. Nate Hagans 'The Great Simplification'. (...) Yeah. And that's also. Well, you can you can check out his podcast. There's a guy called Simon McCue which looks into all the raw materials used fo making this so-called energy transition. Nate Hagans. I think he's amazing. So.

P1: I a look?

P2: Yeah. You should have a great education.

P1: (...) And then maybe coming back to the topic of governance. Yeah. (...) Asking the other way around What is your biggest success in governing the climate neutrality transition?

P2: I think that that I think the biggest success is that that everybody seems to be behind the plan. Right? I mean, we have the politicians and the civil servants. I mean, everybody is behind the plan so far at least. So that's that's a great success. On the other hand, you could say that, well, if everybody agrees and everybody is behind the plan, what is the

reason for that? Is that that it's not it's not controversial at all? Or have we given ourselves and each other the impression that this is a walkover, that this real green transition comes without a price tag at all? That might be the case. So I've heard our director saying that so far the success has been that we have been everybody behind the same plan. Tomorrow, the success criteria will not be that everybody is behind the plan and tomorrow we should not expect to have to have a unity here in the city council, because if we have unity, it's a signal. It indicates that we are not making use of the right measures.

P1: And. (...) That is a very, very interesting point. Maybe then, although I would just like like to ask more in that area, I would like to move on to the topic of capacities, administrative capacities. Now at the time, yeah. So maybe just opening in general, how would you describe the role that the Municipal public administration plays in advancing and governing the climate neutrality transition?

P2: Well, a huge role. And there's a bit of contradiction here, because we some years ago, my colleagues started saying that, well, so far we have we have harvested the low hanging fruit in terms of climate mitigation. And now we are entering the difficult part. And now we are entering the part where what what the municipality can do is only 10%. The rest, the 90%, lies in the realm of the citizens and the community as such, outside, so to speak, the municipality. But the contradiction here is that we are maybe 100 people working on climate mitigation in the city. So so I think we should be a bit careful about saying using the phrase with a 10% and 90% because ex taxpayers could raise the question. Okay, guys, if you can only influence 10%, why on earth should you have 100 people working on the plan? So so I think what we have found out is that the 10% might not actually be true. We can we can influence the development to a much wider extent. But my day to day experience is that we are pretty well off in the municipality. We are these on and off 100 people working on some sort or some part of the climate action plan. And I think it's fair to say that we are quite, quite privileged in that respect. And in the Climate Secretariat, we are now 12 people, which doesn't sound like a lot, but that, that that circles back to the idea that it should be centralized climate action shouldn't be centralized in a climate secretariat. It should be integrated in the various branches of the municipality. So, yeah, but but that said, I mean, we will we will increase the number of employees in the Climate Secretariat. We will be something like 17 or 18 next year.

P1: Interesting. (...) And then you already touched on my next question actually, because that I would be interested to know and that's your city actually have all the skills, processes and resources that it needs to fulfill the role that you described?

P2: Yes, I would say we have, but that's on the organizational, the organizational part of the equation. Still, the specific projects that the specific undertakings necessary to ensure climate neutrality in 2030, that would require billions of billions of Krona. I mean, because if you should replace, you know, the cars and and private mobility with the public transportation to an extent where it would work on a daily basis, I mean, that would cost billions of and it is quite simple in the sense that, you know, it all boils down to money and and day to day logistics. I mean, if you family with two kids, you know, one must go to school and the other to kindergarten. And it's in two separate parts of the city. And and you need to be at work at nine. Try to make that happen with public transportation. Right. It just won't happen. Won't happen. So, yeah, so I mean, I use my bike on a daily basis, but it's very easy to do that because my workplace is seven minutes away on bike. So, so if I compared to my colleagues, it's not those that it's not because I'm a better person compared to those of my colleagues that take the car. Right. Again, it boils down to to practical stuff. I mean, the reason why some of my colleagues take a car every day and use the car every day is very banal. I mean, they just live way too far away from the workplace.

P1: (...) So if you say that you largely have the capacities that you need, which are the most important skills, processes and resources for the climate neutrality transition.

P2: I mean, when I say that we have the resources, it's on an organizational level, right? I would I would say a couple of things. I mean, first and foremost, you need to know your hood, right? I mean, if you are into transportation, you must you must you need to have a... You need to be able to to play around with the facts. Right. You know what? What are the facts? And if you don't know the facts, you can figure out what they are and find out. So it's very important that you have a fact based starting point. And that is also the message from our director. He says that I want you guys to be fact based. So that's point number one. Point number two is the ability to collaborate internally and externally and well and be nice. But yeah, I guess that's pretty much it. And engaged, of course. I mean, and that's I must say that I've been in the municipality now for two years and I'm, I'm very positively I wouldn't say surprised, but I'm glad to learn that, you know, my colleagues, they are super engaged and very knowledgeable and hardworking. I mean, they really are. So that's. That's also why it's great fun. So you can actually learn a lot by working together with with colleagues that knows a lot. And on top of that, we have this, I would say, environment or approach that it's fair enough. If there are stuff you don't know, you can just ask around and people will help you, you know? And at some workplaces it will be used against you. If there's stuff you don't know, somebody will use it against you at some point. Right. But that is not the case here. Everybody is interested in in getting stronger and stronger together. Also, in terms of learning and knowledge.

P1: How do you think you have arrived at this particular culture?

P2: (...) Well, I don't want to celebrate the Danish culture too much because I'm critical in in many respects. And I think you are doing way better in Germany on these matters. So the fact based off and just if you just watch CTF and are ready and you can use broadcasting stuff, it's way, way better than in Denmark. But but I think I think actually I think Denmark is a trust based community, actually. If you are in the tribe, right? If you are in the tribe, it's very hard to enter the tribe. We we are doing everything we can to get to make sure that foreigners stay stay away. Right. So it's that's that's the not so pleasant part of the Danish society. But but within the tribe, I think it's a very trust based community.

P1: (...) So maybe coming back to the capacities that you described. How does the city administration identify the administrative capacities that it needs for the climate infrastructure?

P2: Yeah, that's an ongoing discussion, I would say. And I think that now when our director says that we should take a starting point in the facts, I think that's also an attempt to to understand the scope and the scale of the problem, that that might be something where we need to improve. I don't think the scope, the scope and the scale, of the problem has been widely understood; because it's only if only if and when you know the scope of the problem that you can allocate the resources needed, right? That's a famous [...]. No, I think it was... Or.... One of the other founders of the EU, Schuman I think it was. He says that the tools you need to develop - and of course, he had the European Union in mind - should be appropriate to the problems that you face, right? So so if you if you do not have the right understanding of the of the proportions and the problems that you face, you shouldn't be surprised not to to end up with measurements and tools that are not suitable for for the real task. So I think that's the process we're in right now, understanding of the problem and in the light of understanding the problem, also understanding the measures and the tools to be made use of.

P1: (...) Are there any very specific capacity building projects? Initiatives? That's.

P2: Yeah. I mean, on a concrete level, if you take I mean, we have these emissions that I talked about. So, so one specific project that we are working on here now is carbon capture, a carbon capture facility. And at one of our combined heat and power stations, they want to install carbon capture project, a carbon capture facility. So that's quite expensive. And I don't think they are convinced that it will work. So we are looking into that. Put in Danish kroner, that would be two 2 billion or something to be invested. I mean, it's a lot of money. So but that would sequester something like 300,000 tons of

CO2. (...) And the other power plant we have will have to be phased out. It's the biggest power plant we have in our house will have to be phased out in 2030. Just because it's old. And so it's early on. It was it was fired by coal, but it's now fired by biomass. And at the same time, there are. Some politicians want us to phase out biomass. We can't do that totally, but they want to step down, scale it. So. So what to do instead? I mean that they need to figure out what to do then. And then we have a huge geothermal plant to install 111MW. It's a huge plant. So and it's also one of the actually that's Maersk, one of the private investors that it will they will drill two holes and cross their fingers that they will find some heat down there. (...) Yeah, I mean, if you if you spend €10 million on drilling two holes, I mean, you better have your fingers crossed, right?

P1: (...) As you mentioned before, that part of the capacity building is actually understanding the scope of the problem. Are there any particular analytical knowledge data capacities the city seeks to build to get this understanding?

P2: Yes, actually, one of my colleagues is looking into the data stuff and she will now be she will get a new colleague. So they will be, too. And also in the mayor's department department, we have folks looking into the into the numbers. What I have said internally is that we also need to allocate resources to other parts of the analysis, because analysis is not only a matter of numbers, I mean, you also need to look into various other things. But but we are aware of this and we need to come up with a coherent description of the problems that we face. And that's that's something we are working on and it's not something that we will underestimate. We know that it will take a lot.

P1: (...) You just. Are there any administrative innovations with regards to process changes, etc., that you're undertaking for the climate neutrality transition?

P2: I would say just say one word. I would say focus more and more focus on projects that makes a difference, a fact based focus. I think that's the transition we will see effect based focus, make making sure not to kind of waste your time on projects. That sounds great, but doesn't make a difference in real life.

P1: Key. Then looking at the time, we're almost at an hour. I think it would be good for both our schedules to maybe come to an end here.

P2: Yes. Yes. It's up to you. To me?

P1: Yeah. Actually, I have a follow up interview, so I will have to run in a moment. But this was very, very interesting.

P2: Great talking to you.

P1: Yes, definitely. Is there anything else you would like to add regarding this entire topic area?

P2: No, I just wish you all the best with the project and you endeavor and celebrate the important stuff that you're doing.

E.b Barcelona

P1: That looks good. Yes. Perfect. Maybe to just set the scene a little, could you briefly explain what your day to day work looks like and what your usual tasks and responsibilities are with regard to the climate neutrality transition? Yes.

P2: Actually, the office which I lead is a team devoted to the localization and follow up with 2030 Agenda. And this team was created in 2018, and it's made up of two persons who are statistician myself. And then came another person for outreach projects. And two more persons that were devoted to other projects that related to specific items of the agenda, in which cases where innovation, cost for innovation and a project to foster the installation of renewable energy - Through the collection of private funds as well. But well. This team was commissioned to present a candidacy for the call of the 100 Smart and Net-zero Cities 2030. And we wrote the project and the city was elected, but we are not responsible for any of the policies of the which are directly involved in the decarbonization effort. So we are acting as... And means for the joining up the efforts of the city council in this in this endeavor. So since then we've created a set up, an internal group, technical group for designing the Climate City Contract. The point is that when the city counts, the call was issued. The council had just approved its Climate Emergency Action plan and after that 2030 and it was a bit reluctant to apply because of this, because participating in this mission implies a whole recalculation of the of the plan of the. That of the targets and probably of the actions as well. So intensifying upscaling the actions and this effort. Has to be done coincident with coincident with a pre electoral and electoral period and the certain internal conflict within the governing coalition across some of the crucial issues regarding mobility, for example, especially. And so it wasn't easy to move forwards in this context. And now we had the elections in May and the political landscape has continued to be very fragmented and complicated. And end up middle of June with the election of a new mayor from the Social Democratic Party of Catalonia, which is federated with the Socialist Party of Spain. And in part it means continuity with the former government because it was part of the coalition. But also it stresses new priorities and it's more open to economic growth and. (...) More critical towards prioritizing climate policies regardless of social and economic impacts. So it's advocates for a socially fair and just transition, which does not hinder economic growth or does not oppose economic growth per se. And so now we are in the midst of a process of reorganization, and probably this unit will be joined in the area with or in which environmental policies and energy policies are carried out, which will be actually quite functional. For the final design and implementation of the climate. I must see the contract. But still a lot of work to do pending. Because maybe you know that if you I don't know if you have seen the templates of the plans, they are quite demanding, especially regarding indicators and. The

impacts calculated for each action and so on, and also the financing, the climate financing plan. So this will be our task in the next weeks. We have the intention to present the climate in the middle of September. But. Considering that's the summer in between and that we are still reorganizing. I'm not sure that we'll. This probably will do it. We will present it, but not in an optimal form. But. Well, considering that this is an ongoing process and the process probably will do it and we'll keep on improving it within the next year.

P1: All right. Thank you very much. That already touched on a lot of different points that I want to talk to you today about. So maybe continuing with the Climate city contract you already mentioned about the state of that is and. (...) It also mentioned that there is a climate strategy essentially. Which frameworks are you generally using to address sustainable urban development? Which are the different documents that matter?

P2: Well, the crucial document is a climate emergency action plan. Which the approach is quite holistic in the sense that includes mitigation and adaptation policies and a strong social perspective. In fact, the first aims of the plan to make sure that people get enough energy and water that they are protected from the impacts of the climate change and so on. So it is also a plan that includes both innovation and also austerity. I mean, I don't know the word for this is not exact austerity, but. Sufficiency and so on. Yeah. So it's it's more critical towards economic growth and advocates for. (...) More profound social and economic change. In all the systems in mobile mobility system of consumption, production and so on. Where is the mission? Is the approach of the mission is more restricted to mitigation. In this case also only scope one and two emissions. And more prone to innovation and technology. So this is a bit of a clash, but it's also now the new government is more inclined to do this to a to use this new approach. The problem is that all the technical staff has been working in the other approach for many years. So it's not that easy to change this. And I probably.... We'll need a synthesis of both. We cannot just abandon the more pro-social view the... And the more pro.... The consideration of the of the economic model. So we need this, but we also have to include more practical, more practical approach, because maybe the problem of this climate emergency action plan was this It wasn't specific enough in how this all this would be financed. And would be put into practice.

P1: (...) Maybe following up on another point, you mentioned you already detailed what your office or department looks like and then it will be joined with a different one soon. In general, which organizations and departments are responsible for governing the climate neutrality transition?

P2: Well, besides us there is [...] This is there is an Office of Climate Change and Sustainability. Which is in charge of mitigation policies. Which include also education. So all cultural change measures. So we have also. I forgot this. Last year after the Climate Emergency Action Plan. A new. (...) Culture. Cultural change plan was approved to say so. The title is We Change for the Climate. So it's a whole range of measures to to change the way people think about this and to. To promote social change. These people are also in this office and this office. You also have the people who are in charge of doing. Climate actions within the organization. So the guarantee that energy, so the lightning and heating and so on is used properly and so on. And also the people. So who is in charge of greening the city? So parks and so on, which. It's also part of the adaptation plan. Then you have the Energy Agency of Barcelona. Which is. Strongly controlled by the city council itself, but has. The participation of some other actors, but they are not very relevant in this case. I can send you a composition, but this agency is responsible for the mitigation policies. So they establish the goals. They measure the emissions and they are responsible for the installation of renewable energies and so on. Then you have within the council the mobility department. (...) Responsible for the mobility plan and all the public transportation regulation of private mobility. The notion of cycling and walking and all this. Decarbonized ways of moving. Then you have the housing department, which has also which is big and has at least two different organic. Actors. One is the Institute of Housing and Rehabilitation, and the other is the Institute of Urban Development. And they are in charge of providing affordable housing. So through the acquisition or construction of social housing and also the retrofitting of housing through the retrofitting of public housing. But more because most of the housing in Boston is private through incentives, grants and so on, so that people do invest in the improvement of the housing, the houses and with an increasingly. Energy and climate vision. So that. Although in Barcelona this is quite tricky because we have a quite mild weather in winter and this makes energy renovations financially not very good. The results are not very good because you have a very long, long time of recovery in investment because many houses, many dwellings here don't even have a central heating. And so they spend that much on energy and the housing. Increasingly in cooling now. But so far, the models and research by the European Union take into consideration more Central European or other European model of housing, which you can save a lot of money through insulation, but not here. Well, this is another consideration, but which which is still. Then you have also a unit in charge of waste collection and management. As I said, the service of all the trucks that collect this and then brings to the different places to to recycling or to incinerate. And this is also another source of emissions.

P1: And the kind of governance and coordination of this whole system would be with in your office? And the first one you mentioned, or is there anyone else who would be steering?

P2: Yeah, so far before the mission, it was the head of the area of urban ecology. It's called urban ecology. Which was in charge of the approving this climate emergency action plan. Or did this function. But from a very environmental perspective in a way that it was not very well connected with the economic world and the private. Private capital. (...) Yeah, through the mission. Now it's this coordination role. Should we should we are expected to assume this and we are going to do this. But politically, it was an editorial. It was not very strong. It was small. It's a small unit and politically was placed in in an area which wasn't very relevant. So now we'll be also in this in this the same area which is not called urban ecology anymore, but it's the same area. It has all the competencies and climate change and sustainability. So environment, public space is mobility, energy, housing. So it's a chance, but well, we need to organize it well. And to connect this with the core of the organization, with the presidency, with a mayor office, which is in charge of designing the overall strategy and government plan for four years, the government investment plan for four years. So we should make sure that. The mission strategy. The mission plans are connected to this. We need also transversal horizontal links.

P1: Interesting. Maybe following up on exactly these kind of horizontal transverse links, how just in the city administration are you communicating and coordinating when it comes to climate neutrality issues?

P2: Yeah. It's difficult to say there is the answer to this because we have been doing this in a in a in a period in which we went through... going through a transition to a political instability and free elections, and now after the elections of the organization of a new government. So I think it will be necessary and they will do this to create... It's called here.... (...) Co-responsibility space (...) in which people, representatives from different areas meet formally every two months, more or less. And there are reports the protocols and there are. There's everything public and. To make sure that this coordination happens. This still has to be created because we still don't. Still awaiting how the areas will connect to each other. But this is one of the things that should. Start in September for sure. So we're going to design this. And now in July, this this commission and we had already a commission as agenda 2030, which had the same design. And one of the options is to use this same commission and to enlarge it with the missions, including the mission within. Wich, I think, it's... On the one hand, you may have the cost of having too many issues in one commission, but on the other hand, it's make it it makes it more valuable to be in. And it's important that people with power within the organization feel compelled to to to.

To show up and to talk to participate actively in this in these commissions. Otherwise, the horizontal work at technical level is nice. Interesting. We have been doing it. Lack of something better. But sometimes you need that these spaces. Perhaps high stakes in which the issues are confronted and and really resolve. In three years ago before the pandemic when we designed the 2030 agenda. Barcelona So you can find the reports that we have issued every year. We had a very intense period in which we negotiated the. The targets were the areas and it was very intensive and interesting and the results were quite good. So now we need this, but even better because it's combined with finance plan. So it has to involved the really the the heart of the of the organization within. And this won't be easy, but it's completely necessary.

P1: Boom. (...) Hey, very interesting. And then maybe thinking of coordination, communication with external parties. So for example, other cities, other levels of government, etc.. How is that organized?

P2: Well, there are commissions here that we have that. The point is that the Department of Climate Change and Sustainability with this more environmental approach had very good connections with all the environmental organizations. But it was quite a closed... More of a closed world. So what's not very credible with outside the this this sector and we aim at having a more diverse composition and having all the all the crucial actors there. And we have to see how. Because. We'll need these connections, but this will be a formal and regular connection through this, also through through our commission. But on the other hand, we need these commitments in the commitments of the organizations and we are talking to them individually. We are scheduling. We have been doing this already, explaining about the mission and asking these organizations for a commitment. Formal commitment in a letter in which they commit to the mission and say, what are they willing to do for it? So we don't request them to aspire to be climate neutral by 2030, but certainly to. To commit to certain relevant and impact actions with with with strong impact on emissions. These actors are. There is the the public enterprise that runs the busses and metros or the Port of Barcelona or the institutes or that devoted to the research on energy issues, universities and so on.

P1: Interesting. (...) Then maybe before looking...

P2: Yeah. Since the beginning of this. It was very important, the action promoted by the organization called Climate-KIC, which is an EU program. And this climate kick has one of its central sites is Madrid. And one of the central actors there is the Polytechnic University of Madrid. And they have a program to foster the mission in Spanish cities. And so the seven Spanish cities that were elected for the mission. I have been coordinating have been talking almost every week since many months to. To have a common learning

process of how to approach the mission, how to tackle the requirements of the contract and so on. And. Yeah. They even organize the summer school. Although I think that this is sometimes too much because it takes a lot of time to coordinate for something. It's the results are not so cost effective in a way, in a way that we have. We are not a lot of people and we need the time to really do the work, to do the contract. And sometimes. But whether it's always to look for an equilibrium in these things. But this is an important... It's called City-ES where ES from Spain from Espana. It's an organization which is informal still. But well, they are trying also to disseminate the mission and across many Spanish cities. And in other areas. We also have talked to the Metropolitan Strategic Plan Barcelona. This is an organization that that's in charge of doing strategic thinking and visions for the whole metro area of Barcelona. The metro region, in fact, which has more than 5.5 million inhabitants and one of their they have last year they. Presented its 2030 plan based on eight missions. And one of the missions is. Climate regulates the climate, not the threat in this case, but some commitment to the reduction of emissions. So we also are coordinated because we in fact, many things don't make sense at city level anymore. So the core city of Barcelona is very small. As you know, it's 100km² and very, very dense, has almost 1.7 million inhabitants. But it's well, it's the same urban continuum with many other cities in the area. So transportation, power, transportation, housing. Cheap labor market. These things are completely integrated and can only be tackled in. Successfully from a metropolitan point of view. But institutionally, it's still very, very fragmented. Fragmented. So we have a lot of work to coordinate with. With '[...] Barcelona', which is a functional organization build up of 36 local authorities presided by the city council and then with other governments, including the autonomous regional government of Catalonia. Because Catalonia is still not that big. It's about 32,000km². And it's it's most of it is already a metropolitan region of Barcelona.

P1: (...) So if you think about this entire governance and coordination setup, what would you say are the biggest challenges that you're facing when it comes to governing the climate and energy transition?

P2: The biggest challenge, I think, is political institutional, because there are at least. For relevant? Well, I would say five relevant levels. So. City. Metro. Area. Region. Nation State. And in European Union. And political composition of these institutions may be different. They are often now in political instability because they have minority governments which are not able to take big decisions. And so we have been trying, for example, to talk to the. Regional government. But it was difficult because they are also a minority government they wouldn't commit. And in this state it's really difficult to. To establish. Common goals to align the goals of least so.

P1: So what would you say is needed to overcome this?

P2: (...) It's very difficult. You know, we had a we had a very strong conflict, national conflict, Catalonia, Spain. Which are the very dramatic. And so things things seem to be a bit paralyzed and it's very difficult to... To act in a rational way as Spain does not have any city policy properly. There are and we have and still in Barcelona, one of the. Few existing metropolitan authorities, but it's not enough to to assure that coordination of policies. But it's well, it has to be a lot of work from a technical perspective aligned with the EU and this may help. So saying that this European mission is a happy it has been endorsed by at the European level by experts and it's something that we cannot escape and we should focus on and align and so on. It would be a waste. And also the technical work must be very, very solid and. Constant. And. Even considering this limits. For example, mobility is a crucial aspect of this decarbonization. It is transition within Barcelona. Public transportation is very good. So you can reduce a lot mobility for the private motorized mobility, even if you have huge conflicts with especially people from. From high income classes, groups or from people that from the working class that need to go to outside and to work in in places in which there is no proper with connections. But you have a problem with commuters. We have. I am I am myself a commuter coming from many different cities across the metropolitan area. I think it's up to 700 maybe before the pandemic, about 700,000 a day. And the system is really not good enough to absorb this in a efficient way. So we need a lot of investment to update and enlarge this infrastructure. This probably depends on the original part of the national government and in this case it is difficult. It's one of the most important factors and it's difficult. Another one is, for example, you consider the decarbonization of electricity. You have very, very strong private interests there. So the big firms, energy firms that are in twinned wind with the political power, they hire former politicians and they are resisting completely the transition. So they put difficulties to the private people to to sell their energy to organize and. In many communities and so on. It's well, for example. So they have you have big regulatory issues here as well. Look. As for housing, for example. Yeah. As long as you don't have a law that. Not enforced, but at least strongly incentivize the retrofitting, the investment in improving the housing. You don't won't get the necessary investment because it's not profitable, not profitable enough. There are people don't think about this as a priority. Another question important is also the infrastructure for the electric vehicles. It hasn't been invested enough. There is not a regulation that forces, for example, petrol stations to to build places for electromobility. So we lack a lot of places for electromobility and as long as they are not available, people are reluctant to buy an electric car.

P1: Interesting. So being also mindful of time, I might jump to the next topic area, which is a little more about administrative capacities. So generally speaking. Or to different capacities maybe. So when I say capacities, I mean skills, processes and resources that public administration has at hand and are used to kind of fulfill its function. So which skills, processes and resources would you say? Does the public administration in Barcelona need to fulfill the climate neutrality transition?

P2: It needs instruments that make it possible to work faster. Because we need to run and to upscale the efforts in a few years and the processes to, for example, the public contracts, public procurement processes are cumbersome, are very complex, and digitalization has not brought the expected results; but they bring new complications. And yeah, due to laws that are. (...) They always consider everyone suspect of corruption. Maybe. Maybe. Yeah, but they're right. But this one, this is exaggerated. This brings the administration to a halt. And it's really very frustrating for people spending most of their time doing these proceedings. And we would need something more. Much easier so that things go very much faster. And so in this case, you need also skills and knowledge about these new ways of moving, new ways of building new ways of producing energy and managing energy. So there is there are many technological changes that require that people have new knowledge, and this is not easily available. And so we need we will need a lot of. Involvement of of people from the private sector. Either as consultants or as private funders. So in this public private schemes of investment and this also requires the capacity of the public sector to work with private actors in a productive way so that the public interest is is respected. But also the private actors are acknowledged, as I recognize as legitimate partners and entitled to act as well for this. Um. Yeah. We need to renew the public, the staff in a way. But it's very difficult because. Yeah. In the next year many there will be the retirement of of many people, but I don't know if their places will be occupied again... So if this will be this stuff will be replaced; because there is now also a move, a drive political drive.... It is common in many countries to to reduce taxes and to reduce public spending in in the administration. And this I think this would be a mistake in this case because you need a strong team. I understand sometimes it's difficult because. The administration is also too rigid and it's difficult to hire talent because it's also very complicated ways to hire people and to promote people inside and to reward people and to recognize and evaluate people. This is all things that have not been properly resolved by the public administration in Spain and not in Barcelona. Although Barcelona City Council is acknowledged as being one of the most, we would say, proactive, innovative. People have here remarkable sense of professionalism and public interest. So it's.

P1: (...) So what are you maybe in your department, but also others that are involved in the climate neutrality transition, doing to identify capacities that you need and then build these capacities.

P2: Good question. (...) Not that much really. So maybe it's a think that we haven't focused on so. We talked about it, but there are plans done by the. By the Department of Human Resources. They have commissioned studies on it. But yeah, we have followed in the last four years an approach based on values. So manage public management by values. And these values are five. Which are agility, flexibility. Clarity. Commitment for public, the public values and a morality. You said no. So kindness or. (...) And co-creation, co-creation and these things. But again, the difficult point is to hire talent from outside because. Young people who know all this much better probably than us are confused by these ways of recruiting people. Or they. Are they up for more flexible things? International. Jobs and so on. So maybe to get to this time, you need to to hire consultancy firms. Probably this is why it's being done.

P1: (...) Interesting.

P2: But. Well. And a big effort is needed in this for sure.

P1: And maybe coming back to the different capacities that you listed before that you think are important. Which of those would you say are currently lacking the most? Or in Barcelona?

P2: (...) Oh yeah. We said flexibility and (...) the capacity to to see ahead so prospective or not to foresee to. (...) Yeah.

P1: Interesting.

P2: And the agility probably as well. It depends. Agility in certain aspects is there. But as soon as you have a very complex problem, then the blockage is quite frequent. So you are good at doing more trivia, well known things... Well, not trivial; very important, but well-known. But you are increasingly confronted with wicked problems and you don't know the answers. So you have to search for them. You have to do the diagnostics. And it's more uncertain, but you cannot stop because of this.

P1: (...) Are there any capacities that you are currently developing within your unit? Hmm.

P2: (...) Not specifically. People are ask for. (...) They call it courses, sessions of, you know, building by the building, you know. Yeah. And when when it's reasonable, when

it fits with their job, I approve them. They do it. And we also. Yeah, I think we are too busy managing the projects and don't take the time to to reflect on this. And this is a mistake. But it's it's also because we, we, we are young. We we created just two people at the beginning, then 4 to 5 and always been overwhelmed. But you are right. So we need definitely need to to reflect on this beyond what's done at the individual level for every person. So or specific skills that I say, Oh, you need more negotiating skills, you need more proven data on that. But. Yeah.

P1: (...) So then again, being by the time maybe last question regarding the vision for 100,000 coming cities since the city has joined the mission, how would you say has the way that climate neutrality is governed and implemented and discussed changed, or has it at all changed?

P2: (...) I'd say it hasn't really. It hasn't changed that much because. The political debate has overshadowed it in a way, and this debate has been more political than policy oriented, so to say. So candidates or parties have chosen the certain discourses not because they believe in them sometimes, but because they were convenient to them in the political fight. So. The debate hasn't been done in a. Based on facts and based on previous diagnostics. And it hasn't been very scientific, technical, but political. So I hope and I expect. That. (...) After the next elections. The national elections are now in July. Things are a bit more segmented and we can start doing these debates and. As soon as we have this this climate city contract, this will be a basis to discuss for more than any other thing and to change the way. Climate policies are being approached for the better, I would say, because we'll try to keep the substance of all this, but improving the means. And including ways and means to make sure that we move forward and that we don't just complain or. Yeah. And so that high expectations that are not realized that although in many aspects. Yeah. For example, in the installation of renewable energies, we are far behind. Or in the electromobility or in the housing renovations. So in each one of these three crucial areas of the organization, we have a lot to do. It and.

P1: So all in all, do you think Barcelona will be able to become become climate neutral by 2030?

P2: Well, our proposal is to reduce 80% of the scope one and two emissions and to compensate the remaining 80% by reducing scope three emissions. (...) From food or building, so embedded materials and so on. Or other consumption because we don't have that surveys, the big surveys to compensate through forests, which is also always, in any case very limited. So because your exaggerations are being done this. We are not not sure this will be accepted by the European Commission, this approach. But this is the only one we can do, although unless we fantasize about carbon capturing and so on, which is, I

think doing so to your question, I think the mission will make possible to move faster to the aim, but I'm not sure if it will be done by 2030. But in any case, sooner than 2050. So if we put the the line, so to say, in the means for accelerate and upscaling will probably get there much faster. And it's not that important if it's 20, 35, but. Yes, you need to have the right mechanisms so that people make sure that that people invest in these things and these investments are profitable, especially from a public point of view. And.

P1: Thank you very much. Then it's 3:00. I don't want to steal any more time. Promised.

P2: If you have still one question left, I can.

P1: All right, then maybe I would ask about administrative innovations. Is there anything you want to highlight that you do to for the governance of climate neutrality that is somehow experimental or innovative in the sense of the way that you govern?

P2: (...) Yeah. What? The question. Well, one of the one thing we have been trying and now it's come to a very interesting phase is this public private investment scheme. Because at the beginning we thought that putting 50 million public investment, we would get 116 million of total investment. But in the end, we have seen that we need much less public investment because the point is that the city council is there, even if it's a very low participation in the investment, private capital feels more confident and and comes in and invests in these projects. And this is an innovation because really it wasn't it isn't that common here to do this public private investment schemes and other things. Well, we have been doing this course for call for innovation and which we it's also a way of procurement that you don't construct a very specific service or product, but you construct a solution for a certain problem. And we have been doing this increasingly now, for example. Well, we have several innovation challenges. We call them innovation challenges, and two of them are related to electromobility. So to to to build a charger, which is quite affordable and powerful for charging for electric vehicles or the bias to charge vehicles in the municipal parking places in a more effective and efficient way and (...) systems of industrialized building so that they consume much less materials in the country. We recycle it in a more effective way and all these things, but in a way to govern, to manage government. Well, this is. This is a good question. I'd like to have an answer now, but I think about it.

P1: (...) Okay. But then I think from my side, we will basically be at the end of the interview. Is there anything else you would want to add regarding the topics that we talked about?

P2: Well, you have them the most. Many of these documents are also available in English, but some of them fortunately not. So if you are interested in, I can send you the links to please.

P1: (...) That.

P2: You (...) know, we had a book four years ago about the modernization of the city council, which is what it's on in Catalan. So it's not also printed. I don't think it's not available. Maybe. I don't know. But I sent you the English ones. The Climate Emergency Action Plan for sure. That's your plan. All the plans are available in English.

E.c Bratislava

P1: Then let's just start easy by setting the scene in the survey. You mentioned that you're working on the emission of 100 climate neutral smart cities, but also on the Sustainable Energy and Climate Action Plan, Bratislava. Could you maybe briefly outline and explain what your day to day work looks like?

P2: (...) That's that's difficult to answer. To be honest, I'm this this answer was pretty much because because the the characters were very limited in this question. So I couldn't write many, many things. I remember that I wanted to write, but then it said too many characters. I wanted to write that because the SECAP, we're just starting to we're just starting the process and the CCC or the or the 100 climate neutral cities. That's something that we've been trying to figure out how to approach it, but we're not we're not starting to see CCC or, or anything in that regard. So basically there are two, two different parts of my day. One of them is when I'm trying to prepare for these things to, for example, with the with the CCC or with the with the hundred climate neutral cities, I'm pretty much the only person responsible for that right now in my team because other people just don't have the capacity. So I'm trying to go through all the webinars and all the resources and see what other cities are doing. And yeah, as I'm saying, just like prepare us for when we start actually doing something which hasn't started yet. In terms of the SECAP, we we've been, we actually contracted or subcontracted like a not a consultancy but a company that does these strategies. So there was a lot of work around that around the subcontracting and all the administrative issues with that. But now it's starting to be more about the talks and meetings and negotiations with with all the stakeholders, (...) which is something I do in other regards as well. So does the more, let's say, reactive part of my workload or agenda that so many times there are many meetings with stakeholders who are also my team that is supposed to become the climate team in the future. Will most probably be the one who will take responsibility, at least at the beginning, for some energy planning and energy management in the city, because that's something we are lacking and there are different departments and different stakeholders in the municipality, but none of them actually wants to take it all in a strategic and coordinated way. So. So we suppose that we will be the ones actually starting it. And then maybe like if we gathered enough people and enough, you know, if we have it blend and everything, we can also this can be separated. So we're not really energy experts, but we're trying to at least coordinate this agenda. And then to be honest, my my work day is, is is often quite random because I get all these also all these like journalist interviews or research interviews or, you know, our politicians that want to have a speech about climate and all these all these things. So it's it just comes and goes. So many things.

P1: Interesting. I see. Very.

P2: I hope. I hope I explained it clearly.

P1: Yes. Yes. Actually, a quick follow up question. So you are going to be part of this new climate team that is being.

P2: Yes. Yes.

P1: And who else? Like how exactly will the current organisational setup be shifted to then form this climate team?

P2: (...) That's something that still you know, when I was thinking about this interview, I thought that it's a shame that it's not happening like in a year maybe, because now you really caught us exactly like in the epicentre of the of the process of the difficult decisions and everything. So this it's some talks that have been going on since like, I guess it's been one year pretty much. Where there are different departments with different projects at the municipality, but no real climate team. And I think also the the fact that the city applied to the city's mission was a push to to actually establish something like that. But it has been such a rocky road because at the beginning. So there are, for example, at the different departments and the level of, you know, officers like me, there have been a huge demand for for something like this to to be created. But at the political level, we had to go through so many, so many times where we had to explain like, yes, it's needed, yes, it will do this and these things and these things are really needed. So so these talks have been going on for a long time, but there were elections in in the fall. And after these elections, there was a slight political shift where. Where we after these elections, they decided to do this vice mayor or to create this position of the voice mail for climate, which was also a reflection of how we we fight it for it or we whatever. So there was this position, which was a signal for us that that probably the municipality takes it as a priority even on the political level. And now we had to go through through talks with especially the higher, let's say, higher managers and and politicians about how how it makes sense. And then it was there was this huge issue about whether like where it should even be positioned the this climate office that there was there was the opinion that it should be inside the city administration like another department, because this way it's like the closest to the other departments. And then there was there was an option to be in the in the office of the director of the of the municipality, which is not the mayor. It's the it's the administrative director. And then the mayor is the political director. And actually there is the office of the mayor where some departments like this are positioned. And now it seems like the Climate office will be there. It has many ups and downs, all the all the free options. So this was also something that was that was vastly debated. And then one of the biggest issues is that I

am I was hired already as like a climate climate employee of the of the municipality. But my colleagues who actually hired me and who applied for 100 city commission and who wanted to create the climate office, they are originally EU funds people, so they deal with EU funds with like these projects and partnerships and everything. So their idea was that the more they were seeing that the EU funds and the the EU projects are connected to climate, the more they want, they actually started to work on climate issues and the more they actually wanted to create this climate office. But now the biggest issue is that, okay, so if you create the climate of this, who will take the EU funds agenda, which my colleagues are really good at? And it's it's a very difficult agenda. So, so this was also very hard and it's still ongoing. We still we will still have to find new people who will actually do the EU funds and who will learn how to do them as good as my colleagues did them previously. Because it's a it's a very hard task. I don't know if I answered your question exactly.

P1: Yes. You asked the question. You actually already addressed a couple of other points that I was going to ask about. So that's great. Something very interesting. You said right now that it was this very complicated process to arrive at this setup that will be established now. What do you think? Why? Was the setup that was chosen. In the end, the climate team and the vice mayor for climate. How was this particular setup chosen in the end? Why?

P2: (...) That's a very philosophical question, I think.

P1: Maybe you have some insight that I don't have.

P2: It's fine. It's not the. I think the position of the vice mayor was just chosen that after the elections, the, let's say, political representation, the party that won the the elections, they set at one table and they they just talked about the priorities for the next five years. And and they said that climate should be one of the biggest priorities. And that's why it deserves a four position of a vice mayor to have this political support. And then and then this is really it's mutual help because this was this position was mainly created because we made some, let's say, Bush or some I don't know how to say it. Yeah, we the we or my colleagues, even in the past, pushed for it. So it was created. But then the fact that this position was created means that now it has the political support, because there have been some departments in the, in the city administration before that were trying to do some some climate related projects, some more like strategic ones, not just like single like we go plant five trees here and do this here, but like some more strategic goals with actions, plans and with coordination and with everything. But they didn't have this political support, which means that they were lost somewhere in the city administration and and they didn't have the relevance. Now, for us, if we want you know, if we want people to

really come to a meeting or people to do something or to give us some of their employees to, you know, give a bit of their capacity for us, if the if the vice mayor sends the email or sends the letter or says something, you know, or invites them for for a talk in his office, it's way more relevant.

P1: Interesting. Very interesting. (...) Okay. So maybe building on that, you mentioned in the survey that you hope that this new setup will provide more horizontal governance and open up silos. That's this directly relate to what you just said? And how would you hope that this new setup will in particular enable the horizontal governance and this.

P2: (...) That's something we're still trying to figure out, to be honest. It's like. (...) It's like a goal we have while not having the the exact steps to to go there and to get there. And since it's still not happening, we don't know like how it will work or what it will, all the things it will bring. It's I think. One of the main reasons is to really have all the things connected because climate change is such a complex issue. And for example, we have this Department for Environment, but they are only dealing with greens, with trees and greenery and with waste management. And we're like, Yeah, but climate is not just like the green spaces and waste management, it's also transportation, it's also the buildings, it's also the energy, it's also urban planning, it's also innovation data and all this. And so we. Yeah, we hope that. We managed to somehow connect all of these. I think one of the ideas is to have some kind of platform where people from these different departments would be involved, more or less, and we don't know where we stand on the more or less. (...) But it would be something that would follow the city's strategy because the city has, for example, the Sustainable Urban Development Strategy. It will have the SECAP action plan. And maybe also other smaller, smaller strategies. So it's it's something that. Thanks all of these departments and their goals and aligns it in in a horizontal structure. But we don't know how to achieve that yet. We actually are in now in we started some work with with Bloomberg Associates. I don't know if you know them and we will probably get some consulting from them on this on how to set it up correctly, because it's not just about. Yeah, it's a completely new thing for us, really. It's an experiment. We've seen it in other cities because we talk to other cities or I also, you know, I watch all the webinars of of net zero cities and in all of the cities they explain how they have this horizontal structure, how they created it. But for us, it's really something that's unprecedented. And we don't know exactly how we'll do it or where it will lead us. It will be an experiment, to be honest. The thing is, we we should not be afraid and we should go for it because I feel like there are so many negatives that we often just. We are scared to go for it, you know, And because we might fail because, you know, people might not listen to us or, you know, take part and be on board and stuff like this and. It will be an experiment, but we were very afraid to mess up.

P1: Interesting. Interesting. So it seems like you have a certain role in mind for the Climate office in general. What kind of formal responsibilities will the Climate Office have and how did you kind of determine in your planning process what role the Climate Office should take?

P2: Well, formally, nothing is established yet, so we don't know that. (...) For us. We actually we actually wrote it down. Our climate strategy. I will try to look it up because. (...) Oh, it's not here. Anyway, what is for sure? One of the main responsibility is the coordination. I don't know if I have to further explain, but actually, we still, as I said, we still don't have a concrete idea of how the coordination will actually happen. But it should lead to is that is that first of all, the all the actions of the different departments are aligned with some sort of strategy, with some priorities, etc.. Second thing that they the different departments that the the projects do not overlap because that's what's been happening for some time. Or it also. Also that. We have exactly the priorities set and act accordingly and stuff like this. The second thing is communication, so both internal and external. Where internally it's it's part of the of the coordination of course with. With the different climate relevant departments. But also I think more broadly with the whole city administration. I think that's what I wrote also in my answer that the city administration also like the whole municipality, has to know that we have this big priority. And that's a goal that we have some goals that we are following and that even in the way of how we. How we work at the municipality and what image we have may be on the outside because we do this and this internally that is important. And externally, of course, with both the public and and companies and organisations, stuff like this. So these are two very big. Thinks that the that the Climate Office should be doing. And as I said at the beginning, it's quite possible, even though we don't want to deal with like concrete projects or concrete like. (...) Like content. Content. Thinks it's. Very possible that we might have to do the energy energy part at the beginning because we we have really good we have really good adaptation, we have quite good transportation, all the greens and waste and all this. It's it's working quite well in in the different departments. What is really not not working in any way is is the energy, energy transition energy management of our own buildings but also like thinking about the energy for the whole city.

P1: Okay. Interesting.

P2: And I think there are a few things I might have omitted, but.

P1: You touched on already a few more points that I was going to ask about. Then maybe jump to another point that you mentioned. You highlighted a multi multiple place in the replies The Importance of the Metropolitan Institute of Bratislava. I was just going to

follow up to better understand why this change so important and what is maybe possible now that previously wasn't possible without this institute.

P2: (...) I wasn't there when the institute wasn't there. (...) But. So the Metropolitan Institute was founded by the mayor of Bratislava when he started his first term because he's an architect. And he was working actually in the Metropolitan Institute in Prague, which is he pretty much copied the whole (...) the whole system or the whole organisational structure of the Metropolitan Institute. He just put it in Bratislava and. This institute is mainly focussed on urban planning. And that's super important because they have, first of all. I think the Metropolitan Institute maybe because it's a little bit detached from the municipality. It's not exactly the structure of a of a public authority, let's say, or it doesn't sound like it so much. So it attracts maybe more, more people who wouldn't really go do the horrible office job in the municipality. So it attracts. (...) And the architects and some environmental specialists also. So they have a really good. Knowledge base, and they do really good analytical work for urban planning, which doesn't cover all of the things that climate would like to cover. But they do very, very good work on urban planning. They have been publishing many strategies, manuals and stuff like this. So it's this whole like conceptual analytical work behind how the city should function that is provided there. And one of the biggest really good things that they did is this strategy. Bratislava 2030 The Urban Sustainable Urban Development Plan. And we we've had even some feedback from from the outside that the analytical part of this of this strategy is incredibly complex and really, really, really good. And now, two years after publishing this strategy, the Metropolitan Institute is also developing an action plan. Because the strategy already had some indicators and some goals and stuff like this, but it didn't have all the concrete actions with concrete investments and stuff like this. So. So this is being developed now. We hope that the SECAP will actually be part of this action plan, that it will complement the whole thing on the on the side of energy, but also adaptation, because the SECAP has a big adaptation. But. So. I think the Metropolitan Institute is really important in this sense that it provides the expertise, the the analysis, the strategy. And. Like, in my personal opinion. I think we would need even more of that. Even like like something between the Metropolitan Institute and a city owned consultancy, you know, or some think tank, some really something that would some institution that would provide even more expertise and more capacity and more, let's say, pushing us towards innovation and progress and all these things that, for example, they have in they have this in the in the Netherlands. And I don't know if they have it for all the cities, but they have this like state think thing that is actually like consulting all the other municipalities. And I think they have it in in many different other cities as well. But I'm not sure that the Metropolitan Institute can actually do that. And still what they what they do is is good.

P1: Interesting. Then. Thank you for that explanation. I would maybe jump on the fact that you mentioned the action plan and also the SECAP. I would like to better understand how these different frameworks that you're currently thinking about and using are related in Bratislava. So how does one feed into the other? Which ones are you actually working on? How does, for example, the Climate City contract relate to others? If you could expand on that a little bit. Right.

P2: So the SECAP is actually it's a condition for the creation of the SECAP that was even in the in the public procurement conditions. It said creating the SECAP needs to be in line with with the Bratislava 2030 Development Plan. So. It's like a big bong. The SECAP will take from the Bratislava 2030 strategy and it will feed into the Bratislava 2030 Action Plan. Um. Because, for example, December 2030, the strategy is not the climate related goals and actions are not very ambitious and not very much developed. There is dimension that we are part of the 100 climate neutral cities, but that's like one sentence. And then there is still who wants to reduce its emissions, and that's pretty much it. So it's not very strong on that. And it might also be that we even update the strategy later when we when we have the Climate Office established and we know better about all the other goals and all the actions we want to have in that regard, we might even like go back to the strategy and review it and update it. And then for the CCC, we really haven't started. Nothing in the process of the CCC. Um.

P1: Why not?

P2: Well, that's the thing. The fact that we are only now preparing the SECAP means that the last such plan that was done in Bratislava was like 2017, I think. And it had a very, very low quality, especially the data in it. Um, so we don't have an emissions inventory that would be relevant for us. That something like. That's one of the biggest. The biggest. As the most important aspects of the seat cap, that it will bring us this emissions inventory because otherwise we don't know. And this is also something that is very much needed in the P.C.C. And we have been even talking about whether we should already start building the relationships with the companies, for example, or stuff like this, even if we don't have the plan yet. But. We we met with a few, for example, especially the energy companies, because it's also related to other projects. And I always feel like like until the city doesn't have their own their own plan and like an idea of what they want to do. (...) You know, it's talking about nothing and it's very difficult to structure it when you when you don't know, hey, here, we would need to build a plant like this because we we would need to have, I don't know, a big heat pump in the river, which maybe we would, but we don't even know like. What it would bring, what emissions reduction it would bring. We don't have an analysis for where it should be or anything, you know, so. And all of these things

are like this. They are still in a stage of ideas. They're not in a stage of something that is prepared, that has some concrete projects. And then. Yet it seems very difficult to actually start the process of involving all the other, let's say all the other stakeholders in the ecosystem. When when we are so, so much behind. So we we were kind of hoping to. So arrive at least in for, I think, in the fall. After after the summer, we will already have the emissions inventory. We will, I think, have a better idea of the actions that will be in the action plan. And that's when I think we will be able to start thinking about starting the SECAP. Hopefully with the knowledge that I have now from watching all the webinars and reading all the materials about how other cities do it. And it's also quite complimentary because the SECAP also gives the structure, you know, the CCC. It's this whole process where you have to create a transition team and, you know, make the alliance with the other stakeholders and stuff like this. And I think. Part of this will already be in the SECAP. The SECAP will say you need to have a governance structure to actually go towards the reducing of emissions and you need to involve the external ecosystem. Maybe not in the exact same way as the as the CCC, but. And also, to be honest. And I wrote that in the reply in one of the replies. So we're really, I think. We are very realistic in the way that we will not be able to achieve climate neutrality by 2030. And we even say to our advisors, we have these advisors from Net-zero cities and we told them, Yeah, you know, like we don't we don't have a SECAP yet. And it's, it's almost like, yeah, it's 20, 23. When we, when we have it, it will be 20, 24. There's not so much you can do in. In six years. And I think that the cities that will be able to do it are like the Swedish cities that started so long ago already, and they have all the good governance structures and everything. And the money, of course, the money to do it. Yeah, we're not sure we'll be able to.

P1: So. So what you say, what you say is the biggest bottleneck that will prevent you from becoming climate neutral by 2030.

P2: (...) I think it's the time. I think it's because we're so late. Because. So I wasn't here. Before. I wasn't in Slovakia when when there was another leadership at the municipality. But first of all, Slovakia has a has a horrible political situation. That has been horrible for years already. Or forever, maybe. And but I know that political situations are bad everywhere, but Slovakia is is quite, quite far that road. And that was also reflected in the in the city administration and political representation in the in the local authority. And I've heard and I wasn't I wasn't here when this was happening, but I've heard that when the current mayor came and the current mayor is a good mayor and his school and he was even voted the best mayor at some point, I think because he's this like cool young architect who has a rock rock music band or something like that, but he's also he's also very a good politician. He's very transparent. He means good. And I think he he he made a really big

revolution when he came six years ago because before that, for 30 years, this whole city administration has been just like working on a completely random basis. And. Also this this period, like 5 or 6 years ago, is when things started moving in the whole of Slovakia. And before that there was so much corruption. There was just so much and the money in the administration was not going to projects. It was going to the pockets of people and. So I think the city only started moving towards the goods direction 5 or 6 years ago, and before that there was nothing. There was regression.

P1: Let's see. Okay. Interesting. You. For her. Let me just quickly see where.

P2: (...) Yeah. So I think, if I may, I think it's time. Sure. I think that one of the biggest bottlenecks is time. And the other one then. Is. But I think that's a very generic one. It's just the money. Money. And it's like a combination of everything, really, because there's there's the money issue, but there's also and what we feel the most with the whole net zero of cities and everything is that. Slovakia as a as a whole country, but also in Bratislava it's. (...) There's a huge, let's say, migration or brain drain of the eastern countries to the West, which means that people here, they don't even go to study here. They go to study in the Czech Republic or even more west, and then they not often come back. And even when they study here, most of the time they go, they go somewhere and they go work somewhere else. They. Many people work in Vienna, in Bratislava. Many of the good, good people, they go work in Vienna. Or they they just. Yeah, it's really the people that do something that care that are forward thinking are such a small group. And then to find some capacities who. Want to go into the. Into the public administration and work for little money and be very frustrated with everything. (...) So we're even like losing people there. Like, even though there have been some big budget cuts because of the government now for for our city administration. So the budget cuts they resulted in also like people got, let's say. So many people were were left left. I don't know how to say it, but at the same time, it it kind of met with a moment where many people are like, I'm leaving anyway, you know, like not even the ones that the municipality wanted to let go, but also the ones that we really needed to keep. And they're like, Yeah, I can't do this anymore.

P1: And how how have you noticed this brain drain shortcoming now in your actual operations?

P2: (...) Well, the. (...) That for the 100 climate neutral cities, I think there's a big there's a big attention or focus on innovation and on working with some research institutions and universities and stuff like this. But we don't have this here. And so when we think like, Oh, it would be nice to have like a solution for this, you know, or even some, some of these institutions that would be developing their own. Tools are some solutions and we would be in communication with them. But that's that's just not happening. And also we're

really lacking technical people. But I think that might be the problem in many European cities that everybody wants energy managers now and they're not.

P1: I was actually going to follow up on that. You mentioned in the survey that energy managers and in general the profile of being strong on the technical side, but also having strategic and communication skills is a particular profile that you're looking for. So why is this combination so important and which roles with these people feel in particular if you happen?

P2: Well, that comes mainly from the fact that, as I said, Bratislava doesn't have the whole energy issue covered at all. And. So we don't have an Energy Department. We should have one. We used to have one, but then it just fell apart and. (...) And now there are these different places where there are different people who do their small part of the job. But we don't have it like coordinated with a strategy in mind, etc.. And that's something that we will need for sure. And we see that. We see that, for example, there is this person that has the technical skills. He knows all about the buildings and the boilers in them and stuff, but then he doesn't want to. To, I don't know, lose his time on stupid things like planning or talking to people and. (...) And that's something we really need. Maybe we don't even need them to be like super, super technical skilled. We just need. From my perspective, we need to consolidate this this. So many different factors in the energy sector that are the. The biggest one really, is that to decarbonise the heat system. That's something where the city has little influence because it's in private hands of private companies, but it has still some urban planning and some, you know, like legal possibilities to do so. But it needs someone to, you know, to go through them and to see what what can be done. And then there is electricity, of course, and with electricity, renewables and I don't know the buildings of the of the of the city administration and how they are energy efficient or not and what technologies and what sources go in then and then all the buildings of the whole city and how they are energy efficient. And all of this is like a really big package. And it cannot be it cannot be separated, actually, or it's. It has to follow one, one plan or one strategy. It has to be in the hands of of just. A few people who know everything about it. And. Yeah, we don't know if we'll find some someone like that because we have a few, few people who, as I said, are technician and understand some of the technology, but they, they don't want to be bothered to, to do the whole thing altogether. And then it's a question if we. That's something I've been thinking a lot about recently. So I don't even have a have a really concrete answer to that because. It's so much about personal relations, about how the different people are busy and how their capacities are just exhausted. And and then about the fact that we don't have many energy experts on the market. And if they are on the market, they go work in the private sector. And then we have to think about maybe how to subcontract them. But yeah.

P1: How are you going about identifying which capabilities you need to build and what are you doing to kind of build these capabilities, for example, like energy expertise in this particular combination?

P2: (...) Like how we want to build these capacities.

P1: Yeah, how you want to build them. And also how are you identifying which ones do you need to build?

P2: (...) I think we identify them just by personal experience, to be honest, just by working in in the whole system and seeing what is missing.

P1: (...) Is there some kind of concerted effort or actual strategy or mechanism to identify where there are gaps?

P2: No. No, not really. And maybe that's. (...) Maybe that's also. (...) That could also be in part, somehow one of the tasks of the climate office. But the. And I'm not involved in all these, like, political negotiations about it, really. That's it's my colleagues that are more involved because they've been at the municipality for way longer than me. (...) That. We? Everybody really has to fight to even have one more employee or to have two more employees. And there are these big issues that some departments have a lot and they're not working enough and some some departments have a lot of work and then they don't have many people. And there are these constant fights about who will get how many. And they were these fights, obviously, even when when there were these budget cuts and they were letting people go. So it's it's really not happening in a in any coordinated way. Or if it is, maybe it's somewhere at the really leadership level where I don't see how the decisions are made.

P1: Okay. And on your level, are there is there any planning on how to build the capacities you need within your more immediate organisational surroundings? For example, which capacities you will need in this new climate team, etc..

P2: (...) A further climate thing? I don't know. I don't know exactly if I'm answering your question. Exactly. You mean. (...) You mean the positions that we will need in the climate team? Or you mean like us if we're, like, building So.

P1: See which kind of position you're envisioning for this climate team. I'm just wondering, what are you doing to build the skills and processes and resources that you will actually need to do what you want to do?

P2: (...) Yeah I think, I think it's it's quite random. It's yeah. There's no plan to, to build them. We, we try to learn as much as possible on the way from projects and from other cities. (...) But we don't have some capacity building program. I think there was an idea to have a capacity building program in one project we applied for, but we didn't get it. One of the pilot projects or the first pilot project call that was from from 100 climate neutral cities. Where we wanted to make some sort of capacity building program for our energy manager or for. Not the energy managers, but for people who, for example, on the different levels are responsible for some buildings and for the technologies or for the energies in the buildings and make a capacity building program for them to actually create some sort of network that would be more. More, let's say, educated and skilled for that. (...) But we didn't get this project. So hopefully in the future. But not now.

P1: Then being mindful of time. I think we're almost at the end of the hour. Maybe one more question. You mentioned in your survey reply that you kind of hope. The human and technical capabilities will follow the organisational changes essentially. Could you maybe elaborate what he meant by that?

P2: (...) Well, first of all, we're hoping that we will get more people and that they will be already skilled in some way. I think we all come into the equation with some with some set of skills already. (...) For example, if I if I can say one example, we are me and my two colleagues. And my one of my colleagues is really, really a good networker. She can talk to anyone about anything. And and then. I feel like she always. She's always informed about everything because people just count her in because they know about her, because she's always there. She's always very loud, let's say, and very present. Unfortunately, she's leaving us. But that's, for example, one very important set of skills that we need. And I don't know if we can develop it or. All right. If we just hope that it's. Yeah, it's very difficult to build it. Even these, like, interpersonal skills to have really friends, let's say, or some allies in all the different departments and organisations, that's that's super important. And then there's my other colleague who is really so assertive. She can solve any problem and she has it in mind right away when someone tells her that there is this and this problem, she has the solution. Like she comes up with the solution, she doesn't ask, she doesn't say, Oh, that's impossible. She just has the solution right away, you know, and like a very logical mind. And that's also very important. And I come from a background of of NGO and of climate policy. So I have more of the like knowledge, background of all the all the different. Yeah, let's say climate policies and climate related stuff. And yes, so. So we complement each other like this. And we we need more more of these people. We hope that there will be more people coming. And probably in the climate office we will have like a data analyst already that is promised and a lawyer probably. Which is which is also very important and will be important for for the future

and stuff like this. And we hope to build it. But it's also about how long the person has been to the municipality and really how are the relations built and what authority the person has.

P1: Interesting. Okay. I would love to ask a few more things, but I think we're at the end of the time. I have another interview back to back with this one now. So maybe as a very last point, is there anything else you want to add? Anything you want to highlight out of the topics that we've talked about?

P2: No, I think it's a. It's all it's it's so complex that it all just it cannot be summed up. I try. I really try to, to say it in easy, easy terms, but it's so complex really.

E.d Copenhagen

P1: Then maybe to set the scene a little, could you briefly explain what your day to day work looks like and what your usual tasks and responsibilities are with regard to the climate neutrality transition?

P2: My name is [NAME] and I sit in the Climate Secretariat in the Technical and Environmental Administration of the City of Copenhagen. I'm an energy planner. We're a team of 30, 35 people. I would say out of those 35, I'm the only energy planner. Some other are more into mobility, some are more into CO2 accountancy, some are more generalists. Energy consumption. We also have quite different knowledge and competencies inside the house. I think you ask whether what's my daily life or like my daily tasks? I think that's a very hard question to answer because it really depends on the period. I mean, at the moment we're working on two. We're working on the new climate plan. So right now it's a lot of development activities. We also have still to monitor the climate plan 25. So, we still have to report and make sure that all the initiatives are running as they should be. So sometimes I'm spending more time on that. I'm, of course, part of a very political organization. The municipalities also need to how you call that to serve? I guess you can say the politicians and write the notes and organize their meetings. And yeah, so I think my test car quite broad, actually. (...) Does that answer your question?

P1: Yes, that answers the question. And maybe following up on what you just said, you briefly touched on how everything is organized. Could you outline which organizations are responsible for governing and implementing the transition to climate neutrality? Generally in poverty.

P2: (...) I think I need to get that question again, because you ask which organization take care of the governance?

P1: Yes, exactly. Which organizations, departments in the city, administrations, etc. take care of the governance of the climate neutrality transition.

P2: Can you explain governance? What do you mean by that?

P1: So essentially steering, coordination, control, etc., within the city administration and the wider city.

P2: Well, if that's what it is, then it is us. We are the Climate Secretariat. So we organize and steer and make sure the agendas are coordinated at the municipal level.

P1: (...) And could you maybe talk a little or elaborate a little bit on why this organizational setup was chosen?

P2: I have absolutely no idea. I guess it's more of a historical matter. I mean, as in any municipality, I guess you have the technical and environmental administration, then you have the economic administration, such as you also have the social. You also have, you know, like in any minister or many any municipality. Right. And where are the technical and environmental rules, I guess? I mean, obviously, climate falls into our hands. I don't know since when the Climate Secretariat exists, I guess it's most of it. I mean, I think it has changed the names a long time, but so the climate then has existed since 2009, 12-ish. So it's been there for a very long time now or very long term, at least ten, 15 years. Why has it been chosen like that? I guess it's because the most feasible way to steer and govern.

P1: Yeah. (...) Are there any current or upcoming changes to the governance structures around climate neutrality?

P2: (...) I mean, my department is still going to exist, so. Not as such. No. Except if you mean something else by governance. For me, governance is more than just that. But I don't really know what you mean with it.

P1: So what would governance, what else would governance entail for you?

P2: I think for me, governance is also which tools you use and how you say how you make things feasible to actors, how you use. Numbers and specific. Yeah. Tools to create agency in between the people. But that's a very theoretical way to talk about governance, I guess.

P1: Then let's maybe talk a little bit about these aspects. How is the plant office and the city administration as a whole communicating and coordinating internally around the climate neutrality issue?

P2: Which two did you say?

P1: The Climate Office and the city administration as a whole? Like, how are they communicating, coordinating around the climate neutrality issue?

P2: (...) So how my secretary talks with all the others.

P1: Or for example. Yeah. Or which kind of flows of information, etc. you're aware of which coordination mechanisms maybe who talks to whom and when, etc..

P2: Wolf, that's a tough question. I mean, we're in the technical and environmental administration with 300 people. So there is a lot of people talking with one another. I talk a lot with the city developers, with the waste people with the difference. I mean, there is flows in any direction. So I'm not sure I can just list some of them because I mean, of course we have work in common. So it's like you're talking between colleagues, right? So I'm not so sure how to answer that. I mean, we coordinate with the different. Okay. Maybe I should show you one slide. I don't have it right here, but. Yeah, but there is us. Then there's the politician. So we coordinate with them. We also use the secretariat to help us, like the real Secretariat. The secretaries to help us communicate with the politicians. So that's one part. Then under us, there is a lot of different. (...) Teams of groups or I don't know how you can call that. There is the mobility, the energy use, the people that works with our own buildings, people that work with with the public companies like Rovio or like the transport companies and so on. So I don't know, maybe there's 15 of them. I'm not even sure. And each of us in the Climate Secretariat is responsible for communication with some of those 15. So we coordinate that way and then we get the information up and then up to the politicians. I hope that answers the question.

P1: That's actually pretty much what I was asking for. Thank you very much. (...) Just sitting. (...) So. Would you say that there is like a specific communication model, etc. that you're using or is it mostly ad hoc?

P2: There is both. There is both ad hoc activities. And when it concerns the climate plan will of course have a monitoring system that we fill up twice a year.

P1: (...) Could you maybe elaborate on the monitoring system and generally how oversight and reporting works around climate neutrality?

P2: So we have a climate plan with 64 initiatives. Each of these initiatives we need to report on twice a year. So then all the responsible for some of the I'm responsible for the energy production. There is a thing, 12 or 15 initiatives or so I need to report on them into the system, like the platform. We have it just on SharePoint and just an Excel sheet basically. Yeah. So that's the way we report. You had two questions. I'm sorry. I remember only one.

P1: A Yes. I was generally asking about the oversight and reporting structures, but also about the monitoring system. So if these are the same things.

P2: Are kind of the same thing. And then when we report and we inform the politician about how it goes with the climate plan and if there is some major delays or nodes or if everything goes according to the plan or.

P1: And how exactly your reporting is that defined in the climate plan or is that. Was that after the fact?

P2: Yeah. So I'm responsible for the energy production. So I ask the. Responsible for the 15 initiatives to report to me how it goes. We have a sense like of whether Excel sheet that I asked them to complete and then they send it back to me and then I report back to the central like put it back in the real Excel sheet. And then we gather all the information about the 64 initiatives.

P1: (...) Interesting. So what kind of information would you be gathering there?

P2: How goes if there is major delays or not. So if they are lacking financing, if they're lacking other type of resources, if there is major issues that weren't foreseen, if, you know, just all of those like just taking a status about how it goes with the project.

P1: Interesting. And then maybe asking kind of the same area of questions, but externally. So how is the Climate Secretariat and the city administration generally communicating and coordinating with external partners or I'm thinking, for example, the citizens, other cities, etc..

P2: Citizens. We don't really in external other cities depends. I mean, we have a lot of delegations coming into Copenhagen to ask about the climate plan. So we explain how it works and what we work on. I know there is some forums like we also part of C40, CDP and other municipal networks in which we share knowledge.

P1: (...) Interesting and with regards to other levels of government.

P2: What do you mean?

P1: So how would you or how are you coordinating with regard to climate neutrality issues when it comes to talking, for example, to the national government?

P2: So the politician may go talk to the government, but we do not. Now those employees.

P1: (...) So you already mentioned different city networks, etc., that the city is part of. Is there any kind of unifying framework or initiative that is used as a reference framework for governing the climate neutrality transition?

P2: (...) Trying to understand what that means: A unified framework to govern.

P1: I am thinking, for example, about their reporting standards, for example, by the Covenant of Mayors or the climate, the 100 cities mission by the US, the Climate City contract, and these kind of things.

P2: Yeah, I mean we do report to CDP, C40 and all these networks. Yes. Yeah. But it's more their standards. It's not ours.

P1: Okay. (...) And then maybe asking in particular about the EU mission for 100 climate neutral and smart cities. Part of that process is writing up a climate city contract. So I was wondering what is the current status of that?

P2: I actually do not know. I know it's been very difficult to understand what this whole Climate City contract was all about. So from what I've heard, it has been extremely unclear what they wanted to do with it. And as far as I understood, it's still quite unclear what this network should be used for. But I do not know more. I'm not really involved in it. I've just heard that The office.

P1: (...) Interesting. Thank you very much. And then maybe a few last questions regarding the entire governance setup before we move on to the next topic. So when it comes to using funding mechanisms in governing the climate neutrality transition, what kind of funding mechanisms are used and where? And these.

P2: Define funding mechanisms.

P1: That might be like incentive structures that you set within the city or like certain streams of funding that you in the city administration use to work on and implement climate neutrality, etc..

P2: So the municipality works in a way that every year it's like it's like at the government level, you ask for money, you define projects, and you ask the politician to allocate some money to your project. We do that once a year. And at the moment we're working on the new climate plan and we just work and say this is how much we're going to need. We have we didn't have any confirmation that we're going to get the money, but we just assume that we're going to get there eventually at some point. So, I mean, I'm not sure it's a funding mechanism. It's just a way the organization economy works. When you ask for a budget to carry some initiatives.

P1: And maybe. Asking about a second topic area. What would be the or what would you say is the role of information and communication technologies. So for example, it. Systems in the wider sense but also Iot, etc.. In governing the climate neutrality transition.

P2: We do not use Iot to communicate or to monitor. Then you ask about it. So I guess that also does that. I mean, what you mean by it is computer it. Because in that sense, yes, we work on computers.

P1: If you consider how exactly they're used, which kind of systems do you need to use to coordinate and track things, etc.. Are there any particular solutions that you employ on the information technology front for the governance of climate neutrality transition?

P2: I don't think so. I mean, for the reporting we use Excel to make sure to do the same to accountancy. But that's not a communication tool. So not really know what it [...].

P1: Then maybe thinking more broadly about this entire issue of governance that we discussed, what would you say are the biggest challenges that Copenhagen is facing in governing the climate neutrality transition?

P2: I think what's difficult is that it's very administrative and a very annoying process for all the involved partner because twice a year they need to report on their progress and that means having to put things in an Excel sheet, which is time demanding. It's a big coordination task because it's, as I said, 64 initiatives that need to report exactly the same year, way twice a year. And I'm not sure it's a problem, but it is. Heavy system. It is very demanding. Time demanding.

P1: Very interesting. And what do you think would need to change to overcome these?

P2: Folks don't think we can, actually. Um, because I mean, we need to report, and the only way to report is that everyone has to look into what has happened in the last year. And I mean, yea. I'm not sure how I would do it. I don't really see another way of doing it.

P1: Hmm. Okay, then maybe asking the other way around. What would you say is the biggest success that Copenhagen has in governing the climate neutrality transition?

P2: I would say that it has worked. So far, so good. I mean, 80% of emission reduction in ten years' time, I think that's a pretty big success.

P1: And with regards to the way that this process was steered and controls and reported, what would you say has worked particularly well within that governance dimension?

P2: (...) I think the organization has worked pretty well. I mean, the politicians know what's happening and everyone knows what he or she has to do. So I guess the structure has been working fine.

P1: (...) Okay, Let's then maybe move on to the next topic area, kind of which is more about administrative capacities. So by that I mean the skills and processes and resources that the public administration has in place to achieve its goals essentially, and to maybe start into that area. Generally, if you think about all the things that you described, what would what you say is the role that the public administration has in the climate neutrality transition?

P2: (...) I mean, it's [...] the plan. So we have a big central role. Without us, there would not be any climate plan. So we are the administration that do it. So a pretty big role, I guess. (...) And it's part of creating that plan and implementing it.

P1: What would you say is the main task that the administration has to fulfil compared to all the other actors in the cities like companies, citizens, etc.?

P2: So we write the climate plan. Did you look at the climate plan?

P1: Briefly. Briefly. I'm talking to a lot of cities, so I only had so much time.

P2: Sure, sure. But, you know, it's like a big document with a lot of initiatives. And we do that. We make that plan. So. Without us, there would not be this centralized climate initiatives. So our role is to make that it exists. Oh, my God. I'm sorry. I feel like I'm going a little bit around what you're actually looking for.

P1: No, no, it's fine. It's fine. Please go on.

P2: But it is our job to write that plan and to make sure that we have like initiatives that are ambitious enough, but also realistic.

P1: Okay. I see. So would you say that the city of Copenhagen has all the skills and processes and resources that it needs to fulfill this role?

P2: Yes, I think so. You could always get more money. But I mean, that's the problem everywhere. So everyone could get more money.

P1: (...) Okay. Then maybe asking the other way around which skills, processes, resources would you say are especially important to realize the climate neutrality transition?

P2: Within the municipality, I think it's a lot of project management skills actually, because we don't perform most of the initiatives that are performed by other actors or delegated at least at least in the current climate. And maybe it's going to be different than the new one. I'm a specialist. I'm an energy planner. Not everyone is a specialist. Some are mobility specialists that needs more in-house competencies. But to keep track of the

initiatives, then it's more like a, you know, like being a project manager and making sure everyone is doing its job at the right time, at the right moment. (...) So it's a mix of both like competencies to be generalist and to be expert within an area.

P1: (...) Just. So and if you think of it the other way around, which skills, processes and resources would you say are maybe lacking at the moment?

P2: (...) I mean, at the moment we're developing the new climate plan and there is no knowledge or like the new climate plan is going to be about the consumption based emissions or it's also going to be about those. And we are one of the first, if not the first one of the first municipality working with that. So no one has knowledge because no one knows how to make people stop eating meat and flying it all the time. So, I mean, that's lacking resources, but it's not a problem from the municipality. It's a general issue that it's a new theme. People need to work with.

P1: (...) Very interesting. Is there any systematic way that the city of Copenhagen tries to identify capacities, skills, knowledge, processes that it needs to build?

P2: Really, no.

P1: (...) And are there any particular skills, processes, etc. that are currently being developed or built?

P2: So as I just said, we're working on the new climate plan with the consumption based. And so now we're looking into developing the new initiatives and so on. And for that we need knowledge. So now we're working on that. Some of my colleagues are at least.

P1: But that would mean essentially upskilling or educating the current personnel.

P2: Both. Yes.

P1: Okay.

P2: Hiring and getting your knowledge in the house.

P1: (...) How would you go about doing that? Acquiring knowledge on these areas. How are you going to do that - acquiring new knowledge on these areas?

P2: So we hired an entire new team of people who is going to work on land that they both come from inside the municipality and some been hired outside. So. Just hiring people. That's how you get new competencies. Most of the time. (...) Talking to people outside as well. I mean, a lot of knowledge development.

P1: (...) So how would you say did this come about? Like who decide when to hire and develop which competencies.

P2: So the politician took the decision to work with consumption based. So when they take the decision, we need to apply it. So they said we need to reduce consumption based emissions. And then we had to have a team that would work with consumption based because no one else was. So it's pretty simple, actually. Or pretty straightforward, I mean.

P1: (...) Interesting. And where you. Aware which kind of skills and competencies you're looking for.

P2: So people who work with a consumption based emissions, people do know how to work with behavior changes. People who know how to. Yeah, I mean, it's a big area consumption base because it's flying, it's eating, it's buying clothes. It's basically everything. So you need people working with absolutely every kind of area, actually.

P1: (...) Okay. Very interesting. And then maybe. I would move on to the next area, which is more about implementation. Specific actions that are taken, how the municipality is working. So. Has the city administration changed any of its processes and routines as part of governing and implementing the climate neutrality transition?

P2: (...) So you ask if the administration setup changed in the last ten years?

P1: Not only the set up, but also the formalized processes, maybe other activities that are now done that were never done before for the climate neutrality transition.

P2: Before the transition?

P1: Essentially like trying to see how the processes and the routines and the work changed as part of pursuing climate neutrality as a goal.

P2: (...) I don't think so, because we got organized to make it happen. So it has been remaining quite the same type of organization since it exists. I think new directors, new name and such. But I mean, as in any company, I would guess. Yeah, I think it has been the same actually.

P1: Okay. (...) Then you already mentioned that there are a lot of initiatives underway for different areas. Could you maybe give a short example of a recent project that the city administration has been conducting and that has delivered kind of tangible? Progress towards climate neutrality?

P2: Sure. I mean, we have 64 initiatives. Most of them are delegated to some external actors. I'm responsible for the energy production part. One of the biggest initiatives that have been performed is to get rid of coal fired plants and to replace it with biomass. That was a pretty big job.

P1: (...) Interesting. And regarding the way you're working, would you say there are any recent administrative innovations, kind of new methods of working, collaborating, etc. that are being tried?

P2: (...) I mean, I think some of my colleagues work with. What's called Copenhagen Solution lab, where they try to get funding to do kind of more innovative projects. I know they work a lot with flexibility, different types, like both in heating and in in heating and in electricity. I know that. I mean, there is a few projects here and then working with that a bit more innovative or at least it's innovative. That's the term, but a little bit more far reached, maybe you could say. Yeah. So some.

P1: Are. (...) Interesting. And if you had to reflect on the success or failure of that, how are those initiatives doing?

P2: I mean, you know, these kind of projects there, it's research, basically. It's applied research. So it's both successful because you do research and the failure because you never attain any big breakout. But sometime it's always very needy. So that research goes along.

P1: (...) Interesting. And then maybe as a last topic area, I would like to ask a few questions about the EU mission for 100 smart climate neutral cities.

P2: Yes, you can ask, whether or not I will be able to answer them.

P1: Well, we will see. So just thinking about the mission in general, how has joining the mission influenced the way that climate neutrality is discussed and governed and implemented in the city?

P2: I would not think it has been influencing the way we do our work at all. Actually, I think the municipality of Copenhagen has been a pioneering city. We've been developing our plan since 2009, so it's one of the first municipalities in the world having a plan. So we've been leading the transition and in some ways we haven't been leading, but we've been innovating and setting some like what were the first having CO2 accountancy and so on, some of the first at least. So joining new networks. It's interesting for us because we can share a knowledge and so on, but it's not going to make us change the way we do

things as such. Things. So far we're more trying to. But again, I don't work with this, but I think we're trying to figure out what to use this network for.

P1: (...) So asking generally, would you think that Copenhagen will be able to attain climate neutrality by 2030 as suggested in the mission?

P2: So the climate plan for 25 is to reach climate neutrality on the scope one and two by 25. It's not going to be reached. That has been said also publicly. So I'm sure you can find a lot of info. But that's the reason why is because we didn't get the funding to do a carbon capture storage on one of our plants. So no, we won't. And with the new climate plan, we have a new. Way of accounting. CO2 one is geographical and one is going to be consumption based. So we're going to have to accountancy one is to get climate positive and one is to reduce by half the CO2 emissions. So it's going to get a very more complicated the way we calculate things.

P1: Could. (...) And what would be the target year for that new plan and those new ambitions?

P2: It's 35.

P1: Very interesting. So you already mentioned that the city is kind of trying to figure out what the EU mission is for in the first place. What are your thoughts of the EU mission as kind of a policy tool for achieving climate neutrality?

P2: I have absolutely no idea. I'm one of the relevant persons, Renzo. I'm sorry, but that.

P1: Yeah, no worries at all. (...) Then let me quickly see if I wanted to ask any follow up questions. Sure. Sure. Before. (...) Yes, maybe quickly coming back to the new. Keep your subtheme, whatever that is, hired for scope free and consumption based. I would like to better understand the dynamics within the Climate Secretariat when it comes to building or changing internally, building new teams, building new competencies, how that kind of process looks like.

P2: I think it has been a process of a few months. I mean, maybe it's still in the making. (...) I mean, once we knew that we had to work with this, we had to we knew we had to hire more people because we couldn't just perform the job. And so the process, how are the dynamics? It was pretty good dynamic. Just happy to hire some new colleagues and work with something new. I think people are quite motivated to work with with what they work with.

P1: (...) And would you say that that was successful as a whole? Were you able to acquire the skills and competencies that.

P2: I mean, so as I said, it's a completely new area because no one really knows how to make people stop flying and how to make people stop eating meat and buying H&M clothes. So it's still rather new and there is a lot of know how and knowledge that has not been developed, whether it's in the municipality or worldwide. So it's still in the making? Yeah. I think my colleagues are pretty smart and know what they know and know what they don't know. But that's not really the question. It's just that I mean, it's big and unknown.

P1: Interesting. And then maybe one more follow-up question. Coming back to the organizational structure. You mentioned that, of course, the municipal administration is a very large entity with different branches, etc.. And I was wondering, how do you coordinate climate neutrality goals in other parts of the municipality?

P2: Yeah. So as I said, so we are the climate secretariats and we're the link to the politicians. We help the secretary and we also have all the different organizations, other groups within the municipality. I'm responsible for the energy production. So I'm responsible for communication about that with the other people within the organization that work with that. My colleague, who works with Mobility, she's responsible for coding the communication with the municipality. Within the municipality we work with mobility and so on and so on. So it's like a para umbrella kind of organization. Yeah, but I think I've said Yeah.

P1: Yeah. And how would you say is the collaboration with these other parts of the municipality? Are people generally aligned with your interests or the ways also that you try to promote climate neutrality? Or is there any discourse, any difficulties?

P2: I mean, the economical administration is always off. Yeah, they look more into the economy than us, so sometimes they're a bit more tied than what we are because we see the technical potential and they see the economic consequences of it. So with them, it can be complicated sometimes.

P1: (...) Yeah, I think that would be most of the points that I wanted to ask about. Is there anything else that you would like to add regarding this entire topic area that we talked about?

P2: Oh, I think that would be it. I mean, I think if you want if you want to get to know more about it, you can look online. There's the climate plan 25 and you can look into the

roadmaps and the midway evaluation of the climate plan. And I think that's where you would get most of your questions answered.

E.e Gävle

P1: Then I'm excited to hear what you have to say. So maybe let's just start. Very generally setting the scene. Could you please briefly explain what your day to day work looks like and what your usual tasks and responsibilities are?

P2: Yeah, I'm an environmental strategist and I'm responsible for the climate goal. You can say on the overall level and yeah, I work on a department called. Oh yeah my. It's difficult to speak about my work in English, I realize. What are we called in English? Overall planning, I think we are called. And yeah, we do the long term planning of the whole municipality, but also then the strategic environmental questions are here. So we are directly under the municipality steering thing and my day to day work is very different from day to day, I would say. And no day is like the other. But I've been working here for two years and during that time I developed a climate action plan. We already had the goal to be climate neutral in 2035 when I started here. And then the decision was that we have to have an action plan also to reach those goals. So that was my first task to develop the plan and thereby we developed lots of actions that we need to do. But mainly then we focused on the the actions that the municipality actually could influence. And after that, and I'm then responsible for the overall coordinating of the action plan. Thereby we applied to become one of our viable cities in Sweden. I don't know how familiar you are to viable cities.

P1: A little.

P2: Little, Yeah. It's the Swedish version of Net-zero cities. But actually we were before we started first and I think actually Net-zero Cities was inspired by the Swedish. Yes. Yes, I did. Yeah. And yeah, we applied and we were accepted to that program. And then we also applied for Net-zero Cities. So now we also change our goal to 2030. Is that what they are aiming for? So I'm coordinating also these two initiatives and the climate contracts, the contracts we are doing. And so that is basically my but you know how it is. You work with everything from innovation to companies that wants to come here and establish themselves if it's related to environmental issues. They normally contact me first. And yeah, I also actually run a group on sustainable transportation that we have in the municipality and try to coordinate that on a bigger scale. Yeah, so I think that's my daily daily.

P1: Already quite a list of activities. Yeah. Just one quick follow up question. You mentioned that the goal changed to 2030. What was it before.

P2: At 2035, 2025? Yeah. But the goal for 2035 to also include that consumption based emissions, which I assume they don't. I didn't talk to the politicians about what the if they took the consumption based emissions to 2030, but I certain they didn't because it's difficult enough to 2035. I would say, since we don't have much influence on those emissions.

P1: I see that I would actually try to or want to focus on the frameworks for a second. You already mentioned that you're working on the client city contract. Just in general, which key reference frameworks is your city using to address sustainable urban development? Climate neutrality? So I'm also thinking of the Sustainable Development goals, for example, etc.. There are different frameworks and I just want to hear is there anything else beyond the city contracts?

P2: No, not that we are part of. There is no other framework. I mean, there are a lot of initiatives. I know that in Europe like that the other viable state cities are involved in, but Jabaliya is not at the moment interesting.

P1: And regarding the climate city contracts, what is the current status of that?

P2: Yeah. You think of the international. Yes. Yeah. Not the Swedish pick a sector different. Yeah. The status is that we actually we aim to deliver the contract in March next year and that's not. Well the thing is we already have, I mean an action plan and stuff that needs to be developed, but. But we don't have the local. How do you say that? Local network. You need to have a network locally with companies or academia that also signed the contract and we are currently constructing that local city contracts. We we are we will launch it this autumn, but since it's quite ambitious. So that's why it's taking a lot of time. We actually have a person working on that full time, so I hope that will fly.

P1: I see it. Yeah. But the rest of it is based on the plan you already had in place. The Swedish one.

P2: Yeah. I mean, it's not we had our own action plan that was not really connected to any framework. It was just pure our own initiative. But I will say that we joined these two initiatives to be able to reach our own goals because we knew if we are together with other cities, with our ambitions, we will also learn faster. It will be a faster track to to reach our goals. And also, I mean with net zero cities, we did not have so much interaction yet with other cities. That's what we're kind of hoping that they will sort out soon. We did have a lot of a well, not a lot, but we had some contact with our city advisors. But you realize when you're part of two initiatives that are basically the same, like viable cities, that it's difficult to to the additional value gets less. The additional value for us would be

to be connected to other cities in Europe, since we're already connected to cities in Sweden and we have a very strong. How do you say that connection this 23 citizens, we then we meet three times a year physical for three days. Yeah. And also we have meetings in between. So we're like a big family. And it actually also we are sending a lot of people from the whole municipality to this meeting. So I think we're actually are in a fast way gaining a lot of knowledge through the whole organization and therefore we can also accelerate our work. Yeah.

P1: Interesting. Interesting. Okay. Then I would like to move to the more governance oriented topics now. So maybe starting out very broadly, which organizations, departments or roles are generally responsible for planning, governing and implementing the transition to climate neutrality?

P2: Yeah, we have the overall goal to be climate neutral by 2030. We have this environmental strategic program which we have all the goals in. And actually the steering model for the program is that every department is responsible to gain to reach this goal. And then and then you have us at the strategic level to coordinate it. So we should coordinate it and help them if they. But they are responsible. Everyone, each and everyone is responsible. But I have to say that that that it didn't work that well as we hoped, because like education or health, they they don't feel always that this is their main task. So they basically say we are only responsible for education. So there we still have difficulties to reach out and to make them feel responsible for this. Interesting. So, yeah, we have to actually now we have changed the organization a little bit. We have a new boss for environmental strategical issues since two months. So I think that will also be easier for someone who can address these questions in the organization about about the responsibility, because we realize that we have to change the steering model or at least make it work. I think I mean, we have a lot of people are very engaged in these questions throughout the whole organization, but it's somehow difficult to make it fit in in the how we are structured now. So. To find the time to work with this issue. There's always when something new comes along, you don't really have Yeah, you don't have resources for it. If you don't plan for that or you don't have a structural way to work with it. So you always have to change and change is always difficult in municipalities. It takes time.

P1: And how long did you have the current way of the organization in place before now introducing this new change?

P2: (...) I don't know. It was from if they had the same steering module in the first program because we're already on our second strategic environmental program. And but the second one was adopted in 2020 with that with the current steering model. So I can't really answer for that. I didn't read the old one. I have to admit, since I started here in 2021.

P1: Okay. And what were the main reasons for the kind of changes you're introducing now?

P2: Well, we didn't really introduce the changes yet. We are. We are just talking about that. We need to make some changes. Yeah, because basically they're not delivering on the climate issues as they should. But it was I mean, it is difficult for them when they don't know how to do things. I think they need more steering and help in a way. You cannot always leave people alone to sort things out that they have no knowledge about. So yeah, yeah.

P1: (...) Interesting. You mentioned that there will be a new kind of head of. Role in the organization for these issues, Right. Is the organization set up as a whole changing or is that like an isolated position that's been created?

P2: Yeah, we're actually introducing some kind of portfolio steering where we will also have the environmental portfolio, and that is to secure that. When you have environmental projects or like all the actions that we then defined in this action plan, they need to get into the portfolio. And then when you have the portfolio steering, then you can add resources to it. So so the portfolio steering is the new steering model. I would say that we have, but it's not currently it's under development. We started with the how do you say that the building program there, the big, big development of it, they (...) say that when you build a part of a new city, that's where we started to develop portfolio steering. But we will also do that for environmental issues now to make sure that they're implemented in the whole organization and also to make it easier to go back to the politicians and say how we address the things that they wanted us to do.

P1: Okay, I see. Then you already addressed the next point that I was going to ask about. So maybe looking at the communication and coordination between different bodies within the city, are you currently changing the way that different departments are coordinating and communicating with each other within the city? Achieving climate neutrality.

P2: Yeah, I think that's always constantly developing. I mean, the portfolio steering is one thing that will develop the communication more because we need to use all the the knowledge we have in the whole organizations when we solve problems. And I hope we find more. I mean, we used to work quite ad hoc that we don't have a system for it. So hopefully this will be more of a systematic way of working. And also, I think we're always looking into new ways of working together. In the autumn we will try to gather all the different areas of the municipality and talk about innovation and the digitalization connected to the climate goals, because we realize that we we don't know where where

they are, the rest of the organization and what kind of solutions we should work with and what their needs are. So that will be like a trial arena for a while and see if if we could work that way. So I think it's always a little bit of trial and error with different kind of forums to reach out. But but since we are good size, we're a municipality with so it's quite easy for us to reach out and to have this kind of communication because everyone knows everyone. Yeah. And we're not so small that we have too little resources either. So we're we're a good size.

P1: (...) You mentioned just now that you're also looking at the kind of digital smart city aspect. Are there any changes with regard to ICT infrastructure or the use of ICT with regard to governing climate neutrality coming up?

P2: No, it's very new to us at the moment. Yeah. No, the only. I don't know if you even call that. We use climate view as a digital tool for our climate action plan. But for the rest, I think that's a journey we are just starting. But we realize how much potential you have there. But. But it's a long journey too, to know where to start, I think. Yeah.

P1: What kind of potential are you seeing in particular?

P2: Yeah, I was. Say that. What's. You say it also in English? No. What do you say? Censor censors. But you can use some.

P1: Internet.

P2: Of things. Yeah, Internet things. You can. You can start measure how the buildings are used and how you can stay. Our energy and ventilation and all that. I think that has a lot of potential or also how people are moving around in the city. Yeah, there are several areas where you have a lot of potential, but we don't have any of those almost at the moment. Yeah.

P1: I see. Okay.

P2: Yeah. But we all realize that we are developing in that way at least.

P1: Are there concrete plans for that, or is that more like an.

P2: Lance in the way that we. Actually well not conflict that that we have a project yet but we have meetings and we try to explore this path the whole time. And that's where that's also part of the meeting set up for the autumn that I told you about. Yeah. So, so it's a way of starting it. But yeah, we have no concrete or maybe we do that I'm not aware of. That's the thing. When you work on a strategic level, things happens that you're not

always aware of in the how do you you look at the housing company that we have, for instance, they do a lot of good things that you don't not always aware of.

P1: Interesting. Interesting. Okay. Then maybe going back a moment to you mentioned that your city has exactly the right size essentially, but also that you're talking to other cities. I was wondering, how did the. Ways of communicating and coordinating with other cities, but also with other levels of government kind of change to kind of advance climate neutrality.

P2: (...) Yeah, it's changing through viable states because there we actually have a platform to meet with other governmental bodies and they also part of viable cities. So we see them also three times a year. I think they started to work together very intense, but we still have to on their level because they are organized a little bit the same way and they work similar. We still have I mean, so they work horizontal, but we still have to work also with us in a way, but we didn't find the forums for it. Very good. Yes, I would say there's still a lot of potential there. I mean, we've been given feedback on what kind of how do you say that? Yeah, what we want to change on a national level, for instance. But. Yeah, but how, how we actually can work together is we didn't define yet. I would say it's more like a one way communication, like giving feedback. Yeah.

P1: Interesting. Would you say that you're dependent on other higher levels of government to achieve climate neutral?

P2: Yes, definitely. Yes, definitely. Also an EU level, because I mean, when we join necessary cities, they say all the emissions are caused by cities like 70%. But in truth, it's all the products that we consume. And actually it's easier to address them from the governmental perspective. Like you have to have rules for how much products are allowed to release or what we can import to the European Union. I think that's in a way I feel that they're pushing the responsibility to to us, which is not fair because we don't have all the tools. I mean, we have some kind of tools. We do all the at the planning and a lot of building sector. We we can do that. But I mean, there there needs to be like you need to define the role of all the three levels. And that is an important work that needs to be done within viable sectors, but also necessary cities. And that we don't only talk about the role of the city and what we need to do because there needs to be done stuff at all the levels. For instance, in Sweden. Now you might be aware of that. We changed the government. We have a right wing government and they sort of threw everything out the window from the previous government when from they even took away the environmental department and they want to take away the reduction of biofuels in now currently in diesel and that yeah since the the main emissions from Yala is from the transportation sector that's 70% of our emissions comes from there and 10% is then from

working machines. So it's only from motorized machines. So yeah, we're very dependent on national authorities where, but we, I mean we can try to we have a strategy for how to build out the charging infrastructure. And we also looked at strategical places for where you can fill Yeah. Gasoline stations but not gasoline now for sustainable. But we can't make sure that these things are produced or sell sold because you need to change the market. Hmm. Yeah. So so there's a lot of things we cannot. And that's also a reason why we want to join, because we want to push for these things for rules higher up. Yeah. Okay.

P1: Interesting. Thank you. How has this change in government impacted your day to day work?

P2: How do you mean with the all? You mean the the current condition?

P1: Are there any, like, projects that were impossible or governance structures that didn't work anymore or things like that?

P2: Um. Not that I'm aware it's more economical crisis where that is a big problem. But I don't think we. Well, I think the incentive to use biofuels is less. Now, a lot of people are stepping back to diesel. And since the prices are so high on the also on bio gas these days. But that's also the European Union's fault. It's we are not able to reduce the tax on that anymore that we were before. And so in that sense, we are influenced. I think it will slow down the development of the the electrification maybe, which is a concern. But on the other hand, I'm not sure. I mean, the automobile industry is already changing a lot and it goes fast. So I'm not sure how much it will influence us if they also slow down now. I'm not sure.

P1: I see. And in terms of the governance tools that you have at hand in the city. Has anything changed with regards to the financial and funding mechanisms you can use as a municipality?

P2: Do you mean connected to the national or?

P1: Yes, both. In terms of the funds that you can receive and the kind of funding mechanisms that you can use yourself to govern climate neutrality.

P2: Yeah. I think the only thing they change nationally is the climate climate. But that was basically more for. Companies and they are I mean, still putting a lot of money into charging infrastructure. The right wing part is like electric cars. Okay, I see that they, like everyone, should have a car, but it could be electric. That's what I think is how they see it. It's actually where we had quite a lot of money to build the charging infrastructure for trucks as well. And you got 100% financed. So they are currently under construction. So

in that way that that was positive. But there are some funding. They also took away more connected to restoring nature and stuff that could also reduce our CO2 emissions. Yeah. But not so much as we thought. Yeah, and they always realize that they can't change everything. After a while, the new governments. It's not so easy. Okay. And the funny thing is that business life in Sweden also are pushing very hard for this. All the bigger companies are telling the government we need more wind power. Stop talking about nuclear power.

P1: Interesting. Yeah, interesting. That's definitely something to keep in mind. I think I maybe quick question in between. How much more time do you have? For this?

P2: Yeah, until three.

P1: Until three. Okay, then let's jump ahead to matters of administrative capacity. Do you roughly know what I mean with the term?

P2: You said maybe two minutes just.

P1: You know, sort of capacity and capabilities that the city administration has in the abstract sense that might be skills, resources, processes, etc., that kind of enable the municipality and the administration to actually execute on and deliver certain results.

P2: Yeah. I think we're actually in the process of building a lot of capacity also through the work with climate investment plans that we need to do. And all of a sudden you have we have a group of economists that are sitting with this, are learning about these issues and are very interested. So I think we are moving fast forward to build this capacity. At the same time, you are in a very difficult economic situation, but at the other hand, this means that we are not going to build as much as we want at the moment. And for the environment, I would say that's not that bad. Actually, we're where we are. If we don't build, if we don't construct a lot of buildings or roads and stuff, you also reduce emissions. And if you also if you push them further in the future, you will also have more technology being developed that reduce the emissions from these things so that they are pushed further in the future. I mean, of course the municipality is not happy about this, but but I personally am quite happy about it because that we can. Yeah, it will be easier for us to reach the goals. I think instead of we try to develop so quickly because we want to grow. I think that that is always the problems in politics. We want to grow and grow and grow, but we don't know why. And if it's sustainable that we all grow in these ways that that they want. Where are all these people going to come from? We don't have much childbirth. We don't have much people moving in anymore in Sweden. So it's not it's not feasible that everyone is growing. And but we we had our building plans we had to adjust

them to because we realized we're not going to grow as much as we want. Yeah, but I think it's good because also then we can develop the sustainability issues around this, the new places that we want to develop more on that, I hope.

P1: And if you think of the kind of skills, processes, resources you have within the municipality, how have those influenced your ability to actually pursue climate neutrality projects?

P2: Yeah. Yeah. I. I mean, we have. (...) Some projects Now that has been that is very kind of state of the art environmentally. Like the candy factory is built in a way that it could that could have this. Oh, I can't speak English. I'm sorry. Can you take the question again now? I okay.

P1: I was trying to get at the more internal workings of the municipality. So what kind of skills and processes and resources are you using and do you need to advance climate neutrality?

P2: Oh, yeah, yeah. I think I mean. We have skills, but we need more. I think what we lack is actually to. We say, for instance, that we need to increase biking and we need to with 50% and also people traveling with public transportation. But it's difficult for us that I mean, we understand that we have to do this, but how how much do we need to do to reach this goal? How much do we build bicycle, bicycle roads or bicycle parking places? And where how much do we need of this to be able to double? I think that is the difficult thing to to define the pathway for some of the goals. So there but also you realize that there's all the municipalities are struggling with this. If somebody had the recipe, I think we already would have heard of it. And also, I mean, we have a lot of discussions with climate view about this that we, for instance, in their model, you can see, yeah, you need this most electric cars, this much biking, this much public transportation, then you will reach a reduction this big. But then, then that's not connected to what kind of investments you need to do. Exactly. That we would need to know. How much much do we need to invest in infrastructure or charging? So that is the gap we currently have to look into. And I mean climate. You also think that's very difficult. So it's not there yet, thankfully. But we have I mean, yes, in one way, we have a lot of capacity because I think the awareness gap is high amongst the people working in the municipality in general. We have a lot of people working with environmental issues. If you look at smaller municipalities, they only have like one person. But but we are like eight people centrally. But then you also have people all around organization working with these issues. So we are well equipped with people, but we don't have maybe investment money. We are currently looking into climate investment plans and how much we would need to invest to reach our climate

goals so that that is also the work the coming half year. But we were looking to a lot. Okay.

P1: Perfect. You already touched on most types of capacity. I was curious about maybe in terms of the formal authority and that the municipality has. Is there anything that you would like to do? But the municipality is not allowed in terms of its formal. And what's the right word? Now I'm struggling with the English like the discretion, the formal kind of. Area that the municipality is allowed to operate in by law.

P2: Yeah, we had we did find some of them. (...) Yeah. With buildings, you are not allowed to. No, This would be a challenge in English. Technical Sakharov. I did not know the word in Swedish. And you are not allowed to say. We want you to build the house this way. Or yeah, to say mention a specific technical solution. You're not. And that is sometimes difficult because, yeah, you would like to do that. And also. They have some definitions of height that you can build that makes it difficult to use wood. So we had a workshop about this, so baby sitters collected all the issues that we were not happy about that we could not decide. But in Sweden the municipality has quite a lot of room to do things. In general, I would say there's not a self ruling. It's quite big I think, in comparison with other, but I'm not sure that's what I heard.

P1: Okay.

P2: But we have all the like the planning in multiple planning with the whole area. That's that's what we do and decide over. That's also why it's been a lot of problems surrounding wind power in Sweden because a lot of municipalities just say, no, they don't want it in their backyard. And then the government has not been able to push that through because of the the strong position that we have. Yeah.

P1: Interesting. And if you consider this topic of capacity as a whole, skills process, resources, what is the actually doing to develop the capacity the city needs to achieve carbon neutrality?

P2: Yeah, we try to. (...) Yeah. You have to get everyone on the train. But it's not enough if a few people have this knowledge. So we try to. Yeah. To work very wide in the organization with all our, our own companies and departments in all different kind of questions. That's what I think we mainly due to build capacity and I think also the actually the politicians also want to build capacity. We have a new government here as well locally. Well, new old there's a new party joining in, but since that happened, they are more interested in what we do and they want to meet us more frequently and talk about what how we can speed up the transition. So so we are building capacity on all levels, I

would say, but they're still actually the highest management ment are the most difficult part. I would say if I should be honest, they are not on the train yet. Completely. Okay. Yeah.

P1: For what reason would you say is that?

P2: I have no idea, I think. Maybe this question is that they don't feel that they are that important. It's not the priority in their world. Yeah. And they have not been pushed enough by the politicians. I think the politicians have not asked for results in the way that they could. So that's actually what we've been talking a lot with the politicians about, that they have to push for more results. Yeah.

P1: I see. And thinking of the work that is done in your team. How are you changing the processes and routines that you're actually working with and in? To kind of govern the process of. Given climate neutrality.

P2: Yeah. The thing is, in my group, we don't have much of a routine at all. Since we are strategists, we don't. So I think the challenge for us have been to learn other departments routines and ways of working since we we have to understand how they work to be able to put in the climate questions where they should belong. (...) I think that is basically what we're doing. We realize that we have all this decision tools. Yeah. What else? What do you call that? Three studies. Things that we do where we don't address the climate issue. So we have to include the climate issue in everything we do. And that's not done yet, but we're starting that. So then then the climate will be there from the start. And also because at the moment we only stare at economical values. Like in the end you only look at the spreadsheet and say, Oh, this is plus or minus and you don't think about what? What are the effects on society on the whole, like social issues too. So we need to develop a steering model where we actually can consider other values than economic, and that that is a big journey for us. But I think that's the way we have been working for years and years. We never really develop tools to actually steer more towards our goals. We only steer on economical values and that's where it goes wrong.

P1: (...) Are there any concrete plans to make these changes to the steering model or is that more hope that you have that those things will eventually be?

P2: Yeah, the thing is. Yeah, we started that process. But I have to say that we have the economic director of the municipality. He really loves this idea of doing it, but we haven't really. Got to say that the politicians didn't tell us to do it yet. But that's because they're not really aware of that. It needs to be done, probably. But we will tell them next week to do that. So, I mean, at the moment I'm hoping for it and I'm positive because I think we

are rolling in that direction. I can feel that everyone is supporting this. So I think the only hurdle is that we don't know how exactly to do it, to develop the tools. And also because there is not really other municipalities that's been developing tools for it either really. And when you cannot copy, paste is always more difficult. Yes.

P1: No. No. Sorry for. Yeah. Do you have any initial ideas or starting points where you would kind of begin to develop that?

P2: (...) Yeah, well, what we're doing now is we we use a consulting firm to look at one project to calculate other values. And also in climate view, you can see. If you reduce car traffic this much, you will gain all this positive stuff with health congestion, blah, blah, blah and save this kind of money. So they built in that in their model. So we will start to use it at one project and then we'll see how we have to develop it further. But we need to report it back to both viable citizen cities. We need to do our climate action plan. But it's this learning in progress, I would say for every part. Also, the cities are all ready submitted. Their plans.

P1: Get interesting. Maybe coming back to the initial point that you don't really have that many processes and routines, do you think your work could benefit from more structured processes and routines with regard to governing climate neutrality?

P2: Yeah, I think that's what we are trying to develop in this portfolio. Steering for an environment. Yeah. So definitely.

P1: And maybe building on what you just told me about. I'm also curious about administrative innovations. In the broadest sense, is there maybe you could count what you already mentioned in this category as like including new social characteristics or new models. Are there any other administrative innovations you would want to highlight that are used to work on climate neutrality?

P2: And. (...) No, I already mentioned the. Yeah, we are trying to work towards citizens also in different projects where we teach them about how you can live sustainably. That's the project running at the moment. So we tried to reach out and we also is famous for we have an extensive work on what is called Hello are you forget the A learning for sustainable development. So we have a very good model for teaching the pupils about sustainable development, where we also try to engage parents in that. Yeah. So that's. (...) Yeah, that's what I think about.

P1: Nora, though. That's very interesting. Then maybe for the last ten minutes, I would like to talk about the mission for 100 climate neutral and smart cities. Maybe. Upfront. How has joining the EU mission influenced your work towards climate neutrality?

P2: Broadly speaking, yeah. Broadly speaking, well, not so much yet. I would say actually it's viable. Cities has had a much bigger impact so far, but that because we work together so much and yet we didn't do that, we only I mean, since we didn't start working with the Climate City contract yet we didn't do. And that's also I mean, we've done most of that work already except from the investment plan then. So what I'm waiting for is more to hook up with other cities and learn from each other. That's what I would want to do the way we do in viable cities, because that's really where you learn stuff. Interesting. Yeah.

P1: So. So that is like the key difference between viable cities and the EU mission that you would say there's more cooperation.

P2: Yeah, but it's also of it's more manageable. It's 23 cities and the distance is not so big. We can travel to see each other natural cities in 112 cities or something. So that's impossible to coordinate it in the same way, of course. But I mean, they could make groups of municipalities to work and they have. I mean, the city advisors, they have a group of cities that they work together with, but but they're not engaging us in that. So they meet us and then they meet another city in Sweden. We don't have a city coordinator. Well, there's one coordinator at viable cities, but yeah, we all work together. In another different way there, I would say. But I think it would be possible to develop something similar if you just divide the 112 cities in good sized groups. And also maybe, yeah, with other cities that are with the same challenges. I would say like for us it would be not so interesting to sit in groups with the cities. We have a lot of emissions from housing since we have zero or from we have fossil free heating already for a long time. So yeah, we want to work with like other cities with support or with addressing traffic.

P1: Interesting. And would you say, despite all of that, that joining the mission has opened any particular doors or maybe served as a catalyst for any kind of change in the governance structures or the capacities you have?

P2: No, not yet. And I think also that might be my fault. But I mean, they offer a lot of tools online, but I simply haven't got the time. And I think that's the good thing about a viable site. You are forced to go there because that is signed. You have to go there and be on these meetings and then you do that and then you learn. But if you have to sit at home and take the incentive yourself to go through all of that, you never find the time to do it. So I think that that's the best part, that you need to be thrown into stuff, forced into it.

P1: So for the cities, in contrast, you would physically go there, meet the people, and it's kind of a different experience.

P2: Yeah. Yeah.

P1: Interesting. I had considered that. Um. (...) I think then maybe a few final questions to round this out. Do you think your city will be able to achieve climate neutrality by 2030?

P2: Only if we can compensate. Yeah, we are looking into. We have the central heating. It's fossil free, but we can still catch the CO₂ and that would mount up to one third of our emissions. So that's a lot. If we could cut one third emissions by capturing the CO₂ there, I think that could save us in the transportation sector goes it goes too slow. And it's mainly because we can't influence all of that. I mean, we could try to make people bike more and take public transportation, but that won't be enough in to 2030. So it needs to happen more at a governmental level as well. Yeah.

P1: Interesting and maybe the fine point towards the missions. What are your general thoughts on the EU mission or the use of these kind of missions as policy tools for achieving climate neutrality?

P2: I think it's very good because in general I don't think they have much communication waste with the municipalities. And this is a way to really understand how municipalities work and how what kind of incentives we would need or tools on a national level to actually be climate neutral. So it's creating an arena for at least communication, I think, between different levels in society, which I don't think we had that before. Interesting. At least if I look in a Swedish perspective, we didn't. I mean, in Sweden, there was nothing like that before that, that we could meet with the governmental institutions like we do now. So, yeah, I think it's it's it's an important way to go. Even if I told you we didn't achieve much yet, I think it still is the right way to go. Yeah.

P1: Okay, perfect. Then I think we have reached the end of the interview. Is there anything else you would want to add or highlight?

P2: No. Nothing I can think of now. I think.

P1: Then. I guess this would be all my questions. Do you have any questions for me? Any feedback? Any final notes?

E.f Gothenburg

P1: All right, let's. That looks good. Okay, so maybe to just set the scene a little, could you briefly explain what your day to day work looks like and how your usual tasks and responsibilities relate to the climate neutrality transition?

P2: Yeah, I work with the whole spectrum of environmental transition. I manage a group that works with the environmental and climate program of the city of Gothenburg. So I also have some employees working with city development questions from an environmental point of view. I have worked at the Environmental Administration at the city of Gaithersburg since, um, uh, 2015. Before that, I worked with the environmental management system at the Chalmers University of Technology. S environmental manager there. When I started at the city of Gothenburg, I first was the manager of the department for. And environmental control of different companies and so on in Gothenburg. But now I work with the, um, um, as I said, environmental and climate program throughout. That was, um, it was um, decided by the city council, uh, two years ago. And uh, right now we have followed it up for the first time. So we now know, know much more about what we have to do to, um. To reach carbon neutrality and higher biodiversity and a healthier environment for the people and Gothenburg. (...) So I have. And nine employees working with the environmental and Climate program and the environmental management system of the city. And I have like five employees working with the city developing questions.

P1: Mr.. (...) Thank you very much for the time. Thank you. And maybe following up on a few points you already mentioned. Yeah. Maybe. First, I would like to dive into the wider area of governance. Yeah. You already mentioned how many people work for you in the environmental organization. Could you maybe outline a little more broadly which organizations and organizational structures are responsible for governing and implementing the climate neutrality? Yeah.

P2: And maybe I could. I prepared a picture of the environmental and climate program and our goals. I could share it with you.

P1: We have the permissions to.

P2: Yes, it is. (...) Let's see. Yeah. So if I start there, we had the three goals that we should reach until 2030. A high level of biodiversity. Climate footprint close to zero and healthy living environment. And we have sub goals for in each area. The overall goals they they are more they they are for the whole society of Gothenburg. It's not just for the city, but the sub goals are more related to the city. And. We? We have this environmental management system, the frame around the program that we use to work more

systematically with all different parts of the city. It's a it's a really large city, the city of Gothenburg. We have about 60,000 employees in total. And divided into different parts, uh, with quite different kind of works. And we also work with some strategies that are areas and problems that we have to solve when they are when when we have solutions to these problems, they will address several of the environmental goals and help us to fulfill it. So it's to act as forerunners. Part of that is to be one of the 100 cities in Europe. We create the conditions to live sustainably, sustainably. It's how to involve and and help the people in Gothenburg to live more sustainable. We try the development of the circular economy and. We look and have to finance this transition to a more sustainable society and. We look at sustainable construction and the building environment and a green and resilient city parks and so on and city structure and then sustainable transport is another strategy. So the environmental administration of the city of Gothenburg, we are about 250 persons at the Environmental Administration. We are responsible for coordinating and drive forward the environmental program and. Uh, my employees, they, they do the, um, um, broader coordination work. Ah, the responsible for that. But we also have at our department more employees working specifically with, uh, climate transition. So I should say it's about ten persons working with climate transitions. And in addition to my employees that work with the overall system. (...) We also have three employees at the department that work with, uh. And energy and climate advices to the people and companies of Gothenburg. And we have like ten persons working with biodiversity questions. And three persons working with noise questions. Uh, and uh, five persons are working with air pollutions. And, um. Do we have more? Um. (...) Maybe that's it. You. At our department, we are about, uh, 50% in total. And, uh, I am responsible for a third of them.

P1: Okay.

P2: So maybe that was one of the picture part of the picture. But even if we are responsible at that environmental administration for coordinating the environmental climate program, there are different responsibility responsibilities in other parts of the city. For example, the person who coordinate the the strategy of a green and resilient city works at the, um, Administration for City Development. This is a really large organization in the city. But my employee is working with the development, uh, the corporate with. But my my persons have more the mental and. (...) Yeah.

P1: So why would you say was this overall setup chosen or how did it emerge?

P2: And we are earlier environmental program was more traditionally built with maybe 200 different actions that the city was going to take that. The, um, Environmental Administration had proposed and um, some parts of the organizations didn't agree with

that. So it was really hard to, um, to drive and coordinate. And the goal was more of the, um, uh, they were related. Uh, these goals are also related to like, again, the 2030 and the national goals. But um, the earlier ones were more like, uh, breakdowns of the national goals and not really, um. And suitable for the city. So we saw that we had to work in another way. We had to focus on the, um, um, acting. And the responsibility to create responsibility from other parts of the organization. We couldn't do this like alone. And we saw that. Other parts of their organizations won't do as we say unless they haven't invented the goals and the actions themselves. So therefore, we we set up this environmental management system and we create the the program only with the goals and sub goals and strategies and not actions in this program. Instead, all the other parts of the city, via their environmental management system, has to identify what are their largest impact on the environment. And they have to choose their own actions to, uh, improve their environmental, uh, work. (...) But we can't do it only by looking at each part of the six separate islands. To solve these more difficult challenges. We have to cooperate. So the strategies was, um. And the idea of them is to cooperate between different parts of the organization and with other organizations to find solutions to more. Um, uh. It transdisciplinary challenges. So that's why we chose this way of arranging the, uh, program and connect it to the, uh, environmental management system.

P1: Very interesting. Very interesting. Maybe following up on directly, something you said right now. Yeah. How are you actually communicating and coordinating internally?

P2: The what? The how we are communicating and coordinating the.

P1: Public administration around the climate neutrality issue, communicating and coordinating internally based mechanisms.

P2: Yes, there are different mechanisms. Some of them are connected and we use the environmental management system for it. So, for example, we do give my employees support for other organizations and they inform them in different way. We have created a digital education for other employees in the city that they can use, and we gave more direct support to parts of the city that need more support compared to others because they maybe had problems to create their environmental management system. So we help them a bit on the way. We don't do the work for them, but where we are there by their side. And every year we follow up the environmental management work by internal audits of the whole organization. So we visit a physically or digitally. Each part of the organization is about 50 different parts and ask them how it goes. And they reported further to the city council. The status of their environmental work in the whole organization. And I think these internal audits are central to make things happen. And set some pressure on the different organizations. We also follow up the work and end results of the strategies each

year. The results are followed up by a They have to report the results to us. This year it's the first time they have to report the results in the form of a report that has been decided by their different councils. The political politicians of their potch and. And we do also follow up how the work goes, the way of workings each year. And the first time we did it was, uh, 20, 21. And by that, by then some of the strategies had started to, to act. But some of them had enough resources. Next year, 2022. We could see that the all strategies had resources in form of persons working in them. And they were like running. But they had come a different differently far. But. And now this year, we are taking a broader perspective when we're following up the work and the strategies. And and two researchers from Chalmers and the University of Gothenburg are looking at how this way of working with strategies is that this is successful or not, or should we change the way we work a bit in the future So they will more look at the the whole perspective of the strategy work. And this this spring, we have also followed up the goals of the program. For the first time, we have 47 indicators for different for for the different sub goals and the goals. And we have checked what the values of them. We have talked to people in the organization, the persons who are responsible for the strategies and a lot of other persons within the city and our experts on different areas, including climate at our administration. And we have recently present that report with the results of this following a follow up. So now we know much more than we have known before about the different goals and also put it all together, what we have to do more to reach the different goals.

P1: (...) Interesting. So maybe a few quick follow up questions. Yes. Things you mentioned. You said that there was a notable improvement between 2021 and 2022. Yeah. How did that come about? What changed?

P2: I think the book were the strategies. It's a new way of working. And it was a bit difficult both for the people who ran the strategies and the organizations that are involved in the work with the strategies. And it takes some time to build networks and find the right contacts and get enough resources and so on. So I think it's indicate that this work with the strategies had more like um it has it has past the first uh implementation phase. So I think that's why. And the when we look at the environmental management system, we can see that we were we were we are in the implementation of that as well. All organizations in the city hasn't implemented that to 100% yet. Most of them are maybe 50% implemented. And we hope that we will see a big improvement. This year, we are starting internal audits in September again. To follow up all different the 50 different parts of the organization. Bludgeoned. And so.

P1: (...) And my second follow up question would be you mentioned before and now again, the kind of talks with different parts of the organization and the report that you just

published. Yeah. What were kind of your major takeaways for How to Govern? Yeah, I approach Bioprocess going forward.

P2: You mean the major results from the report? Yeah, we can see that. Um, it will be very difficult to reach the goals. Firstly. But it is possible. But it requires a major transition and only for one of the sub goals is to produce number two in climate producer energy solely from the new renewable sources that will be possible to reach with the different acts that are planned and decided today. And the other sub goals and goals are we need to increase the resources, change ways of work and for some of them a major transition is needed and we don't think that they work with the environmental management system and the strategies will be enough. We have to come to develop them further and we have to complement in different ways. And one way to complement is that we are developing a function for climate transition that will focus on the higher strategic level and focus on the climate issue and with cooperation with the, UM and national authorities, the European Union and um, large companies and so on. So we have started some discussions and we have started the development of this climate transition function. And we also are planning to develop it further relatively soon. But what we see is we need much more cooperation within the organization and with other organizations at all levels. And we have to work with, um, uh, different responsibilities to um, really, we have to implement the environmental management system, uh, to hundred percent in the city, make all the different parts of the city take their responsibility. And we need help from our political politicians, um, to take, um. Relatively. And what they say. Brave decisions and different questions. We have to reduce the traffic, uh, relatively drastically in the city. The car traffic electrification will help, but it will not take us the whole way. Um. We have to work much more with sharing risks when we do large investments for the climate transition, for example. Um. (...) I could send you the report. Maybe you can use the translate function. It's in Swedish. Um. Yeah.

P1: (...) But you could also do that after the interview.

P2: Yeah.

P1: I actually have to follow up questions regarding things you just said. Yeah, because I was actually going to ask about both the external coordination and funding, So maybe the first one first. How? Is the public administration in general communicating and coordinating with external partners such as other cities, other levels of government, etc.? What are the governance mechanisms there?

P2: There are many different mechanisms and. For example, we have this. EU office. The city has some persons in Brussels that help us with contacts in the EU. We do have

contacts. With different Swedish authorities via networks and via a different project that we are joining. And when we are like now trying to build this climate transition function we cooperate with. Other. We are trying to have funding from the VA and we also cooperate with, um, the, um, academic institutions and. Within the different strategies. There are several different networks. For example, there is, um. Called the handshake with the construction companies within the Strategy for Sustainable Construction and Circular Economy. So there are really different, very many different networks and uh, different kind of manifests that way. Do, um, join. And, um. And, uh, the three are active in. Interesting.

P1: And maybe the other regarding the other point you mentioned, you said that you wanted more shared risk of investment in general. How are what is the role of funding mechanisms when it comes to governing the climate neutrality transition?

P2: I think it's a very important role because this transition will be so expensive. I, I think, uh, maybe we need to, um, SOEs in some way. Um. Well, we do have to use the technology, for example, to reach the goal of the climate footprint close to zero. And because we have a lot of refineries in Gothenburg. And we have to cooperate with the, um, uh, refineries and the energy company and so on to, um. The energy company is part of the city. It's a board in the city. So I think that's. That's an advantage for us. Uh, we do have some more control and easier to cooperate with the energy company of Gothenburg. And it's a part of the city.

P1: Interesting. Maybe regarding another sub dimension. Yeah. How is the city using or what is the role of more information and communication technology when it comes to the climate neutrality transition?

P2: Oh, it's it's really important. And that's a big problem for us that I forgot to mention when I talked about the result from the report of the following up the program. Um. It is really challenging to, um. To collect and save and analyze data related to the environmental transition. And we need to use the tools to, uh, to visualize what different measures will result in. And we have to follow it really carefully. The, the changes in like energy consumption is an easy part, but it's really difficult to, to find the data about that, to collect and uh, use data about uh, the different species and the biodiversity and so on. So good systems to manage data and to visualize and to create climate budgets and so on. I think it's really useful and we don't have it on place. That's something we really need to develop and I think we can have some help. Um, from the city adviser for the 100, um, climate cities. In this area. But we have to do most of the work ourselves. We have to find better, more helpful systems to, um, to, to use for the environmental management system as well. (...) We we today put far too much time in handling data that must be able

to be handled more efficiently. This is the really big issue for us and it's very difficult to solve. Because it's it costs a lot. And I don't think that the the perfect system that we would need doesn't exist. (...) But we do have the city council has told the Environmental Administration to come up with a way of, uh, creating a carbon budget for the city. So we are working on it. (...) And we would need a better system for that.

P1: So how are you going about solving this?

P2: Yeah, we are working on it. This project with the carbon budget will help us to find, uh, better solutions. And uh, we're also working with Java and Environmental Management System. Uh, we are trying to find out efficient ways of reporting and we try to do the same system as the Sierra used for other questions. And the other posture of the staring. But, um. It's difficult to, um, involve the central part of the city, uh, administration in this. (...) We also have, um. All politicians wants to decrease the administration in different ways. So it's difficult when we need more data. We have some. We meet some resistance, although they also has decided that we should reach a footprint close to zero. Well, there are some different, um. Best gold conflict there.

P1: So if you think about this entire domain of climate neutrality governance that you talked about, what would you say are the biggest challenges that you're currently facing?

P2: I think a really big challenge is that, um. All the different parts of our city do have their work to do and they, uh, have responsibility for, uh, like for education, uh, or for um, uh, helping old people or for um, collecting waste and so on. And, uh, they are looking at their main priorities. Uh, firstly. And they use all their resources for their main priorities. And the main priorities are not to reach the environmental goals. It's something else for each part of the organization. And we do have to it will be needed to do changes in the way that the different parts of the city work with their different questions. And I think it's they don't have the incentives clearly enough. They it's always much easier to work with things in the same way that they always have done. And there are not resources enough to change the way they work with their main priorities. So to I think that the biggest challenge to to find out what we need to change, how we can do it and to make it happen when it comes to the all the wide flow of different activities that the different parts of the city are responsible for.

P1: Very interesting.

P2: Yeah.

P1: How would you say or what would you need to overcome these challenges?

P2: Support from from different levels both the city politicians, national and EU politicians. And in the end, we are living in a democratic democracy. So it also depends on what with people, what what are their choice choices? Different choices and. (...) And I also see a big challenge in. Transitioning the whole community outside the city, like the companies and so on, and to to make the transition happen there, it will in some ways happen automatically. But in other ways not. (...) So that's another great challenge. But within the city, I should say, the challenge is to change the way a different part of the city works. And to make that or cooperate to reach the sustainability goals. Hey.

P1: And asking the other way around, What would you say are your or is your biggest success so far in governing the climate neutrality transition?

P2: Mm hmm. (...) And. (...) I think that this the. The new program, the environmental and climate program that we have, uh, um, succeeded in, um, uh, building this environmental, uh, management system, the strategies and so on. We have mobilized the different parts of the city that hasn't been engaged earlier. And um, another success is that we have created more cooperation with other levels like national levels and EU levels and so on. Uh, through. By being one of the 100 cities and so on. We have improved our possibilities to become climate neutral. Very much the last year. Maybe that's the greatest success. We have created a system that needs to be developed even more, but we have it in place. Have something. Something to work from.

P1: (...) Then. That is very interesting. Already, I would maybe use that opportunity to jump into the next topic area.

P2: Yeah.

P1: And which would be more about administrative capacities. Yeah. So you already talked about the IP requirements, etc.. So in general, which skills, processes and resources would you say does your city need to advance climate neutrality?

P2: And we need more competence and have to perform a transition towards climate neutrality. We need. (...) Competence. Uh. In our own organization, in our own in the environmental administration. And we also need competence within the city. On transmission, on cooperation, on a project leading. (...) We need larger capacity in relation to as we talked about it. Systems that data handling and so on. And we definitely need, um. The capacity to create like. Decision making that we need. I don't know really the English word for it, but we have to make. Politicians and other persons who take decisions on on great investments, we have to make them feeling comfortable with taking risks. We have to find ways to share risks between city companies, other authorities and so on to do

large investments. And we have to. We need the competence to prepare those decisions. (...) Am. (...) We need. (...) Would would do need even if there are some people now working with the environmental work in the organization, it's still quite a few persons. If we are having in mind they have the organization in total is 60,000 and we are a few hundred working with their. The environmental questions. So within their organization we would need more resources. With more resources, we could also use the environmental control of companies and so on. In relation to the Swedish law, we could also increase that. And it would also help. To drive the whole society in a more, uh, in the right way. And. I'm thinking of. At the. (...) Oh, I forgot it. Sorry. I lost.

P1: It. That's already, like, a pretty long list. What? What are you doing to build or develop any of these capacities?

P2: For example, we are right now trying to get finance to develop the climate transition function even further. We will. We have this strategy on finalization. And so we had one at least one person where where they will be too soon working, focusing on how to finance the transition and how to be better on receiving different fundings. And, um. And we also work with like, uh, uh, sustainable loans and so on for the city. It's a really small part of the city's total loans, and we have great obligations to know about that. It's something that our finance department work with. So since ten years back, the city has had green obligations. They were pioneering Sweden with that. And we do have this. That's new sustainability loans that when the city take loans to finance different things, they have, uh, connected them to the, uh, climate goals. Uh, and, um. If we succeed in that work, we have some, uh. Um. We have a lower costs for the. I do say... the rent?

P1: The interest?

P2: No, no. The, um. The cost of the loan lowers. If we succeed with climate goals and the cost of the loans rise if we succeed. To fail. Yeah. And this year, the succession of the the we succeeded enough to have a reduction of the cost for the loans that were connected to the climate program. That's why that's one of our success. Small, small successes.

P1: Just for me to understand that correctly. [...]

P2: So why not? We have a it's a it's an agreement with one of the banks that are funding, uh, different activities in Gothenburg. And we connected a smaller, a smaller loan to the climate goals. And then if they see progress in the goals, we have lower costs for the loan. And that happened this year. It was the first time. That's we had these loans, so they were evaluated for the first time. (...) And that's one way to work with financing the transition. In a way that the silencing is itself drives for, um, transition.

P1: Yeah, it looks like a very interesting mechanism. Yeah. Yeah. And maybe you're. The level higher. How would you say is the city identifying which administrative administrative capacities it needs to develop?

P2: Yeah, it's, it's a part of the, um, strategy for finances. And it's also part of the, um, function for climate transition. We have to find these different ways of funding and to, uh, finance the transition. And we are not there yet. Really. We, we have some ideas, but, um. In Australia. We have to work on it. It's one of the capacity that are missing. Okay. We need to develop. (...) Hopefully there will be some fine fundings connected to the, uh, the, uh, hundred cities. (...) So we will continue to, uh. To uh. To try to apply for fundings in different ways, but we also have to find methods to make, um, the sustainable choices. Um, and. Is easier and cheaper than the unsustainable ones.

P1: SIEGEL Since then, but maybe also looking at the time, I don't want to take too much time. Move onto from skills a little to processes. How is the city administration changing its kind of processes and administrative routines when it comes to governing the carbon neutrality transition?

P2: (...) Um. The environmental management system was one way of changing routines. And. In very many different areas. And climate is included in the in different routines. For example, the routine for purchases for the city, the climate aspect and the environmental aspects are included, but they need to be much more included. Here is another area where we need more data and we can do much more. Uh, and um. For sustainable construction. There are routine that include the environment and climate. As I told you, I have, um, uh, some employees working with City Development and, um, they get the, um, some environmental advice as related to city development. So then you, um, uh, part of, or maybe, um, quarters of the city are planned. Uh, we always ask for how, how do this quarter or buildings, uh, agree with the environmental assessment made sustainability program, The climate program? Uh, how, um, how does it impact the mobility of the city transport structures? How does it impact the, uh, energy production and consumption? And uh, we look at all these things, so the climate and environment is included in the, in the. And this city development as well.

P1: That.

P2: Yeah. So so where we are trying to change routines and impact that in different way and the, um, one of the main, uh, part, main um, issues with the uh, environmental management system is that all different, uh, parts of the city shall see their environmental impact and make their change their routines to reduce negative environmental impact or improve the, um, positive impact from their, um, activities.

P1: Mm hmm.

P2: So it will, uh, it it is, um. Important for the processes, and it does impact the processes of the city in different ways.

P1: (...) Are there any administrative innovations or experimental methods that you maybe would want to highlight when it comes to organizing? Processes governance.

P2: Yeah, I think that the strategy of the program is a bit innovative, uh, since, uh, they focus on, um, challenges. Uh, it's not the usual coordination of everything connected to, uh, like circular economy or so they, they are the, the, they are looking at what are the main challenges when it comes to a circular economy is it's, um, how the law is written or is it, um, old habits or is it, uh, how we do purchases and buy things or is it something else? So they're, they have to look at that. What is the main challenges and to find ways to solve it. So I think that's quite innovative to have the persons and, and the departure boards and so on look especially on how to solve these problems. I also think it's a bit innovative to use the environmental management system as a at at the city and a lot of cities maybe do. But since we are quite large organization, uh, it's a bit innovative as well. Hmm.

P1: Interesting. Then again, looking at the time, I would maybe quickly jump to one last book of questions regarding the EU mission for 100 U.S. citizens. Self. So since your city has joined the EU mission, how has that influenced the way that climate neutrality is discussed and governed and implemented?

P2: And for example, it's, um, it's another, um, possibility to, uh, include and engage and engage uh, uh, companies and other parts and networks. And so as we had a large meeting last year inviting different guests as that wanted to help Gothenburg in the climate transition and wanted to be a part of it. So it can can be used to, to involve and engage people and the companies and, and other organizations. I also think it's quite good with this city advisor that can help us in different ways and help us to find take contacts with other cities with the same sort of, uh, challenges. And I hopefully it will also, um. And B make more possibilities to find fundings for different transitions. (...) Just like.

P1: Mm hmm. So what are your general thoughts on the EU mission as a policy tool for achieving climate neutrality?

P2: (...) I think. For me, the most important thing is that it showed that EU cares and think it's important with climate transition. They have really highlighted climate transition and. It's a large, uh, symbolically symbolic value. So I think it's it's important to we do need

to cooperate between companies and cities, between countries and so on. And this mission creates a platform for cooperation.

P1: Could you maybe give a quick example of an opportunity, etc., that being part of the mission has given you?

P2: Yeah, we have. The, uh, city advisor visited us, uh, last month and it was a great opportunity to discuss different, um, uh, different questions. And we also learn more about how to contact him and, uh, what kind of help we can have and have to get in touch with other cities and so on. So this is this transition is also very much about learning. I don't know how to to do exactly how to manage this transition. So we we need to learn a lot and to increase our competence and capacity capacity. And the mission is one tool for that to.

P1: Then maybe as a last question, do you think your city will be able to become climate neutral by 2030? Yeah.

P2: I do. It will be very hard, but, um, I think it's possible. Yes, we can be with nature.

P1: (...) What is the key thing that you would need to make that definitely happen?

P2: Um. It's about the it's it's to make all parts of the city and our partners to take their responsibility. And we need innovation and and we need. (...) We need cooperation. And funding. To finance the whole transition. So. There's a lot of things to do. Uh, hopefully the refineries will, uh, change their processes and change to, um, green alternatives. That will help a lot. It's a large, large part of our, um, um, emissions from Gothenburg. Um. Some brave decisions are needed for from the politicals. To to reduce the traffic. (...) But it's definitely possible. I can look at other cities and see how streets has been changed from car traffic to bicycle, for example, in central Paris and Cologne and so on. So there's a lot of good examples. But we could do as well.

E.g **Guimarães**

P1: Could you please briefly explain what your day to day work looks like, especially with regards to climate neutrality in your city, what your role and responsibility entails?

P2: So this is the energy efficiency cabinet, okay. It was like a cabinet that was created in 2019, so pretty recent and it was created with the aim to better manage the energy related issues, energy efficiency, renewable energy production, that management and so on for the municipality, and obviously to work also on projects that were related with climate change mitigation. So since then, things are going on. Sustain this pace. And we are trying to work on different projects regarding climate change mitigation and to improve the already implemented climate action in the municipality. So, with the creation of the Cabinet, it's not it was not exclusive for, for climate action because the municipality has been done it for several years, at least since 2013 when we join government of mayors. But now we have an in-house cabinets to work those teams. So that's that's basically it. So, I do a lot of this work. I do the projects for mitigation, I do the measurements, I do the inventories for greenhouse gases, I do the candidacies for the projects, I do the that the management. And I also do some energy efficiency work. Just a quick a quick overview. This is not where our. Climates where the action is being developed. So with this, I'm saying we are part of a bigger... We are a small will of a bigger will in the municipality. Okay. So basically, the municipality has a governance ecosystem. This is at least what we call it. We call it the Mission to 30. And he encompasses all the sustainability related areas. Okay. And we try to have an integrated multidisciplinary approach towards our sustainability areas. So because I work mitigation, it doesn't mean that this is not connected to with the water sector, with the biodiversity sector, with the waste sector sector, with the planning sector. So we we try to integrate all of this into one big ecosystem that is actually coordinated by [NAME OMITTED], which is an expert professor from the University of Minho, the local University of of of climate change. And basically this ecosystem is composed by academia, local administration, outside stakeholders. Actually, we have more than 400 that collaborate with us being there from from the private sector and so on. And we also have an external committee. Okay. That is actually coordinated by Professor [NAME OMITTED] in which he provides us external advisory. For this ecosystem regarding sustainability in the city of Cambridge. All of this started around 2013. Okay. With this mandate having the objective to transform the city, I'm saying transform because this is something with a few years now. So this is already in a very mature phase. So we are in a transformative phase. But the first phase in 2013 was actually an assessment phase. So when when the ecosystem structure for for sustainability in the municipality was, was mounted. So first there was the there was the assessment. All the state of things are, how are we regarding sustainability indicators?

How can we measure those indicators? How are we against other cities? Are we doing good or doing well? What is missing? Do we need to do some extra work to develop indicators for in the future will be we are able to assess. So all of those. All of those questions. And yes, a lot strengths were identified, but obviously a lot of I wouldn't say weakness, but it was a lot of opportunities were identified as well. With the years passed and facing those opportunities. Things are not on a mature state. I would say now this is the transformative part of this of this process. Okay. So now we are we hire with more knowledge about our vote, our local. What about those local aspects? And we are trying to transform them into into a better into a better way. So this is basically the state of things accompanying this. It was already the two European green capital candidacies. Those are really great exercises for us to to see how the state of things are in our territory. And we already did one in 2017. We are going this year for 2025. And one thing that we stated is this acceleration of... Not acceleration; this improvement of the maturity of the ecosystem. If we buy in one year, we had a lot of lack of debt, lack of indicators, lack of correlation between different disciplines of sustainability. Now we have a more integrated approach that really helps us to better understand. Can I keep going?

P1: Can I please, please keep going.

P2: Okay, So this Cities mission. So to see city's mission, it's something in a bigger thing. Okay. So. But obviously, the city's mission came along. In 2020 when we saw the opportunity to do our candidacy and obviously we said, Oh, well, now I think we have good work going here in Guimaraes. I think we are prepared to such a project. I think we we have now the energy cabinet that provides us internal capacity to do these kind of things. We are not dependent because in the past we were dependent on external consultants, the agencies. Okay. Which is I'm not saying that is bad or that is good. It just I'm just saying that is not the same as having internal capacity for those issues. I'm not. We still work with consultancies, but now we have the critical thinking in our side. So if I do something externally, I have the capacity to criticise it, to scrutinise it, and to see if better serves the municipality objectives and if it's aligned with our with our governance ecosystem. Okay. (...) So when when the arrived the candidacy, we decided to to make it. We got the idea we have a solid candidacy. And that was proven with with the outcome when we were selected. Obviously this changed things a little bit because we're talking about the most ambitious climate neutrality project for local authorities in the world. There's nothing that's more ambitious and ambitious than this, and we are. And so things got even more busy. So now we are working even more to see this go through. (...) If this changed anything in this previous eco system I told you about, I won't say change. I would say it's strength them in it. I'm sorry. My English. Sometimes it's difficult to pronounce. Okay. So I would say these kind of projects are getting having things are bringing stronger

commitments. So the ecosystem is getting stronger with this because we have a more connected approach. I think that's that's basically it. I don't know if you want more specifics or...?

P1: Yes, I was actually curious about this; because you mentioned before that the whole ecosystem matures and it's in a relatively mature state now. And. Could you maybe elaborate what exactly you mean by that and how that was, again, strengthened by joining the mission?

P2: Okay. So basically what I think I'll try to explain the whole conversation, but when I see mature is like when we. The mandate decided to build a structure that was thinking about the local system and sustainability. They first needed to know things, to know the territory. I told you to do the assessment and so that was the first phase. So everything was at the beginning. So we were discovering our territory at first. And now I'm talking about ten years later. And now ten years later, things are not on that point anymore. Things are more structured and now we have relations. Now we have a network of relationships that can help us to do that work. And we are transforming, not assessing anymore. Well, we are always assessing, but now we can transform. We can pick up the things that we we assess previously and to transform them for the for the better. This is what I meant with with maturing and obviously the people that's working on the ecosystem understand it better now and they will they all work together for its health. If I can say like this for its health, obviously the city's mission strengthen because we are talking about a very strong commitment. And when you have a team, a team of people, when you have an ecosystem of stakeholders and you try to involve them into a single goal like this, obviously with highlight the aspects of have been interconnected well and good working team on the municipality.

P1: How did the organisational setup of this ecosystem change over time in pursuit of climate neutrality?

P2: Well, basically now the this bring the perception that this subject matter and they can be a tool for decision making. Obviously, you can only do a thing like this if there's if the top management commits with it. And obviously that's what's happening. And I think that's the real secret for it. (...)

P1: Interesting. And. How? That this coordination within this ecosystem had...

P2: So it was with a academia first. So I think the municipality went into... The knowledge providers, let's say like this in the city and said, this is our city. You have the knowledge, we have the technicians. The city has its own its own structure. Let's think this together.

Okay? Let's let's see how we can how we can use this as a tool to better govern our city when it comes to the sustainability aspects. Another thing that was created and I forgot to mention is the landscape plan. The landscape plan is also another. The the ecosystem and is an institution for [...] and environmental education. And it's a three is a shared by three institutions, two of them academia and one it's the municipality. And the municipality has the majority. But in this way it can promote investigation and development and environmental education activities within the whole municipality. This is another key fundamental institution in the structure of this governance ecosystem. Then I can I can send you the link for this website and maybe.

P1: That would be great. If you think of the role that the municipality has in this ecosystem, how would you describe the role that the municipality plays in promoting climate neutrality commitment?

P2: This is how I describe it. I would say the municipality, it's really committed to try to do its best to work towards... And to create a pathway that impacts on climate in a positive way. This is what we are learning and this is what we are trying to achieve here. It's ambitious. We know it's it, it is it brings a lot of questions, but also it brings a lot of opportunities and systematic thinking towards the the commitment to we have now. So I would say commitment it's the true it's a true motivation.

P1: Okay. And would you say that the municipality has all the skills, processes and resources that it needs to actually govern, implement that?

P2: Well, that's a difficult question. When you say he has the skills and resources. You're saying like internal skills and resources because, for instance. But just to put in perspective skills and resource to implement something that the...

P2: It's brought to us by the European Commission. But at the same way the European Commission brings their skills and resources to do it. So. I wouldn't say alone. A municipality can do it. We need the the 100 Cities mission. And it's happening. We need it. And they are providing all of their skills as well. So if you ask me, there's a municipality by itself can do it. It has the skills to do it alone. No, but this is a project. This is a consortium with partners. So we need everybody's skills involved to to to make this work. I don't know if I made myself. And you know what? Because no municipality in the world will say to you or has the skills to do alone the goals of the city's mission. Okay, but obviously there's different municipalities with different skill levels and I would say the skill level of humanity is it's one of it's on a good track. I think we have the skills to do what's best to us. Which are the most important skills, processes, resources that you need to actually pursue climate neutrality. That's really a good transition team and a good

ecosystem. That's what I would say, but a very good transition team that disrupts the function of organic structure of a municipality. Because municipalities are very, very vertical, are very vertical structures in its organisation. And to do this you need to, to have a very good transition thing that does that brings horizontally to the to that, to that structure. So we need to disrupt that and to break the silos and work together.

P1: And how is that done?

P1: And what kind of skills, process, and resources, would you say are you still lacking in that regard?

P2: Okay. In terms of human, I would say it wouldn't be harm if we had a little bit more human resources, a little bit more people working on it. And obviously, there's always, always. But that's I think... That's the problem. Of all the cities on the project, there's always the financial strains that they and the investment part of, of it also. Those are the main the main ones.

P1: And in terms of the process and routines that the municipality has to actually govern this whole system?

P2: So in terms of routines, it's a lot with scheduled periodic meetings and exercises between the different parts that are involved. All that has an impact on the mission. And I think that's pretty much it. And communication. And teamwork. Those are keys.

P1: Let me quickly check something in my guide here. (...) Yes, let's maybe stick with these kind of skills, processes, and resources - the capacities of the municipality - for a moment. (...) How is the municipality identifying which capacities and capabilities it needs to implement [...]

P2: The necessities that you need to know one thing first. So we don't have our Climate city contract yet. We are still making it and it's part of the Climate city contract. There's a whole process to identify those you ask. But as a municipality... And what we basically do is we assess the work we have to do and then we see what kind of internal resources we have to implement it and to do it. Pretty straightforward. Very simple.

P2: Well, it's just it's at the pace things are coming. You know, it's like because this is a project. So this has... So this is made in the [...] Very project management perspective. So you have the tools of, of like any project where you identify everything within. Within a pretty standard project management perspective. Assessing hours. Assessing Resources, financial. And activities that you might need. What will be your constraint? What will what is expected you expecting in the future? So things like that. And obviously our transition

team as coordinators, it's like the project management manager figure of this and which moves all the parts of the team.

P1: Okay. Could you maybe elaborate on the transition team a little more and what kind of role it takes in the institutional setup?

P2: All right. So a transition team. It's a team within the municipality. Okay. So it is in the municipality that tries to put the work. Okay. Regarding the city's mission. So this is an aspect that's. I wouldn't say mandatory that, but that is highly recommended by the net zero cities. And in order for you to do a successful project, you have to have a you need to have a transition team. This transition team needs to be multidisciplinary across the departmental and it needs to create a network, the network of and the workflow that tries to encompass all the municipality activities and to then to put them in the climate city contract that we are elaborating.

P1: So that has been newly established as part of joining the mission, or has that been part of the ecosystem beforehand?

P2: Not all the members of the... So the ecosystem brings everybody but the transition team, which is within the ecosystem, doesn't have everybody of the in it because it's internal from the municipality. It's a transition within the municipality workers. So it's I would say it's very detrimental. For instance, we they, we have me and my colleagues from from the energy. Then we have the colleagues from the transportation sector. We have the colleague from the waste. We have the colleagues from the water. Okay. So that's basically our, our transition team. And you formed that as a reaction to joining the mission. That was formed as a reaction as enjoying the mission. And it's something, like I said, is something highly recommended by the by the material cities. So it's something that they it's something they really want us to do.

P1: I see.

P2: And the transition team is not something that the name itself, it's the name they gave. They called it. So within their project they call the transition team. So each municipality must have one as part of the project.

P1: And which kind of role and responsibilities does this team have within the municipality?

P2: We need to do the job. So we need to do the Climate city contract. But not only the. Not only the writing part. You see, this is the vision of this is this is not a product. We are not developing the product. We are developing a project that he has a systematic way of,

of doing things. This is designed to be on working process that will be enhanced every year towards climate neutrality. This is not a product. So this is this transition team is not just sitting and writing documents to fill and to you know, it's not a master thesis. You know this is something that we need to work on an early, daily, monthly basis. Okay. So we are working this on 2023. We need to work this to till 2030 and beyond. We this is just to keep going.

P1: And what kind of, let's say, oversight and reporting and coordination mechanisms do you have to kind of govern this whole process also in the long term?

P2: The coordination. So we have our internal project management. When you're on the project, things are pretty standard. I don't really know how to answer that. Not in any other way. But is this is... That's how it's done. So there's a structure, there's a coordination. And we do things accordingly. With that structure, which is basically it.

P1: Okay. (...) And if you consider the role of this transition team within the municipality as a whole, also with the political level and the ecosystem, what kind of coordination mechanisms are there externally, so to say?

P2: (...) The coordination mechanisms. Can you give me an example of what you define as a coordination mechanism?

P1: So, for example, do you have certain, let's say, set of rules when you report back to whom, whose kind of advice you're supposed to take, under which conditions, etc.. So how essentially the unit fits into the [...]

P2: Yeah. Obviously, we ultimately report to our politicians. That's the goal of it. So they have the commitment. We do the the work for the commitment and then we, we give them feedback on how things are going. This is how things work pretty much everywhere.

P1: And to what extent is your work dependent on this political support?

P2: 100%. This is this is a political decision. So we're talking about a project for municipalities. So it's a political structures or... Well, they are governed by political structures. So it's it's obviously very political. And that's why we are glad. This this mandate, it's working on these subjects and committing to them, like I said earlier.

P1: And if you consider the role or the municipality as a whole, to what extent is your ability to advance climate neutrality dependent on higher levels of government?

P2: This is very dependent on national government because we can decarbonise the territory to a point, but then ultimately it becomes a national government issue. So

obviously without the national government support, it's very difficult to meet the goals. But this is what we are looking for here. We are also looking for that government support to help us achieving these goals. That's also one of the main purposes of this mission.

P1: Okay. I would maybe quickly come back to something you said a moment ago. You said that your part of them is a penalty and reporting as usual, it might be an obvious question, but still, how exactly does this reporting process look like? What kind of oversight and governing mechanisms do [...]

P2: You need to define reporting? Because there's a lot of levels of reporting, you know...

P1: I'm looking for the governance side of it within the municipality. So what how do you report back your progress on your work towards climate neutrality? To whom do you report that back are the monthly?

P2: We ultimately will report them to the to the executive structure. Let's say, on a monthly basis. Because like I said, this is so the politicians that decides the deciders they need to be fed in with our with our progress in order to keep the politics of the municipality going. So this is the ultimate level; I don't know if I made myself clear.

P1: Yeah. I'm just trying to narrow in so that I develop the correct understanding. And they're also kind of overseeing that the approach or the initiative remains on track on the long term?

P2: The ecosystem I told you about. And this reporting is not only... involves not only the executive, also the parties that are now at the share. It also involves the other parties. So we always try to maintain this as transparent as possible. (...) And obviously, as far as today, we always have the support of other party or other parties, even though they are not governing at now. So I think I would say the support, the political support is pretty much... They all consent with this project. And obviously I don't see it not going through in the future.

P1: Okay. I see. And maybe regarding a few other aspects of governing, the climate neutrality transition. What changes were made or are being made with regards to the funding mechanisms that the municipality uses to promote climate neutrality within the city?

P2: Well, that's what we're trying to figure out now with the Climate City Contract and to see where we're going. We are in other projects. But regarding to this one, this is the ultimate goal because you need to develop an investment plan for your measures and you

need to try to... The search for the findings for those measures. And this is what this project... This is what we hope this project is going to do for us.

P1: Interesting. So how far is this process along?

P2: That's difficult to answer. This is an ongoing project. Has a timeline that extends throughout the the future, but it doesn't has an end date. (...) But I would say if you look at that short term. And we charter Miami in 2030. For instance, I would say that we look at that as with strong possibilities to to get funding for for our climate action. Otherwise, we will not be able to meet all the commitments we are making for 2030.

P1: (...) Let's see. And then maybe jump into another aspect of governance. How is information and communication infrastructure used to govern and advance climate neutrality?

P2: Information and communication infrastructure to advance....?

P1: So maybe sorry I missed formulated that a little. So how is your city changing its ICT infrastructure, its information communication infrastructure - that might also include like Internet of Things, etc. - to essentially govern the climate neutrality transition?

P2: Well, I think basically it comes down to the transition team again. So we basically we pass on the information and we are responsible to make it to make it flow.

P1: Then I would maybe jump to the topic of capacities again. We already touched on that a little earlier. And I just would like to understand in a few different categories what kind of capabilities and capacities you think the municipality needs to build or is building to kind of pursue climate neutrality? Maybe first, with regard to knowledge, analytical and data capabilities, what is needed or is being built to kind of...?

P2: Yeah. So when it comes to personal personnel capabilities, we have the energy cabinet that was made and now I would say that we have those even though it wouldn't harm to have a few more people doing it. But the capabilities are here. We have them. And then I would say infrastructure wise. I'm saying like Smart City Solutions and so on. We are working on those as well. But for those capabilities we have, depending on an internal structure, which is our intelligence system structure. But basically we are also very dependent in outside parties. That that we need them to we need them to do those in the municipality. Regarding to that. And so on.

P1: What do you mean by outside structures?

P2: Uh, for instance, if I want an outside party, like a consulting company, like, you know, technology companies and so on.

P1: And what role would you say this entire smart city domain plays in with regard to achieving climate neutrality?

P2: It plays a very central role.

P1: Why?.

P2: Because that's the name of the project suggests smart and neutral cities. It's not only neutral, they also must be smart. So, yeah, definitely a major role, a car role, I would say in this, in this in this project.

P1: (...) Okay. You mentioned earlier that it would be nice to have a little more human resources. Is there anything in particular where you would say we need these kind of skills or these kind of competencies?

P2: Yeah, as you said, maybe for data. I'm not saying that we don't have them. We have them. We just we could have a little bit more people working on it because there's a lot of work. (...) And generally here and there, every department could use a few more people to work.

P1: (...) Is building these capacities kind of a concerted effort? Is there something like capacity plan management system?

P2: Well, I can tell you a constraint to acquire those capacities. And one is the hiring public structure. Okay. The law, basically. It's very limiting to find suitable capacities for some work. Not for all of them, but for some. And what was the question? Can you repeat again.

P1: If there is kind of a capacity management process or strategy that is used?

P2: We have the internal, the internal management that's also required by law. You know, there's like hours of formation and so on.

P1: Sorry. Can you repeat that?

P2: Powers of formation. So, like, if you're a higher technician, you need to have yearly a certain amount of yearly hours of capacity building and so on.

P1: I see. (...) Interesting. And you mentioned the legal limitations with regard to that. Could you expand what that exactly? Well, you know.

P2: How can I put this? Sometimes there's constraints upon instance. There's a... We need an electric engineer for the municipality. So we open. (...) First of all, we say it in English. We open. Of make and to that position. But because at the the municipality level the paycheques are low. There's because they are they are fixed by law. Nobody comes because everybody else can earn more money outside. And so nobody applies to the job and this is actually happens.

P1: I see, I see. (...) Okay. (...) Is there any major capability that the municipality is lacking that would be needed to advance climate neutrality?

P2: No, not. I wouldn't say that.

P1: No. (...) Then I would like to maybe jump more towards the administrative implementation of climate neutrality. It might be a little niche topic, but I would be interested in how is the municipality changing its processes and routines to govern the climate neutrality transition?

P2: Once again, transition team. We have the disruption. And that's basically it.

P1: What do you mean exactly by disruption? Could you [...]

P2: Like I said, like I said earlier, so the municipality has a very well structured organic. So things flow in a certain order and everything, and the transition team is trying to break out of that flow and to work in a more horizontal way.

P1: How does that look like in practice?

P2: Challenging. But slowly come to results. Coming to results.

P1: So are you essentially revising processes and structures long term, or is this more ad-hoc that you try to bridge things ever?

P2: You learn on the job, you know. Steady go in, but not with a road map to it. It's just. So with. How you think it must be done.

P1: What kind of advantages do you hope to gain from this? More horizontal, more open structure or process?

P2: Communication flow? Definitely. And cooperative work. And the network establishment.

P1: The interpersonal network between employees or interpersonal?

P2: Yea, definitely.

P1: What would that look like in day-to-day practice?

P2: Well that is looking like... Flowing directly to a colleague where I need something instead of going to do the whole or normal procedures that are usually implemented.

P1: Do you think the city could benefit if some of these structures would be more formalised, some of these more horizontal structures? If there were more carved into the system?.

P2: Definitely.

P1: Are there any initiatives to make this kind of change?

P2: Not yet. Still very early, you know. And then there was always the constraints. The regular constraint and limit are constraints. We cannot do it to a point where we totally disrupt this. We can only do it into a certain... But not completely. That's impossible. At least at the moment.

P1: And in which areas in particular would you like to revise the way towards a more horizontal and.

P2: Not any particular area. I would say like all across.

P1: And maybe building on this: Are you pursuing any kind of administrative innovations or novel ways of [...]?

P2: Not at the moment.

P1: Are there ideas in that regard floating around that are maybe thought about but not yet implemented?

P2: There's idea floating around and there's a lot of. Work within the net zero cities towards that for us. So they are trying to communicate that with us a lot.

P1: (...) Okay. And to what extent have you acted on that?

P2: (...) I won't say to the extent of the transition. It's very confined there.

P1: Why?

P2: Regular old habits are difficult to break. But my answer.

P1: That I understand correctly, it is easier to make changes in the transition team because there is a new kind of unit? But elsewhere things are different?

P2: Things are more a little bit more complicated, but not impossible. There are always opportunities to change.

P1: And maybe for the last few minutes I would like to talk about the EU mission in particular. You briefly touched on that earlier, but. How has joining the mission generally influenced the way climate neutrality is pursued in your city?

P2: It joined the influence in the well. That's a little bit early to say, but I would say that first, the stakeholder involvement for that is been great.

P1: (...) Which kind of stakeholders are you thinking about?

P2: Industry, civil structures, transport all over. But industry, it's been very, very fruitful, this project and the engagement we are making with them. We are very industrial here in Guimaraes.

P1: Well, could you give an example of a kind of project maybe, or some initiative that has been triggered?

P2: Yeah. So we just launched the climate pact. In regard for industry and citizens, and I can share the website with you and you can have a look if you want. And which is basically we try we are trying to gather as many stakeholders as we can and to involve them into the commitment of the city mission.

P1: (...) Interesting. Then maybe being conscious of time, a last point. Do you think your city will be able to become climate neutral by 2030?

P2: No. And I think we can. Uh, create design of, of. I think we can design a structure that aims neutrality on a short term to give you a fixed point, a date. It's, it's complicated. And so I would say that short term, it could be a little bit longer than 2030, but still a win. Okay, but that's not the line of think we have. This is like more like a personal opinion. Okay. Though I of think the purpose is to do. What we can to reach it in 2030.

P1: So what are your thoughts in general on the EU mission as a policy tool for achieving climate neutrality?

P2: Is it all for climate neutrality? It's a very good tool. I think they are what they are trying to do with this. It's to change our and to design our think and our our structures and

our our climate action. And I think they're a very good tool to start this and maybe to spread in the future to other cities.

P1: Is there anything else? Any final comments you would like to make regarding this stuff?

P2: No. Yeah, no, it was. It was good, obviously. Maybe I wasn't very much prepared for so many organisational related questions, but I try to do my best, so I hope.

E.h Heidelberg [EN]

P1: Great. Then let's start right at the beginning. Could you briefly explain what your day-to-day work looks like and how your tasks and responsibilities are aligned with climate neutrality, with climate neutrality change, and what you do in that area?

P2: Right. What are my daily tasks? So if she can allow, I may also start a bit more general, how climate protection is located in the administration. I think that's because you're also looking at it internationally and it's certainly good to hear how the administration is positioned in Germany. In Heidelberg, there are four different departments, including one for environmental protection, climate protection and mobility. Our office, the Office for Environmental Protection, Trade Inspection and Energy, is located in this department. And in this office there is the Energy and Climate Protection Department. That's where I work. That. This department is divided into three areas: climate protection concepts, climate-neutral urban development and municipal energy management. I myself am the head of the climate protection management department, and we are responsible for achieving climate neutrality by 2030, if you will. That is the goal to which we have committed ourselves in the EU mission. At the same time, however, we have a municipal council resolution that is somewhat different. It says climate neutrality according to BISco STANDARD by 2040. But we give everything and so. That is really so supplemented. In the resolution it is to be created faster that we reach evenly this goal of the emissions also. Yes, and I myself am in charge of this mission together with two colleagues. This Climate City Contract has to be set up, and that means we manage the process internally and with the stakeholders. Another area of responsibility is climate protection in general, now independent of the mission, updating the climate protection concepts. Heidelberg was also a master plan, municipality, master plan, 100 % climate protection funded by the Federal Ministry. We supervised the concept and write. Yes, the goal is annual. That doesn't always work out, but we now have new staff, so we now also have capacities. So the CO2 balance is to be updated annually. That is also one of the tasks. That's exactly what we do every day. And now, quite topical - this is a subject that pops up again and again from time to time - in any case, the expansion of wind energy. The state of Baden-Württemberg has an area target for how much land you will make available for the expansion of renewable energies, for wind and PV. And FORST-BW has now put out to tender areas that lie in the state forest area and in Heidelberg there is also state forest and an area has now been put out to tender that also affects the Heidelberg district. However, the entire area still extends into the neighboring municipalities and the tender is now underway. A consortium with the municipal utilities and three different energy cooperatives would like to apply. We had also hoped that there would be a special procedure, so that they would be given priority, so to speak. That did

not work out. But now the area has been divided into two lots. That is the hope. Is the smaller area, which was determined there, perhaps suitable for this consortium, in order evenly. To be able to let the citizens profit and thus perhaps to have a higher acceptance. And exactly, so this is also still a topic on my desk or in our area of expertise.

P1: You just mentioned the contract, the Climate City Contract. What is the state of affairs in Heidelberg?

P2: We just had an exchange with our City in today. We will have, so to speak, a supervisor who will stand by us and support us, and we talked things through with her again. The thing is, we're not starting from scratch. Basically, all municipalities are already quite advanced in climate protection and cooperation with stakeholders is not new to us. So this Climate City Contract will focus on stakeholder participation, so that as many stakeholders as possible join this goal and demonstrate with their own measures how they want to contribute to achieving this goal. And then, of course, we will use our networks that we have at various levels. And there is also a great willingness to do so. And we are now formulating the commitment that they are to sign and the mandate to send us the contribution that they want to make. And then we have to fill out three different templates: commitment, target, country, action, plan template and financial template. And we are now diving a little bit into the depths to understand what is being asked for and hopefully we will be able to submit the contract in the fall, that is the plan Climate City.

P1: Span. And if you think beyond the Climate City Contract now, what other frameworks, frameworks, concepts might be applied in Heidelberg for the governance of climate neutrality change?

P2: Well, we are organized in different city networks. The largest is 40, and that's where we were just now. Every two years we have to show what we are doing to keep our membership longer. And we have now presented a climate neutrality concept in which all the issues of climate protection were brought together within the framework of the administration. We have now submitted this and in fact our membership has also been extended. Then Our Lord Mayor is President of Energy. CTS, There is also an international exchange. Climate Alliance we are represented. Exactly. And yes, the 100% climate protection master plan is of course still a concept, which was very detailed and profound, which still applies to us, so to speak. And then we also declared a climate emergency. And after the state of emergency had been declared or the climate emergency had been declared, we drew up another climate protection action plan. The plan was intended to focus a bit more on the most important points in climate protection. Did it end

up being a 30-point plan? It is not necessarily consistent in itself, but it does reflect the most important goals.

P1: Yes, and then I would go further, so in the next topic block and around governance and steering. You have now already briefly described the organizational structures. I would be interested in: Within these structures, which organizations, departments, etc. are actually primarily responsible for steering this entire process of climate neutrality change?

P2: Basically, climate protection is a cross-sectional task and I would say that the strings are pulled by us here in the Environment Department, in the Energy and Climate Protection Department. That means we are responsible for it, we are responsible for the process. Exactly. That has advantages and disadvantages.

P1: What would those advantages and disadvantages be?

P2: Um, so the disadvantage is, of course, that if it's a cross-sectional task, it's such an administration that functions strictly hierarchically and that means you always have to talk about the. If one speaks with another office, stop the office lines include. At the working level, direct exchange and direct agreements are very difficult. We are now agile, but in some areas we are involved in very fundamental decisions. Of course, that's not possible; you always have to keep to the hierarchy levels. You don't have any, no possibility to get through, and in the end you always have to. It often depends on people. If you now simply take as an example - this is now completely value-free - the urban planning office. If someone, I'll say, puts design before climate protection, then it's sometimes very difficult to find compromises. Exactly, so we always argue about PV and green roof. That's an intra-office conflict. Right there. There are many conflicts and climate protection is not always the very top priority in the decisions. Exactly. Of course, the top management has already made it clear that climate protection actually has a high priority. But at the working level, this sometimes leads to difficult discussions because not everyone shares this view, right?

P1: Interesting. And they say there are difficulties. Are there currently any changes to change or add to these organizational structures to improve things?

P2: Currently there's not. There was, um. Now, of course, I have to think a little bit. So the department in which our office is located, that has been newly established. But now I don't know what the hang-up was and when exactly that was. That. But I could research it again and send it to you afterwards. So simply to give the topic more weight and also to bundle the offices in the department that are relevant there. This is the Office for

Mobility and Landscape, the Forestry Office and the Office for Waste Management. They have been merged into one department. That was a step that, as I said, was taken a few years ago and should have weighted the issue accordingly. And currently there are no changes planned.

P1: What would you change if you could?

P2: If I were to do that. So, it's when you say climate protection has the highest priority in all decision-making processes, then you also have to place it at a correspondingly high level and perhaps place it directly as a staff position with the mayor. That could help, but it doesn't have to. As I said, in the end it always depends a lot on people, but that would map it out again. When you say that this has the highest priority.

P1: Okay, then maybe from the structures more so to collaboration. What mechanisms, methods of communication and coordination do you actually use to coordinate within public administration on these issues?

P2: So I say; example now of the participation in the mission, what then? So that of course one then sets up a working group that meets temporarily and then all relevant offices are invited and a certain rotation is agreed upon, how often one meets and exchanges and goes apart with work assignments that are then processed. These are actually so and of course there are different rounds directly with the department head or directly with the mayor, where then also an exchange takes place to the topics. But that is then dependent on need. And for the stakeholders. For the external actors outside the administration, there is only one fixed round of climate protection action groups, which meets two to three times a year. (...) Then there is a network for sustainable management. They have a different focus. But of course, we always include climate protection topics in these meetings, and company checks are carried out, energy checks. So climate protection is actually applied in practice and not just talked about - in quotation marks.

P1: (...) Is that a fixed, well thought-out control model or more ad-hoc? How would you describe the working model? The communication and coordination model?

P2: So there is none there. It's not a concept, if you will. The state, what is given to us, how we communicate internally. So there are, as I said, some set structures. There is a roundtable at the mayor's office that meets once a week with his department heads and office management. Then each department head has a jour fixe with his offices, which usually takes place every 14 days, and of course we also have these meetings at the working level, i.e. at the office level. So there are already firmly established, what do you call jour fixe exactly, always with his next smaller organizational unit. That exists. And

if then such special topics come, where then an exchange with offices to be chosen freely is somehow necessary, then one must set up and invite to it. And exactly tries to win the mayor as a rule that he invites to it to give also the meaning that this is determined accordingly high.

P1: And when they think about the importance of information technology, and so on and so forth, in this whole sphere, what does it look like on that front? Is it being used? When, at what points?

P2: What exactly do you mean by that? I'll say agile methods for example, right?

P1: Yes absolutely agile methods. But also when you think about what data, information sources, sources are used, what programs, software, IT, infrastructure, whatever.

P2: I'm afraid we're still pretty ole bony there. So we communicate mainly by e mail and exchange information on that. So what we have now quite new is Climate View. This is a tool for visibility, for making our climate protection plan visible. And to show the development of CO2 emissions and the effect of measures, which is also publicly accessible. This is the first tool we are using. As I said, to demonstrate our work to the outside world with a real touch. Of course, we have websites and communicate our press release through all available channels. But this is a new activity. And otherwise, internal communication within the administration is still email and paper. In fact.

P1: Okay, then maybe looking holistically at this domain of governance and steering: When you think about the biggest challenges or when you think about it, what are the biggest governance and steering challenges around the climate neutrality transition?

P2: A bigger challenge is already.... I'll put it this way, getting an administration to agree on a goal, whether it's now.... And of course, if there are contradictory goals. So if you listen to biodiversity, there was also an international conference, they also formulated at the end, that is the most important thing. The most important thing is to preserve or protect biodiversity. Of course, this contrasts somewhat with climate protection. We don't have to play these off against each other. But that's exactly what has to be weighed up. And finding a common approach to these different challenges is certainly the most difficult thing.

P1: (...) And how do you see these challenges maybe being overcome?

P2: (...) In the end. So since we are a hierarchical system, it always has to be lived from the top down.

P1: (...) And they don't see the potential to actually somehow change, adapt the system itself?

P2: (...) In this respect, I don't see any approaches for this. So even these agile methods. We started a project where the development of a conversion area was supposed to be developed in an agile way and volunteers were supposed to come forward from each office to work on this group. And since we still have these silos, as I said, it was very difficult. It has... You almost have to say it didn't work. Maybe it was introduced incorrectly. It was certainly introduced wrongly, but. It's always difficult when such a project has gone wrong, then this agile work is also a bit burned up by it Content gone.

P1: (...) Okay. Then I think that would be the governance and control block. I would then move on to the area of administrative capacities. Hm, maybe there as an introductory question. How would you characterize the role of the public administration in Heidelberg in the area of the transition to climate neutrality? What is the role of the city in this matter?

P2: She is a role model. It is an incentive provider. So we do promote, we do set up incentive programs. And yes, already, intermediaries too.

P1: Does the city have all the capabilities, processes, resources necessary to fulfill this role?

P2: (...) We certainly have the ability. So we have that with the role model. That definitely works. We have good resolutions. An internal decision, for example, that our vehicle fleet will be successively converted to emission-free vehicles and sustainable procurement, catering, and so on. So we are setting an example and I think we are also good at communicating that to the outside world. We. We also have good concepts. We have funding programs that we can offer citizens to get involved in climate protection themselves. But you also have to see that if a city wants to become climate-neutral, the responsibility of the municipality is limited. So we only have a maximum influence of probably 50 %, not directly on emissions, but our sphere of influence is not 100 %. It also depends on national legislation and international legislation and also on the will of the citizens to make decisions. If I set up a subsidy program for the rational use of energy, where I promote the insulation of houses, then it still requires the decision of the citizens to also take advantage of this and to really insulate the house in the passive house standard and not. Simply to leave it as it is. And from there, The influence possibilities, which we have, we use well and fully. But as I said, it's not all-encompassing. Generally speaking.

P1: What are the key capabilities, processes, resources that you need for carbon neutrality?

P2: I was just distracted for a moment now because a message popped up on my screen here. Can you repeat it again?

P1: When you think about it in general what are the key capabilities, processes, and resources for the climate and neutrality transition?

P2: Yeah so, of course it takes.... we need finances. Now, if it's about realizing wind energy somehow here, together with the public utilities, then that needs to be financed. So it needs money. It also takes political courage to make political decisions that may be uncomfortable. So in the area of mobility, you have that all nose. When lanes are taken away for bike lanes or parking spaces are taken away because safety also plays a role, then these are uncomfortable decisions. Or increasing parking fees and similar measures that make driving more unpleasant. Then courage is needed, and that is sometimes more, sometimes less, than we have. Actually, the majority in the local council are already quite good, that one could think, the courage should be there, but also there one wants to be re-elected. And then the political courage is sometimes not enough.

P1: And if you now compare all these considerations with the prescribed state, what skills processor resources are you missing in public administration for the climate neutrality turnaround?

P2: So it's actually smoking.... We always end up needing more staff as well because if... So our local council is very generous in giving us money as well. We're in a fortunate position there. But of course we also need staff to spend the money. So, for example, if we pursue neighborhood concepts, that has to be applied for, it has to be processed, and for that we simply need personnel. And when we see how many districts, how many neighborhoods we have, then - if I extrapolate that - there is simply a shortage. This is always done for one neighborhood, for example now. But it doesn't work for the entire city, and then unfortunately there's a lack of personnel. So even if Heidelberg is in a good financial position, we still lack funds. If we now make a municipal heating plan and want to promote the expansion of district heating - we already have district heating here in Heidelberg - and then want to supply other parts of the city with district heating, then there are amounts involved. Of course, a city can't do that on its own. So sometimes you have to spend a lot of money at once in the very short term in order to implement things; but then they might last forever in the long term - forever, but not in the long term - like the district heating network, for example.

P1: What opportunities do you see to address these deficits? Build up these capacities?

P2: So we also have an exchange with the German cities with the federal government. And we addressed this there. So it is already the task of the federal government and the states to provide the municipalities with funds.

P1: Okay, then I would go from here to the third block, which is more about processes in implementation. Generally speaking: How does Heidelberg change administrative processes and routines in the context of this transition to climate neutrality? (...)

P1: (...) Um, how do you handle the of identifying this kind of problem internally? How do you decide which capacities are missing, which capacities need to be built?

P2: That's basically determined by the head of department; so now municipal advertising planning, to take the example, is a mandatory task. Wind has now come, because the country has just made this tender. So it is not always controllable. And there are new mandatory tasks. They have to be tackled. Of course they do. Then there was also a new personnel position. Wind came relatively suddenly, and so priorities are sometimes reset at relatively short notice.

P1: Are there any skills, processes, etc. that they are actively developing right now?

P2: (...) So really develop? Not in the context of heat planning. Is there also a [...] ... Now a citizen information event is to take place. So citizen participation is already quite a big topic. However, this is not something that has been newly developed, but is used again and again for the topics. And is it really a new development? Actually, I would say no.

P2: A tough question. How do we change processes? (...) Hm. (...) So in the end it always runs through, through conversation or through the [...]. About the exchange with superiors and other other offices. But there I'm a bit on the tube with the question. Because as I said, in my perception there are not so many changes in the processes. So of course, when such a department is newly established, that's, that's a political decision, that's something that you actively think about, how processes could be designed and changed to somehow change, to improve this cooperation. There are currently no activities to mention there.

P1: (...) And if you now think on the implementation side: Which measures have you taken so far that have actually already become effective in the final analysis for climate protection, for climate neutrality? Have they already been implemented?

P2: For example, we have an energy concept for municipal properties. There are standards that go beyond the legal STANDARD. And that is currently being updated. And that is basically then again sharpened that we go there, as I said, beyond the legal STANDARD. Even if someone acquires municipal real estate or acquires land, then there is an

obligation to build to the passive house standard. We have developed a completely new district, the Bahnstadt, and this district has also been built completely in the passive house standard. That was, I think, in the implementation that one of the essential points. And, of course, the expansion of district heating and the expansion of renewable energies and the share of green district heating.

P1: (...) You said that in the process area not so much has changed yet. But when you think overall about how you indicate climate neutrality in terms of control and implementation, are there any administrative innovations, new concepts, etc. that you have tried out on implemented?

P2: (...) So, what I definitely changed is the cooperation with the municipal utilities, so as an energy supplier here. Although the goals climate neutrality very have adopted and implement that. (...) With the housing association, the cooperation doesn't work quite as well. But the municipal utilities are a good cooperation partner in this area.

P1: (...) Interesting. Okay, then I would actually already jump into the last block, where it's more about the EU mission for 100 cities specifically. Maybe in general terms: Since Heidelberg joined this mission, how has this influenced the way climate neutrality is discussed, regulated, implemented?

P2: So participation in such projects always means a bit of a tailwind and strengthened arguments that one is also obligated. And at the same time, after we participated, there was also the decision to tighten the climate protection target. That's why it's backing. In any case, because we are committed to this goal. And that applies to the entire administration and, of course, ultimately to the urban community as well. But within the administration in any case. At the same time, however, we are also held up to criticism. Because the population hangs climate protection very high and always points at us, we are not fast enough. And when it comes to our own things, such as wind, things get difficult.

P1: (...) Okay. Interesting. (...) Do you think Heidelberg will become climate neutral by 2023?

P2: No, it can't be done. There will still be passenger cars driving around on gasoline. Not every house will be climate neutral and heated climate neutral.

P1: What would it take to somehow make that work after all?

P2: Um, the Building Energy Act is a good example. So that would have been aimed at becoming carbon neutral by 2030. And that didn't work. And it would need exactly these legal requirements. And stricter, stricter rules and laws. (...)

P1: And when they think about this EU mission as a tool to drive climate neutrality. What do you think about it? As a legal tools, as a policy tool?

P2: (...) So participation in the mission is not yet a policy tool, but, as I said, this is what we German cities are trying to explain right now in the exchange, i.e. within the framework of this national monitoring process with the ministries, where we need legal, stricter requirements in order to really implement the goal, also on site. We are, of course, the actors on the ground, but we also need the legal requirements. And participation in the mission helps to achieve this. So that's also new. We've never had that before, so that cities have communicated directly with the ministry level. Again, more often via their, via the umbrella organizations such as Deutscher Städtetag and the like. But not directly with the cities. And that is new and also something new, that several ministries are involved in this process. This is also new on the ministry side. Normally, only one ministry is involved.

P1: Could you tell me a little bit more about that process?

P2: We were invited by the federal government, by the Ministry of Economics and Climate Protection. And yes, they wanted to hear exactly what we need, but then they said Yes, the further discussion will then take place via the leading associations. And then we said, well, we are already the selected model cities that are a bit more ambitious. And it would be wiser to communicate directly with us. We are nine German cities, and we have selected two spokespersons to represent us, and they are in regular contact with the Ministry for... So the Ministry of Economics is there, the Ministry of Finance and [...] Research and Development. I don't have the full names in my head, unfortunately. I hope you can add to that.

P1: After all, that's perfectly normal at the ministerial forum.

P2: And I don't know that. I hope you'll forgive me for that too. Yes, but always fully counterchanged. Yes.

P1: Very nice. And this direct communication with the ministries, this is now a long-term arrangement?

P2: So there is no defined end yet. But for the time being, we will definitely stay in the exchange.

P1: Yes. (...) What demands, wishes, agenda points are you trying to address through this channel?

P2: And it's simply the various topics that are relevant. This is the expansion of renewable mobility, the heat transition... These are the generic terms. Of course, this is all prepared in a bit more detail, but decarbonization of district heating, open space PV systems, wind energy expansion Building Energy Act, requirements for it, building standards. Gray energy is an issue. So it's already... We have quite a small catalog where we need support. The first reflex at the ministerial level was: we need to be provided with subsidies. That wasn't the case, but we were able to make it clear that sometimes it's not just the money that's lacking; that's what's needed, of course, but also tighter legislation.

P1: (...) Then I think that would be most of what I wanted to ask. Do you have any additions, any points on this topic that you would make?

P2: (...) So it's still an important topic and the municipalities are already an important player on the ground. And a lot is expected of us and I think we are also well positioned to deliver and. Cooperation with the stakeholders, I think, is very important at the municipal level, but also. Well organized. And so in all German cities that actually works very well. As a municipality, are you somehow also accepted as a fully-fledged discussion partner? And we now have a completely new situation in which people approach us proactively for advice. For example, the expansion of PV on agricultural land or when farms have large roof areas, how they can realize PV there, so that we are somehow perceived as a competent advisor. I think that's a good development.

P1: (...) Very nice. That does sound like a good closing. Thank you very much for the interview then.

E.i Heidelberg [DE]

P1: Super. Dann fangen wir doch mal direkt am Anfang an. Könnten Sie kurz erklären, wie Ihr Arbeitsalltag aussieht und wie Ihre Aufgaben und Verantwortlichkeiten auf die Klimaneutralität, auf den Klimaneutralitätswandel hin abgestimmt sind und was Sie in dem Bereich so machen?

P2: Genau. Wie sind meine täglichen Aufgaben? Also wenn sie erlauben kann, darf ich auch ein bisschen allgemeiner anfangen, wie Klimaschutz in der Verwaltung verortet ist. Das, glaube ich, ist, weil Sie betrachten das ja auch international und da ist es sicherlich ganz gut, mal zu hören, wie wie die Verwaltung in Deutschland aufgestellt ist. Also in Heidelberg ist es so, Es gibt vier verschiedene Dezernate, unter anderem ein Dezernat für Umweltschutz, Klimaschutz und Mobilität. In dem ist unser Amt, das Amt für Umweltschutz, Gewerbeaufsicht und Energie angesiedelt. Und in diesem Amt gibt es die Abteilung Energie und Klimaschutz. In der bin ich tätig. Das. Diese Abteilung teilt sich auf in drei Sachgebiete einmal in Klimaschutzkonzepte, klimaneutrale Stadtentwicklung und kommunales Energiemanagement. Ich selbst bin Sachgebietsleiterin in dem Sachgebiet Klimaschutzmanagement und wir betreuen hier, wenn Sie so wollen, den Weg klimaneutral bis 2030. Das ist das Ziel, dem wir uns verpflichtet haben bei der EU Mission. Gleichzeitig ist es aber so, dass wir einen Gemeinderatsbeschluss haben, der etwas abweichend ist. Da heißt es Klimaneutralität nach BISco STANDARD bis 2040. Aber wir geben alles und so. Das ist wirklich so ergänzt. In dem Beschluss ist es schneller zu schaffen, dass wir eben dieses Ziel der Emissionen auch erreichen. Ja, und ich selbst betreue eben diese Mission zusammen mit zwei Kolleginnen. Da ist ja dieser Climate City Contract aufzusetzen, und das heißt, wir steuern den Prozess verwaltungsintern und mit den Stakeholdern. Ein anderes Aufgabengebiet ist ganz allgemein im Klimaschutz, jetzt unabhängig von der Mission, die Klimaschutzkonzepte fortzuschreiben. Heidelberg war ja auch Masterplan, Kommune, Masterplan, 100 % Klimaschutz vom Bundesministerium gefördert. Das Konzept haben wir betreut und schreiben. Ja, das Ziel ist es jährlich. Das klappt nicht immer, aber wir haben mittlerweile neues Personal, sodass wir da jetzt auch Kapazitäten haben. Also soll jährlich die CO2 Bilanz fortgeschrieben werden. Das gehört ja auch zu den Aufgabengebieten. Genau das ist so der Arbeitsalltag. Und jetzt recht aktuell - das ist ein Thema, was temporär immer wieder aufplopt ist - Auf jeden Fall jetzt der Ausbau von Windenergie. Das Land Baden-Württemberg hat ja ein Flächenziel, wie viel Flächen Sie für den Ausbau von erneuerbaren Energien zur Verfügung stellen, für Wind und PV. Und FORST-BW hat jetzt Flächen ausgeschrieben, die im Staatsforst-Gebiet liegen und in Heidelberg gibt es eben auch Staatsforst und es wurde jetzt eine Fläche ausgeschrieben, die die Heidelberger Gemarkung mit betrifft. Das Gesamtgebiet geht aber noch mit in den Nachbargemeinden hinein und da läuft jetzt die

Ausschreibung. Ein Konsortium mit den Stadtwerken und drei verschiedenen Energiegenossenschaften möchte sich gerne da bewerben. Wir hatten auch gehofft, dass es ein Sonderverfahren gibt, dass die sozusagen bevorzugt zum Zuge kommen. Das hat nicht funktioniert. Jetzt wurde aber die Fläche in zwei Lose aufgeteilt. Das ist die Hoffnung. Ist das die kleinere Fläche, die da bestimmt wurde, vielleicht geeignet ist für dieses Konsortium, um eben. Die Bürger profitieren lassen zu können und damit vielleicht eine höhere Akzeptanz zu haben. Und genau, also das ist auch noch ein Thema auf meinem Schreibtisch oder in unserem Sachgebiet.

P1: Sie haben eben schon den Vertrag, den Climate City Contract erwähnt. Was ist da der Stand der Dinge in Heidelberg?

P2: Wir hatten gerade heute einen Austausch mit unserer City in drin. Wir werden ja haben quasi eine Betreuung, die uns zur Seite steht und uns unterstützt und haben mit ihr noch mal die Dinge durchgesprochen. Es ist ja so, wir starten ja nicht bei null. Also grundsätzlich alle Kommunen sind ja schon recht weiter im Klimaschutz und die Zusammenarbeit mit Akteuren ist uns jetzt auch nicht neu. Also dieser Climate City Contract wird ein Fokus haben auf Akteursbeteiligung, dass möglichst viele Akteure sich diesem Ziel anschließen und mit eigenen Maßnahmen aufzeigen, wie sie dazu beitragen wollen, dieses Ziel zu erreichen. Und dann nutzen wir natürlich unsere Netzwerke, die wir auf verschiedenen Ebenen haben. Und die Bereitschaft ist da auch groß. Und da formulieren wir jetzt gerade das Commitment, das die unterschreiben sollen und den Auftrag, uns eben Ihren Beitrag, den sie leisten wollen, zu übermitteln. Und dann gilt es ja, so ein drei verschiedene Templates auszufüllen Commitment, Tape, Land, Action, Plan Template und Finanz Template. Und da tauchen wir jetzt gerade so ein bisschen in die Tiefen ein, zu verstehen, was da alles abgefragt wird und wir werden dann hoffentlich im Herbst, so ist der Plan Climate City Kontrakt einreichen können.

P1: Spannen. Und wenn man jetzt über den Climate City Contract hinaus denkt, welche anderen Rahmenprogramme, Frameworks, Konzepte werden vielleicht sonst noch angewendet in Heidelberg für die Governance von Klimaneutralitäts-Wandel?

P2: Also wir sind ja in verschiedenen Citynetzwerken organisiert. Das Größte ist 40, und da waren wir jetzt auch gerade. Da müssen wir alle zwei Jahre quasi darlegen, was wir alles tun, um unsere Mitgliedschaft länger zu bekommen. Und da haben wir jetzt ein Klimaneutralität skonzept vorgelegt, in dem alle Belange des Klimaschutzes im Rahmen in der Verwaltung zusammengeführt wurden. Das haben wir jetzt vorgelegt und tatsächlich wurde auch unsere Mitgliedschaft verlängert. Dann Unser Oberbürgermeister ist Präsident von Energie. CTS, Da ist auch ein internationaler Austausch. Klimabündnis sind wir vertreten. Genau. Und ja, der Masterplan 100 % Klimaschutz ist natürlich auch

immer noch ein Konzept, was sehr ausführlich und und tiefgreifend war, was immer noch sozusagen für uns gilt. Wobei dann ja bei uns auch der Klima notstand ausgerufen wurde. Und wir haben, nachdem der Notstand ausgerufen worden war oder der Klima Notstand ausgerufen worden war, noch mal ein Klimaschutzaktionsplan aufgesetzt. Der sollte noch mal einfach ein bisschen fokussierter die wichtigsten Punkte im Klimaschutz zusammentragen. Ist dann am Ende ein 30 Punkte Plan geworden? Der ist in sich nicht unbedingt konsistent, aber gibt eben doch die wichtigsten Ziele wieder.

P1: Ja, und dann würde ich mal weitergehen, so im nächsten Themenblock und um Governance und Steuerung. Sie haben jetzt die Organisationsstrukturen schon kurz beschrieben. Mich würde interessieren: Innerhalb dieser Strukturen, welche Organisationen, Abteilungen etc. sind tatsächlich für die Steuerung dieses gesamten Prozesses des Klimaneutralität-Wandels vor allem verantwortlich?

P2: Also grundsätzlich ist Klimaschutz eine Querschnittsaufgabe und ich sage mal, die Fäden in der Hand halten wir hier im Umweltamt, in der Energie und Klimaschutzabteilung. Das heißt, wir sind dafür, wir sind für den Prozess verantwortlich. Genau. Das hat Vor und Nachteile.

P1: Was wären diese Vor- und Nachteile?

P2: Ähm, also Nachteil ist natürlich, dass wenn es eine Querschnittsaufgabe ist, es so eine Verwaltung funktioniert, streng hierarchisch und das heißt, man muss immer über die. Wenn man mit einem anderen Amt spricht, halt die Amtsleitungen einbeziehen. Auf der Arbeitsebene ist ein direkter Austausch und direkte Absprachen sehr schwierig. Wir sind zwar mittlerweile auch agil, in einigen Themen aber in ganz grundlegende Entscheidungen. Da geht das natürlich nicht, sondern da muss man immer die Hierarchiestufen einhalten. Man hat keine, keine Durchgriffsmöglichkeit und am Ende muss man auch immer. Es hängt oft auch von Personen ab. Wenn Sie jetzt einfach als Beispiel nehmen - das ist jetzt völlig wertfrei – das Stadtplanungsamt. Wenn jemand, ich sage mal, Gestaltung vor Klimaschutz geht, dann ist es manchmal sehr schwierig Kompromisse zu finden. Genau, also wir streiten immer um PV und Gründach. Das ist ein amtsinterner Konflikt. Genau da. Es gibt viele Konflikte und Klimaschutz hat nicht immer die alleroberste Priorität in den Entscheidungen. Genau. Es ist natürlich von der Verwaltungsspitze schon so vorgegeben, dass Klimaschutz ja schon eigentlich eine hohe Priorität hat. Aber auf der Arbeitsebene führt das trotzdem manchmal zu schwierigen Diskussionen, weil das nicht jeder so teilt, oder?

P1: Interessant. Und sie sagen, es gibt Schwierigkeiten. Gibt es aktuell irgendwelche Änderungen, diese Organisationsstrukturen zu verändern oder zu ergänzen, um Sachen zu verbessern?

P2: Aktuell gibt es die nicht. Es gab, ähm. Jetzt muss ich jetzt natürlich ein bisschen überlegen. Also das Dezernat, in dem unser Amt angesiedelt ist, das ist neu eingerichtet worden. Jetzt weiß ich aber nicht mehr, was der Aufhänger war und wann das genau gewesen ist. Das. Könnte ich aber noch mal recherchieren, im Nachgang Ihnen noch mal zukommen lassen. Also um einfach das Thema ein höheres Gewicht zu geben und auch um die Ämter zusammenzubündeln im Dezernat, die da relevant sind. Das ist einmal das Amt für Mobilität und Landschaft und Forstamt und Amt für Abfallwirtschaft. Die sind in den Dezernat zusammengeführt. Das war schon ein Schritt, der, wie gesagt, jetzt ein paar Jahre zurückliegt und das Thema entsprechend gewichten sollte. Und aktuell sind da keine keine Änderungen geplant.

P1: Was würden Sie ändern, wenn Sie es ändern könnten?

P2: Wenn ich das machen würde. Also, es ist, wenn man sagt, Klimaschutz hat die höchste Priorität in allen Entscheidungsprozessen, dann muss man es auch entsprechend hoch ansiedeln und vielleicht direkt als Stabsstelle beim Oberbürgermeister ansiedeln. Das könnte helfen, muss aber nicht. Wie gesagt, es hängt am Ende auch immer viel von Personen, aber das würde das noch mal abbilden. Wenn man sagt, das hat die höchste Priorität.

P1: Okay, dann vielleicht von den Strukturen mehr so zur Zusammenarbeit. Welche Mechanismen, Methoden der Kommunikation und Koordination benutzen Sie tatsächlich, um sich innerhalb der öffentlichen Verwaltung zu diesen Themen abzustimmen?

P2: Also ich sage mal; Beispiel jetzt von der Teilnahme an der Mission, was dann? So dass man natürlich dann eine AG einrichtet, die temporär tagt und dann werden alle relevanten Ämter eingeladen und es wird ein gewisser Turnus verabredet, wie oft man sich trifft und austauscht und geht mit Arbeitsaufträgen auseinander, die dann bearbeitet werden. Das sind eigentlich so und natürlich gibt es verschiedene Runden direkt beim Dezernenten oder direkt beim Oberbürgermeister, wo dann auch ein Austausch zu den Themen stattfindet. Das dann aber ist dann bedarfsabhängig. Und für die Akteure. Für die externen Akteure außerhalb der Verwaltung gibt es nur eine feste Runde Klimaschutz Aktionsgruppe, die zwei bis dreimal im Jahr tagt. (...) Dann gibt es noch ein Netz nachhaltiges Wirtschaften. Die haben einen anderen Fokus. Aber natürlich, da werden auch immer von uns Klimaschutzthemen reingespielt und werden ja so

Unternehmenchecks gemacht, Energiechecks. Also da wird dann ganz praktisch eigentlich Klimaschutz angewendet und nicht nur drüber geredet - in Anführungsstrichen.

P1: (...) Ist das ein festes, durchdachtes Steuerungsmodell oder eher so ad-hoc? Wie würden Sie da das Arbeitsmodell beschreiben? Das Kommunikation- und Koordinationsmodell?

P2: Also es ist keines da. Das ist kein Konzept, wenn Sie so wollen. Der Staat, was uns an die Hand gegeben wird, wie wir intern kommunizieren. Also es gibt, wie gesagt, ein paar feste Strukturen. Es gibt eine Runde beim Oberbürgermeister, die einmal wöchentlich tagt mit seinen Dezernenten und Amtsleitung. Dann hat jeder Dezernent mit seinen Ämtern einen Jour fixe, der 14-tägig in der Regel stattfindet und natürlich auf Arbeitsebene, also auf Amtsebene haben wir dieser diese Runden auch. Also da gibt es schon fest etabliert, wie nennt man Jour fixe genau, immer mit seiner nächst kleineren Organisationseinheit. Das gibt es. Und wenn dann solche speziellen Themen kommen, wo dann ein Austausch mit frei zu wählenden Ämtern irgendwie erforderlich ist, dann muss man das selbst aufsetzen und dazu einladen. Und genau versucht in der Regel den Oberbürgermeister dazu zu gewinnen, dass er dazu einlädt, um auch die Bedeutung zu geben, dass das entsprechend hoch bestimmt wird.

P1: Und wenn sie in dieser ganzen Sphäre an die Bedeutung von Informationstechnologie, und so weiter und so fort, denken, wie sieht es an dieser Front aus? Wird es genutzt? Wann, an welchen Punkten?

P2: Was genau meinen Sie damit? Ich sage mal so agile Methoden zum Beispiel, oder?

P1: Ja durchaus agile Methoden. Aber auch wenn Sie daran denken, welche Daten, Informationsquellen, Quellen genutzt werden, welche Programme, Software, IT, Infrastruktur, was auch immer.

P2: Ich fürchte, da sind wir noch ziemlich olz Knochen gestählt. Also wir kommunizieren hauptsächlich per E Mail und tauschen uns darüber aus. Also was wir jetzt ganz neu haben, ist Climate View. Das ist ein Tool zur Sichtbarkeit, zur Sichtbarmachung von unserem Klimaschutzplan. Und um auch die Entwicklung der CO2 Emissionen und die Wirkung von Maßnahmen darzustellen, das ist auch öffentlich zugänglich. Das ist das erste Tool was wir einsetzen. Wie gesagt, um unsere Arbeit mal nach außen zu demonstrieren mit einem richtigen Touch. Natürlich haben wir Internetseiten und kommunizieren unsere Pressemitteilung über alle Kanäle, die es gibt. Aber das ist jetzt mal ein neues Tun. Und ansonsten ist die interne Kommunikation innerhalb der Verwaltung immer noch Email und Papier. Tatsächlich.

P1: Okay, dann vielleicht mal gesamtheitlich diese Domäne Governance und Steuerung betrachtet: Wenn Sie über die größten Herausforderungen oder wenn Sie darüber nachdenken, was sind die größten Herausforderungen im Bereich Governance und Steuerung rund um die Klimaneutralitätswende?

P2: Eine größere Herausforderung ist schon... Ich sag mal so, eine Verwaltung auf ein Ziel einzuschwören, sei es jetzt... Und natürlich, wenn es dann widersprüchliche Ziele sind. Also wenn man jetzt hört Biodiversität, da gab es auch eine internationale Konferenz, die haben auch am Ende formuliert, das ist das Wichtigste. Das Wichtigste ist, was es zu bewahren gilt oder zu schützen gilt die Biodiversität. Das steht natürlich dann schon ein bisschen im Kontrast zum Klimaschutz. Das muss man nicht gegeneinander ausspielen. Aber genau das muss eben abgewogen werden. Und das darauf, dann einen gemeinsamen Weg zu finden bei diesen verschiedenen Herausforderungen, das ist sicherlich das Schwierigste.

P1: (...) Und wie sehen Sie, dass diese Herausforderungen vielleicht bewältigt werden können?

P2: (...) Am Ende. Also da wir ein hierarchisches System sind, muss es immer von oben runter gelebt werden.

P1: (...) Und sie sehen nicht das Potenzial, das System selber tatsächlich irgendwie zu verändern, anzupassen?

P2: (...) In dieser Hinsicht sehe ich keine Ansätze dafür. Also selbst diese agilen Methoden. Wir haben ein Projekt gestartet, da sollte die Entwicklung einer Konversionsfläche agil entwickelt werden und es sollten aus jedem Amt Freiwillige sich melden, die an dieser Gruppe mitarbeiten. Und da wir wie gesagt noch diese Silos haben, war das sehr schwierig. Es hat... Man muss fast sagen, es hat nicht funktioniert. Vielleicht war es auch falsch eingeführt. Es war sicherlich falsch eingeführt, aber. Es ist dann immer schwierig, wenn dann einmal so ein Projekt so schiefgegangen ist, dann ist dieses agile arbeiten auch ein bisschen verbrannt dadurch Inhalte weg.

P1: (...) Okay. Dann wäre das glaube ich der Block Governance und Steuerung. Ich würde dann mal weitergehen in den Bereich Verwaltungskapazitäten. Hm, vielleicht da als Einstiegsfrage. Wie würden Sie die Rolle, die die öffentliche Verwaltung in Heidelberg im Bereich Wandel zur Klimaneutralität einnimmt, charakterisieren? Was ist die Rolle der Stadt in dieser Sache?

P2: Sie ist Vorbild. Sie ist Anreizgeber. Also wir fördern ja auch, wir setzen Förderprogramme auf. Und ja, schon, Vermittler auch.

P1: Hat die Stadt alle Fähigkeiten, Prozesse, Ressourcen, die notwendig sind, um dieser Rolle gerecht zu werden?

P2: (...) Die Fähigkeit haben wir ganz sicher. Wir haben also das mit dem Vorbild. Das funktioniert auf jeden Fall. Wir haben gute Beschlüsse. Eine verwaltungsintern also, dass zum Beispiel unser Fuhrpark sukzessive auf emissionsfreie Fahrzeuge umgestellt wird und nachhaltige Beschaffung, Catering, dergleichen. Also die Vorbildrolle nehmen wir wahr und sind glaube ich auch gut darin, das nach außen zu kommunizieren. Wir. Haben auch gute Konzepte vorliegen. Wir haben Förderprogramme, die wir Bürgerinnen und Bürgern anbieten können, um sich im Klimaschutz selbst zu engagieren. Aber man muss eben auch sehen Wenn eine Stadt klimaneutral werden will, ist die Verantwortung der Kommune eingeschränkt. Also. Also wir beeinflussen ja nur maximal wahrscheinlich 50 %, um von den nicht direkt von den Emissionen aber es ist unser Einflussbereich ist eben nicht bei 100 %. Es hängt auch an nationaler Gesetzgebung und internationaler Gesetzgebung und auch am Entscheidungswillen der Bürgerinnen und Bürger. Wenn ich ein Förderprogramm zur rationellen Energieverwendung aufsetze, wo ich die Dämmung von Häusern fördere, dann bedarf es immer noch der Entscheidung der Bürgerinnen und Bürger, das auch in Anspruch zu nehmen und das Haus wirklich im Passivhausstandard zu dämmen und nicht. Einfach so zu belassen. Und von daher, Die Einflussmöglichkeiten, die wir haben, nutzen wir gut und voll aus. Aber wie gesagt, sie ist nicht allumfassend. Allgemein gesprochen.

P1: Welches sind die wichtigsten Fähigkeiten, Prozesse, Ressourcen, die Sie brauchen für die Klimaneutralität?

P2: Ich war jetzt gerade kurz abgelenkt, weil hier eine Nachricht auf meinem Bildschirm aufgepoppt ist. Können Sie es noch einmal wiederholen?

P1: Wenn Sie allgemein darüber nachdenken welches sind denn die wichtigsten Fähigkeiten, Prozesse und Ressourcen für die Klima und Neutralitätswende?

P2: Ja also, natürlich braucht es... brauchen wir Finanzen. Wenn es jetzt darum geht, Windenergie irgendwie hier zu realisieren, zusammen mit den Stadtwerken, dann muss das finanziert werden. Also es braucht Geld. Es braucht auch politischen Mut, um Entscheidungen politische Entscheidungen zu treffen, die vielleicht unbequem sind. Also im Bereich Mobilität haben Sie das alle Nase. Wenn Fahrstreifen weggenommen werden, für Radwege oder Parkplätze weggenommen werden, weil Sicherheit eben auch eine Rolle spielt, dann sind das unangenehme Entscheidungen. Oder Parkgebühren erhöhen und dergleichen mehr Maßnahmen zu ergreifen, die das Autofahren vermiesen. Dann braucht es da Mut und das ist mal mehr, mal weniger vorhanden, als wir. Eigentlich sind

die Mehrheit im Gemeinderat schon ganz gut, dass man denken könnte, der Mut sollte da sein, aber auch da will man ja wiedergewählt werden. Und dann reicht der politische Mut manchmal nicht.

P1: Und wenn Sie jetzt all diese Überlegungen mit dem vorgeschriebenen Stand vergleichen, welche Fähigkeiten Prozessorressourcen fehlen Ihnen in der öffentlichen Verwaltung für die Klimaneutralitätswende?

P2: Also es raucht tatsächlich... Am Ende brauchen wir immer auch mehr Personal, weil wenn... Also unser Gemeinderat ist sehr großzügig, auch uns Geld mit Geld auszustatten. Wir sind da in der glücklichen Lage. Aber wir brauchen natürlich auch Personal, das Geld auszugeben. Also wenn wir zum Beispiel Quartierskonzepte verfolgen, das muss beantragt werden, es muss bearbeitet werden und dafür braucht es einfach Personal. Und wenn wir sehen, wie viele Stadtteile, wie viel Quartiere wir haben, dann - wenn ich das hochrechne - da fehlt es da einfach. Das geht immer beispielhaft für ein ein Quartier, jetzt beispielsweise. Aber es geht nicht über die ganze Stadt verteilt und dann fehlt leider Personal. Also auch wenn Heidelberg finanziell ganz gut dasteht, fehlt es trotzdem auch uns an Mitteln. Wenn wir jetzt eine kommunale Wärmeplanung machen und den Fernwärmeausbau voranbringen wollen wir haben hier Fernwärme in Heidelberg schon dann weitere Stadtteile mit Fernwärme versorgen wollen, dann stehen ja dann Beträge im Raum. Das kann natürlich eine Stadt nicht alleine stemmen. Also man muss manchmal sehr kurzfristig sehr viel Geld auf einmal in die Hand nehmen, um dann Dinge auch einmal umzusetzen; Die dann aber langfristig vielleicht ewig - ewig nicht aber langfristig - halten, wie das Fernwärmenetz beispielsweise.

P1: Welche Möglichkeiten sehen Sie, diese Defizite anzugehen? Diese Kapazitäten auszubauen?

P2: Also wir haben mit den Deutschen Städten auch einen Austausch mit der Bundesregierung. Und da haben wir das adressiert. Also das ist schon Aufgabe des Bundes und der Länder, die Kommunen da mit Mitteln auszustatten.

P1: Okay, dann würde ich von hier aus mal in den dritten Block, wo es eher um Prozesse in Umsetzung geht. Allgemein gesprochen: Wie verändert Heidelberg administrative Prozesse und Routinen im Kontext von diesem Übergang zur Klimaneutralität? (...)

P1: (...) Ähm, wie handhaben Sie die des Identifizieren von dieser Art von Problem intern? Wie wird entschieden, welche Kapazitäten fehlen, welche Kapazitäten aufgebaut werden müssen?

P2: Das legt im Grunde der Dezernent fest; Also wobei jetzt kommunale Werbeplanung um das Beispiel mal zu nehmen ist eine Pflichtaufgabe. Wind ist jetzt gekommen, weil da hat das Land eben diese Ausschreibung gemacht. Also es ist nicht immer steuerbar. Und es kommen neue Pflichtaufgaben dazu. Die müssen angegangen werden. Natürlich. Da hat es dann auch eine neue Personalstelle gegeben. Wind kam dann relativ plötzlich und so werden die Prioritäten manchmal auch relativ kurzfristig immer wieder mal neu gesetzt.

P1: Gibt es irgendwelche Fähigkeiten, Prozesse etc., die sie gerade aktiv entwickeln?

P2: (...) Also wirklich entwickeln? Nicht im Rahmen der der Wärmeplanung. Gibt es auch eine [...] ... Jetzt soll eine Bürger Informationsveranstaltung stattfinden. Also Bürgerbeteiligung ist schon ein recht großes Thema. Das ist aber auch nichts, was jetzt neu entwickelt wurde, sondern immer wieder bei den Themen zur Anwendung kommt. Und wirklich neu entwickeln? Tatsächlich würde ich sagen nein.

P2: Eine schwere Frage. Wie verändern wir Prozesse? (...) Hm. (...) Also am Ende läuft es immer über, übers Gespräch oder über den [...]. Über den Austausch mit Vorgesetzten und anderen anderen Ämtern. Aber da stehe ich ein bisschen auf dem Schlauch bei der Frage. Weil wie gesagt, in meiner Wahrnehmung gibt es nicht so viele Veränderungen der Prozesse. Also natürlich, wenn so ein Dezernat neu eingerichtet wird, das ist, das ist eine politische Entscheidung, das ist etwas, über das Sie aktiv nachdenken, wie Prozesse gestaltet und verändert werden könnten, um diese Kooperation irgendwie zu verändern, zu verbessern. Da gibt es aktuell keine Aktivitäten zu nennen.

P1: (...) Und wenn Sie jetzt auf der Umsetzungsseite denken: Welche Maßnahmen haben Sie bisher ergriffen, die tatsächlich in letzter Konsequenz für den Klimaschutz, für die Klimaneutralität schon wirksam geworden sind? Schon umgesetzt worden sind?

P2: Also beispielsweise wir haben eine Energiekonzeption für kommunale Liegenschaften. Da sind Standards festgeschrieben, die über den gesetzlichen STANDARD hinausgehen. Und das schreibt ja aktuell gerade fort. Und das wird im Grunde dann noch mal wieder nachgeschärft, dass wir da, wie gesagt, über den gesetzlichen STANDARD hinausgehen. Auch wenn jemand städtische Liegenschaften erwirbt oder Grundstücke erwirbt, dann besteht die Verpflichtung, im Passivhausstandard zu bauen. Wir haben einen komplett neuen Stadtteil entwickelt, die Bahnstadt, und dieser Stadtteil ist komplett auch im Passivhausstandard entstanden. Das war, denke ich, in der Umsetzung, dass eines der wesentlichen Punkte. Und natürlich Ausbau der der Fernwärme und Ausbau der erneuerbaren Energien und Anteil der der grünen Fernwärme.

P1: (...) Sie haben gesagt, im Prozessbereich hat sich noch nicht so viel verändert. Aber wenn Sie insgesamt darüber nachdenken, wie Sie an Steuerung und Umsetzung die Klimaneutralität angeben, gibt es irgendwelche administrativen Innovationen, neue Konzepte etc., die Sie auf umgesetzt ausprobiert haben?

P2: (...) Also, was ich auf jeden Fall verändert hat, ist die Zusammenarbeit mit den Stadtwerken, also als Energieversorger hier. Obwohl die Ziele Klimaneutralität sehr sich angenommen haben und das umsetzen. (...) Bei der Wohnungsbaugesellschaft klappt die Zusammenarbeit nicht ganz so gut. Aber die Stadtwerke sind ein guter Kooperationspartner in dem Bereich.

P1: (...) Interessant. Okay, dann würde ich tatsächlich schon in den letzten Block reinspringen, wo es eher um die EU Mission für 100 Städte konkret geht. Vielleicht mal allgemein gesprochen: Seit Heidelberg dieser Mission beigetreten ist, wie hat das die Art und Weise beeinflusst, auf die Klimaneutralität diskutiert, geregelt, umgesetzt wird?

P2: Also die Teilnahme an solchen Projekten ist, bedeutet immer auch ein bisschen Rückenwind und gestärkt Argumente, dass man eben da auch in der Pflicht ist. Und gleichzeitig, nachdem wir da teilgenommen hatten, gab es ja auch den Beschluss zu dem verschärften Klimaschutzziel. Von daher ist es schon Rückendeckung. Auf jeden Fall, weil man sich eben diesem Ziel verpflichtet hat. Und das gilt für die gesamte Verwaltung und natürlich dann am Ende auch für die Stadtgesellschaft. Aber verwaltungsmäßig ist auf jeden Fall. Wird uns gleichzeitig aber auch vorgehalten. Weil die Bevölkerung hängt der Klimaschutz sehr hoch auf und zeigt immer auf uns, wir seien nicht schnell genug. Und wenn es dann aber an die eigenen Dinge geht, Beispiel Wind, dann wird's schwierig.

P1: (...) Okay. Interessant. (...) Glauben Sie, dass Heidelberg bis 2023 klimaneutral werden wird?

P2: Nein, es ist nicht zu schaffen. Es wird immer noch PKW geben, die mit Benzin rumfahren. Nicht jedes Haus wird klimaneutral sein und klimaneutral beheizt werden.

P1: Was bräuchte es, um das irgendwie doch noch hinzukriegen?

P2: Ähm, das Gebäude Energiegesetz ist ein gutes Beispiel. Also das hätte ja darauf abgezielt, bis 2030 klimaneutral zu werden. Und das hat nicht funktioniert. Und es bräuchte genau diese gesetzlichen Vorgaben. Und strengere, strengere Regeln und Gesetze. (...)

P1: Und wenn sie über diese EU Mission als Werkzeug nachdenken, um Klimaneutralität voranzutreiben. Was halten Sie davon? Als gesetzlichen Werkzeugen, als Policy Tool?

P2: (...) Also die Teilnahme an der Mission ist noch kein policy Tool, sondern ist, wie gesagt, das versuchen wir deutschen Städte ja jetzt gerade im Austausch, also im Rahmen dieses nationalen Begleitprozesses mit den Ministerien da darzulegen, wo brauchen wir gesetzliche, schärfere Vorgaben, um das Ziel wirklich umzusetzen, auch vor Ort. Also wir sind natürlich die Akteure vor Ort und wir brauchen aber eben auch die gesetzlichen Vorgaben. Und dazu hilft die Teilnahme an der Mission. Also das ist auch neu. Das hatten wir noch nie, so dass direkt Städte mit der Ministeriumsebene kommuniziert haben. Noch mal öfters über deren, über die Spitzenverbände wie Deutscher Städtetag und dergleichen. Aber nicht direkt mit den Städten. Und das ist neu und auch was Neues, dass mehrere Ministerien da an diesem Prozess beteiligt sind. Das ist auch auf Ministeriumsseite wohl neu. Normal ist das immer nur mit einem Ministerium.

P1: Könnten Sie mir ein bisschen mehr über diesen Prozess erzählen?

P2: Wir waren eingeladen von der Bundesregierung, vom Ministerium für Wirtschaft und Klimaschutz. Und ja, man wollte eben hören, genau, was wir brauchen, und hat dann aber gesagt Ja, die weitere Diskussion wird dann eben über die Spitzenverbände laufen. Und da haben wir gesagt, na ja, wir sind jetzt schon ja so ein bisschen die ausgewählte Modellstädte, die ja ein bisschen ambitionierter unterwegs sind. Und es wäre doch klüger, direkt mit uns zu kommunizieren. Und daraufhin haben wir dann Wir sind neun deutsche Städte, zwei Sprecher ausgewählt, die uns vertreten, und die sind im regelmäßigen Austausch mit dem Ministerium für... Also das Wirtschaftsministerium ist dabei, das Finanzministerium und [...] Forschung und Entwicklung. Ich habe die vollen Namen leider nicht im Kopf. Ich hoffe, Sie können das ergänzen.

P1: Das ist beim ministerialen Forum ja vollkommen normal.

P2: Und ich kenne das nicht. Ich hoffe, das verzeihen Sie mir auch. Ja, aber immer voll gegendert. Ja.

P1: Sehr schön. Und diese direkte Kommunikation mit den Ministerien, das ist jetzt ein langfristiges Arrangement?

P2: Also es gibt noch kein definiertes Ende. Aber bis auf Weiteres werden wir da auf jeden Fall im Austausch bleiben.

P1: Ja. (...) Welche Forderungen, Wünsche, Agenda Punkte versuchen Sie über diesem Kanal anzugehen?

P2: Und es sind einfach die verschiedenen Themenfelder, die da relevant sind. Das ist Ausbau erneuerbarer Mobilität, Wärmewende... Das sind so die die Oberbegriffe. Das ist

natürlich alles ein bisschen detaillierter noch aufbereitet, aber Dekarbonisierung der Fernwärme, Freiflächen PV Anlagen, Windenergieausbau Gebäudeenergiegesetz, Anforderungen daran, Baustandards. Graue Energie ist ein Thema. Also es ist schon... Wir haben da schon einen recht kleinteiligen Katalog, wo wir Unterstützung brauchen. Der erste Reflex auf Ministerialebene war: Da muss man uns Fördergelder zur Verfügung stellen. Das war es eben nicht, sondern wir konnten auch klar machen, dass es eben manchmal nicht nur am Geld fehlt; Sondern das braucht es natürlich, aber eben auch gesetzliche Verschärfungen.

P1: (...) Dann wäre das, glaube ich, der größte Teil dessen, was ich fragen wollte. Haben Sie noch irgendwelche Ergänzungen, irgendwelche Punkte zu diesem Themenbereich, die Sie anbringen würden?

P2: (...) Also es ist nach wie vor ein wichtiges Thema und die Kommunen sind schon ein wichtiger Akteur vor Ort. Und von uns erwartet man auch viel und ich denke, wir sind auch gut aufgestellt, da zu liefern und. Die Zusammenarbeit mit den Akteuren, denke ich, ist auf kommunaler Ebene sehr wichtig, aber auch. Gut organisiert. Und also in allen deutschen Städten funktioniert das eigentlich sehr gut. Wird man als Kommune als vollwertiger Gesprächspartner irgendwie auch akzeptiert? Und wir haben es jetzt sogar ganz neu, dass man proaktiv auf uns zukommt, wenn es um Beratung geht. Ausbau PV zum Beispiel auf landwirtschaftlichen Flächen oder wenn landwirtschaftliche Betriebe große Dachflächen haben, wie sie da PV realisieren können, die also, dass wir da als kompetenter Ratgeber irgendwie wahrgenommen werden. Das ist, denke ich, eine gute Entwicklung.

P1: (...) Sehr schön. Das klingt doch nach einem guten Schlusswort. Dann vielen Dank für das Interview.

E.j Klagenfurt [EN]

P1: Maybe just to start broadly and put it a bit in context: Could you briefly explain what your day-to-day work looks like and what tasks and responsibilities you have around the change to climate neutrality in Klagenfurt?

P2: Very well. I am the head of the climate and environmental protection department at the city of Klagenfurt. With a total of 26 employees currently or full-time equivalents. And we oversee with the with the team projects and measures to achieve climate neutrality for the state capital. Because our municipal utilities are also largely involved in the projects and we also work with external partners. But in addition to the project work, we also have classic environmental expert activities in-house. So it runs through my department and we coordinate the entire mobility area, including public transport. And these are the main tasks. And we are on the path to climate neutrality. We have laid this down in the Smart City Strategy, which as of today is called the Smart City Climate Strategy in version 7:00 zero. That's why I was in the City Senate today, for example, but also had to answer questions from the press. So this is a daily bread, simply to inform the stakeholders, the politically responsible people. Because to see that the relevant decisions are sustainable? UMA Because we need funding, we need and we need a mandate to be able to implement.

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P1: (...) And if you think the other way around, what capabilities? Processor resources are you perhaps lacking at the moment?

P2: (...) So we certainly still have weaknesses in the area of digitalization. And in the whole social area to do we also pant after the requirements. That is certainly human resources issue. Hmmm. (...) All the other areas could be dealt with. With good will let

I already cover. With the granny it is rather a question of directing the existing resources into the correct courses.

P1: Like could you maybe briefly elaborate on the point about digitization and what you think specifically there.

P2: (...) Uh, so digitization starts from there with. With a wide variety of hardware solutions in the public sector, i.e. broadband, 5G, WLAN or whatever you need now, in order to simply establish the appropriate tools. And (...) to create the prerequisite that, for example, autonomous driving can be implemented somewhere in a more normal way, that really good digital tools are developed, which then also bring a benefit for climate neutrality. With the Internet of Things, not at any price or for any nonsense, but simply use it where it really generates a benefit. And. And it can generate benefits for the property management itself by bringing the entire management processes onto the digital track. On the digital track bring, where one still partly very much with. Work or have to work with outdated paper methods. That networked have the resources. That to convert.

P1: What are you currently doing to build that capacity that you would still like to have?

P2: Well, I tried to convince the decision makers that you need the Man Domain Power. (...) It was built up accordingly, because in the free market West West doesn't get something like that so easily. (...) And that the video really supports the existing structures in the IT area at home in the administrative area with additional human resources. (...) But it was back-breaking work. Only if you do nothing. We are overtaken left and right and and infinite opportunities lie. So for example, we don't have the capacity right now to. To be interested in smart public lighting. Okay, we've been hearing that since Henning, where Andrea is weighing, to put on. But we still fail again and again because of the in house, but because of the lack of. Interests and and resources.

P1: (...) Then, looking at the time, I would quickly go to a question around processes. How is the city of Klagenfurt, and also you specifically, changing processes and administrative routines to manage and implement the transition to climate neutrality?

P2: (...) Hm. Well. (...) Mass is an extremely difficult question because what has to be where? Climate neutral processes? So we are yes. We are dependent on the existing structures. You can't prevent. Uh. You have to be able to prevent that. Are they the process content? And perhaps also the one or other procedural step around, to think about where there, where the contribution to climate neutrality could be. Uh, so for example, we've had a so-called climate relevance duel for a year. And that's on exasis. Relatively quickly and easily. It. A lot of leg, way too simple. But at least quickly assesses the climate

relevance of project proposals. And that is used obligatorily when it comes to decisions for a city senate. But that leads at least to the fact that then the clerk thinks about how he has to approve his project, that is the city senate, how he, if it can bring climate protection. And he does it independently. And the evaluation was done according to traffic light system. And if the traffic light shows red, that is, the evaluation shows the project is always harmful, then he comes to us and asks us what he has to do so that he can still bring the project through. And then either improve it by fulfilling certain criteria in construction projects. Or one compensates or or it does not go evenly. Of course, there is also that. And then it's up to the politicians to decide whether they want the project anyway or say, well, we'll do without. So it is better to bring about changes in this way.

P1: Very exciting, very exciting. Disappointing. Then you would have answered the next follow-up question directly with that. After a good example. Um, then maybe I would like to ask a question about the mission for 100 climate neutral and smart cities. Since Klagenfurt joined this mission, it has changed the way climate neutrality is discussed, controlled and implemented.

P2: Yes, yes, absolutely. So on a political level, definitely. But also on the external level, I'm noticing increasing interest, especially from the business community. In research, funnily enough, it's still a bit reserved or more reserved, but business is very interested in it at the moment. But. (...) What is not yet fully understood is in the in its own is in its own ranks. The. Who tend to be skeptical and say it never runs out anyway. And for what do you need it? Does Norbert so to speak only. We have already received really numerous project promotions under the title. So that already supports nona the power of persuasion. (...) But we are only at the beginning. That is. That will already.

P1: Germany then looking at the time maybe as a last question Do you think that Klagenfurt will be climate neutral by 2030.

P2: Well, certainly not. What can he do about it? When he. I say to myself for this it's a balance sheet climate neutrality. But still. And the way to get there is not that difficult. Therefore I already believe that one can create that. Is, that nothing, nothing will happen. So such stories as corona or inflation or war. Test of the beam already neat. It was once. Already already loose. I was lost by it. And that. But it is not. It takes on a momentum of its own. And once the the journey really starts and also then really all recognize, there is no way back, then it goes very quickly.

P1: And what do you think is the key to this momentum? What makes the crucial difference?

P2: Well, the key is you need, you need the critical mass, the critical mass that, that recognizes. Yeah, that's really important now and that's doable. And they want to be there now. And that doesn't have to be the majority at all. But if. If simply now large companies do not jump on the bandwagon, then. Blessing of he automatically multitude of small companies to be in the supply chain through and thus more or less the whole labor market with the messenger. And then. Then realizes that it everyone nice and that goes then. That goes then relatively quickly with that one has really initiated at the end which is then also visible and that is essential for the general population that they then also really see yes. So something changes there, even if it is only about electric buses and it is something short wind. You have to then also more rather yourself. That actually increases the quality of life. If the point is reached, then it goes faster. So it may well be that times two to the power of 20 still be far from the goal and then. And then I flip the switch and suddenly you've got it.

P1: (...) Very exciting. I think then at the end of the time, yes, we are slowly getting closer. I don't want to keep them from the next rehearing.

P2: That's exactly what I have to say. In addition the whole time horizon, one should not be so strict to oneself, if it is so goal 2030, that is not on the 31st twelfth 2030 is accounted for or so and then? And on January 1 is over. That is nonsense, but decisively this Rosi then really probably already so disturbed that there is no way back. And that one, no matter what happens. If I am then two years later climate neutral, which is much ska. That will not be the decisive thing.

P1: (...) Already. So do you have any other comments that you want to make on this topic area last?

P2: Thank you.

E.k Klagenfurt [DE]

P1: Maybe just to start broadly and put it a bit in context: Could you briefly explain what your day-to-day work looks like and what tasks and responsibilities you have around the change to climate neutrality in Klagenfurt?

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P2: (...) Uh, so digitization starts from there with. With a wide variety of hardware solutions in the public sector, i.e. broadband, 5G, WLAN or whatever you need now, in order to simply establish the appropriate tools. And (...) to create the prerequisite that, for example, autonomous driving can be implemented somewhere in a more normal way, that really good digital tools are developed, which then also bring a benefit for climate neutrality. With the Internet of Things, not at any price or for any nonsense, but simply use it where it really generates a benefit. And. And it can generate benefits for the property management itself by bringing the entire management processes onto the digital track. On the digital track bring, where one still partly very much with. Work or have to work with outdated paper methods. That networked have the resources. That to convert.

P1: What are you currently doing to build that capacity that you would still like to have?

P2: Well, I tried to convince the decision makers that you need the Man Domain Power. (...) It was built up accordingly, because in the free market West West doesn't get something like that so easily. (...) And that the video really supports the existing structures in the IT area at home in the administrative area with additional human resources. (...) But it was back-breaking work. Only if you do nothing. We are overtaken left and right and and infinite opportunities lie. So for example, we don't have the capacity right now to. To be interested in smart public lighting. Okay, we've been hearing that since Henning, where Andrea is weighing, to put on. But we still fail again and again because of the in house, but because of the lack of. Interests and and resources.

P1: (...) Then, looking at the time, I would quickly go to a question around processes. How is the city of Klagenfurt, and also you specifically, changing processes and administrative routines to manage and implement the transition to climate neutrality?

P2: (...) Hm. Well. (...) Mass is an extremely difficult question because what has to be where? Climate neutral processes? So we are yes. We are dependent on the existing structures. You can't prevent. Uh. You have to be able to prevent that. Are they the process content? And perhaps also the one or other procedural step around, to think about where there, where the contribution to climate neutrality could be. Uh, so for example, we've had a so-called climate relevance duel for a year. And that's on exasis. Relatively quickly and easily. It. A lot of leg, way too simple. But at least quickly assesses the climate

relevance of project proposals. And that is used obligatorily when it comes to decisions for a city senate. But that leads at least to the fact that then the clerk thinks about how he has to approve his project, that is the city senate, how he, if it can bring climate protection. And he does it independently. And the evaluation was done according to traffic light system. And if the traffic light shows red, that is, the evaluation shows the project is always harmful, then he comes to us and asks us what he has to do so that he can still bring the project through. And then either improve it by fulfilling certain criteria in construction projects. Or one compensates or or it does not go evenly. Of course, there is also that. And then it's up to the politicians to decide whether they want the project anyway or say, well, we'll do without. So it is better to bring about changes in this way.

P1: Very exciting, very exciting. Disappointing. Then you would have answered the next follow-up question directly with that. After a good example. Um, then maybe I would like to ask a question about the mission for 100 climate neutral and smart cities. Since Klagenfurt joined this mission, it has changed the way climate neutrality is discussed, controlled and implemented.

P2: Yes, yes, absolutely. So on a political level, definitely. But also on the external level, I'm noticing increasing interest, especially from the business community. In research, funnily enough, it's still a bit reserved or more reserved, but business is very interested in it at the moment. But. (...) What is not yet fully understood is in the in its own is in its own ranks. The. Who tend to be skeptical and say it never runs out anyway. And for what do you need it? Does Norbert so to speak only. We have already received really numerous project promotions under the title. So that already supports nona the power of persuasion. (...) But we are only at the beginning. That is. That will already.

P1: Germany then looking at the time maybe as a last question Do you think that Klagenfurt will be climate neutral by 2030.

P2: Well, certainly not. What can he do about it? When he. I say to myself for this it's a balance sheet climate neutrality. But still. And the way to get there is not that difficult. Therefore I already believe that one can create that. Is, that nothing, nothing will happen. So such stories as corona or inflation or war. Test of the beam already neat. It was once. Already already loose. I was lost by it. And that. But it is not. It takes on a momentum of its own. And once the the journey really starts and also then really all recognize, there is no way back, then it goes very quickly.

P1: And what do you think is the key to this momentum? What makes the crucial difference?

P2: Well, the key is you need, you need the critical mass, the critical mass that, that recognizes. Yeah, that's really important now and that's doable. And they want to be there now. And that doesn't have to be the majority at all. But if. If simply now large companies do not jump on the bandwagon, then. Blessing of he automatically multitude of small companies to be in the supply chain through and thus more or less the whole labor market with the messenger. And then. Then realizes that it everyone nice and that goes then. That goes then relatively quickly with that one has really initiated at the end which is then also visible and that is essential for the general population that they then also really see yes. So something changes there, even if it is only about electric buses and it is something short wind. You have to then also more rather yourself. That actually increases the quality of life. If the point is reached, then it goes faster. So it may well be that times two to the power of 20 still be far from the goal and then. And then I flip the switch and suddenly you've got it.

P1: (...) Very exciting. I think then at the end of the time, yes, we are slowly getting closer. I don't want to keep them from the next rehearing.

P2: That's exactly what I have to say. In addition the whole time horizon, one should not be so strict to oneself, if it is so goal 2030, that is not on the 31st twelfth 2030 is accounted for or so and then? And on January 1 is over. That is nonsense, but decisively this Rosi then really probably already so disturbed that there is no way back. And that one, no matter what happens. If I am then two years later climate neutral, which is much ska. That will not be the decisive thing.

P1: (...) Already. So do you have any other comments that you want to make on this topic area last?

P2: Thank you.

E.1 Leipzig [EN]

P1: Oh, that looks good. Thank you. As a little introduction or to establish some context, could you maybe briefly explain what your day-to-day work is like and how your usual tasks and responsibilities pay into the shift towards climate neutrality?

P2: [NAME] my name. I'm an energy and climate change coordinator for the city. Now since 2016, so been overseeing the energy and climate change process for quite a while. The topic really took off in 2019 with the proclamation of the climate emergency in Leipzig. As a result, a unit has also been established Unit for sustainable development and climate protection, also with an increase in staff. We warn against it to two. We now have eight people in the core unit and six satellite units in the individual operational departments. Frahm Yes, and manage the energy and climate protection process with six fields of action, over 120 measures and an investment sum of over 300 million euros together with the Leipzig Group, which is more or less the city group, i.e. the 100 percent subsidiary of the city of Leipzig. And this ranges from the expansion of renewable energies to the expansion of cycle paths, as well as many education and awareness campaigns, i.e. a very broad spectrum of measures in energy generation, mobility transition, nutrition, agriculture, public relations, municipal buildings, i.e. many sectors, which we will perhaps also discuss in further detail. Last year, we were awarded the EU's 100 climate-neutral and smart cities mission. I also have this with me on the table with colleagues from the Digital City department. And of course there's a lot of coordination to be done with the departments, with other departments, in order to set up a sustainable climate city contract by next spring. Which is very ambitious, because we don't have any funds or extra personnel for it. So this is running virtually parallel to the implementation process of our regular energy and climate protection program.

P1: Very exciting. I was able to address a lot of topics there that I would have come back to anyway. Let's maybe start with the last one you mentioned the state contract Climate City already? Yes. Could you maybe go into a little bit more detail about what the status is there and the plan?

P2: So it's like that, our energy and climate protection program has actually dealt with measures that have, uh yes, the city administration itself and just the Leipzig group concerns, consisting of public utilities, waterworks and the transport companies and just the city administration with its seven and a half thousand employees and with the climate city contract we now want to look beyond these uh, yes, to think outside the box and activate even more players, be it a university hospital, other large hospitals here in the city, companies, the private sector, even educational institutions that are not directly municipal. Um, the Diakonie, the churches. In other words, there are many players in the

city who are already involved in climate protection or who have set themselves ambitious goals and are combining them in the Climate City Agreement, so to speak, in order to present a kind of roadmap to climate neutrality for the entire city by 2030. That's the goal and clearly the focus is on the private sector. We have very, uh yes, small-scale business structure in the city. We don't have any large DAX corporations or corporate headquarters here in Leipzig. This means that we have to deal with many small and medium-sized companies, some of which have already embarked on the path to climate neutrality and are also using this as a marketing tool and also to retain employees and also to acquire capital for their business activities.

P1: And beyond the Climate City Contracts, what are the frameworks that are used in Leipzig to manage the climate neutrality process?

P2: We have an umbrella brand Leipzig das Klima bewusst. Everything that we do in terms of campaigns or infrastructure is collected there. And that is our brand, so to speak, in order to communicate to the citizens. Um. Yes, and of course it is subdivided. Depending on the sector, there are also smaller events. If I think of the food sector or something like that. But it's all included under this label, and then of course it's also included in the departments. So when a bike path is opened or something like that, it is also linked to the climate protection process. Even our transport companies, which are now running on 100% green electricity, are aggressively promoting the issue of climate protection. And there is also a link to the municipal climate protection campaign. And we are also working a lot with civil society players. Friedrichs for Future, all the subgroups Omas for Future Parents for Future. There are an incredible number of groups that have developed from this and with these, yes, they also receive municipal funding for certain projects. Um and so that we also use that. The potential that exists there in terms of civic engagement and is available in the city.

P1: Perfect. Then from here, I would first go over the Governance, Steering and Coordination team block. Maybe in general terms, which organizations, organizational units, offices, etc. are responsible for steering and implementing climate neutrality and?

P2: This is the Sustainable Development and Climate Protection Unit here. Um. Although this just, as already mentioned, with six satellite offices, so its own climate protection manager in the departments. That is the Office for Transport and Civil Engineering, the Office for Economic Development, the Office for Urban Green Areas and Waters, the Urban Planning Office, the Office for Economic Development. Um, who have I forgotten now? The Office for Environmental Protection. They all have their own climate protection manager, as does the main office. So everything that has to do with procurement. And these are our field offices, so to speak, or they communicate climate

protection activities to the departments and also help shape and organize measures there. And the overall control of the process lies with us here in the Sustainable Development in Climate Protection department, which was set up in 2021.

P1: (...) So, how would you say you communicate and coordinate between all these actors internally around the issue of climate neutrality?

P2: (...) There are project structures for different topics. Let's now take municipal heat planning out of the equation, where there is the transformation vehicle climate neutrality in the heat sector. There is a group with the city planning office, with the data, with the data management in the city administration and also with the municipal utilities around such a large project. So to steer. So that, um. So there is also in the transport sector and in others. (...) It is appreciated and also in other sectors and fields of action. That exactly. (...) Yes, so there is no overall coordination, but these are individual components and they have individual project structures and working groups, because of course there are always different groups of people. Who work on other topics.

P1: And how do these structures arise in each case? Is it ad hoc? Or is there a concrete governance [...]

P2: For each project, project coordinators are appointed for the topics and then a separate project structure is created. So, they are created at the moment when the contract is awarded or when the project is pulled on board, so to speak. Then there are responsibilities as to who has project coordination.

P1: And this project coordination is usually with you in the unit or somewhere else?

P2: this is exactly what lies here with our unit.

P1: (...) And if they think now less about internal, but more about external coordination and communication, so for example with other cities, other levels of government and so on, how we handled that.

P2: Well, at the EU level, a lot of that goes through the international cooperation department, that is, everything that concerns Europe Cities. Mayor of Leipzig, now president of Eurocities, the European cities network. Everything that happens at the state and federal level in the area of climate protection and energy, that's also up to us. So when it comes to the technical issues, also the preparation in the German Association of Cities, that's up to us. And the European level is dealt with by the International Cooperation Department.

P1: You. (...) To what extent would you say you are dependent and on other levels of government and other actors when it comes to climate neutrality?

P2: Very, because the municipal budget is. Yes. Finally. We've had a coronary anemia. We have a lot of refugees to take in the city. There are many mandatory tasks that, that need to be done in the growing city, from providing school and daycare places. Yes, providing mobility services. So a city, a municipal budget, can only have a very limited effect on this. So just in terms of motivation for redevelopment activities in the private sector. We have a large stock of Gründerzeit buildings with a very diverse ownership structure. The city can only raise awareness. But financial incentives are out of the question. The municipal budget is simply not sufficient for that. That is the task of the federal government. And the ramp-up of electromobility and the provision of infrastructure is also a federal task. That it is then again at the municipal level together with our network operators and the municipal utilities.

P1: (...) Very exciting. And maybe to come back to another governance issue When you think about reporting and oversight structures like that at your unit, but also in public administration in general yes, like us, How does reporting and controlling work around climate neutrality?

P2: We have implementation reports and final reports every two years. They always refer to the previous biennial budgets. And there we report to the city council as well as to the interested public what measures have been implemented. And where there is a lack of either financial resources or human resources to implement certain measures. To implement. And that is actually our communication tool. So there is also about the greenhouse gas balance. It is based on the individual sectors that we collect in the climate planner according to the BISCO STANDARD. That is exactly our monitoring instrument. And then, of course, there is also internal quasi measures monitoring. But in the direction of the public, this is already the authoritative document.

P1: What do you do internally?

P2: Of course, he interviewed the measures in more detail. When we sit together with the departments, it is of course then discussed internally again in more detail, where the, where the measures quasi in the implementation, what it still needs for this. And when it comes to public communication, we naturally also want a positive perception of this energy and climate protection process, and we also like to focus on successes that have worked well.

P1: (...) Me. Then I want to want to address two very specific aspects around governance, steering, etc. How does Leipzig use financing mechanisms to manage the transition to climate neutrality?

P2: What mechanisms do you mean?

P1: Financial and funding mechanisms? Financial incentives? Financial steering?

P2: Good question, because within the framework of the EU project we are also required to acquire private capital and integrate it into the urban infrastructure projects. We are not practiced in that as a city administration. In other words, public-private partnerships and the involvement of large investment companies or major investors in urban infrastructure. There is simply a lack of expertise, including in our municipal treasury or the finance department. No one really dares to get involved and has no experience in this area. Our municipal utilities are a bit more experienced, but that's only to a certain extent. Normally, this is just normal borrowing to realize projects, but not now. There are no other financial instruments being used now. At least I'm not aware that now really also on the capital market or so. As from funds or so quasi projects are co-financed with it. But that's what you need to leverage the effect of public money and to bring a multiple of the investment sum into the city. Would one have to actually every euro. Uh public money again with 9 € private capital lever, in order to be able to provide simply the enormous investment sums. And then it also requires the personnel to plan and implement infrastructure projects and then to get them approved in an administrative procedure and then to implement them structurally.

P1: (...) Very interesting. Maybe then directly as a follow-up question to that. Which weakness? Certain knowledge, qualification, personnel you would then need in this area. And do anything to build that up practically. Like.

P2: I think we have enough strategic personnel, which he is also on the way so in the coordinating area. What we need is really technical engineering staff to implement concrete measures. That starts with redesigning intersection areas bike lanes, installing renewable energy on training, daycare, buildings, expertise in energy efficient construction of public buildings. These are all areas where it is really about the very concrete projects implementation. And there is simply skilled personnel in demand and they consider, I think, the city as an employer now not necessarily as a priority. They also like to work in the private sector. At real estate companies, project developers. That's not where the city is now. Uh, yes, is not at the top of the ranking of the best employers for such a target group. When I think of civil engineers and architects, who are simply needed to design public buildings in a sustainable way. But have enough people who develop

concepts and strategies and develop the measures. But there is a lack of people who can actually put this into practice.

P1: (...) This tape and the second area. Before we talk more about capacity, I actually have some more questions. There would be more about the role of information technology How does Leipzig use information technologies? - In this sphere: transition to active neutrality.

P2: Together with our Digital City Unit. If now many. Yes digitize data as well. We are trying to create digital twins of energy generation, transport systems, in order to simply have a better overview and also to allow projects to be carried out more efficiently, especially if it is with external partners, when I think of municipal heating planning. Of course, this is all intermingled with casting applications. Yes, energy potential, estimation, demand, analyses. Of course, all of this has to be done digitally. And the municipality is also required to use analog data, be it from the consumption of public buildings, where we still have janitors who read the meter in the boiler room every three months and enter it in an Excel spreadsheet. There simply needs to be much greater digitization with smart meters, also in order to be able to take measures directly on the monitor. So we have given an example. Last winter, the public administration was urged to reduce room temperatures and the temperature of swimming pools as part of the gas shortage or gas crisis. Um, we can't really say what percentage of energy this has really saved us, because we simply don't have the data to do this, because we would have to read every building, every swimming pool, every infrastructure without a meter. This is not held centrally. There is an annual statement and that's it. We can't say what percentage of energy we effectively saved last winter through these measures. We are also talking about city lighting. The illumination of historic buildings and tourist attractions. Yes. Then it becomes clear that this is actually also a. There are still many steps necessary to make this data collection visible on a dashboard in an automated way and to create a certain transparency.

P1: And again, the question of what does it take in the field to make that happen? And are they in the process of building that capacity somehow?

P2: Well, it's clearly money and personnel. If I want to replace all analog measuring points with smart meters, then that's a question of priority. I have to provide the personnel and then also build up an IT infrastructure in order to be able to adequately process the generated data and simply make it usable. And there are simply other priorities at the moment. It's about making school buildings, the windows tight, bringing the sanitary facilities up to standard, and there's the issue of energy, monitoring and so on. That's the addition you make then. Yes, when everything else is running perfectly.

P1: (...) Very exciting. If you think now about this whole sphere that we talked about. Where it's about steering and coordinating climate neutrality in Leipzig. What would you say are the biggest challenges that Leipzig is facing? Warmth.

P2: Heat. The heat turnaround is very clear. Unsolved problem. Where? 1/3 of our city is supplied with district heating, which is currently gas-based. The remaining 2/3 are significantly gas supplied and there is no master plan yet how to supply a large city with 600,000 inhabitants with renewable energy in the heat sector. Is the focus now on large heat pumps, on green hydrogen? Um, yes, there are many technological options. Yes, but there are still many, many unknowns. I think the electricity sector is well under control in Germany, and rightly so. That's, I think, where everybody is also relying on simply the expansion of renewables at the federal level to go ahead. But with the electrification of many other sectors, such as mobility and heating, the demand for renewable energies is also increasing immensely. But as a city, we also have a big land problem, because the moment we talk about integrating renewable energies, we inevitably always come to the question of the land where the renewable energies will be placed. And there is simply a big city like Leipzig. We don't have 1,000 hectares left to install solar thermal and solar power plants, not to mention wind turbines, because the distance between them is insufficient in an urban area anyway, which means heat, electricity and, of course, transport. Urban mobility. Um. A lot has happened in recent years, including the attractiveness of cycling and public transport. But there is still a lot of work to be done in order to really develop the modal split in the direction of eco-mobility. This is not done with individual measures involving the expansion of 20 kilometers of bike lanes per year. That means more, more control, parking space management, charging infrastructure for e-mobility. All these building blocks must be interlinked. So these are the three sectors. And then, of course, there is also the issue of private consumption, private eating habits, and travel habits. But of course this also has a very strong impact on the private habits of citizens. And local politicians don't want to get their fingers burned. That.

P1: And now when you think specifically about governance steering, what are the biggest challenges in that area?

P2: (...) Well, it's always about the interests. Weighing up also within such a city administration. The topic of climate neutrality is by far not the number one priority for every department. That's just the way it is. Yes, that's simply the way it is. We don't yet have the compass to ensure that everyone is pulling in the same direction. And if economic development is designed to generate quantitative growth with jobs, regardless of the sector, and whether that is climate-friendly or not, it doesn't matter. The main thing is that we have. We create jobs in this city. Then that's not a sustainable growth strategy

for those for the economy. And that's just conflicting goals yes, with many other goals. So is the issue of affordable housing, energy retrofits, displacement, gentrification of entire neighborhoods. If I want to encourage energy-efficient refurbishment, I automatically have higher rents as a consequence, which are then demanded. And that simply involves many, many interests and conflicting goals in a city administration that has to meet a very broad spectrum of goals. But it is precisely the issue of social Yes, who? Who bears the costs of the climate protection? The climate protection measures? Steadily rising ticket prices for public transportation, which hits the socially weaker classes hard. Because if you're driving a company car anyway, you're not really interested in public transport prices. But if I want more frequent service, more interlinking and more streetcar infrastructure, then that has to be financed somehow. And that is usually at the expense of those who can't afford it or shouldn't be able to afford it. If you know what I mean.

P1: Yes, and what would you say is needed? What do you need to address these governance control issues?

P2: Well, that is also the signal from, uh, from higher political levels. So both from the state level, where we are relatively weakly positioned in Saxony, in the area of climate protection up to the federal political level, that there simply yes the support, financial and personnel kind is just guaranteed. We still have climate protection as a municipal, voluntary task. There is no, no, no sanction mechanism if we do not achieve our climate protection goals. If you compare it with the issue of air pollution control, where there are very clear targets for soot particles and nitrogen, there are a number of measuring stations for these pollutants in the air. And if they are breached, then there are fines. Or the city has to impose driving bans for certain classes of vehicles. We don't have anything like that in climate protection. So we simply don't have the legal basis. Um, yes, the basis for implementing this in the city administration is really binding. If, in the next election period, the next mayor thinks that a department for sustainable development and climate protection is not politically desirable, then he can abolish the department. No one will help him. It is not an obligatory task like the environment, nature conservation, water, or a water authority. These are legally binding tasks that the city has to fulfill. Emission protection, the examination of energy efficiency standards or so is now none, none. Not a mandatory task for the municipality. That's a voluntary one. There. Voluntary task area like culture or club promotion or other areas. And if so much importance is attached to this topic at the federal and European level, then it must also be legally anchored at the municipal level and the corresponding personnel resources must be made available. Because although there are twelve of us working here now in the climate protection area, other organizational structures are by far. We are equipped with four times the number or

the power of this personnel structure, but we are also responsible for mandatory areas of municipal administration. So there. If you really take this topic seriously, you have to hire 203,100 people for this topic and those who deal with it in operational business. You can't do that with twelve people. I managed that for a major city with over half a million inhabitants.

P1: Exciting. And asked the other way around What would you say is the biggest success in Leipzig when it comes to the governance and coordination climate of climate neutrality in the end?

P2: The big success is the energy and climate protection program with the Yes measures fields already mentioned and also the investment sums. Um, €300 million sounds like a lot of money at first. But if I convert that into infrastructure, into district heating, into the expansion of renewable energies, into the mobility sector and purchase e buses and streetcars, then €300 million is also there. It's a certain amount, but it's also not enough to really take this path to climate neutrality realistically by 2030 or 2040. That's where we need four times this, this investment sum. That was the idea. EU Commission had once dropped the sum within the framework of the EU project. 1 billion € per 100,000 inhabitants. Um, as costs. I think that's still far too low, because we're actually talking about the. Yes, the sum can be spent well, I think. Only for the building renovation and those who have the infrastructures for the for the heat transformation. And there we haven't talked about the transport sector yet. And if I really want to implement public transport as the backbone and as the transport form in the urban area next to bicycle and pedestrian transport, then I just need huge investments. So, and those. We can't provide those as a city, and we can't provide them through our LAPD, which is the city corporations. Not generate, that doesn't work. And that is also a very clear criticism of such EU programs. You can't ask a city to set up a climate protection contract that is supposed to show the roadmap to climate neutrality by 2030. But you don't give any human or financial resources to the city. It doesn't work that way. That. Yes then is really that the word climate neutrality, until whatever year is a marketing tool. Is. (...) But this is also seen by many German cities, so by many cities that now also participate in the take part in the EU mission. Um, there are already yes restrained reactions to it, one must say so.

P1: You? (...) Very exciting, very exciting. Then, also with regard to the time, I would now switch over to the topic area of administrative capacities. You already said a little bit about that and maybe briefly jump in again in this area with another perspective. When you think about the transition to climate neutrality in Leipzig, how would you define the role of the city administration in this?

P2: Is a central player as a clear energy consumer, as a pioneer in the area with municipal buildings, with municipal public procurement. But you also have to see that the city administration as a whole only causes 2% of the CO₂ emissions of the entire city. So if we really want to become climate-neutral as a whole city, then I also have to address the other 98%. And these are the private households, property owners, private companies, yes, which simply cause the greatest, the greatest savings potential or now also the greatest greenhouse gas emissions. And there, the city is a hinge between the population and also has a lot. Yes, in the topic of public participation, public awareness yes there a value. But the citizens of this city are now also not daily on Leipzig on the road and inform themselves about municipal websites, Yes, about investments or how they make their private mobility or renovation decisions. There the city is also now not. Not the first address.

P1: And what would you say? What skills, processes, resources does Leipzig need to fulfill this role? Very important are.

P2: (...) Yes, well, I have already mentioned that. One needs the personnel on the strategic conceptual level, there we are well positioned as a city. But there is a lack in the operational implementation of the projects. We need much more practical know-how. This starts with the upgrading of roof areas for PV. Yes, bike paths, planning, simply the practical implementation of the projects in the administration because only with the formulation of the concept and the adoption in the city council then actually begins the actual climate protection work. That is only printed paper. And we need a lot more capacity. And that then takes place in the specialist departments. In a civil engineering office, I need 25 people who are only concerned with bike paths, not just two. And that's what I need in the PV sector, on municipal roofs, etc. This can be spelled out in every single measure. And without these personnel capacities, we will simply not be fast enough in the implementation of measures to even come close in seven years. On the path to climate neutrality.

P1: And I'll say in a perfect world, what capabilities, processes, and resources does Leipzig have to actively address or optimally map climate neutrality?

P2: We have a very well-informed, but also very motivated civil society, which also supports many processes of the city with incentives. That's something that I don't think you have in all big cities. As a city, we are also trying to use this offensively and to involve them in our processes. Um. Yes, and I think yes. Transformation of the transport sector and the heating sector. I think we are in the good midfield of German cities, and there are certainly cities that are already further along. But this is a point that urgently needs to be driven forward in the next few years. And urban policy has also clearly declared that there

must be a move away from the car-oriented city. And ultimately, many urban planning processes will have to be rethought.

P1: Relax. Uh, we've already mentioned a few points where capacities of various kinds are lacking. What is Leipzig doing to build these needed capacities?

P2: Question This is also a budget question and a question of staffing, of growth, also of the city government with the general population growth in the city. We've grown by 100,000 residents in the last ten years. You don't necessarily see that number, that increase now in city government. So there it is also simply in budgeting, budgeting and personnel planning. If you take the issue of climate protection seriously, then you have to take it up a notch in terms of personnel resources for the issue. And that. It's a matter of setting priorities in local politics as to how the issue is anchored. But as I said at the beginning, there are many other municipal tasks that also have to be performed. In the last two or three years, the municipality has been very busy fighting the pandemic. We have had many refugee movements, also from Eastern Europe, from Ukraine, who have to be cared for here, who have to be educated, who simply have to be provided for socially. These are all burdensome tasks. Yes, in the municipal budget and also in the human resources. And that. (...) That is simply a fact. And that is all limited. And there. If you take climate neutrality seriously, you have to show much stronger growth, especially in terms of personnel resources. I don't think there's that much financial tension at the moment, at least not now. But we simply don't get many funds for projects implemented and transported to the citizenry because we simply don't have the personnel resources. When tenders are made. Projects have to. Well, you know how it is. Maybe it would also be EU funding projects, funding, management. These are all processes that require a lot of capacity. And for that, they need expert staff.

P1: (...) Is there anything that your unit is doing on that front to, for example, any initiatives or active strategic building of such human resources?

P2: We are fighting for such personnel resources to be implemented and anchored in the departments. Um, yes, that goes from the subsidy management that one puts on there central exhibits. Uh, yes. All the way to the practical civil engineer, who understands sustainable construction and who also integrates renewable energies into buildings. These are all topics that older female employees in particular do not necessarily have on their radar. And that also has something to do with a generational change within a city administration: whether I think about such topics right away and simply set the priorities correctly.

P1: (...) And how would you say. Do you or the Leipzig city administration generally determine what administrative capacities are missing at any given time? Is there some kind of strategy, system, etc.?

P2: Nope. It's an allocation mechanism. The departments register how many personnel resources they need. And they get a certain share of that. But it's not like that, that it's a kind of wishful thinking and you register ten positions and you get ten. If you get 1/3 of that, I think you're well on your way.

P1: I say. Exciting. There's any capacities, capacities that their unit is actively working in right now. Any particular ones that are knowledge or skills that they're trying to build?

P2: Yes, we try, for example, at the Office for Schools and the Office for Sports, which are in charge of many properties, to implement technical know-how there as well. Yes, to implement technical know-how, simply because these are the building owner offices, which ultimately also prepare the tender and then commission the construction activities. If they do not have the know-how for sustainable and energy-efficient buildings, then a school will not be planned and commissioned in this way. This means that you need staff in these offices. This means that you need staff in these offices who know how to design a tender and what technical requirements I simply have to place on certain buildings. Because these buildings will be standing in our city for at least 80 years, and they actually already have to be climate-neutral in new construction. Otherwise, I have to think about how to make them climate-neutral.

P1: Do you have that knowledge internally of how such RFPs should be designed?

P2: Limited. Limited. That's a. (...) There's also a lot of know-how needed.

P1: (...) I am curious. Uh, then maybe very briefly two more questions about processes and implementation before we jump into our topic block. Time. (...) Do you have, or how are you currently changing processes and routines within the city administration in the context of climate neutrality? Man.

P2: We have testing scheme on climate, on climate impact of templates. That is, everybody who brings in a template or does every subject is required to look at the climate impact of that particular template and answer that. Or some questions. And that is also the signal to the city council whether certain measures will be financed or implemented. And that is a kind of traffic light system, where you then determine whether this proposal has a corresponding climate impact, or what effect does it have? (...) The statement criterion is then also rather limited. So if I now have to simply renovate a road bridge because it is dilapidated, then the administrator is forced to set the traffic light to red there.

But because it causes greenhouse gas emissions on the one hand in the gray energy of the building substance itself and on the other hand in the subsequent effect. But how do I deal with this as a municipality? Do I then stop this? Do I stop this bridge renovation? Is the road then virtually closed or what? What do I do with it? That. And of course, every new school building and every new administrative building also induces massive greenhouse gas emissions. But I can't put all urban development on hold and say we're not going to get involved anymore. That's just it. There is such a test scheme, but the political consequence or the consequence for the projects, that is not spelled out, what then happens when the traffic light is on red there.

P1: (...) Booth. Then. Maybe this question here. Um. If you have an example, or. Are there any administrative innovations or process innovations or simply experimental or innovative mechanisms and procedures that are being applied in the governance of climate neutrality change?

P2: (...) Is that not the end of it now. Well, we do a lot of digital work now. Digital participation as well. Digital workshops. Digital participation tools. Um, but these are rather the tools, the contents have remained the same. That's why. Yes, I don't really know what innovative governance structures they're working on now, which are, in the final analysis, working groups, meetings and workshops, whether they take place in analog or digital form. Yes, you don't do any harm to the content, but that's really the bottom line, that's just administrative action, because there are also well-rehearsed processes that run like such projects and also decision-making mechanisms in the direction of the city council, how templates are created, how certain committees are served, simply in this democratic legitimation process. Of course, these are also very formal processes that have to be adhered to. I can't do that now. Yes, the degree of innovation in these voting processes is also limited.

P1: (...) And. Then I would maybe in the last days just briefly talk about the mission for from the daycare center. Since Leipzig joined this mission. What has changed? In how climate neutrality in the city are controlled, regulated, implemented and discussed.

P2: We have set up a transition team, consisting of four employees for these EU missions, who are now also helping to steer the participation process. We have a bit of a discrepancy that we just set our original energy and climate protection program 2040 as climate neutrality. One year later, we are taking part in an EU mission that has set this target as early as 2030, 2010 years earlier. This is also difficult in terms of communication, because you have these different targets, and that makes this target somewhat arbitrary. I can write any number of years behind it, but it's not really scientifically proven or how this transformation path is supposed to succeed, yes, it's usually not spelled out. And that's

where we often get the feedback from citizens or companies: Well, what is it now, how? How did you do it? You can't say we're going to be climate-neutral in 2022, and then in 2023, we'll do it ten years earlier? Um, there. You have to be very careful that you don't jeopardize your credibility as a local government by constantly coming up with new annual figures and targets and, ultimately, the billfold. Well, that's like the international climate conferences even before that they now do not take at face value that you can really implement or realize and then. Then you have an arbitrariness and also no more credibility. In the climate protection process.

P1: (...) Exciting. Maybe just as a quick follow-up question. You mentioned the transition team. Could you explain a little bit more about that, what the role of that is, to call for failure like that?

P2: Exactly. We control the process both in the city administration and with the companies. We now have external participation support from a company and are trying to set up this topic in the development of the climate city process climate city contract as goal-oriented as possible in order to obtain commitments from the actors. For this climate city contract with financing with greenhouse gas reduction potential. Exactly. And that is now our task for the next three quarters of a year, in order to have this climate protection contract finalized as far as possible next spring.

P1: Relaxed. (...) And you also mentioned that these. Annual targets 2030 2040 bring in a certain arbitrariness. Do you think then that Leipzig will be able to become climate neutral by 2030? No.

P2: Not from a professional perspective. So that's just unrealistic. If you see that the new construction of a streetcar line takes at least 15 years in the whole planning and implementation process. Then it's unrealistic to become carbon neutral now in seven years. Unless we take billions in hand and offset all our emissions. But then I wouldn't say that's one. In which yes a real climate neutrality of this. And also if look at the transport system the building sector. That is too ambitious. (...) Nevertheless, I understand the mechanism of the EU Commission, that you do not want to dilute the target by simply 2014 because that of course does not put the pressure also on the municipal decision-making levels. It is rather a politically set target, but it has nothing to do with a with a technical reality. From there. Politically, I would say, to maintain the pressure to act, correctly chosen, but technically not achievable.

P1: (...) Okay. That almost sounds like a good closing.

P2: Or not? Depending.

P1: It's a conclusion, after all.

P2: Yes, exactly.

P1: Very nice. Do you have anything else on this whole topic around governance? Capacities for climate neutrality that you will want to raise?

P2: Nope. Just the statement again. If you really take this seriously, this issue, and you have to get on the bike there, then it's not achievable with the current staff capacities and it's not feasible. Then one lies there also politically into the bag. And yes, at some point you also have your back to the wall in relation to the population. If you have to explain why you're not on track until 2030 or 2040, whatever the case may be. And if you take this seriously politically, then you have to give the municipalities support and the freedom to make decisions. Then we can't get bogged down here in discussions about speed limit zones and the establishment of bicycle lanes and who has what approval powers under the Road Traffic Act, but then the municipalities must be able to decide independently and also be able to decide which roads are to be completely freed from car traffic. In the current administration, this will not work quickly enough in the cascade.

P1: Is that something - still as a last follow-up question - that is actively being done in your unit, that you are trying to expand your formal authorizations in some way.

P2: Yes, also the departments. Of course, this is also addressed politically via the German Association of Cities. But there is also a lot of work to be done there. This also applies, for example, to the question of monument protection versus the installation of renewable energies. There too, there are major legal obstacles. And especially when I have a large number of listed buildings, I need a solution. I have to be able to explain to the citizens somehow how they can get a PV system on the roof of a listed building, because otherwise a large part of the roofs cannot be used. And that is currently still the case.

P1: (...) Alright, then from my side we will actually at the end of this interview.

E.m Leipzig [DE]

P1: Oh, das sieht gut aus. Danke. Als kleine Einführung oder um einen Kontext zu etablieren, Könnten Sie vielleicht kurz erklären, wie Ihr Arbeitsalltag aussieht und wie Ihre üblichen Aufgaben und Verantwortlichkeiten auf den Wandel zur Klimaneutralität hin einzahlen?

P2: [NAME] mein Name. Ich bin ein Energie und Klimaschutzkoordinator für die Stadt. Jetzt bereits seit 2016, betreut also schon eine ganze Weile den Energie- und Klimaschutzprozess. So richtig Fahrt aufgenommen hat das Thema 2019 mit der Ausrufung des Klimanotstands in Leipzig. Infolgedessen hat sich auch ein ein Referat gegründet Referat für nachhaltige Entwicklung und Klimaschutz, auch mit einer personellen Aufstockung. Wir warnen davor zu zweit. Mittlerweile sind bei acht Personen im Kernreferat und haben noch sechs Satellitenstellen in den einzelnen operativen Fachämtern. Frahm Ja, und steuern eben den Energie- und Klimaschutzprozess mit sechs Handlungsfeldern, über 120 Maßnahmen und eine Investitionssumme von über 300 Millionen € zusammen mit der Leipziger Gruppe, der die quasi der Stadtkonzern, also der 100-prozentige Tochter der Stadt Leipzig ist. Und das reicht eben vom Ausbau erneuerbarer Energien über den Radwege Ausbau auch viele Bildungs- und Sensibilisierungskampagnen, also ein sehr breites Spektrum an Maßnahmen der der Energieerzeugung Mobilitätswende, Ernährung, Landwirtschaft, Öffentlichkeitsarbeit, kommunale Gebäude, also viele Sektoren, auf die wir jetzt vielleicht im weiteren Gespräch dann auch noch eingehen werden. Letztes Jahr haben wir den Zuschlag bekommen für die EU-Mission der 100 klimaneutralen und smarten Städte. Das habe ich auch mit mir bei mir mit auf dem Tisch mit Kolleginnen vom Referat Digitale Stadt. Und da gibt es natürlich auch viele Abstimmung zu führen mit den Fachämtern, mit anderen Dezernaten, um dort einen tragfähigen Klimastadtvertrag bis nächstes Frühjahr aufzulegen. Was sehr ambitioniert ist, weil wir dafür weder Finanzmittel noch extra Personal Mittel haben. Also das läuft quasi parallel zum Umsetzungsprozess unseres regulären Energie- und Klimaschutzprogramms.

P1: Sehr spannend. Da konnte ich schon viele Themen angesprochen, auf die ich ohnehin zurückgekommen wäre. Beginnen wir vielleicht mal mit dem letzten Sie haben den Staatsvertrag Climate City schon erwähnt? Ja. Könnten Sie vielleicht noch nochmal ein bisschen mehr ins Detail gehen, was da der Stand der Dinge ist und der Plan?

P2: Also es ist so, dass unser Energie und Klimaschutzprogramm sich eigentlich mit Maßnahmen beschäftigt haben Hat was die, äh ja, die Stadtverwaltung selbst und eben die Leipziger Gruppe betrifft, bestehend aus Stadtwerken, Wasserwerken und den Verkehrsbetrieben und eben die Stadtverwaltung mit ihren siebenhalbttausend

Mitarbeitern und mit dem Klima Stadt Vertrag möchten wir nun also über diese äh, ja, da über den Tellerrand hinausschauen und noch mehr Akteure aktivieren, Sei das ein Uniklinikum, andere große Kliniken hier in der Stadt, Unternehmen, Privatwirtschaft, auch Bildungseinrichtungen, die jetzt nicht direkt städtisch sind. Ähm, die Diakonie, die Kirchen. Also viele Akteure in der Stadt, die Klimaschutz schon jetzt betreiben oder sich ambitionierte Ziele gesetzt haben und das quasi bündeln in dem Klima Stadt Vertrag, um so eine Art Roadmap zur gesamtstädtischen Klimaneutralität bis 2030 aufzuzeigen. Das ist das Ziel und klarer Fokus liegt eindeutig auf der Privatwirtschaft. Wir haben sehr, äh ja, kleinteiliges Wirtschaftsstruktur in der Stadt. Wir haben keine großen DAX-Konzerne oder Konzernzentralen hier in Leipzig. Das heißt, wir haben es mit vielen kleinen und mittelständischen Unternehmen zu tun, von denen sich aber einige auch schon auf den Weg zur Klimaneutralität begeben haben und das auch nutzen für sich als Marketinginstrument und auch, um Mitarbeiter zu binden und auch, um Kapital zu akquirieren für ihre Geschäftstätigkeiten.

P1: Und jenseits von dem Climate City Contracts, was sind die Rahmen Frameworks, die in Leipzig genutzt werden, um den Klimaneutralitätsprozess zu steuern?

P2: Wir haben eine Dachmarke 'Leipzig ist Klimabewusst'. Dort sammelt sich quasi alles drunter, was wir an Aktionen machen oder was auch an Infrastruktur umgesetzt wird. Und das ist quasi unsere Marke, um in die Bürgerschaft hineinzukommunizieren. Ähm. Ja, und es gliedert sich natürlich auf. Je nach Sektor quasi sind es zum Teil auch kleinere Veranstaltungen. Wenn ich jetzt an den Ernährungsbereich denke oder so genau. Aber das wird alles unter diesem Label gefasst und wird dann natürlich auch in die Fachämter hinein. Also wenn jetzt ein Radweg eröffnet wird oder so, dann wird das quasi auch mit dem Klimaschutzprozess verknüpft. Auch unsere Verkehrsbetriebe, die jetzt zu 100 % mit Ökostrom unterwegs sind, werben offensiv mit dem Klimaschutzthema. Und da gibt es auch die Verknüpfung quasi zur städtischen Klimaschutzkampagne. Und des Weiteren sind wir noch viel mit zivilgesellschaftlichen Akteuren unterwegs. Friedrichs for Future, die die ganzen Untergruppen Omas for Future Parents for Future. Es gibt ja unheimlich viele Gruppen, die sich daraus entwickelt haben und mit diesen, ja, die erhalten auch städtische Förderungen für bestimmte Projekte. Ähm und so, dass wir das auch nutzen. Das Potenzial, was dort an zivilgesellschaftlichem Engagement quasi vorherrscht und in der Stadt verfügbar ist.

P1: Perfekt. Dann würde ich von hier aus erstmal den Teamblock Governance, Steuerung und Koordination übergehen. Vielleicht ganz allgemein gesprochen Welche Organisationen, Organisationseinheiten, Ämter etc. sind für die Steuerung und Umsetzung von Klimaneutralität verantwortlich und?

P2: Das ist hier das Referat Nachhaltige Entwicklung und Klimaschutz. Ähm. Obwohl dieses eben, wie schon angesprochen, mit sechs Satellitenstellen, also einer eigenen Klimaschutzmanagerin in den Fachämtern. Das ist das Amt für Verkehrs und Tiefbau, die Wirtschaftsförderung, das Amt für Stadtgrün und Gewässer, das Stadtplanungsamt, die Wirtschaftsförderung. Ähm, wen habe ich jetzt vergessen? Das Amt für Umweltschutz. Die haben alle einen eigenen Klimaschutzmanager, das Hauptamt auch noch. Also alles, was um Beschaffungswesen geht. Und das sind quasi unsere Außenstellen bzw. die stellen die Klimaschutzaktivitäten in die Fachämter hinein kommunizieren und dort auch Maßnahmen mitgestalten und organisieren. Und die Gesamtsteuerung des Prozesses liegt aber hier bei uns im Referat Nachhaltige Entwicklung im Klimaschutz, welches 2021 eingerichtet wurde.

P1: (...) Also, wie würden Sie sagen kommunizieren und koordinieren Sie sich zwischen all diesen Akteuren intern um das Thema Klimaneutralität?

P2: (...) Es gibt zu unterschiedlichen Themen Projektstrukturen. Greifen wir jetzt mal die kommunale Wärmeplanung raus, wo es um den Transformationsfahrzeug Klimaneutralität im Wärmebereich gibt. Gibt es eine Gruppe mit Stadtplanungsamt, mit den Daten, mit der Datenhaltung in der Stadtverwaltung und eben auch mit den Stadtwerken um so ein Großprojekt. Also zu steuern. Also das, ähm. So gibt es das auch im Verkehrsbereich und in anderen. (...) Er Würdigung und eben auch in anderen Sektoren und Handlungsfeldern. Das genau. (...) Ja, also da gibt es keine Gesamtkoordination, sondern das sind einzelne Bausteine und die haben dann eben einzelne Projektstrukturen und Arbeitsgruppen, weil es natürlich auch immer unterschiedliche Personenkreise sind. Die an anderen Themen arbeiten.

P1: Und wie entstehen diese Strukturen jeweils? Er ad-hoc? Oder gibt es ein konkretes Governance [...]

P2: Für jedes Projekt werden Projektkoordinatoren benannt für die Themen und dann wird daraus eine eigene Projektstruktur geschaffen. Also, da die entstehen in dem Moment, wo, wo man den Zuschlag erhält oder wo das Projekt quasi an Bord gezogen wird. Dann gibt es Verantwortlichkeiten, wer da Projektkoordination hat.

P1: Und diese Projektkoordination liegt im Regelfall bei Ihnen im Referat oder woanders?

P2: genau dies liegt hier bei unserem Referat.

P1: (...) Und wenn sie jetzt weniger an die interne, sondern eher an die externe Koordination und Kommunikation denken, also zum Beispiel mit anderen Städten, anderen Regierungsebenen usw. und so fort, wie wir das gehandhabt.

P2: Na auf EU-Ebene läuft das viel übers Referat internationale Zusammenarbeit, also alles was Europe Cities angeht. Leipziger Oberbürgermeister, jetzt Präsident von Eurocities von dem europäischen Städte Netzwerk. Alles was auf Landes und Bundesebene sich abspielt im Bereich Klimaschutz und Energie, das liegt dann auch bei uns. Also wenn es um die fachlichen Themen geht, auch die Vorbereitung in den Deutschem Städtetag, dass das liegt bei uns. Und die europäische Ebene wird eher vom Referat Internationale Zusammenarbeit bespielt.

P1: Sie. (...) Inwiefern würden Sie sagen, sind Sie abhängig und von anderen Regierungsebenen und anderen Akteuren, wenn es um Klimaneutralität geht?

P2: Sehr, weil der städtische Haushalt ist. Ja. Endlich. Wir haben eine Coronabanämie hinter uns. Wir haben eine Vielzahl an Flüchtlingen aufzunehmen in der Stadt. Es gibt viele Pflichtaufgaben, die, die in der wachsenden Stadt zu erfüllen sind, von der Bereitstellung von Schul und Kitaplätzen. Ja, Mobilitätsangebote bereitzustellen. Also, da kann eine Stadt, ein städtischer Haushalt, nur sehr begrenzt darauf einwirken. Also gerade was auch die Motivation für Sanierungstätigkeiten im privaten Bereich angeht. Wir haben großen Bestand an, an Gründerzeitbauten mit einer sehr diversen Eigentümerstruktur. Da kann die Stadt ja nur sensibilisieren. Aber finanzielle Anreize sind dort ausgeschlossen. Dafür reicht einfach der der städtische Haushalt nicht. Das ist Aufgabe des Bundes. Und genauso ist der Hochlauf der Elektromobilität eine bundesdeutsche Aufgabe und die Bereitstellung der Infrastruktur. Dass es dann wieder auf kommunaler Ebene gemeinsam mit unseren Netzbetreibern und den Stadtwerken.

P1: (...) Sehr spannend. Und um vielleicht noch auf ein anderes Governance Thema zurückzukommen Wenn Sie so an die Berichterstattung und Aufsichtsstrukturen bei Ihrem Referat, aber auch in der öffentlichen Verwaltung allgemein denken ja, wie wir, Wie funktioniert Berichterstattung und Controlling rund um Klimaneutralität?

P2: Wir haben Umsetzungsberichte und Abschlussberichte im Zweijahresrhythmus. Die beziehen sich dann immer auf die zurückliegenden Doppelhaushalte. Und dort berichten wir gegenüber dem Stadtrat als auch der interessierten Öffentlichkeit, was für Maßnahmen umgesetzt wurden. Und wo es eben hapert, entweder am finanziellen Ressourcen oder auch an personellen Ressourcen, um gewisse Maßnahmen umzusetzen. Und das ist eigentlich unser das Kommunikationsinstrument. Also da wird auch über die Treibhausgasbilanz berichtet nach den einzelnen Sektoren, die wir erheben im Klima-Planer gemäß BSKO STANDARD. Genau das ist unser Monitoringinstrument. Und dann gibt es dazu natürlich auch noch interne Quasi Maßnahmen Monitoring. Aber in Richtung Öffentlichkeit ist das schon, dass das ja das maßgebliche Dokument.

P1: Was machen Sie intern?

P2: Er Interview natürlich die Maßnahmen nochmal detaillierter aufbereitet. Wenn wir mit den Fachämtern zusammensitzen, wird natürlich dann intern noch mal detaillierter besprochen, woran die, woran die Maßnahmen quasi in der Umsetzung, was es dafür noch braucht. Und als in der öffentlichen Kommunikation möchte man natürlich auch, dass da ja auch eine positive Wahrnehmung dieses Energie und Klimaschutzprozesses und da wird jetzt ja, werden auch gerne Erfolge in den Vordergrund gestellt, die, die gut geklappt haben.

P1: (...) Ich. Dann will ich noch zwei ganz bestimmte Aspekte rund um Governance, Steuerung etc. ansprechen wollen. Wie nutzt Leipzig Finanzierungsmechanismen, um den Übergang zur Klimaneutralität zu steuern?

P2: Welche Mechanismen meinen Sie?

P1: Finanz und Finanzierungsmechanismen? Finanzielle Anreize? Finanzielle Steuerung?

P2: Gute Frage, weil wir ja auch im Rahmen des EU-Projektes dazu angehalten sind, auch privates Kapital mit zu akquirieren und mit in die städtischen Infrastrukturprojekte zu integrieren. Da sind wir als Stadtverwaltung nicht geübt drin. Also das, was Public Private Partnerships angeht und jetzt quasi auch große Fondsgesellschaften oder Großinvestoren jetzt in städtischer Infrastruktur mit zu beteiligen. Da fehlt es einfach an Know how, auch bei uns, bei der städtischen Kämmerei oder bei dem Finanzdezernat. Da traut sich niemand so richtig ran und hat da auch keine Erfahrung damit. Unsere Stadtwerke, die sind da ein bisschen geübter drin, aber das ist auch nur ansatzweise so. Also normalerweise ist das eine ganz normale Kreditaufnahme, um Projekte zu realisieren, aber jetzt keine... Da werden jetzt keine anderen Finanzinstrumente benutzt. Zumindest ist mir das nicht bekannt, dass jetzt wirklich auch am Kapitalmarkt oder so aus Fonds oder so quasi Projekte damit mitfinanziert werden. Aber das braucht man, um diesen Hebel von öffentlichem Geld einfach dort die Wirkung zu hebeln und ein Vielfaches der der Investitionssumme einfach in die Stadt zu bringen. Müsste man eigentlich jeden Euro öffentlichem Geldes nochmal mit 9 € privatem Kapital hebeln, um einfach die die gewaltigen Investitionssummen bereitstellen zu können. Und dann bedarf es aber eben auch der dem Personal, um Infrastrukturprojekte zu planen und umzusetzen und in einem Verwaltungsverfahren auch dann genehmigt zu bekommen und auch baulich dann umzusetzen.

P1: (...) Sehr interessant. Vielleicht dann direkt mal als Folgefrage dazu. Welche Schwäche? Bestimmte Wissen, Qualifikation, Personal bräuchten Sie dann in diesem Bereich. Und tun Sie irgendwas, um das praktisch aufzubauen. Wie.

P2: Ich glaube, wir haben genug strategisches Personal, was er so im koordinierenden Bereich auch unterwegs ist. Was wir brauchen, ist wirklich technisch ingenieurtechnisches Personal, um konkrete Maßnahmen umzusetzen. Das fängt an bei der Umgestaltung von Kreuzungsbereichen Fahrradwege, Installation von erneuerbaren Energien auf Schulung, Kita, Gebäude, Know-how beim energieeffizienten Bauen öffentlicher Gebäude. Das sind alles Bereiche, wo es wirklich um die ganz konkrete Projekte Umsetzung geht. Und da ist einfach Fachpersonal gefragt und die erachten, glaube ich, die Stadt als Arbeitgeber jetzt nicht unbedingt als prioritär. Die, die arbeiten auch gerne im Privatbereich. Bei Immobilienkonzernen, Projektentwicklern. Da ist die Stadt jetzt nicht. Äh, ja, steht nicht ganz vorne auf der Rangliste der der besten Arbeitgeber für so eine Zielgruppe. Wenn ich an Bauingenieure Architekten denke, die man einfach braucht, um auch öffentliche Gebäude nachhaltig zu gestalten. Aber haben genug Leute, die Konzepte und Strategien entwickeln und die Maßnahmen entwickeln. Aber es fehlt an Leuten, die die das dann wirklich auch in die Praxis umsetzen.

P1: (...) Dieses Band und der zweite Bereich. Bevor wir nochmal mehr über das Thema Kapazitäten reden, da habe ich tatsächlich noch einige weitere Fragen. Da wäre eher nach der Rolle von Informationstechnologie Wie nutzt Leipzig Informationstechnologien? - in dieser Sphäre: Übergang zur aktiven Neutralität.

P2: Zusammen mit unserem Referat Digitale Stadt. Wenn jetzt viele Daten auch digitalisieren. Wir versuchen da digitale Zwillinge zu erstellen von Energieerzeugung, Verkehrssystem, ... um dort einfach ja besseren Überblick zu haben und auch da Projekte einfach effizienter durchführen zu lassen, gerade wenn es dann mit mit externen Partnern ist, wenn ich an die kommunale Wärmeplanung denke. Das ist natürlich alles mit GIS-Anwendungen verschnitten. Ja, Energiepotenzialabschätzung, Bedarfsanalysen. Das muss natürlich alles digital stattfinden. Und da ist die Stadtverwaltung eben auch angehalten, bisher noch analog geführte Daten - sei das vom Verbrauch öffentlicher Gebäude, wo wir teilweise noch Hausmeister haben, die da alle drei Monate mal im Heizungskeller den Zähler ablesen und das in Excel Tabelle eintragen - zu digitalisieren. Da braucht es einfach eine viel stärkere Digitalisierung mit Smart Metern, auch um Maßnahmen direkt am Monitor zu können. Also wir haben ein Beispiel geben. Jetzt im letzten Winter wurde ja die öffentliche Verwaltung auch angehalten Zimmertemperatur abzusenken, die Temperatur von Schwimmbädern zu reduzieren im Rahmen der Gasmangellage oder Gaskrise. Ähm, wir können nicht wirklich sagen, wie viel Prozent

das uns jetzt wirklich eingespart hat an Energie, weil wir schlicht die die Datengrundlage uns dafür fehlt, weil wir das ja man müsste jetzt im Endeffekt bei jedem Gebäude, bei jedem Schwimmbad, bei jeder Infrastruktur ohne Zähler Ablesung machen. Das wird so zentral nicht vorgehalten. Es gibt eine Jahresabrechnung und damit war's das. Wir können nicht sagen, wie viel Prozent Energie wir im letzten Winter effektiv durch diese Maßnahmen eingespart haben. Da geht es ja dann auch um Stadtbeleuchtung. Das Anstrahlen von historischen Gebäuden und touristischen Gebäuden. Ja. Da wird dann klar, dass das eigentlich da auch eine. Da noch viele Schritte notwendig sind, um diese Datenerfassung auch automatisiert auf einem Dashboard ersichtlich zu machen und auch eine gewisse Transparenz zu schaffen.

P1: Und auch hier wieder die Frage Was braucht es in dem Bereich, um das möglich zu machen? Und sind sie dabei, diese Kapazitäten irgendwie aufzubauen?

P2: Na ja, das ist ganz klar Geld und Personal. Wenn ich alle analogen Messstellen durch Smartmeter ersetzen möchte, dann, dann ist das eine Frage der Priorität. Ich muss dafür das Personal bereitstellen und dann auch eine IT Infrastruktur aufbauen, um das ja die erzeugten Daten auch adäquat weiterverarbeiten zu können und die einfach auch nutzbar zu machen. Und da gibt es momentan einfach andere Prioritäten. Da geht es darum, Schulgebäude, die Fenster dicht zu machen, die sanitären Anlagen auf den Stand zu bringen und da ist das Thema Energie, Monitoring und so. Das ist der Zusatz, den man dann macht. Ja, wenn alles andere perfekt läuft.

P1: (...) Sehr spannend. Wenn Sie jetzt an diese gesamte Sphäre denken, über die wir gesprochen haben. Wo es um Steuerung und Koordinierung von Klimaneutralität in Leipzig geht. Was, würden Sie sagen, sind die größten Herausforderungen, den Leipzig gegenübersteht? Wärme.

P2: Wärme. Die Wärmewende ist ganz klar. Ungelöstes Problem. Wo? 1/3 unserer Stadt ist Fernwärme versorgt, die momentan noch gasbasiert ist. Der die restlichen 2/3 sind maßgeblich gasversorgt und es gibt bisher noch keinen Masterplan, wie man eine Großstadt mit 600.000 Einwohnern mit erneuerbarer Energie im Wärmebereich versorgen möchte. Ob man da jetzt auf große Wärmepumpen setzt, auf grünen Wasserstoff? Ähm, ja, da sind viele technologische Optionen stehen da im Raum. Ja, aber da sind noch viele, viele Unbekannte. Ich glaube, den Strombereich, den hat man ja auch Bundesdeutsche zu Recht gut im Griff. Das ist, glaube ich, das, wo sich auch alle darauf verlassen, dass einfach der Ausbau der erneuerbaren Energien auf Bundesebene voranschreitet. Aber mit der Elektrifizierung von vielen anderen Sektoren Mobilität und Wärmebereich steigt da natürlich auch der Bedarf der erneuerbaren Energien immens an. Aber da haben wir als Stadt auch ein großes Flächenproblem, weil in dem Moment, wo

wir über die Integration erneuerbarer Energien reden, kommen wir zwangsläufig immer an die Fragestellung der Flächen Wo werden die erneuerbaren Energien platziert? Und da ist einfach eine Großstadt wie Leipzig. Wir haben jetzt nicht 1000 Hektar übrig, um Solarthermie und Solaranlagen zu installieren, ganz zu schweigen von Windkraftanlagen, weil dort die die Abstandsflächen sowieso nicht ausreichen in einem urbanen Gebiet, das heißt Wärme, Strom und natürlich Verkehr. Urbane Mobilität. Um. Da hat sich in den letzten Jahren einiges getan, auch in der Attraktivität des Radverkehrs, des ÖPNV. Aber um dort maßgeblich wirklich den Modal Split in Richtung Umweltverbund zu entwickeln, da ist auch noch sehr viel, sehr viel zu tun. Das ist jetzt nicht mit Einzelmaßnahmen mit 20 Kilometer Radweg Ausbau im Jahr getan. Das heißt, da braucht es mehr, mehr Steuerung, Parkraumbewirtschaftung, Ladeinfrastruktur für Emobilität. All diese Bausteine müssen ineinandergreifen. Also das sind die drei Sektoren. Und dann noch zusätzlich natürlich das Thema privater Konsum, private Ernährungsverhalten, Reiseverhalten. Aber da greift man natürlich schon sehr stark auch in die privaten Lebensgewohnheiten der Bürgerinnen und Bürger ein. Und da möchte sich die Kommunalpolitik auch nicht die Finger dran verbrennen. Das.

P1: Und wenn Sie jetzt speziell an den Bereich Governance Steuerung denken, was sind in dem Bereich die größten Herausforderungen?

P2: (...) Na ja, es geht immer um die Interessen. Abwägung auch innerhalb von so einer Stadtverwaltung. Das Thema Klimaneutralität ist jetzt bei weitem nicht bei jedem Fachamt die Priorität Nummer eins. Das ist schlicht. Ja, ist einfach so. Also da haben wir ja noch nicht den Kompass, dass alle da am gleichen Strang ziehen. Und wenn eine Wirtschaftsförderung eher darauf ausgelegt ist, quantitatives Wachstum zu erzeugen mit Jobs, egal in welchem Sektor und ob das klimafreundlich oder nicht, ist erst mal egal. Hauptsache wir haben. Wir kreieren Jobs in dieser Stadt. Dann ist das keine nachhaltige Wachstumsstrategie für die für die Wirtschaft. Und das steht einfach im Zielkonflikt Ja, zu vielen anderen Zielen. Genauso das Thema bezahlbarer Wohnraum, energetische Sanierung, Verdrängung, Gentrifizierung von ganzen Stadtteilen. Wenn ich energetische Sanierung anreizen will, habe ich automatisch in der Folge auch höhere Mietpreise, die dann abgefordert werden. Und das birgt einfach viele, viele Interessen und Zielkonflikte in einer Stadtverwaltung, die halt ein sehr breites Spektrum an Zielen gerecht werden muss. Aber gerade das Thema soziale Frage Ja, wer? Wer trägt die Kosten der Der Klimaschutz? Der Klimaschutzmaßnahmen? Stetig steigende Ticketpreise im ÖPNV, was maßgeblich sozial schwächere Schichten quasi trifft. Weil wer sowieso mit seinem Dienstwagen unterwegs ist, den interessieren die ÖPNV Preise reichlich wenig. Wenn ich aber eine stärkere Vertaktung und Verzahnung und Ausbau von Straßenbahninfrastrukturen möchte, dann muss das irgendwie finanziert werden. Und das

geht dann meist zulasten auch derer, die sich das eigentlich nicht leisten können oder nicht leisten können sollten. Wenn Sie wissen, was ich meine.

P1: Ja, und was würden Sie sagen, ist notwendig? Was brauchen Sie, um diese Governance Steuerungs Probleme zu bewältigen?

P2: Na ja, das ist auch das Signal von, äh, von höheren politischen Ebenen. Also sowohl von der Landesebene, wo wir in Sachsen relativ schwach aufgestellt sind, im Bereich Klimaschutz bis hin zur bundespolitischen Ebene, dass dort einfach ja die Unterstützung, finanzielle und personelle Art eben gewährleistet wird. Wir haben Klimaschutz immer noch als kommunale, als freiwillige Aufgabe. Es gibt keinen, keinen, keinen Sanktionsmechanismus, wenn wir unsere Klimaschutzziele nicht erreichen. Wenn man es vergleicht mit dem Thema der Luftreinhaltung, wo es ganz klare Zielvorgaben gibt für Rußpartikel Stickstoff, da gibt es etliche Messstationen für diese Schadstoffe in der Luft. Und wenn die gerissen werden, dann gibt es Strafzahlungen. Oder die Stadt muss Fahrverbote für gewisse Fahrzeugklassen verhängen. So was haben wir im Klimaschutz überhaupt nicht. Also es fehlt einfach die, die auch die rechtliche. Ähm ja Grundlage das wirklich verbindlich auch in der Stadtverwaltung zu zu implementieren. Wenn in der nächsten Wahlperiode der nächste Oberbürgermeister meint, ein Referat für nachhaltige Entwicklung Klimaschutz ist politisch nicht gewollt, dann kann er das Referat auch wieder abschaffen. Da wird ihm keiner. Es ist eben keine verpflichtende Aufgabe wie Umwelt, Naturschutz, Wasser, eine Wasserbehörde. Das sind rechtlich bindend verbindliche Aufgaben, die die Stadt zu erfüllen hat. Emissionsschutz, die Prüfung von Energieeffizienzstandards oder so ist jetzt keiner, keiner. Keine verpflichtende Aufgabe für die Kommune. Das ist eine freiwillige. Da. Freiwilliges Aufgabenfeld wie Kultur oder Vereinsförderung oder andere Bereiche. Und wenn man dem Thema auf Bundes und auf europäischer Ebene so viel Bedeutung zu beimisst, dann muss man das auch kommunal rechtlich verankern und auch die entsprechenden Personalressourcen bereitstellen. Weil wir arbeiten zwar jetzt hier zu zwölf im Klimaschutzbereich, aber andere Organisationsstrukturen sind bei weitem. Mit dem Vierfachen oder der Potenz dieser dieser Personalstruktur ausgestattet und erledigen aber halt Pflichtbereiche der der kommunalen Verwaltungen. Also da. Wenn man das Thema wirklich ernst nimmt, dann muss man hier 200-300 Leute für das Thema einstellen und die sich, die sich damit im operativen Geschäft auch beschäftigen. Das kriegt man mit zwölf Leuten nicht. Ich gewuppt für eine Großstadt mit über eine halbe Million Einwohner.

P1: Spannend. Und andersherum gefragt Was würden Sie sagen, ist der größte Erfolg in Leipzig, wenn es um die Steuerung und Koordinierung Klima der Klimaneutralität am Ende geht?

P2: Der große Erfolg ist das Energie- und Klimaschutzprogramm mit den schon erwähnten Ja Maßnahmen Feldern und auch den Investitionssummen. Ähm, 300 Millionen € hört sich erst mal viel Geld an. Aber wenn ich das in Infrastrukturen umsetze, in Fernwärme, in den Ausbau erneuerbarer Energien, in den Mobilitätsbereich und davon e Busse und Straßenbahn anschaffe, dann sind 300 Millionen € auch da. Es ist eine gewisse Summe, aber es ist auch nicht genug, um diesen Pfad zur Klimaneutralität wirklich realistisch bis 2030 oder 2040 zu gehen. Da brauchen wir das Vierfache dieser, dieser Investitionssumme. Das war die Idee. EU-Kommission hatte im Rahmen des EU Projektes mal die Summe fallen gelassen. 1 Milliarde € pro 100.000 Einwohner. Ähm, als Kosten. Das halte ich noch als viel zu gering, weil wir eigentlich über die. Ja, die Summe kann man glaube ich schon gut ausgeben. Nur für die Gebäudesanierung und die, die die Infrastrukturen für die für die Wärmetransformation haben. Und da haben wir noch nicht über den Verkehrsbereich geredet. Und wenn ich den ÖPNV wirklich als Rückgrat und als die Verkehrs form im urbanen Raum neben Rad und Fußverkehr implementieren will, dann brauche ich einfach gewaltige Investitionen. So, und die. Die können wir als Stadt nicht bereitstellen und auch durch unseren LAPD, also den Stadtkonzernen nicht. Nicht erwirtschaften, das funktioniert nicht. Und das ist auch eine ganz klare Kritik an solchen EU-Programmen. Man kann nicht verlangen von einer Stadt, dass sie einen Klimaschutzvertrag auflegt, der den die Roadmap zur Klimaneutralität bis 2030 aufzeigen soll. Aber man gibt keinerlei Personalressourcen oder finanzieller Ressourcen der Stadt mit an die Hand. Das funktioniert so nicht. Das. Ja dann ist wirklich das das Wort Klimaneutralität, bis zu welcher Jahreszahl auch immer ist ein Marketing-Instrument. Ist. (...) Das wird aber von vielen deutschen Städten auch so gesehen, also von vielen Städten, die jetzt auch an dem nehme an der EU-Mission teilnehmen. Ähm, da gibt es schon ja verhaltene Reaktionen darauf, muss man so sagen.

P1: (...) Sehr spannend, sehr spannend. Dann würde ich auch mit Blick auf die Zeit jetzt mal in den Themenbereich Verwaltungskapazitäten überwechseln. Sie haben darüber schon ein bisschen was gesagt und vielleicht in diesem Bereich nochmal kurz mit einer weiteren Perspektive einzusteigen. Wenn Sie an den Übergang zur Klimaneutralität in Leipzig denken, wie würden Sie die Rolle der Stadtverwaltung dabei definieren?

P2: Ist ein zentraler Akteur als klar auch Energieverbraucher, als als Vorreiter in dem Bereich mit kommunalen Gebäuden, mit kommunaler öffentlicher Beschaffung. Aber man muss eben auch sehen, dass die Stadtverwaltung als Ganzes nur 2 % der CO2 Emissionen der Gesamtstadt verursacht. Also wenn wir wirklich klimaneutral werden wollen als Gesamtstadt, dann muss ich eben auch die anderen 98 % adressieren. Und das sind eben die Privathaushalte, Immobilieneigentümer, private Unternehmen, ja, die einfach den größten, das größte Einsparpotenzial oder jetzt auch den größten

Treibhausgasemissionen verursachen. Und da ist die Stadt ja Scharnier zwischen Bevölkerung und hat auch viel. Ja, im Thema öffentliche Öffentlichkeitsbeteiligung, öffentliche Sensibilisierung ja da einen Stellenwert. Aber die Bürgerinnen dieser Stadt sind jetzt auch nicht täglich auf Leipzig unterwegs und informieren sich über städtische Webseiten, Ja, über Investitionen oder wie sie quasi auch ihre privaten Mobilitäts- oder Sanierungsentscheidungen fällen. Da ist die Stadt auch jetzt nicht. Nicht die erste Adresse.

P1: Und was würden Sie sagen? Welche Fähigkeiten, Prozesse, Ressourcen braucht Leipzig, um dieser Rolle gerecht zu werden? Ganz wichtig sind.

P2: (...) Ja, naja, das habe ich schon das schon angeführt. Man braucht das Personal auf der strategisch konzeptionellen Ebene, da sind wir gut aufgestellt als Stadt. Aber es fehlt in der operativen Umsetzung der der Projekte. Da brauchen wir sehr viel mehr praktisches Know-how. Das fängt an von der Ertüchtigung von Dachflächen für PV. Ja, Radwege, Planungen, einfach die die praktische Umsetzung der der Projekte eben in der Verwaltung. Weil nur mit dem mit der Formulierung des Konzeptes und der Verabschiedung im Stadtrat dann beginnt ja eigentlich erst die eigentliche Klimaschutzarbeit. Das ist ja erst mal nur bedrucktes Papier. Und da brauchen wir sehr viel mehr Kapazitäten. Und das spielt sich dann aber in den Fachämtern ab. Dann brauche ich eben in einem Verkehrs Tiefbauamt 25 Leute, die nur sich mit Radwegen beschäftigen und nicht nur zwei Personen. Und das brauche ich im Bereich PV, auf kommunalen Dachflächen usw. Das kann man durchbuchstabieren in in jeder einzelnen Maßnahme. Und ohne diese Personalkapazitäten werden wir die ja einfach die, die in der Maßnahmenumsetzung nicht schnell genug sein, um jetzt hier in sieben Jahren auch nur annähernd. Auf dem Pfad der Klimaneutralität zu kommen.

P1: Und ich sage mal in einer perfekten Welt Welche Fähigkeiten, Prozesse und Ressourcen hat Leipzig, um die Klimaneutralität aktiv anzugehen oder optimal abzubilden?

P2: Wir haben eben eine sehr gut informierte, sondern sehr motivierte Zivilgesellschaft, die sehr viele Prozesse auch der Stadt mit unterstützen und mit Anreizen. Das ist etwas, das man, glaube ich, jetzt nicht in allen Großstädten so hat. Das versuchen wir auch als Stadt offensiv zu nutzen und die dort einzubinden in unsere Prozesse. Ähm. Ja und ich glaube ja. Transformation des Verkehrssektors und Wärmebereichs. Ich glaube, da sind wir im guten Mittelfeld der deutschen Städte gibt es sicherlich auch Städte, die dort schon weiter sind. Aber das ist ein Punkt, der muss jetzt in den nächsten Jahren dringend vorangetrieben werden. Und da hat sich auch die die Stadtpolitik klar dazu bekannt, dass

es eine Abkehr von der autogerechten Stadt geben muss. Und im Endeffekt dort auch viele stadtplanerische Prozesse neu gedacht werden müssen.

P1: Entspannen. Äh, wir haben ja schon einige Punkte genannt, wo Kapazitäten verschiedenster Art fehlen. Was unternimmt Leipzig, um diese benötigten Kapazitäten aufzubauen?

P2: Frage Das ist auch eine Budgetfrage und eine Frage der personellen, des Wachstums, auch der der Stadtverwaltung mit dem generellen Bevölkerungswachstum in der Stadt. Wir sind in den letzten zehn Jahren um 100.000 Einwohner gewachsen. Diese Zahl, diese Steigerung sieht man jetzt in der Stadtverwaltung nicht unbedingt. Also da ist es auch einfach in Haushaltsplan, Haushaltsplanung und Personalplanungen. Wenn man das Thema Klimaschutz ernst nimmt, dann muss man da auch eine Schippe drauflegen in dem, was quasi Personalressourcen betrifft für das Thema. Und das. Ist eine kommunalpolitische Prioritätensetzung, wie man das Thema verankert. Aber wie auch eingangs schon gesagt, es gibt viele andere kommunale Aufgaben, die eben auch wahrgenommen werden müssen. Die letzten zwei, drei Jahre war die Kommune sehr damit beschäftigt in der Pandemiebekämpfung. Wir haben ja viele Flüchtlingsbewegungen, auch aus Osteuropa, aus der Ukraine, die hier versorgt werden müssen, die beschult werden müssen, die auch einfach sozial versorgt werden müssen. Das sind alles Aufgaben, die Lasten. Ja, im kommunalen Budget und eben auch in den Personalressourcen. Und das. (...) Das ist einfach Fakt. Und das ist alles begrenzt. Und da. Müsste man ja, wenn man das ernst nimmt, Klimaneutralität, dann muss man da sehr viel stärkeres Wachstum an den Tag legen, gerade was auch die Personalressourcen angeht. Ich glaube, finanziell ist da zurzeit zumindest jetzt gar nicht so groß die Spannung drin. Aber wir kriegen einfach viele Mittel auch für Projekte nicht umgesetzt und nicht in die Bürgerschaft transportiert, weil einfach die Personalressourcen fehlen. Wenn Ausschreibungen gemacht werden. Projekte müssen. Naja, Sie kennen das ja. Vielleicht wäre es auch EU-Förderprojekte, Fördermittel, Management. Das sind alles Prozesse, wo ja die sehr viel Kapazitäten brauchen. Und dafür brauchen sie fachkundiges Personal.

P1: (...) Gibt es in dieser Front irgendwas, das Ihr Referat unternimmt, um zum Beispiel irgendwelche Initiativen oder aktiver strategische Aufbau solcher Personalressourcen?

P2: Wir kämpfen dafür, dass Ihnen in den Fachämtern auch solche Personalressourcen mit implementiert werden und verankert werden. Ähm, ja, das geht vom Fördermittelmanagement, dass man dort zentralen Ausstellen auflegt. Äh, ja. Bis hin zum praktischen Bauingenieur, der, der nachhaltiges Bauen was von nachhaltigem Bauen versteht und der auch erneuerbare Energien gleich in Gebäude integriert. Das sind alles Themen, die gerade auch ältere Mitarbeiterinnen jetzt nicht so unbedingt auf dem Schirm

haben. Und das hat auch was mit einem Generationswechsel innerhalb von so einer Stadtverwaltung zu tun: Ob ich solche Themen gleich mitdenke und dort einfach die Schwerpunkte richtig lege.

P1: (...) Und wie würden Sie sagen. Stellen Sie oder die Stadtverwaltung Leipzig generell fest, welche Verwaltungskapazitäten zu jedem gegebenen Zeitpunkt fehlen? Gibt es da eine Art Strategie, System etc.?

P2: Nö. Das ist ein Zuteilungsmechanismus. Die Fachämter melden an, wie viele Personalressourcen sie brauchen. Und davon bekommen sie halt einen gewissen Anteil. Das ist aber nicht so, dass sie, dass das quasi Wunschkonzert ist und man zehn Stellen anmeldet und auch zehn bekommt. Wenn man 1/3 davon bekommt, ist man glaube ich gut, gut unterwegs.

P1: Ich sage. Spannend. Da gibt es irgendwelche Kapazitäten, Kapazitäten, in denen ihr Referat gerade aktiv arbeitet. Irgendwelche bestimmten das Wissen oder Skills sind, die sie versuchen aufzubauen?

P2: Ja, wir versuchen zum Beispiel beim Amt für Schule und beim Amt für Sport, die ja viele Liegenschaften betreuen, auch dort quasi. Ja bau technisches Know-how zu implementieren, einfach weil das die Bauherren Ämter sind, die dann ja im Endeffekt auch die Ausschreibung mit erstellen und die die Bautätigkeiten dann in Auftrag geben. Wenn die nicht das Know-how haben für nachhaltige und energieeffiziente Gebäude, dann wird eine Schule auch nicht so geplant und auch nicht so in Auftrag gegeben. Das heißt, man braucht in diesen. Ämtern, eben auch Personal, die wissen, wie ich so eine Ausschreibung gestalte und welche technischen Anforderungen ich auch an gewisse Gebäude einfach stellen muss. Weil diese Gebäude stehen mindestens 80 Jahre in unserer Stadt und die müssen eigentlich heute schon klimaneutral sein im Neubau. Ansonsten muss ich mir ja wieder Gedanken machen, wie ich die quasi dann klimaneutral stelle.

P1: Haben Sie dieses Wissen intern, wie solche Ausschreibungen gestaltet werden sollten?

P2: Begrenzt. Begrenzt. Das ist ein. (...) Da ist auch noch viel Know-how nötig.

P1: (...) Dann vielleicht noch ganz kurz zwei weitere Fragen zum Thema Prozesse und Umsetzung, bevor wir in unseren Themenblock springen. Die Zeit. (...) Haben Sie, oder wie verändern Sie momentan Prozesse und Routinen innerhalb der Stadtverwaltung im Kontext von Klimaneutralität? Man.

P2: Wir haben Prüfschema auf Klima, auf die Klimawirkung von Vorlagen. Das heißt, jeder, der eine Vorlage einbringt oder jedes Fach macht, ist angehalten, sich mit der Klimawirkung der jeweiligen Vorlage zu beschäftigen und dies auch zu beantworten. Oder einige Fragen. Und das ist eben auch das Signal dann an den Stadtrat, ob gewisse Maßnahmen finanziert oder umgesetzt werden. Und das ist so eine Art Ampelsystem, wo man dann feststellt, hat diese Vorlage eine entsprechende Klimawirkung, Ähm, ja oder welche Wirkung entfaltet sie? (...) Das Aussagekriterium ist dann aber auch mal eher beschränkt. Also wenn ich jetzt einen Straßenbrücke, weil sie baufällig ist, einfach sanieren muss, dann ist der Sachbearbeiter gezwungen, dort die Ampel auf Rot zu setzen. Aber weil es eben einen zum einen in der grauen Energie der Bausubstanz selbst als auch in der Folgewirkung natürlich Treibhausgasemissionen verursacht. Aber wie gehe ich als Kommune damit um? Stoppe ich dann diesen? Diese Brückensanierung? Ist die Straße dann quasi gesperrt oder was? Was mache ich denn damit? Das. Und jeder Schulbau und jeder auch Verwaltungsneubau induziert natürlich auch massive Treibhausgasemission. Ich kann deshalb aber nicht die ganze städtische Entwicklung auf Eis legen und sagen wir, wir engagieren uns dann nicht mehr. Das ist ja. Es gibt so ein Prüfschema, aber die politische Konsequenz oder die Konsequenz für die Projekte, das ist nicht ausbuchstabiert, was dann passiert, wenn die Ampel dort auf Rot steht.

P1: (...) Vielleicht noch diese Frage hier.: Falls Sie ein Beispiel haben, oder... Gibt es irgendwelche Verwaltungsinnovationen oder Prozessinnovationen oder schlichtweg experimentelle oder innovative Mechanismen und Verfahren, die in der Steuerung von der Klimaneutralitätswandel angewandt werden?

P2: (...) Na ja, wir arbeiten jetzt viel digital. Auch digitale Beteiligung. Digitale Workshops. Digitale Beteiligungsinstrumente. Ähm, aber das sind ja eher die Tools, die die Inhalte sind ja die die gleichen geblieben. Von daher. Ja weiß jetzt nicht so richtig, worauf sie da jetzt an innovativen Governance-Strukturen das ist im Endeffekt das sind Arbeitsgruppen, Sitzungen und Workshops, ob die jetzt analog oder digital stattfinden. Ja, man tut den Inhalten jetzt keinen, keinen Abbruch, aber das ist im Endeffekt wirklich, das ist halt Verwaltungshandeln da ja gibt es auch eben eingespielte Prozesse, die wie solche Projekte verlaufen und auch Entscheidungsmechanismen dann in Richtung Stadtrat, wie Vorlagen erstellt werden, wie bestimmte Fachausschüsse bedient werden, einfach in diesem demokratischen Legitimationsprozess. Das sind natürlich sehr formelle Prozesse auch, die eingehalten werden müssen. Da kann ich jetzt nicht. Ja, der Innovationsgrad in diesen Abstimmungsprozessen ist auch begrenzt.

P1: (...) Und. Dann würde ich vielleicht in den letzten Tagen nur kurz auf die Mission für von der Kindertagesstätte zu sprechen kommen. Seit Leipzig dieser Mission beigetreten

ist. Was hat sich verändert? Darin, wie Klimaneutralität in der Stadt gesteuert, geregelt, umgesetzt und diskutiert werden.

P2: Wir haben ein Transition Team aufgesetzt, wir aus vier Mitarbeitern für diese EU-Missionen und die jetzt auch den Beteiligungsprozess mit Steuern. Wir haben ein bisschen die Diskrepanz, dass wir uns eben unserem ursprünglichen Energie- und Klimaschutzprogramm 2040 als Klimaneutralität gesetzt haben. Ein Jahr später nehmen wir an einer EU-Mission teil, die sich dieses Ziel schon 2010 Jahre früher 2030 vornimmt. Das ist auch kommunikativ schwierig, weil man diese unterschiedlichen Zielstellungen, dass das ja man das wirft so eine gewisse Beliebigkeit dieser Zielstellung auf. Ich kann da jede Jahreszahl dahinter schreiben, aber so richtig wissenschaftlich belegt oder wie dieser Transformationspfad gelingen soll, ja, das ist dann meistens nicht ausbuchstabiert. Und da kriegen wir von Bürgern oder auch von Unternehmen oft die Rückmeldung Na, was ist denn nun, wie? Wie habt ihr denn? Ihr könnt doch nicht 2022 sagen wir machen 2040 klimaneutral und 2023 ein, Wir schaffen das schon zehn Jahre früher? Ähm, da. Da muss man auch sehr aufpassen, dass man die Glaubwürdigkeit auch als Kommunalverwaltung da nicht aufs Spiel setzt, um mit immer neuen Jahreszahlen um die Ecke kommt und Zielstellung und im Endeffekt die Lade. Naja, das ist wie bei den internationalen Klimakonferenzen schon vorher, dass sie jetzt nicht für bare Münze nehmen, dass man das wirklich umsetzen kann oder realisieren kann und dann. Dann hat man eine Beliebigkeit und auch keine Glaubwürdigkeit mehr. Eben im Klimaschutz Prozess.

P1: (...) Spannend. Vielleicht nur als kurze Folgefrage. Sie haben das Transition Team erwähnt. Könnten Sie darüber noch ein bisschen mehr erklären, was die Rolle davon ist, so ein Scheitern zu fordern?

P2: Genau. Wir steuern quasi den Prozess sowohl in die Stadtverwaltung hinein als auch mit den Unternehmen. Wir haben jetzt noch eine externe Beteiligungsunterstützung durch ein Unternehmen und versuchen quasi dieses Thema in der Erarbeitung des Klima Stadt Prozesses Klima Stadtvertrags möglichst ja zielführend dort aufzustellen, um quasi Commitments von den Akteuren einzuholen. Für diesen Klimastadtvertrag mit Finanzierungen mit Treibhausgasminderungspotenzial. Genau. Und das ist jetzt unsere Aufgabe für das nächste 3/4 Jahr, um diesen Klimaschutzvertrag möglichst im nächsten Frühjahr dann finalisiert zu haben.

P1: (...) Und Sie haben auch schon erwähnt, dass diese. Jahresziele 2030 2040 eine gewisse Beliebigkeit reinbringen. Glauben Sie denn, dass Leipzig in der Lage sein wird, klimaneutral zu werden bis 2030? Nein.

P2: Aus fachlicher Perspektive nicht. Also das ist einfach unrealistisch. Wenn Sie sehen, dass der Neubau einer Straßenbahnlinie im ganzen Planungs und Umsetzungsprozess mindestens 15 Jahre dauert. Dann ist es unrealistisch, jetzt in sieben Jahren klimaneutral zu werden. Es sei denn, wir nehmen Milliarden in die Hand und kompensieren alle unsere Emissionen. Aber dann würde ich nicht sagen, dass das eine. In der ja eine reale Klimaneutralität dieser. Und auch wenn sich das Verkehrssystem anschauen den Gebäudesektor. Das ist zu ambitioniert. (...) Nichtsdestotrotz verstehe ich die den Mechanismus der EU-Kommission, dass man das Ziel nicht dadurch verwässern möchte, dass man das einfach 2040 weil das natürlich nicht den Druck auch auf die kommunalen Entscheidungsebenen. Es ist eher ein politisch gesetztes Ziel, aber es hat nichts mit einem mit einer fachlichen Realität zu tun. Von daher. Politisch würde ich sagen, um den Handlungsdruck aufrecht zu erhalten, richtig gewählt, aber fachlich nicht zu erreichen.

P1: (...) Okay. Das klingt doch fast noch ein gutes Schlusswort.

P2: Oder auch nicht? Je nachdem.

P1: Es ist ein Fazit, immerhin.

P2: Ja, genau.

P1: Sehr schön. Haben Sie noch irgendwas anderes zu diesem gesamten Themenbereich rund um Governance? Kapazitäten für Klimaneutralität, das Sie anbringen wollen wird?

P2: Nö. Nur nochmal das Statement. Wenn man das wirklich ernst nimmt, dieses Thema und sich dort auf dem Fahrrad begeben muss, dann ist es mit den jetzigen Personalkapazitäten nicht zu leisten und nicht machbar. Dann lügt man sich da auch politisch in die Tasche. Und ja, steht irgendwann auch gegenüber der Bevölkerung dann auch mit dem Rücken zur Wand. Wenn man erklären muss, warum das eben bis 2030 oder 2040 wie auch immer, warum man dann nicht auf Kurs ist. Und wenn man das politisch ernst nimmt, dann muss man den Kommunen auch die Unterstützung geben und auch die Entscheidungsfreiheit. Dann können wir uns nicht hier in Diskussionen über Tempo 30 Zonen und die Einrichtung von Fahrradstraßen verzetteln und wer da welche Genehmigungsbefugnisse hat nach der Straßenverkehrsordnung, sondern dann müssen das Kommunen selbstständig entscheiden können und auch entscheiden können, welche Straßen komplett vom Autoverkehr befreit werden. Das wird im jetzigen Verwaltungs in der Kaskade nicht schnell genug funktionieren.

P1: Ist das etwas - noch als letzte Folgefrage - das in Ihrem Referat aktiv unternommen wird, dass Sie versuchen, Ihre formalen Berechtigungen in irgendeiner Form auszuweiten.

P2: Ja, auch die Fachämter. Über den Deutschen Städtetag wird das natürlich auch politisch adressiert. Aber das sind auch dicke Bretter, die dort zu bohren sind. Das gilt zum Beispiel auch für die Frage Denkmalschutz versus Installation Erneuerbare Energien. Also auch da gibt es große rechtliche Hemmnisse. Und gerade, wenn ich einen großen, denkmalgeschützten Gebäudebestand habe, dann brauche ich da eine Lösung. Da muss ich den Bürgern ja irgendwie erklären können, wie sie auch die PV-Anlage auf dem Gründerzeitdach bekommen, weil ansonsten ja ein Großteil der Dächer nicht nutzbar. Und das ist aktuell noch der Fall.

P1: (...) Na gut, dann werden wir von meiner Seite tatsächlich am Ende von diesem Interview.

E.n Ljubljana

P1: All right. To set the scene a little. Could you maybe briefly explain what your day to day work looks like and what your usual tasks and responsibilities are around the climate neutrality transition?

P2: (...) Well, I work as such an economy manager for the city of Ljubljana since 2018, and for the last year, year and a half, I've been also involved in this mission 100 climate neutral and smart cities. So what we usually do different stuffs. You know, one part of my job is related to inform, motivate, encourage. My colleagues on the topic of circular economy is also related to the climate change, of course. Another another thing is that we have a lot of different European projects that I'm involved in as a project leader or a member of a staff. So, you know, there's a lot of administrative work but a lot of also content. Then of course, we have different, different. Different. (...) A lot of citizens are reaching out to us with different suggestions, sometimes even complaints and so on. So this is also a part that I have to. It's possible for then we have different internal things that we have to, you know, also be a part of like finances, public procurements, different administrative and financial tasks. We also have a lot of meetings within the city administration to orchestrate, you know, our work. And I'm also working a lot on promotion of good practices. So, you know, we think a lot of. Delegations from abroad. Also. And then we are doing some study tours or just the presentations and so on. So it's a lot of a lot of different.

P1: Just say. So maybe to get right into the first topic block that I would like to talk about, which is about governance, essentially how you're steering, coordinating around climate neutrality topic. So which are the which organizations or departments or units within the public administration are responsible for governing and implementing the climate neutrality topic?

P2: Well, all of them, you know, because in 2000, maybe just to say to some something in 2007, our mayor introduced when he first ran for the mandate in the city hall, so called Vision 2025. And this vision, the sustainable development, was one of the three main development goals. And the purpose of this vision was to be the best, the best service for the for the citizens and of course, to increase the quality of life in the city. And based on this vision we have already implemented in the past 15 or 16 years, more than 2400 different projects. And we have also won different awards for that. One of them being European green capital. So the mayor insists from the first day in the office that all the public so that the public administration, the public institutions and public companies have to work very closely. He also is having a meeting every Monday with all heads of department offices. Also the head of the public holding, which is uniting all our public

companies, is present and also different, important the heads of institutions are there. So there we are discussing different projects, you know, and each has an opportunity to say if something is missing or we should add something or something like that. Then also the leadership itself every Tuesday morning has its own meetings where they are discussing because we have a mayor and two different deputy mayors which are in charge of different topics. So they are also communicating all the time. Then twice a year we also have team buildings with with also the heads of of the public administration, the heads of public companies and most of the public heads of the public institutions in order, you know, to to connect even more closely. As for the mission 100 climate neutral and smart cities, we have a core team which was delegated from the mayors side, from different departments, and we also have a larger group of of people, more than 20, which are supporting this for staff in implementing different activities related to the mission. So now we are preparing this climate contract. So we have to have a lot of meetings with different institutions and also we have to collect a lot of data from different departments so they are the persons responsible in different departments so that we can more easily and quickly collect the data.

P1: (...) Very interesting. So you mentioned that in principle, every department is responsible and there's a lot of coordination. But this kind of central [...] specifically for the EU mission. Is there some other sort [...]?

P2: Yeah, it's. It's led by the head of the Department for Environmental Protection where I'm situated as well. But we also have colleagues from how is it called in English. So, it's for development sector, for development. And we also have from the mayor's office a colleague who is responsible for for energy sectors in the sector. So, this is the core team. So, I'm covering the circular economy topic. And yeah. So, it's like five, five people. And we also have. (...) The witness who is helping us to coordinate everything and prepare this contract and.

P1: Prior or outside of the EU mission. Is there any other institution that. Coordinates between departments on an administrative level when it comes to climate neutrality?

P2: Well, it was always in the Department for Environmental Protection, so. Yeah. But as I said, the mayor always says, you know, you are one big family with more than 12,000 members and you have to help each other and support each other and collaborate with each other. So it doesn't matter for him who gets the suggestion or something like that. It is his duty, you know, to coordinate with the appropriate for, let's say, department and to make sure that the citizens, for instance, get get the answer. So it's not important for each department the citizens turn to. He always has to get the right information.

P1: Is there any other special feature about the governance system around climate neutrality that you would want to highlight?

P2: (...) No, I think this is quite intense already.

P1: (...) If you think about the way that climate neutrality is governed in your city, what are the biggest challenges that you're facing?

P2: Well, of course, the lack of staff because. Well, it's maybe also the competencies in some topics. For instance, we have to prepare the investment plans, you know, for the projects. And there I mean, not a lot of this is not something that the public administration use usually does, you know, So it's like some different skills or even, let's say the manager skills, you know, because now the point is that this is not only the project of the city administration or the big city family, but also we have to include other stakeholders. So the actual institutions, the NGOs, the private sector, the research institutions and so on. So we have a lot of meetings where you have different interests, you know, different science is present and you really have to be a good manager to bring everyone together and get the best solution. So this is not something that is very usual or something that we are taught in schools. You know how to manage different experts. So I would say so some skills. Also the staff, you know, because we didn't employ additional staff for this, but because we are convinced that we also have to change, you know, ourselves, our processes, you know, in to optimize things. So this is also very challenging and demanding, you know, how to how to motivate people to do their jobs, to do their work in different, in different way, especially maybe because we have a lot of seniors in the administration. We are not a young team anymore. I think that this is something that is actually happening in all the city administrations. So yeah. So now, you know, we have to implement different business models. You know, something that when we went to school was not there. So yeah, it's a lot of challenges.

P1: Interesting. So what do you think?

P2: Course. Also the financing, you know, it's always there because, you know, we are barely covering all the services, providing the services that we have to, you know, in line with the legislation and in these kind of projections. You have to also there's different solutions. So Internet, a lot of innovation. So we have to get the money because, you know, and also, if it's very risky, it's, you know, nevertheless the taxpayers money. So you cannot just throw it out of the window. And so, yeah, that's why we are also applying for a lot of European funding, private public partnerships and so on.

P1: (...) Interesting. Maybe really briefly. What would you need to overcome these challenges?

P2: Well, yeah. I mean, of course, additional skills, patience, time, money stuff, you know.

P1: (...) Then maybe asking the other way around What are some of the biggest successes when it comes to governing the climate neutrality transition that you've seen?

P2: Well, I think that's one of a very important factor, is that we have the same mayor for 15 years now, 16 years, and he won another mandate in last autumn. So, you know, this means the political stability. So that means that, you know, the policies are there are continuing. You know, it's not the values are not changing every mandate. So I think this is very important. So, you know, even the citizens got used to, you know, what the messages that he's sending and they know him very well. So, yeah, I think this is one of the most important thing that you have a supportive and stable circumstances or. Conditions.

P1: Interesting. Then, looking at the time, I moved to the next kind of topical block, which is about administrative capacities. So when I say capacities, what I mean is essentially skills, processes, resources that the administration uses to achieve its goals. To enter this entire area? Maybe. What would you say or how would you describe the role that the municipal public administration plays in advancing climate neutrality in the city?

P2: Well, it should be a role model. I think that first we have to start with ourselves. We have been greening the administration, the infrastructure, the equipment for years now. You know, as I said from 2007, sustainability is a very important part of our work. So, yeah, I think that you should start with yourselves and then demand from the others to change.

P1: Well. And which skills processes resources and does your city need to fulfill this role?

P2: (...) Well, the college experience, for sure. Good. Have as many good managers as possible. I have to say, the DA mayor comes from the business sector, so that's why he has organized the big city family in a way, because the businesses are working. So, yeah, but there's you know, you have to know that the change is not going to happen overnight. So it's a process alone and it takes sometimes a lot. It's time to learn the, you know, the common language. So, yeah, you also have to have patience, you know. Because not everyone is going will be on board. You know, in the beginning. But nevertheless, I think that you should start with the with the with the stakeholders that are very motivated to get some positive results and then the others will follow when they see that there is a result.

This is something that I always say to other delegations don't start with the hardest thing, you know, because you will use a lot of energy and you are not sure what the result will be. So just start with something that is easy, that is that you are confident that you will, that there will be a success story and then build from there, you know, and but also accept that there will be people, stakeholders that will never get on board. But this is fine as well because you also need the critics to keep you going and to actually test your policies. So also this these type of stakeholders are essential for the success.

P1: Interesting and maybe asking the other way around which skills, processes and resources are you currently lacking that you would need for the climate neutrality transition?

P2: Well, depends, you know, because if I said that, you know, the big city family is consists of 12,000 people, then, you know, there are a lot of factors. Some are more motivated, some are less motivated. Not all are motivated by money. Some are motivated by the challenges. So it's hard to say to pick only ones and say, okay, this is like I think that this is. Individual. You know, you have to offer a lot of things and then people decide. And you also have to be open to suggestions and try and. Be aware that sometimes you will fail because this is a learning as well.

P1: (...) And when it comes to governing this transition process in particular, what skills do you see there that you maybe need for?

P2: Well, I think that what we are lucky because we have, as I said, this structure that is in place for a long years. So we all know how it goes. What are the rules, how it functions, who to turn to. So, yeah, transferability, I think it's also a very important skill so that, you know, communication, communication, communication so that everybody knows what is happening. We have also an internal magazine for times. We have a weekly internal newsletter that is, you know. That is focusing on pointing out the main activities on different topics. So yeah. Communication, information. But this is not something that we are lacking. I think that we are fairly good at, very good at. But as I said, it's a complex thing. I don't know exactly which one I would pick that it would fit all the employees.

P1: How are you identifying which capacities you might want to build or develop in the future? - as an administration.

P2: Well, actually what is also maybe a specific for us. So we have this strategic umbrella vision which everyone has to follow. We have a vision 2025 but Ljubljana 2045 is also in place and this vision is built with all the heads of departments and the main stakeholders. So we know that the during the next 20 years a lot of new. Concepts. Ideas

will pop out. But in general, we are in favor that we have one. You have your own story, your own vision, your own way. And then you have to, if it fits your vision, you include all these different initiatives that are popping in. But as for Ljubljana, I think that the sustainability will stay on for surely because we are very green city, the natural environment is very important for us. So yeah, this is also I mean was very important in the past. I don't see how it would change in the future. Maybe there would be some modifications, but that we would completely change everything. It's not very likely.

P1: And when it comes to like the skills and processes internally, are there any particular. Skills and processes you seek to develop currently? Or how would you develop those? Or how are those being developed?

P2: Well, I think that, as I already pointed out, the most important is that there is enough communication between the departments and the. (...) Within the department and from public companies and so on. So people need to interact a lot in this. In this way, you get the best feeling what is happening. If you don't know your colleagues, then you cannot react appropriately and in the right manner in the right time. So I think the communication is the crucial time. And since we are understaffed, understaffed, this is even more important. You know, in order to deliver all the results that are or the services that we need to. So, yeah, communicating, communicating, communicate.

P1: Is there anything you're doing to communicate better or develop the way that you communicate internally?

P2: Well, we have also this is some very specific Ljubljana. So in 2018, the mayor decided that he would like to introduce different new, innovative working positions within the city administration. My position as a circular economy manager was one of them. But we also have, for instance, marketing manager. So the response. Now it's actually a section for marketing because, you know, there is so much to do. But the purpose and the goal of this action is that it actually unites and helps to make the results in our stores more visible and visible in in the best way for different groups of stakeholders. So I think that this was very good and very needed because, you know, if the you can do a great project and activities but the people. Long notice that you are doing this and why you are doing it. Then they will not follow. So I think that it's not just PR, but it is also marketing so that, you know, the different I mean the same brand we are communicating in the same way so that literally we are breathing all together. And yeah, this external visibility is also a very important thing.

P1: Very interesting. Then be mindful of the time. Maybe. The question about the mission. So since your city has drawn the emotion for 100 smart and climate neutral cities,

how has that changed the way that climate neutrality is discussed, implemented in your city?

P2: Well, not very much because we you know, we were aware of this topic in the past as well. Maybe it did speeded up a lot because before, you know, we had the goal to be climate neutral by 2045. Now we the new goal is 2030. So yeah, it's, you know, it's not a lot of time. So, I mean, in an organizational way, except for for these two groups to be nominated, it's not anything different because we have the same structure from 2007. So, yeah, it's just it's more stressful in a way because the, you know, the timeline is, is getting clearer and are But I also have to say that we have a lot of support from the net zero cities. But on the other hand, they're also organizing a lot of different activities, which is a little bit overwhelming, you know, at the moment because we have our regular jobs now, we have this this goal and this additional work and over. And these we also have a lot of events that citizens organizing. So it's quite stressful, you know, to manage doing the regular job and supporting them, giving feedbacks, you know, listening to all the webinars and so on and, you know, actually doing your jobs and, and so, yeah, it's, it's getting overwhelming.

P1: (...) Interesting. And maybe just one follow up question if you have time. Yeah. You mentioned that one of the key or the one of the only organizational results of joining the mission is this kind of core team, etc., that was established. What is the relevance of the team beyond the mission? Is there any coordination function that is holds beyond the EU mission, or is it really in place only for the city contract?

P2: Well, we see this as the same as one of the projects you, you know, gather the team that is the best for the for the purpose. And then after the job is done, you know, you get you reassign the people to two other projects. Of course, we we are aware that it will be very hard to achieve the climate neutrality by 2030. So of course, we are counting the mission will go on after the 2030 as well. But if if the if there will be a need for the core staff to continue to work, then it will. Otherwise, you know, it will be reassigned to other projects which we are not lacking. We have a lot of different projects.

P1: Okay. Very interesting. Then I don't want to steal any more of your time. Is there anything else you would like to add regarding the topic area that we talked about?

P2: No, I think that. What? I would like maybe to point out is that we have a highly motivated staff, so and very dedicated staff. I also have to say, after, you know, winning the title European Green Capital, also the users of our service, the citizens, are getting more and more divided, demanding. They're constantly demanding new green services. So this is very good in a way for us so that they are also motivated. Of course, we have a

part of the citizens who are who maybe cannot participate as much as we would want to, but, you know, for different reasons. But this is something that we really have to pay more attention to for difference energy, poverty and that kind of topics. So not to leave anyone behind, but on general, we also have a very lively Do-It-Yourself and culture sector, which is also very important regarding also the social innovations, not only the technological. We also have a, a long tradition of environmental education in kindergartens and school. I think this is also very foundation, you know, doing a lot of environmental. (...) Activities with the younger generations because they will be leading and leaving the city in the future. So yeah.

E.o Reykjavik

P1: Half an hour should be more than maybe to set the scene a little. Could you briefly explain what your day-to-day work looks like and how its tasks and responsibilities relate to climb the climate neutrality transition?

P2: Good. Well, maybe. As you know, I'm located at the Department of Environment and Planning at Reykjavik City. I have the title and I can say I report to the manager of the division or department. But you ask me to describe my daily workload, and just now I am actually collecting data for hunting in our data to CTP or the Carbon Disclosure Project that are you familiar with that one?

P1: I heard of it, but yeah.

P2: Exactly. It's like a mission related data, but also information on covenants, the equality covenants as well. So I had a meeting this morning with the Gender Committee. I will have a meeting later today with Icelandic Ministry of Environment that is leading a group of, how can I say, set a strategic group for adaptation to climate change, and that is for the whole of Iceland. So I both have the road towards the city, but also I am appointed in different kinds of groups to work for the government as well. So that is maybe a little bit how my work takes goes. We are a part of the 112 major cities, so that is also, I can say it a large part of my week to have like a meetings with the transition team, organized meeting with stakeholders. Also, a part of my work is that I actually could do a lot more of this, you know, like watching the videos that Net-zero cities are making. Reading What is the most new information on climate issues? And usually, I don't do it unless I have to make some comments about it. And I really find it sometimes sad. I would like to have more time for that, but that is just how it goes. So sometimes I read, I read news and climate reports, etc. in my free time.

P1: Thank you for that kind of perspective into your workday. Maybe I would follow up directly with one of the topics that you mentioned. You said part of what you do is meeting with stakeholders and the transition team generally. Which organizations and departments are responsible for governing and implementing the climate neutrality transition and.

P2: Well, actually, it is my unit or the I can say it's the only unit within Reykjavik that has the name of climate Within. Okay. But at the mayor's office, there is a strategy that is like a. I can say it. It's like an umbrella. Yes. Over different kinds of strategies within the city. And there is the focus on climate neutrality as well. So strategy wise, the climate policy is one of the umbrella strategies and. How can you say that It has actually started to be a part of that strategy, but then like on procurement, etc., it is very often located

within the Department of Environment and Planning, also internal. Like we have an environmental like action agenda, then we call it Green steps, and that is also led by the Department of Environment and Planning. So how can you say? (...) The responsibility is located at the end of the planning. But then, of course, it affects all the kind of departments, the mayor's office and also the financial department that are issuing green bonds, etc.. You know, I have been working with them and the department, but they, of course, have the responsibility of financing the city. Just example how it goes. So it may be sometimes it's a little bit. (...) And all of the places somehow. But at the same time, I feel that that is the correct way. Have it like located within each of responsible department.

P1: Interesting. The transition team that you mentioned relates to the structure. How.

P2: Yes. Okay. Yes. Thank you for asking about that, because that is specific on the mission. And we got guidelines on governance of the mission there. And it was very valuable because there's a lot of political interest in climate issues in Reykjavik. So it was decided by the mayor to have like a political steering committee, and it's the format of all of the political groups. I'm sorry. I don't remember how many are. (...) Och, it's all other groups. It was around eight, something like that. So it's like eight people in that group. And my supervisor, that is like the, like the connection because of course she is leading the department on behalf of the mayor. That steering committee was established in August last year when the project went ahead. (...) There was a decision on having a transition team and it is still only internal. And then we have like three people from the mayor's office right now. I started with one, but they added to it, so I didn't say no from the mayor's office that is handling the Green plan, but also has the connection to innovation and how can I say the business. So it's like three people like that. There's one from the Human Rights and Democracy Department that is also located at the city Hall. There are two from the financial department and one from the PR department or communication department here at the Environmental Planning and also. One from the waste collection department that is also within the environmental planning. And he's an engineer, so he knows about how to count for greenhouse gases and so on. And I think we are the only two ones in the group that know what CO₂ equivalents are. So that is how that goes. Well, this group started working in like February or something like that. So we have been meeting and having a proposal to the steering committee on what to do next, and we are planning to. Push forward to make the first Climate City contract in the next slot. The EU has now in September. So I'm going for a two weeks vacation, but then I think it will be crazy work.

P1: (...) Interesting. Thank you very much. (...) So just quickly see what to ask next, considering the time. (...) You already mentioned. So thinking maybe about the way that the climate neutrality transition is governed in Reykjavik in general. What are the most important challenges that you're facing with regard to governing this transition process?

P2: I think the challenge is for us is the lack of knowledge. And therefore people would in my mind, I, I don't know what because I'm not discussing this in detail, but I think there's a lack of knowledge and therefore it's a lack of support. You know, I'm the only person with a climate change responsibility, you know, only. But it would be good to have support on just, for example, on like the building or the construction industry, on calculating emissions and environmental effects, support for the issuing of green bonds, support for making climate budgeting, support for procurement. (...) And how to calculate different kinds of emission for different ways of transport. And I may be focusing on this one because we have green energy in Reykjavik, Iceland. So district so main greenhouse gas emissions are due to transport it's 70% and housing is right less than 10% or something like that. So we have. We don't have much focus on on housing and so on. So it's mostly about procurement for our own cars and also to strengthen the transport department and so on. Yes.

P1: So that I understand correctly all of these areas that you mentioned, like the emission calculations, climate budgeting, etc., this is all your personal responsibility and you're the only one working on that. Or did I misunderstand?

P2: I'm not no, I'm not working on climate budgeting, but I'm like support. (...) But, you know, there's a kind of weak support in one person that has a lot of other things to do. So that is something I would like to do more of.

P1: (...) Interesting.

P2: And also when I can say it's maybe not about myself or growing up department or something like that, but like strengthening, you know, within the procurement department that it has some kind of environmental aspect there or something. I have not thought about it. So if you have a brilliant idea on this, it would be appreciated.

P1: Interesting. Then let's think about it. What do you think could be done to overcome these challenges?

P2: (...) And I actually think that there has to be a stronger focus on on reducing emissions and look at that in a regular way. (...) Like you are looking at financing and so on. You know, that is legal to have like an annual report. And now there is a lot of focus on housing. That is, of course, that is very much important. But it's like the politicians are

very much focused on that and have like a quarterly report and a people working in that, and that is great. But at the same time, it is not like a same how can I say it? I don't know the English word. It's not the same. Follow up on climate issues. I feel a little bit like I'm the one running the show. If I would not say, hey, I would like to show you the numbers for 2022, if I'm not asked for it, then no one would ask me. Maybe two years later, Oh, where is the climate numbers or something like that? I have that feeling right now.

P1: Interesting and maybe thinking about the other way around. What would you say is your biggest success in Reykjavik so far in governing the climate transition?

P2: Exactly. Maybe I'm a little bit contradicting because I also think it's a success that I don't have like a ten person department because I really believe that climate should be a part of the process all around the city. And so it's like the finance department that does the that does the greenhouse calculation for the operations of the city. I myself collect data for the for the whole of Reykjavík the social emissions. (...) And also when there has been procurement on on on less emitting cars. It has been a part of the work of those who are buying the cars. I'm not buying the cars. So how can I say it? It has been. It has been more looked at as climate and environmental issues are a part of of the daily work of the city. But I also think because I was started, you know, 12 years ago at the city and we started with an environmental program that is now still running, but it's another person running it. And I think that the focus on that project also helped a lot because it's like environmental focus is all over the city, you know, at all of the workplaces, etc.. So I think that this kind of success, I think the mindset is there, but we would need support to escalate the changes actually.

P1: Interesting. So looking at the time, let's maybe jump to a slightly different topic area.

P2: Okay.

P1: I would like to ask you about administrative capacities, which I by which I mean essentially skills, processes and resources that the public administration kind of uses to fulfill its function. So which skills, processes and resources would you say Does your city need to advance the climate neutrality transition?

P2: (...) I think it's procurement that would have to strengthen its skills in carbon emissions calculation and also like making. How do you say it? There's some kind of obligation to reduce the greenhouse gas emissions when you're working for the city. Also another skill that would be very much needed. It is in human resources. (...) To like. I don't see how you can say to. What kind of education is needed for us to. To move into a carbon neutral community. And that is not only Reykjavik, it's all also just national. Why?

In my opinion, we need sometimes a very practical education on. On how to reduce carbon emissions in you know, when you're making food, you as a cook, how do you sit there when you're building a house, when you're making clothes, when you are? I don't know, whatever you're learning, you should always have this kind of knowledge as well to be a part of your education in general. But then also like part of the city there, I would like to see the Human Resource Department have a stronger role.

P1: Interesting. (...) So maybe following up on that a little. Do you know if there are any active or asking the other way around, how are you developing the kind of capacities that you need? Are there any methods or strategies or ongoing initiatives, for example, by the Human Resource Department that already procures or tries to build capacities needed for the climate neutrality transition?

P2: Well, it actually started with just recently the city have like a digital education website or portal or something like that. And I'm really looking forward to that as a tool. But then also, we have been discussing, and I don't know how far that will go, but we are going to meet after the holidays, me and the lady who's running the green steps right now. That is quite a good educational program. And she has been working a lot with human resources because, you know, she is going into kindergartens, schools, libraries, whatever the city's running that she's visiting people that are working with the green steps. So that could be like a part of of running the show. You know, if we could have not only environmental education, but also more climate related.

P1: Interesting.

P2: But that is not you know, I don't know how that will go. And it may be a way to strengthen it.

P1: And within the administration itself, what what kind of skills, processes and resources that might be required for the transition are currently lacking? And what are you doing to develop those?

P2: (...) I think that is lack of general knowledge on greenhouse gas emissions. And just like for scope one, two and three emissions, I am not doing anything about it right now. The only thing I can do is actually addressing it.

P1: (...) Looking at the public administration a little from the outside. What would you say is the role that the municipality plays in advancing climate neutrality?

P2: (...) Well, it is to use the means that can to towards climate neutrality. And there is a we have the planning authority within the city. So that is something we can use and we

are using it actually in my mind. To strengthen the public transport system. And I can say it making it easy for electric cars. But the main focus is on a walkable city like the 50-minute city. So that is something that the city actually can do in regards with the community and for all people living in and visiting Reykjavik. And the second one is the procurement. That can have a huge effect on on the market, but we need to strengthen that a little bit. But that is one of the tools that the city has. And then also, of course, like connection with businesses and CEOs, etc.. We have such a huge role, not only because we are the capital of Iceland, but also because we are by far the largest municipality in Iceland. So that is I can say it. It's a responsibility to. Go ahead. (...) Interesting. Being the forefront.

P1: (...) And be mindful of the time. And maybe I would also like to ask about the EU mission for 111 Smart Cities. So since joining the mission, what has changed with regard to climate neutrality and Reykjavik? How is maybe climate neutrality differently discussed governance implemented now than it was before?

P2: Well, the steering committee, it was established because of that, the political steering committee and also the transition team. They well, it was just like the recommendations of the guideline of the climate neutral guideline. So to have a guidelines like that, it's very good that you can show to politicians, your coworkers, this is how they recommend that we do things. And so you. That actually both gave you the confidence, but also maybe more secure to be doing the right thing. For some not, you know, specialist in governance. I have a background in business and and environmental and natural resources. But government is like out of my of my box somehow. But I always am. It's getting clearer how much it really means to making things to make. How can say it? We cannot change the. The society to a climate neutral society if we don't have the governance and that with that kind of focus.

P1: (...) Could you give an example where you have seen this extraordinary relevance of governance?

P2: (...) Um. (...) It's just like with people. It's just like with procurement. I know it had a huge effect on the governance of our company that bought the electrical process and made the strategy of being climate neutral by 2030. And. That was a part of the. Goal setting of Reykjavik City as well. I don't know if that answers the question. That is a governance.

P1: Well, arguably. Okay. (...) And maybe as a final question, do you think that it will be able to become climate neutral by 2030?

P2: No.

P1: (...) What would be needed to make that happen.

P2: Uh, we would like we would have to make the climate safety conscious work and a lot of stakeholders taking the part and reducing the emissions that is their scope. Three emissions. But is our scope one emissions. But it's like it's a transport that is the most emitting sector. And then it's about the. The persons or the or the individuals that are driving the cars to and from work. And we don't will the public transport system and electrifying of the fleet will not be ready before 2030. So if individuals and citizens are ready to reduce their car driving, then it will be possible. But. Yeah. Just see how that goes.

P1: (...) Okay, then. I think we're at the end of the half hour. Great.

P2: I hope this is helpful for you.

P1: Very helpful. Yeah. Very few people actually have mentioned the importance of procurement and HR in this extent so far. So definitely some very interesting insights here. So yeah. Is there anything else you would like to add to what we discussed as a final note?

P2: Nope. But like I say, I believe we will be climate neutral by 2040. I think that is possible to say, because that is our goal. (...) And also another thing, maybe we can be carbon neutral by 2030 if carbon capture technology goes very fast and will be extremely cheap. So maybe that would be the end of of the climate neutrality. I don't know. That could be a kind of innovation of the technology as well.

P1: (...) Interesting.

P2: It's a little bit sad, though, because when I was learning about climate issues, then this was kind of the end point to have carbon capture. But that is maybe that is our only possibility.

P1: Let's see.

P2: Let's see how the Climate City contract works.

P1: Yeah. Yeah. Do you feel like it works so far?

P2: Well, it's just such a short time, you know? It's just the first contracts now, so I think. If it doesn't count in 2 or 3 years. Then we should take some other kind of means. But that is also how it works, because they say that there's a kind of trial to making the first

admission now and then you learn from it and make amendments and then you make the second contract, etc..

P1: (...) Okay.

P2: (...) So that is very valuable. It's also valuable to have like consultants from [...]. Because sometimes you need someone from outside to talk about things and. And making people work together with a different kind of [...] in the in the city. (...) Well, okay. Now I have to go. Yes.

E.p Stockholm

P1: So maybe just to get started. Set the scene of the. Do. Please briefly explain what your day-to-day work looks like and what your usual tasking responsibilities are around the transition to climate neutrality.

P2: Yeah, so I work at the Executive office at the within the city of Stockholm. The Municipal Executive Office and I work mainly with climate strategists and trying to coordinate the, the, the work that we do in Stockholm. And so right now we are developing policy documents, a new climate action plan. And so and I'm kind of developing new work methods to change the way we work instead of instead of just working very like decentralized, we're trying to develop more coordination around the climate work, trying to develop some kind of portfolio thinking and developing more of a like strategic discussion on what we what types of projects we need to develop and, and analyze the existing projects, trying to understand what we need in terms of electrified transports, for example, or as circularity or consumption perspective. So, so and that's, that's something that we haven't had before. And I also work with the we have a national climate city contract and also a climate, the European climate city contract. So I've been very much involved in the develop development of the European. Yeah. We feel filled out the templates for the from the commission. So I would say it's both like coordination within the municipality and also trying to collaborate with others like the university and some business partners as well. So that's my main thing.

P1: Interesting. So you mentioned that you're working on the Climate City contracts. I would be curious, where do those stand right now, both the National one and the EU?

P2: Yes, the national one is something that is so they are a bit different. So the national one was developed in 2020 based on a national initiative called Viable Cities. So it is a contract where we as a city bring in our actions in terms of reaching climate neutrality. And then six national authorities in Sweden. The ministries are quite small and the authorities are much larger. So six six national authorities bringing their actions to support cities. In terms of policy, in terms of more coordinated funding and a European part as well. And then it's it's a signing every year. So we update the contract and it's signed by the mayor and the general directors for the authorities. So that's the the the national, the Swedish climate, the contract. And so, yeah, the the European one was we thought from the beginning that it would be quite the same thing, that we would have a contract with the commission, but it's not that way really. So it is. And also it's very formalized. The templates with a climate action plan, a climate investment plan and a commitment document. So so we developed three documents based on our. So our Climate Action plan was based on our existing climate action plan. And then we developed the Climate

Investment Plan for the first time. So we actually took the, the, the, the measures needed for climate neutrality and adding a financial perspective on that. And then it is a contract based on like the city of Stockholm. So we are we did invite others to sign that they are supporting our work and and that they will help and develop this together. So it's signed by the municipal companies, the energy company and the electric grid company and the three universities that we have a partnership with. So in total it was, I think was 13 signatures, signatures, and then we sent it to the European Commission and it was some kind of completeness check in March, and then we finalize the submission in April. And now with this some kind of review process on these three documents with different parts, for example, the European Joint Research Center are where are we reviewing the the Climate Action Plan and other actors that review the other ones? And then we will hopefully get a mission label if they think if they think it's an okay work. And the plan on the progress for climate neutrality, we will get a mission label in. We don't know really, but we think it is in August. If they were on vacation.

P1: (...) Could you maybe briefly touch upon what this mission would mean to you?

P2: (...) We are. We hope it would mean because now it's a bit unclear what it will mean. So we have in our political budget a writing that Stockholm is supposed to be a global frontrunner in the in the environmental work. And. For us. It's both that we need to do the work within the city, but we're also and we have a long reputation and a long history of working together with others as well. So for us, it was more or less that this is something that's new and interesting, so let's do it from the beginning. But we hope that it will be some kind of funding connected connected to it, and we also hope. That may be it can be more of a policy window in some way that it will be. I mean, this could be some kind of dream, maybe, but we hope that we could. Kind of develop like this. A lot of our our goals needs a European policy to actually reach it or a national budget. So for us, we can do a lot of things on the city level, but we need the dialog with the national government and the European government, the European Commission and the European policy. So for us, we hope that the mission label can like give access to discussions for policy. But we don't know.

P1: (...) Interesting. Very interesting. Then maybe as a quick follow up, is, are there any other frameworks or concepts you're employing besides these contracts to pursue climate neutrality in the city?

P2: (...) I mean, we we report to GDP. Oh, is it called GDP? (...) I think so. Maybe so. But that's more or less some kind of reporting. So I would say that that it is this framework that we focus on. But we also have we have right now a really strong focus on from the

political side within Stockholm. So our goal is to reach climate, a climate positive Stockholm by 2030. So it's an even higher ambition than climate neutrality.

P1: Maybe then I would like to transition it into the area of governance a little more. You mentioned earlier already your portfolio approach, etc.. And maybe to start off with, could you briefly explain which organizations are responsible for governing and implementing the transition to climate neutrality in Stockholm?

P2: (...) I mean, it's. Do you mean in the I mean the it is all the organizations working in. Some way affecting. Affecting. (...) I mean, affecting even consumption in Stockholm. So for us it is. I mean, we are working as a city, the region, the government. But I mean, we. Our emissions is about 10% of the total emissions. So we need to work with the business partners and with the with the citizens as well. But we are also integrating more of a scope three thinking, which means that it is about the consumption perspective and the products that's bought here but produced anywhere else. So I mean, thinking in. Such a way. It is important to think also about global companies.

P1: And when it comes to governing and steering this process, which organizations are doing that?

P2: (...) We are working within the city in terms of like. Focusing. So we work within the city, but we're also working with like a month ago I had a meeting with the, um, the organizations. I don't know the exact word in English, but like. Like the organization for the. Is it called Branch? No. Like if you have a like a trucking company, it is an organization like organizing all of the trucking companies or all the the retailers. So it's more like because that is a way of. That is a luxury as the capital that all these organizations are based in Stockholm so we can organize meetings with them. So it's much more difficult for other cities because they don't really have access to these people. But for that, that is one way where we trying to like reach the business sector in a more huge in another way. So but we I mean, we can't we can't govern. We don't stair in any way. So that's much more about collaboration, like joint joint initiatives and so on.

P1: And if you think within the municipality itself, what structures are used to coordinate and communicate within the city, essentially the city as an organization.

P2: So we have a we call it like a core group of a climate core group. That is it's me. Working on climate neutral Stockholm. I have a colleague. He's the like chief climate officer. Then we are. It's the environmental department with two representatives, one working on more analysis and numbers and data and one more working on on development projects and so on. And also the traffic department and an EU policy, (...)

one working on EU policy and funding from EU and one invest. Since the development of the Climate investment Plan, we are also integrate the person working on investments and financial issues. So that's the core group. And then we have so that's like led by the City Executive Office, but integrating people from the environmental department and the traffic department. Then we have a like climate coordination group, which I think is super interesting or it's a key. I used to be a researcher and I followed the city of Stockholm. So that was one. One thing that I highlight like that is a key. It is. It is all all the municipal companies and the most relevant. Technical department. So it's not like it's not school and elderly care, even though we might need to integrate them in some way. But it is the not the top management but the second level of. So it's not like the. The the head of the department, but it's the second level representation from each, which means that. It is a group with a mandate. But also an understanding and. Yeah, they like it is there it is their employees that works on the climate projects and like the Climate action plan that we developed right now. And so that's a really important group for us to, to work with. So we meet them like every six week or so. But the core group is meeting every week or every single week.

P1: Okay. So how does the core group and this coordination group relate to each other beyond these meeting schedules?

P2: So it is the coordination group. Have more departments and companies involved than the core group? (...) And. Yeah. The the that's more on the like. We can share information with them and we can like say that this is going to happen. You need to take this home and come back with information to us or you. We will start to work on a new climate action plan. You will be heavily involved. You need people. You need to point out people that can work on this while the core group are more handling all the issues with the contracts, the the more of like coordination every day. Today is the thing.

P1: So why was this set up chosen in particular? What are its benefits and.

P2: I think it was. We have been working with this for about six years and it was when so it was like 6 or 7 years ago when the climate chief officer was appointed from the beginning. So there was no climate officer at the executive level before that then. The climate was an issue for the environmental department, even though it's something that needs the support or the work of the rest of the city. It was something that was managed by the environmental department and like 6 or 7 years ago, it was a political initiative to like move this into the climate, into the city executive office, to to highlight the important, the importance and the need for like an overall city coordination, because the city executive Office has a much more stronger mandate to coordinate and also much more of an overview of the city. So and when my colleague started work, it was like, okay, so I

can I can sit here all by myself working on the climate. I need to develop some kind of internal structures. And so that was the background. So he started with the Climate Coordination Group with this management level. And then the the core group has been more developed during the time with the national climate conflict.

P1: I see. (...) Interesting. Very interesting. So if you think about this entire structure of these coordination mechanisms, the way you're governing this process, what are your the biggest challenges you're facing in governing the climate neutrality transition?

P2: The thing, as I said about started to say about portfolio development. We can see that we are doing a lot of things in terms of development projects, or it could be like innovation projects, but it is also a lot of things happens within our largest urban development projects with lots of focus on logistics or minimizing traffic or building materials and so on. But we have a problem of scaling and implementing into the ordinary structures. So what we are trying to develop now and we are starting with electrification of transport, but more will come, is that we are we have appointed one like coordinator of electrification. And we are. So she is she already like existed within the organization but with this like. Appointment or air. We say that you are the coordinator, you have the mandate. You can tell everyone else like bring because she needs to work with the port. The real estate department. They are super relevant, but also our parking company and others. It's like she will create her own core group on electrification and this has not existed. Some sometimes you can think it's simple but so we develop this and we say that it's not on a like. It shouldn't be on a too low level. It should be on a like people with mandates in some way. But they should know about the existing innovation projects going on, for example. But it should not be the project manager of a project. But we also connected into the ordinary. So we have a top management group of all the. And. The highest bosses of all the departments and companies. So we say that this is something that's like the climate. The climate neutrality is it's everybody. You should really work on this. And we have this portfolio of like a coordination on electrification where we connect the innovation project. So it will be possible to analyze the existing project, the need for new projects in terms of both like technical issues but also behavioral aspects or legal or business models or whatever, and then kind of integrated into the ordinary governing structures much more then it will be possible for if they find some problems or difficulties or good results. We will I think we will at least be able to handle the problems easier because we can move things up a bit. And then we might also be we it might be easier to integrate and implement results as well. So that's something that we are developing right now and hope for. So but that's our. Huge challenge, I would say, to make use of the results.

P1: So this portfolio still is developed by this core group or whoever is in charge of that.

P2: Yeah, I am in charge of it. But yeah, I would say that I am in charge of the idea of developing it and the. The whole like climate portfolio, but then it will be different portfolios for like electrification. But it is it is my responsibility to, to, to develop it and yeah.

P1: And how are the kind of processes and administrative routines changing as part of this transition to the portfolio? Your view?

P2: Yeah, I think that we. Because we have this like ongoing administrative routines on like yearly planning, the budget process follow up, it's like a machinery just going on. And that's the that's the ordinary structures. So one, one problem for not implementing things from from previous projects is that it is very it's if it is very difficult to. Be a part of the budget process. Because if you're if you're not in, you're out. Like it's a lot of steps both within the different departments and within the city as a whole to actually be part of the new budget. And in Stockholm, the budget document is super central. It is like if it is in the budget, it will happen. And if it's not, it will not happen. So this is one thing that we need to kind of develop this new way of working, which is much more like a, I would say much more of a network based, more of a network based. In some way. Uh. Yeah. Innovative way of working with the more traditional budget administration. So it will be like a there is a very strict yearly will on like how the budget document is produced. But I think that we if you take the electrification group so we know that like in. Early, like, say, in February, all the different departments is supposed to come in with their needs and their developments for the upcoming years. But we will also need that from the electrification. Else more of a theme. So it's much more of a thematic development instead of a department like. Yeah. So I think that it will it will add, add a layer of. (...) A layer of a thematic thing into the ordinary administrative routines.

P1: Interesting. And how are you trying to make this change happen to allow for thematic budgeting?

P2: (...) Oh, say again.

P1: How are you trying to make this change happen? That. You can it. It's based on a theme.

P2: (...) Yeah, I think. I think that in some way the budget will end up on. (...) A budget for the department. Anyway, because that's the way we can like send out money or change. But instead of it's the traffic department, like thinking of what we need, what do we need as a department? It's much more of like, how what do we need from this theme?

Maybe the most important thing is to change how the parking company works or how. So that would be if the parking company changed the way they work. Maybe the the the traffic as a whole, like the goals for reducing traffic will change. And that will not happen by itself. So that's now.

P1: (...) Okay, great. Then maybe you said you have 45 minutes, if I remember correctly. Right. Okay. So then let's move on to a second topic, which is more about administrative capacity and capabilities. So what skills, processes and resources does the city administration need to achieve the climate neutrality transition?

P2: No, I mean, we need people changing and we I mean, we need people to both understand a change, but also the existing administrative processes like and how it's like possible to change within. The system as well. For example, we have a discussion on how we can because we are adding an environmental zone from next year where it's only possible to have electric cars. It's the first in the world, I think. But. Then it's only the police that can give fines to people. So it's our policy, but it's only the police department that can work with the follow up. So we started to discuss if it's possible that the the people working with parking fines can give a fine because if it is a non-electric cars within this area that's parked, then it has been driving in the area. And then there was this like legal administrative person that said, well, we can just add a new parking zone. So we have like a parking zone one and parking zone two, we can just add one. That's like possible for us. And that's, that's that was something like that is a person really super bureaucratic. So sometimes we say that we need we need innovative people, we need process leaders and so on. And we need that because we need to work on like design thinking and changing and changing the way we work and so on. But we also need to like make use of all these bureaucrats that understand the system, but also kind of say this is possible. Not all of them say this is possible, but there are some people that can like stretch policy or like. So I think that's one important thing. And then we also need to make use of the whole organization. So, for example, our climate investment plan, we need to work with all the like all the investments. It's not that we are working with climate investments because if we do climate investments and then have the rest, that maybe goes in another way, then it doesn't work. So we need like we need the whole organization, like pushing for climate actions and also all these people with business contacts. So I met yesterday, I met our tourist visit Stockholm, which is part of they are like promoting Stockholm for meetings and events and also tourists. So the importance of that, they are also working for climate neutrality, even though a lot of people arrive with a plane. But yeah. Anyway, so. (...) And I also think that we need a lot of people that accept change because we need to change quite fast and the leadership that can push for that kind of change.

P1: Okay, interesting. So what is the municipality doing to build the capacities for climate neutrality?

P2: I would say that the portfolio thing is one to actually like develop the skills we are also like now. When we are developing a new climate action plan, we created a method for these working groups to actually think more of a less scenario thinking or (...) more thinking of what kind of CO2 do we want? In 20 years or so. Instead of just thinking, what are we doing right now? And how can we just push that a little bit, a little bit extra? So that's one way. We are also. Developing. (...) Like more of an innovation education or more of a both like educating, but also. So we have a new e e program E on innovation both on like different steps to action because a lot of I mean, we have 50,000 employees. So I meet some people, but and my colleagues. But the largest group works in school and elderly care. And we also need to make use of those people and the social services as well. So it's not only about the traffic and the environment and so on. What else? So we are also recruiting some different more of like. Innovation leaders. (...) So people with I know a a business or a housing company has recruited a person with the same thinking. Experience. And so it is, I would say, in some way, but it's it may be a bit slow, but still (...) changing a bit.

P1: Is there a systematic approach behind all of that, or is it more ad hoc?

P2: I would say it's ad hoc and based on. The leader of the company or the department. The department. When the top management change into a more. Change oriented person. They also traditionally we have one example where a lot of things happen, but that's really connected to change at the top management.

P1: Okay. Interesting. Then maybe, although we're almost at the end of the time, I would quickly want to ask you about the EU mission itself. So has joining the EU mission for 100 climate neutral cities. What difference has joining this mission made to the.

P2: (...) Um, I would say that the Climate Investment Plan and the push for climate investment plan is really an important change for us. We had that part within the the national contract as well. But it was not like mandatory as the European City Council. So we had to do it before. Also, it is a net-zero cities the project with its we are using transmission model that they developed and I think it's quite good. And useful in some way. But that's also I mean, for someone not. Like if you haven't been into transition studies or into it, it could be a bit. They were ethical. Maybe. But if you understand it, it's useful. So for us, it's been good to make use of that and then kind of translate it into our. So we haven't been able to just just use it straight away. But anyway. So yeah. And, I mean, this week or next week, it's a huge conference in Brussels. So, I mean, it's also

interesting to develop the discussion with other cities. And I would say that's also part of that. So. To develop the discussion with the Nordic capitals, for example, even though we had it before. But now it's been much more focused on this.

P1: Interesting. So then maybe as a last question of.

P2: Your time, it's. It's fine. Take your left.

P1: Okay. So do you think Stockholm will be able to become climate neutral by 2030?

P2: Hmm. (...) I would say that there are chances at least. (...) But that needs. That needs huge efforts and huge policy changes as well. And for now, the national policies are not working our way really. So we have a we had an existing path on biofuels and the reduction of fossil fuel in the existing. But now the national government has changed this into the lowest in Europe, which is actually it gives us huge effects on because the transports are so much emissions. And then that will affect us really much from this year. So if that is not changing, it is it is problematic for us. And also heavy transport is also difficult. And I mean, based on the consumption, we can't add the consumption perspective if we're adding the consumption perspective into the climate neutrality. It's. It's not not possible, I guess for 2030, I guess with. Now. (...) Four. It's it's too much from from other other. Other countries. We consume too much. Okay. (...) Okay. Let's hope.

P1: Let's hope. Yes, let's hope indeed. But I think for much of the time. I would come to an end here. Yeah. Is there anything else you want to add or highlight with regards to this topic area?

P2: (...) I think it's great that you have the administrative capacity focus because I really think. It is about. It's. It really is about like. Routines, working methods, but also the way we work with others. So developing kind of our collaborative capacity as well. So because if we just continue to do as we already do, it's we're building the city that we are already have.

E.q Tallinn

P1: Just set the scene: You already described briefly in the survey the main points, But could you briefly describe what your day to day work looks like and how that relates to the climate neutrality and sustainable transition?

P2: Well, I think I am in a rather unique position. I would assume that most cities do not have the luxury of having a dedicated sustainability governance advisor or somebody who's working with specifically like this. But what we do together with my colleagues is quite a lot of. Reminds of academic work, actually, or some work that is usually done by consultants. And indeed, it is true that we are actually relying on our knowledge and consultants and we are not specifically doing the academic work ourselves, but putting it together or hiring people who put it together. But still, we are dedicated. This is our job. We are not strategic planners or some sites we are specifically working on sustainability governance as a collection of governance processes and trying to make sense how to govern cities. So this is a rather unique position which exists, I think mainly due to effective agreeing capital award and our commitment in this program that we shall do it. So it is it is not something that is business as usual or a normal thing for the city of town to have. So yeah, our daily business essential is to find resources and experts on the topic of governance and trying to make sense of it and put it together both what we use for the city of telling so how to govern better. That's very inclusive. Also, the transition towards climate neutrality or in general the Sustainable Development Goals. So how to govern the city of tally better but also make this. Knowledge available and then even actually consult if there is need. But we consult our cities on how to improve our governance processes.

P1: (...) Very interesting. Then maybe following up on that directly, you mentioned the green capital, of course, might be aware that in the context of my research, I'm also looking at the EU mission for 100 climate neutral and smart cities. Could you maybe address again which kind of governance and reference frameworks is the City of Tallinn using to think about the sustainable transition and how do they relate to each other?

P2: I do remember a question and I had a hard time, hard time finding like if there are any, any kind of frameworks. So definitely one is the SDGs and I would probably say it's one and only frame work. But I might be mistaken here. When we did the strategy telling strategy we relied on, OECD's wealth were a model. I don't remember exactly what the name of it is, but if you Google for it, we see the welfare model. So, it is basically the same thing that it looks at the. Well, our of society puts it together with sustainability. So, you kind of have to balance expected wealth where with the sustainability of resources and environment. So, this is what we use my unit specifically to elaborate the strategy. But I can say that it is widely used in the city. So, it is just something that we use that for

at the moment. But on a wider circle, probably I would say that different people use different management theories of let's put it like this. There are we are we have been looking into the ISO standards regarding governance but haven't used it and haven't even come to making sense of if we could apply them somehow or not. So, then I run out of out of ideas. But SPG is probably the most predictable framework. And we have all opted to donate economy but are not using it.

P1: Okay. So very interesting. And maybe asking about the mission for 100 climate neutral smart cities in particular. By, would you say is Tallinn, if I'm correct. Not part of this EU mission.

P2: (...) We think that this is a job accident. So, it is not a question of our. That being were or not caring, but maybe being a bit too afraid that the commitment is like too serious. But we definitely need to achieve it. And if we don't, then we have been like that. It has been a complete failure and we don't want to be a failure. And so we don't risk to take this ambition. So, I think it was a lot about miscommunication and kind of just mismanagement of a of a process of application. So bad governance in this sense that we didn't make the decision at the right time. If if the opportunity would present today, we would definitely apply. So it was just a case of but at this moment, we couldn't make a decision fast enough.

P1: And why do you think that is?

P2: (...) I don't know because I wasn't at the administration at the specific time. So I can only guess that it might have been due to like maybe structural reform being in progress and the roles of people being a little bit maybe unclear and a lot of things going on at the same time. The green capital application and trying to win the Green Capital Award and then not having enough resources to focus on another stream. And it kind of just fell on the floor. I guess I don't have a good answer here because it wasn't present.

P1: (...) All right, then I would like to ask a few follow up questions regarding information you provided in the survey. So regarding the lack of governance, governance structures, coordination, etc.. So you mentioned that the Strategic Management Office is the central coordinator for sustainability. Could you elaborate a little on its structure and its purpose within the wider city administration?

P2: Yes. So. Sure, sure. Um. (...) Well, I've heard that in some cities there is something like a city executive office or some kind of a central unit that is across or above the departments or. Not like the sectoral institution. Basically, our strategic management office is the same kind of thing, a cross sectoral thing. But just keep in mind that we have

two such units but across the world. So we have a steady office and a strategic management office and a strategic management office is way bigger, deals with more topics and was created kind of to separate the. Everyone said mundane, but still kind of purely administrative and legal aspects that were previously kind of dominating the city office and are now officially the city office tasks and more like development and change management oriented things. But then we're put together into the streets management office. So the. Some tasks of a city office were taken away, separated from city office, and the capability was increased like a lot. And especially on the strategic planning side because we did have h.r. And i.t. Sections of a city office anyway. And now we are part of a strategic management office pretty much in the same way and financial department, etc.. But the district specifically strategic management part was pretty small and now it's like grown pretty big. So we have strategic planners, we have service design people, we have green transition people and etc.. So basically it is oriented towards change management and kind of providing horizontal knowledge and tools to all the departments and kind of setting a vision where we are going, setting the matrixes and providing kind of services that the departments need in order to work towards our strategy.

P1: As. And in contrast, you also mentioned the the Development planning unit and Green transition unit in a different place in the survey. Where are those situated and how do they relate?

P2: They're all part of a strategic management office. So basically all the things besides. The legal department and audit. And these kind of very administrative things, baby were left in the city office and all the things that are providing direct services to departments or dealing with change management in any way are were put together in the Strategic Management Office and this included v h r v i t finance green transition, strategic planning, service design and etc..

P1: Things. Very interesting. And you mentioned, of course, that this this is an organizational change or a change to the organizational structures. Could you compare this to the previous setup maybe and what the key differences are?

P2: Key differences are in capabilities and any volume because the city office previously they did have the same functions theoretically, like on paper they would work, but they were drastically unmanned. And the strategic planning side of it was buried. In in our kind of. Or buried under bigger units. For example, strategic planning was in the city office but under financial planning department. So it was a really small, small unit and we didn't have a green transition unit specifically. We didn't have service design. There are so. So we're totally like unmet. (...) And it's still the Office of Strategic Management Office kind of. And then increasing capabilities for these functions have drastically

improved. But the capability of doing what this unit needs to do, that's the main difference. So and of course, specifically like stating that this unit deals with strategic management, which deals with service design. We still have innovation and foreign funding. So more kind of. Clear pieces is humans with specific competencies.

P1: (...) Okay. You mentioned capabilities a few times on a more higher level beyond just general strategic planning. What capabilities does this new organization have that are important and how are they grown by where they grown? And how do you know and where are they useful?

P2: Uh, I think besides strategic planning, which we started to grow before the structural reform and the strategic planning unit was also one of the units that kind of was facilitating this reform as well. I'm saying that we need to have it because otherwise we cannot implement our strategy. Besides that, there are two. Main new capabilities added one is service design or service management. So how to how to design our services and how to govern around the concept of services. And the other is green transition of the capabilities of making sense. What does climate and energy policy mean? Doing the setup and now implementing the setup centrally.

P1: And you? Okay. I think we will come back to the block of capabilities and capacities in a moment. I would actually like to remain with the government. Up for a moment. And there are two more questions I want to ask. You mentioned in the survey that you're in the process of designing both reporting and funding mechanisms, that they don't exist yet, but they might be upcoming. Could you describe what that process looks like and which principles kind of are included in this planning?

P2: Mm hmm. This is the task of a development planning unit who is responsible for the city strategy and the support for different departments for creating sectoral development documents. So basically, based on the city's strategy and KPIs there, the development Planning unit is basically working on having a holistic set of indicators for basically all the sectors. So they don't do it themselves for all sectors. But we work together so that if the sectors are doing the development plans, that these will include the indicators. And the indicators would be, I'd say, holistic in the sense what? One set of indicators for one topic, not like what some some unit uses one indicator for a specific topic, but somebody else uses a totally different one. So having a complete overview of the indicators that we use to measure progress and have accountability. The other part, financing budgeting is is more difficult because here the developing planning unit cannot do it themselves. They need the cooperation of a financial department and the budgeting planning unit. And they are basically what they're trying to do is align a structure of a strategy with the structure of a budget. So we do have basically an activity based budgeting system, but the activities

listed in the budget structure do not one on one align with their activities in city strategy. There is definitely an overlap and they're not very far off, but they are still a little bit off. So there is not complete alignment. And yeah, what what they're trying to do is sector by sector. So we take one sector and try to align. Service strategy activities, budget activities. And then this is a very difficult process because most likely we don't see that it would ever function in complete alignment because there is always a need to change it in one system, for example, in strategic planning. But if you have it completely aligned, you would need to at the same time change it in the system. But it is not always possible to legal or whatever reporting requirements or whatever. So they will not be we don't expect that they can be aligned 100%. It doesn't make sense. So probably it needs to be another instrument applied to kind of. View them together and make sense of them together, even if they use a little bit different structures. So we need to figure out what this system is.

P1: (...) Very interesting. Then maybe jumping to a different block. Sorry for the disjointed topics. I'm trying to ask follow up questions to the survey. So at one point we mentioned that the with regards to collaboration, cooperation externally that the Climate Assembly is coming up in autumn. Could you elaborate a little on what that is and what role it plays?

P2: And yeah, I might now be struggling to use the correct terms, but the, the methodology is an international methodology that we haven't come up ourselves, but we're using a recognized methodology for citizen climate assembly or what's what's the correct English. And this is, this methodology is imported by an NGO or several NGOs to Estonia and was first piloted in the city of Tartu when Tartu did their Climate and energy action plan, I think. So and we use the expertise of these people from these NGOs so that we would use the methodology correctly because it is a quite an extensive and also expensive process which takes a lot of commitment from the engaged people. So it is not just asking questions for 30 minutes and goodbye the people who are in this assembly. I think we need to work like four weekends or something like this. So it's quite an extensive time commitment and it is not only for getting the opinion of people, but providing them the whole information that the city government also has to make decisions. And so kind of putting people in the context of not only giving their opinions but having the information that they need to make this decision. So how how does how does actually knowing what the background and the information is, how does that change people's opinions? So essentially, they are put kind of like into decision makers role, trying to provide them enough background information as well. Of course, it is still a mini model. It's it's what we consider is a lot for a normal cities and it is not very much for a civil servant, but it's still much more complicated than just asking questions from citizens like in a survey form or something like this.

P1: It's very interesting. And maybe related, maybe not. You mentioned a different point in the survey that a lack of integration with the political level is something that you're concerned about. Could you maybe expand on that point a little?

P2: Yeah, I think that's always. They sing in public sector and everywhere. But the (...) Goals. In a very wide sense of civil servants and politicians are a little bit disliked because what the civil servants don't think about is being reelected. And this is what what is key for the politicians and most of the civil servants expect always there should be a long term view and not the view of the next elections. While the politicians are faced faced with a harsh reality of the next elections. So there is kind of some kind of misalignment is called into with this process. So that's one thing. But the other thing is also that the civil servants are working on one specific topic. They're like kind of experts and have time to do reading and, you know, really be fully committed to this topic. While politicians may need to be jack of all trades, essentially we need to know a little bit about everything. So there is kind of this conflict of what what is what is known in order to make a decision and. (...) Yeah, but the is. Politicians just wouldn't have a time to. Focus on some decision making process in such detail. As the civil servants are and they cannot be, you know, they haven't read all the documents or they don't know what what is in the development plan on this page, in this paragraph, because it's not humanly possible for them to do it. So. Yeah, that kind of friction always. I mean, it's. It's nothing special about the city of Tallinn. It's just total democracy, which.

P1: How do you. To me, this misalignment in practice when it comes to the climate neutrality transition.

P2: Um. Basically. It manifests. When or in the process of budget making. Most importantly, that our strategies don't have a very specific budget generally. So there is some estimations done of what we could achieve. Of course. But they are not a very strict year or two year plan because I mean, that's what the politicians are there to actually do the budget every year and that's what the city councils do. But if you're as a politician, your job is to and what you are focusing is making the budget and you are maybe only slightly aware of a strategy because you didn't do it. You were not in this process, but now you are in the process of doing the budget then. It's easy to make budgeting decisions without taking into consideration all the goals that have been set and kind of comparing. Or kind of analyzing whether this action, while I want to finance, how well does it align with different goals that are setting the strategy? Because we don't have basically any impact assessment. Process is when we do the budget. Which is something that we are kind of looking into. Like it is clear that we cannot do very specific impact assessments, but maybe we should do just kind of a reflection towards the SDGs versus something like

SDG evaluation toolkits, like just give grades. Like how much does one action contribute to one SPG or the other? So currently there is no such process in place. So the budget is made pretty much based on like on a hunch. I would say so. But, but the first very specific actions that previously have been evaluated maybe if an impact assessment has been made, but they are it doesn't cover all the actions or all the decisions made in a budget. Only a small amount of the decisions that are made have a previous impact assessment being mostly.

P1: Interesting. Okay. And then maybe following up on a different aspect that you mentioned, I think it was in the same reply actually, that the execution in different departments is lacking or something you're concerned about. Could you maybe also expand on that a little?

P2: Mm hmm. Well, it has also to do with the fact that the messages or in this case, the six strategic goals set in our strategy were cross-sectoral. So every goal is influenced by different sectors, and every sector influences different goals. But it is not directly with job. Of course it should be, but in reality it is not for the sector sectors to evaluate the decisions in relation to how they contribute or don't work towards the goals. Because if you are working in a sector. You kind of. Um, let's say if your only tool is a hammer, every problem is a nail, basically. So you're not very motivated or you are always in this box and it's hard to get outside of this box and think, okay, but what do I what is really expected of me in the context of these goals? It's easier to think what is expected in the context of this action that I'm doing. So the sector is a very action specific way. Look at I'm doing this action, action, action. I'm not. How does this action relate to different goals? So if I'm building a new road, which kind of alleviates maybe congestions for for a short while, but is it also at the same time reduces children's personal mobility and they walk or cycle less, then this impact is not necessarily considered by the people who build the roads because my job is just to build a. So I'm exaggerating here, of course, but there is kind of this in general, this is how how it very often works. But we but the sector specific decision makers that don't necessarily have the tools, the skills or even they need to look at all the impacts. But the actions have words of a strategic coach.

P1: (...) I would actually use this as a bridge that you mentioned, tools and skills and maybe move over to the administrative capacity section. As a follow up question there, at some point in the survey you mentioned that leadership skills are improving but still lacking. Could you elaborate on what leadership skills are to you and why they're important in the climate neutrality concept Context?

P2: Yeah. Yeah, a big for a long time. The. Expectation. Towards more leaders was to make. To do these actions Build a road by bus. Build a school so have is very specific

and concrete things as opposed to what the leaders should do is describe where do we want to be in five years, like being the being the person who describes the future. But we're working towards and sets a roadmap to how do we achieve this future and then players with people who are able to fulfill it. (...) Um, so, so I think that's the leadership part that you, you are first you are like the goal setter, but. Narrator of this future. And then you have a person who enables other people to achieve this future. And this is a skill that has been lacking. But there is more like administrative skills, like knowing how to do public administration or the legal stuff tendering or or budgeting or something like this, but not the leadership and sense of where we go with our through our people know what we are going. They motivated to go there and do we have the capabilities and the freedom and the initiative to take action?

P1: (...) Thank you very much. You mentioned also that in your opinion, there are there's currently a waste of manpower with regard to certain processes. Could you explain why you think that and the example that you were thinking of?

P2: Okay. This is just pure good bureaucracy. But bureaucracy in very many cases is set up in order to avoid mistakes. And if you are trying to avoid mistakes very intensively, you will have inefficient processes because for for 95% of cases, you don't need this process because nobody will steal or nobody will break stuff or whatever. You only need it for a specific 5%. But all these 95% all also have to now carry out this additional process. And then this is, for example, elaborated in the context when we sometimes issue and permit and how how much information to we fact check in this permit, like is this information actually needed? What we ask and do people need to need to actually know specific things or or the fact that the law states that some kind of permit template must be issued by the ministry and then the ministry will request it from the ministry, and then the ministry delivers it to us, and then we deliver it to a person who is making the application. And it just doesn't make sense. We could just as well have a website to enter the information and that's it. So it starts it can start from different things. Very often it is a legislative thing, but it can be like national legislation, not only local legislation. And usually it is to kind of avoid this small percent of. Complications or errors that would would. Always be present.

P1: All right. Thank you very much. Jumping to the next comment, you wrote that there's a lack of strategic planning and result result oriented capacities. Could you explain what these capacities are that you were thinking of and why you think they're important?

P2: Yeah. The. Development Planning unit in a strategic management office is not responsible for elaborating all the goals and activities that the city plans. Basically, they are only responsible for the stability strategy and the environment and Energy and Climate

Action plan. All our development plans need to be done by the departments and it is the departments who don't have the strategic planning capabilities. They are more like implementation agencies. So have been implementation agencies so far. So there is a need to build up this purely like planning capability in the departments so that they can take ownership of the strategic planning process and they are sector, and that includes setting goals, setting indicators, doing like some very high level impact assessment and budgeting and then etc.. So that's what I mean by the strategic planning capability in the department. Who is responsible for a specific sector?

P1: All right. Very interesting. And you also further mentioned that there is a lack of consensus on what climate neutrality actually is. Could you elaborate on this? And which are kind of the positions that are commonly held and by whom?

P2: Mm hmm. Yeah. I think it's still a new enough topic in a weird way. Although you want to argue that it has been on the agenda of the cities and national governments for. For a long time already. But I think it's still. The narrative is. A bit unclear. Because. But what I asked some some time ago, we one of the deputy secretary generals of the Ministry of Environment like, okay, so why do we use climate neutrality or with CO₂? Indicator as an indicator. And basically, he said that it is a good proxy, but it's not necessarily that it's a CO₂ emission itself, but shows something. But it kind of relates to a lot of things that we need to do in order to be sustainable. So if we reduce CO₂ emissions, then we do a lot of other things that are needed for environmental sustainability. Of course. But if you if you're an interpretation is based on CO₂ emissions, then people don't understand why it is needed. We don't feel CO₂ emissions like on a daily basis. So the actual effect still is somewhere else that people can see and feel and touch and. And so it's kind of what I'm trying to say, but. And. (...) It is true that we need to take a complex topic and kind of narrate it in a simple way. And so climate neutrality kind of is this simplification of things. But for different people, it's different parts of climate neutrality that are important. And it is not always clear like which parts currently are more important and where we could actually make compromises. And like, does it make sense to specifically reduce CO₂ emissions or is there some other part or some other thing that we actually want to do? Like, is it do we want to more focus on reducing the. Reducing the use of resources or in some cases to reduce pollution or something like this. But that is actually the goal. And we use the CO₂ only as a proxy to or to work towards these goals. And I think it's still. It still wasn't enough, but. But it's not very widely. Accepted in the society.

P1: (...) Does the city of Tallinn have a defined way of measuring climate neutrality yet?

P2: But we also use CO₂ and we use the energy efficiency or how to call it. So the amount of energy produced for producing a certain amount of GDP. So these are key indicators

for climate quality and. And then as I said. Or a regular person, it's hard to. Visualize how how that is important in the life. So it's quite a lot the question of narrative. And I think it's. It is it is easier to communicate in countries where you have, I don't know, natural disasters or something like this. You can say, oh, this happens because of climate change. But in Estonia, the weather, the climate, wherever, it's okay. You have a hard time to communicate that something is really messed up. So. So climate change is kind of a. Which is not the best narrative in Estonia. I think. So I'll. (...) That's why it's kind of still, I would say, fuzzy.

P1: (...) Then I think I have one more question here that I've noted down. You mentioned that there are processes that work against climate neutrality currently. Could you give the example that you thought of.

P2: In the cities where it's usually mobility? So it comes as no surprise, but there is still an expectation that we can provide more possibilities for traveling by car. This is still a widely, relatively widely held expectation by the public. So so this is something that is directly against it. But on a more general level, still, the overall narrative of economic development as opposed to sustainable development. So economic development, the need for more GDP, the need to produce more, the expectation that people can consume more. That we need to be rich in the sense of having more things. I guess it is still something that is. Embedded in society. So kind of. Somehow we expect that we can consume more and still be sustainable at the same time. So there is a contradiction really embedded into this by nature.

P1: (...) An interesting. Those are actually very conclusive final words that kind of sum up to a certain degree. Is there anything else you would like to add in this kind of topic area of governing, the transition and capacities that you would like to add?

P2: Mm hmm. Probably. Still, we have a. (...) Lack of skills to. (...) Direct. Direct the civil society, not a receiver, but the private sector towards sustainable actions through kind of soft measures. But the public sector is kind of more oriented towards either legislation or giving money. So kind of hard things to direct. Direct private sector. And there probably is. More that we could do with soft guidance, but we don't have the skills or even understanding like how does that fit into this system of legal. Legal guidance and providing financial incentives or taxes in some cases. So how does this soft influence fit together the heart of policy making? So, yeah, probably there is more that could be done. And this is something that we would like to look at with our sustainability governance model as well.

P1: Could you maybe give an example of what would be a soft measure for you?

P2: On. For example, when we when we plan an urban area that is big enough to have different stakeholders. So you might have some residential. Things were privately owned. You might have some retail, maybe some other offices or whatever, then some transport or public sector owned things. And now we want to have a comprehensive plan for this district. So that the city currently does not see them as a facilitator of bringing these stakeholders together and facilitating a common vision, which also might include some. Both legal and financial incentives for somebody to do it. So kind of combine this facilitation role. There may be some new incentives for the private sector. It is something that it has been done in other cities where public sector capabilities are stronger in this topic, but not so much in Italian because it's kind of like it is kind of said that this is not the municipalities task and it's all about urban planning is what is about this task, but kind of going beyond the urban planning, but rather the implementation also. So how do we implement this comprehensive plan of different stakeholders and and interests? So maybe if some lands would need to be swapped, maybe some things should be kind of bought by the public administration for for public purposes or whatever. Or maybe sometimes it's just enough to. Provide a forum where the private stakeholders can negotiate, but they have a mitigator who is unbiased and who they can believe to do the correct, unbiased decision. So no incentives are needed. Just a forum for discussion.

P1: Interesting. Very interesting. Thank you very much for the comment. I think we're then basically at the one hour mark that I had in mind for this interview anyway. Is there anything else you would like to add?

P2: No, not really.

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P1: Okay, then maybe to start and set the scene a little, could you briefly explain what your day to day work looks like and what your usual tasks and responsibilities are around the transition to climate neutrality?

P2: (...) Well, day to day work, I think is (...) planning ahead, looking for financing opportunities for different climate actions. Managing a number of EU financed projects and something like that. And just representing thought to on on different meetings, whether it's in the within the country or internationally.

P1: (...) [...] What do your planning responsibilities mostly pertain to?

P2: (...) Planning for different climate actions, whether it's towards renovation, whether it's something with (...) climate adaptation or just planning out actions in the two missions that we are included in.

P1: (...) And could you maybe explain in which organizational unit you are located and how that relates to the governance structure overall?

P2: It's the Department of... Department of Urban Design in Tartu City Government and its. It's a department.

P1: Okay. And then maybe looking at the governance of the topic of climate neutrality within Tartu. Could you briefly describe how this topic is located in the governance structures in which departments and teams are related to governing the climate neutrality transition?

P2: Well. The department is on equal levels with other departments. Climate We have our climate. Action plan. That's for mitigation and adoption. It is a. Official strategy and action plan document and actions from that document find their way into the budget plan at the annual budget, but also to the city master plan.

P1: (...) And who is steering and controlling that process of. Getting actions into the plan and deciding what is done next and which order and who to coordinate with.

P2: (...) In the end, the city government and city council decide what are the what actions they prioritize. But. Yeah. Our department basically makes the suggestions for more climate actions into the budget plan, which is for four years. And the. City budget as well.

P1: Could you maybe expand a little more how your department is organized internally and how you as a department coordinate with other actors in the city around climate neutrality?

P2: We have around 12, I think we have 12 people. We have project managers, we have a city planner. There are strategy people. And data specialist. And yeah, that's about it.

P1: (...) Interesting. And what kind of coordination mechanisms or structures or meeting schedules or methods of that kind are you using to kind of coordinate and communicate around the climate neutrality transition? Um.

P2: (...) I think it's more about I don't I don't know. I can't tell you that there's any specific. (...) Any specific structures in place giving like. I don't know. (...) Yeah. I don't know. I can't answer that question.

P1: Interesting. And if you think about how your work around climate neutrality is reported and managed from above, which kind of oversight and reporting structures are you using to in the governance process of climate neutrality?

P2: Um, the climate reporting mostly goes into the annual. (...) I don't know what's in English like that. Annual report of the city government. Basically, it's it's part of it, but. (...) Yeah. It's like you have to report on your. The actions, strategy, actions and and gains and stuff like that. So that's basically the most. That's one annual thing that happens.

P1: Every year. Okay. Let's see. And. If you think about the external coordination with actors beyond Tartu, the government, other cities, etc., how is that coordinated and communicated?

P2: On project basis. There is no reporting. Annual reporting of climate. Whatever. Nothing is needed from the national level and. Yeah, it's we are the members of. (...) The covenant of mayors, but also equally. But. That reporting is not annual. And the clay reporting is extremely tedious and. (...) We don't do that.

P1: So what was that? Clay.

P2: Yeah, I see. L. The I.

P1: And. In just. (...) And if you think about. The kind of. (...) Structures you're using for reporting, coordination, governance in general. Are there any changes underway, any changes coming up with regards to how climate neutrality is governed?

P2: (...) Creation of our department was a big change already. Our role is to bring together these. To manage more of these type of horizontal issues, for example, climate change and climate adaptation. So we're working on it and we'll see. We'll see how it ends up.

P1: Okay. Could you maybe explain a little more why the department was created? But the rationale behind that was.

P2: (...) But as I said, to manage better these type of horizontal issues. So to bring some kind of. Bring different departments together on under specific. For example, climate tasks also. But initially we were situated in a different place in the city structure, but due to some political changes, we used to be under the mayor, but now we're under a deputy mayor, which is how all the other departments are situated.

P1: And how would you characterize the consequences of this change?

P2: (...) I can't really characterize them because. (...) The period under the under mayor was pretty short, so I can't compare it. I can't compare it with we. We are only like a two year old department, so it wouldn't be right to do any actual. (...) Learnings from that.

P1: (...) Okay, Interesting. And if you kind of think about the entire. I'm interested in governance that you described here. What would you say are the biggest challenges that you're facing with regard to governing the climate neutrality transition? (...) Um.

P2: (...) Regarding governance.

P1: The governance.

P2: Number of. I do still think that climate actions are not prioritized or the understanding still is that this is a new task that city has to tackle. And it's confusing and expensive and basically confusing and expensive. And there is no understanding that. Environment or urban design and climate actions and things go hand in hand and you have all the budget you need for climate action is just the thing. It's just doing things differently. That understanding is still not there. (...) And it's not so it's not so much a matter of decision processes or financing or even, let's say some tools or KPIs or something like that. It's more about the will of taking all these tools that are available, whether it's in in Estonia or in Europe or worldwide, just taking those tools into. The. And to use.

P1: (...) Who would you say? Who are you thinking of if you're saying that this understanding is not there?

P2: (...) It's on different levels. It's on city administration level, but it's also on on political level as well.

P1: Eat. (...) Very interesting. (...) And if you think about these challenges that you describe, what do you think can be done and what is needed to overcome those?

P2: Um. I mean, it's just. I think. (...) I think. Well. Let's say. People far smarter than me are looking for the answer for this question And. That's like that is the main question about climate change. The thing isn't it's not about money. It's not about technology. It's only about the people and behavior of people, best behavior of companies, behavior of stakeholders, behavior of decision makers. It's it's all about. It's all about the people.

P1: (...) Interesting. Okay. And maybe asking the other way around, What are your biggest successes so far in governing the climate neutrality transition?

P2: I think our biggest successes are (...) we have been quite successful in attracting science financing, whether it's Horizon money, life funding, also INTERREG money. But that's. Those are our biggest success stories, whether it's our projects like Smart Tent City, where we did get a lot of extra funding for renovating buildings, redesigning our bus network, creating a electric bike sharing network in Tartu new challenging projects about renovation that I'm managing. Also financing about biodiversity and richness of life in the city and which is also it's been for, let's say it's been in operation now for, let's say nine, ten months or so, but the impacts are already quite big. So but it's. But and I think another success story maybe is our car free avenue. You heard about.

P1: I've actually seen it.

P2: You've seen it. So. But that was also about seizing the opportunity. And that was when COVID struck. And we saw that everything all events planned for summer in Tartu were were canceled. And the city government took upon itself to to to to vitalize the city center. And we did it through this festival like open air event that lasted for four weeks the first time around. But it was it was through this opportunity and moment in time. So. But. But so far, let's say these actions haven't so, so much translated into into how do I say this? (...) A thread of politics that goes through all the decisions. And it's when whenever a decision is made, the decision makers usually don't ask themselves the question How is this impacting our climate goals? And. Whether the way we are taking this approach to whatever investment or change and operation of city government or whatever, that that we take this into account. It's more like, Yeah. It's more like we try to avoid asking ourselves this question. So.

P1: Yeah. Yeah. Okay. Interesting. Thank you. Then maybe two more questions in the governance section of this interview. If you're considering how funding mechanisms are

used to govern climate neutrality in Tartu, what are you doing in that regard? And is there anything changing with regard to funding mechanisms?

P2: Sorry. You have to ask again.

P1: So if you're considering the funding mechanisms that are used in Tartu to govern the climate neutrality transition. What are those and is there anything changing with regard to the funding mechanisms used?

P2: Nope. Funding and investment usually is funding and investment of climate actions is usually done through external financing. (...) As I said, we need to take more into account when we're using our own financing so that. Parts of whatever our investments are, the parts that can have the most effect on, let's say, mobility or biodiversity in the city should be taken into account. It's usually it's usually a fraction of the cost of investments that has to be changed. But between us, it's this funny effect that you can argue about 5 or €6000 for an hour. It's usually easier to get approval for \$1 million investment than it is for a €6,000 investment because. Because you can understand how much is €6,000, but you don't understand how much this million euros.

P1: Interesting.

P2: Yeah. So let's say there's. You do a \$3 million investment and then you choose to save money on let's say it's just a hypothetical, it's just a hypothetical example. But for example, you choose to save money on on some bike shelter. Just build two instead of three or. Or save money on some. Planting new trees because of cost or you plan. (...) Plan a street investment and then somebody says that if we do this and this, then, which is like good for our mobility investment, then you think, okay, maybe.

P1: Thanks.

P2: Whatever. It doesn't matter. But you get the point. It's easier to save €6,000 than it is to save. To decide on €1 million.

P1: Interesting. Okay. And then a similar question about how Tartu is using information and communication technology for the climate neutrality transition. What role does ICT play in the transition and are you changing anything?

P2: Well. (...) Let me share a link with you. Um. Again, the trouble the problem is not technology. It's not data. Data is widely available. It's. It's more about. Not even how you use it, but whether anybody wants to use the data for making decisions. Because the data might usually when you do. (...) Then they database decisions, then usually the data. (...)

Directs you in, let's say, climate friendly direction, or it asks for things that, let's say, decision makers don't want to do for one or another reason. For example, I share the link with you, which is our almost real time mobility split visualization tool. So mobility split is a big goal for us. We want to be in 2040 in a situation where four of the major mobilities are basically equalized. So trips 25% of the trips are done by cycling. Equal amount are done by working equal, amount by public transportation and by private car. It's a huge goal and we have this tool that helps to monitor it and it takes account all of these all of the sensors that we have all over the city and calculates the trips, trips made and by what modality and stuff like that. Then there's great. Great tool by one of the Estonian tele crowd insights which you can use to get a pretty good understanding of how people move around, where they stay and how they move around in the city and neighboring areas. That's a tool that can be used to take into account. But. (...) But it's it's again it's more about. And educating the. (...) The people who plan investments to take this information into account, but also the decision makers to really understand the data and trust the data because it's much easier. Usually what I wanted to say earlier is that let's say the data usually shows a picture that that is not in sync with people's understanding of life. Or perception of what's going on in the city. So when the data doesn't reflect their understanding of of the world, then it's not them who is wrong. It's the data that is wrong. So building up this. (...) Trustworthiness of the data when when making big investment decisions is a difficult task.

P1: Just.

P2: (...) There's it's just that there is no practice in the data is widely available, but there's the practice of actually relying on data is what is the innovation in in data.

P1: Very interesting. What do you think would need to change to make that happen? That data is more regarded.

P2: Again, this is the million, billion, trillion dollar question that everybody's looking the answers to. But what usually helps is that, let's say, for example, these crowd insights data which is provided by Telia, this is something that decision makers cannot argue or they are not going to put into doubt the correctness of this data because. Because it's Telia. It's not a startup from here or there. That's two. Two young guys and one professor. But it's a big corporation, so you have to use. You have to use these. (...) Third party. Respect or. Something like that.

P1: Interesting. (...) Okay. Then looking at the time, I would move on to the next area maybe that I would like to ask you about. You initially mentioned, of course, the Climate

city contracts and the mission that Tartu is participating in. Could you briefly explain what is the state of work on the Climate city contract?

P2: (...) It is a plan and it's so far has remained a plan because we have been working on this climate city mission for a year now, but certainly not year, two years. Actually. We knew two years ago that this mission was coming up, then it was being worked on. So we did as much research as possible. What's going on? Then a year and a half ago, first official information came out. We prepared for applying. We did the application. Then there was a period of waiting for the results. About a year ago, a bit more than a year ago, we learned about the results. And then let's say the work started in in the mission. And then we knew that there's a pilot city program is coming up. So we decided to. (...) Apply for the Pilot City program. Waiting period was a couple of four months or so. Another two months for was for writing the project. Then another two months was for waiting for the results. And this is how we have spent the last 24 months preparing for the mission, Preparing for pilot cities. Applying for money for whatever things we want to achieve in in this mission. And so far, we are not a pilot city and we haven't had the capacity to actually work with the Climate City Plan Act also. (...) Yeah. So that's about it. I have I think I have a great plan on how to move forward with Climate City Action Plan, but I will not. Describe my plan at the moment because I have to go present it to our deputy mayors and the mayor before I'm willing to talk about it.

P1: Yeah, that is fine. Of course. You just said that you didn't have the capacity to work on the case and the city contract so far. Could you specify what you understand by capacity here?

P2: I only have eight hours in a day. And to build capacity, for example, to find people first, I have to find the financing for it. (...) Yep. So applying for financing has been a lot of the work they're applying for projects. The Pilot City project wasn't the only one that we applied to. (...) That's one thing. And. And the other thing is finding. Good people for work like this. So whether it's trying to find a good project manager for replacing me in different projects or finding people for new actions, it's pretty difficult.

P1: By, would you say? Is that the case?

P2: Um. (...) It's only 1 million people in Estonia. Not 1.3, actually, but sustainability, climate actions. That is. (...) Pretty. Specific and pretty niche field of work.

P1: (...) Hey, and I would like to continue in a moment on this topic of capacity, but maybe beforehand. Are there any other reference frameworks or relevant concepts that you're using to govern the climate neutrality transition besides the climate side contracts?

P2: (...) Um. No. No, I don't think so.

P1: (...) Then regarding capacity, I was actually one of my main interests here to maybe start out and set the frame on that a little. What would you say is the role of the municipality of the city administration when it comes to. Governing and implementing the climate neutrality transition.

P2: What is it at the moment or what should it be?

P1: Both. Yeah. Both like. (...) Um.

P2: (...) I mean, I don't know if I'm the right person to actually give. Give an opinion on this because I have been working in city government for 14 years, but really on this sustainability and energy efficiency and climate actions for the past, let's say seven years. So there is always. We have achieved a lot. But there's always the feeling that we haven't done enough. So. (...) For example, we we launched our bike share in 2000. 19. So by now it's four years old and it feels like something that is. A staple in Tartu. Like it's been there my whole life. And people think feel it. It's kind of the perception that it's always been there. Although it's just four years old and it's you tend to forget about this as a as a great success story. So as playing the role, I think the city has taken many risks. Not, but many risks are launching. The Bikeshare system itself was a huge risk and something never done before in Estonia. So this is something that the public sector has to do to bring these new services or take these difficult decisions that that companies, corporations or the market itself is not willing to do or not willing to take the first step because it would not pay off in short term. But these types of long term changes, that is something that the public sector has to guide and has to manage. But also taking. Taking some of the technological risks as well. And I think we have been good at doing that. But but again, we have been doing it with external financing a lot.

P1: And.

P2: So that we can do. Maybe we don't have to change our own processes. Not so much.

P1: Mm hmm.

P2: There's a good example from. From Estonian national government is pre-fabricated element renovation. Do you know about this?

P1: I heard about it in the academic context somewhere, but not in detail.

P2: Okay. So what national government has done is that they allocated some of the national financing scheme and they allocated the money for. For bringing this technology

to the market. And they boosted the rate of financing for buildings. Who would like to try this technology and first buildings. The preparation has taken 4 to 3 years or something like that. A lot of mistakes have been made. There's been quite a lot of frustrations. But at the moment, the feedback from the renovation companies and the element companies is that they have learned a lot in past 9 to 6 months when actually producing this renovation elements and installing them on buildings. So they say that they have come pretty close to the cost of. Of kind of traditional renovation with this new technology. But the new technology means that they need less manpower and the renovation is quicker. It has higher quality and they have solved a lot of small technical issues. And they also have taken into account some of the notes from us in our renovation project to solve some tedious stuff. So what I wanted to say with this long story is that. The national government, instead of hoping that. That the market and the companies will bring this new technology to the market and market will solve itself. It was not going to happen. They took the risk of trying to boost this technology, and now it's I would say it's pretty close to pretty it needs some more boosting from national government or keeping the interest high for apartment buildings. But I would say it will be the the main renovation technology for next for the future in apartment buildings. And that is because the national government took the risk.

P1: Interesting. (...) So if we from. That role that you describe, look to what you're doing in the Tartu city administration. What skills, processes and resources do you need to fill the role that you envision for the municipality in the climate neutrality transition?

P2: (...) We need better mobility people. Not just street or traffic engineers, but actually people who work with and understand mobility and don't get stuck into details like mirrors on a bus or something like that. We do need. And we need better understanding of climate change within the city structure, I mean, in the built environment. We do need. Better risk management towards climate adaption and extreme weather events. But. (...) But we also need actually more communication people as well.

P1: (...) Interesting. And. What? Just a second. (...) Okay. How? What is the public administration currently doing to build these capacities?

P2: Well, we're looking for financing. We have been. We have managed to employ, for example, specifically people for sustainability, communication and our sustainability goals and whatever we need in that term, whether it's on on city greenery, biodiversity, mobility, renovation. And the person is not financed from the city budget, but from the external. External financing through our Interreg and Life and Horizon projects. (...) But for example, we do have a there is a position available from Mobility Manager, but. Is impossible. The place has been available for almost a year now. It's just impossible to

find a person with proper education, but also some experience of working in this area. And.

P1: Christine. (...) And how would you say are you? Monitoring and deciding which capacities you need.

P2: (...) I think. I don't know. It's not so much up to me. It's my. My superior who. Who has to understand who's overworked and who's. I'm on the road.

P1: (...) Interesting. Besides what you already mentioned with regard to mobility, is there any other area in which the city government is currently trying to build capacities for climate for the climate neutrality transition?

P2: (...) No, I think the mobility is a number one thing at the moment, because that is that is something that we in terms of greenhouse gas emissions, that's what we have the most influence over in Estonia.

P1: (...) Okay. Then I would like to move on and quickly ask you about process and routine changes. How has the city administration changed its processes and routines to governance? Implement the climate neutrality transition.

P2: (...) I wouldn't say we have changed. Anything at the moment.

P1: (...) Are there any plans for changes?

P2: (...) Maybe in my head.

P1: What would be your ideas in that regard?

P2: (...) I would keep them to myself at the moment.

P1: Okay. Yeah, sure. That is perfectly fine. Then maybe as a last kind of block, I would quickly like to address the new mission for 100 climate neutral cities itself. I would be interested in knowing how has joining the EU mission influenced the way climate neutrality is discussed, governed and implemented in your city?

P2: It hasn't changed anything. It's. (...) It seems to be more like an annoyance. Because climate neutrality is. Is a big and confusing word, and it is something that can be used as a as a weapon for a weapon in communication, as a negative thing. It's very technocratic and. (...) What I like. It's it has a very negative vibe to it. But also the mission is mission itself is governed. (...) And let's say in a bad way.

P1: You specify what you mean specifically? Um.

P2: As I understand that one of the goals for a mission like this is. To do innovation on every level. There is a lot of lot of innovation expected from city governments. But at the same time the commission who has. (...) Who's come out with all these missions. It doesn't seem that they are doing any innovation themselves. (...) And let's say there's the commission on the high level and they are expecting innovation from municipalities. But in between is a regulatory, structured and very bureaucratic EU project that's called net-zero cities. And all I see is, is deliverables and tools and tasks that are being done in this project by the project partners and project managers. And we see I see the very many recycled tools or actions that are usually part of any other EU project. So, so far. I there's I can't say that there's much benefit from. From the mission itself. But it is what we do with the mission label or the mission. In Estonia, in Tartu, with other municipalities and the national government. (...) It's. It's how we use it that will benefit us. It's not the mission itself. If you understand what I had in mind.

P1: Yes. Yes, I definitely understand. Very interesting. And so maybe as a last kind of content question. Do you think Tartu will be able to become climate neutral by 2030?

P2: (...) I think it's. It. To be honest, it doesn't matter. It's not up to task to become climate neutral. We cannot do it by ourselves. There's so much that has to be done by national government, for example, or cleaning up our energy mix. And in electricity, for example, we can do our own part. There's it's. Whatever results, whatever results we achieve by 2030, the number of emissions, whether it's zero or 100,000 or -100,000, that is not how you measure the success of this mission. It's what you have changed along the way. That is how you have to measure the success. So if, for example. If. Yet, for if the national government doesn't achieve its goals that it has presented in renewable energy. If they don't do that, then it's impossible for to become climate neutral. But that doesn't mean that whatever we do has been. With no purpose or we have failed.

P1: Interesting. So what kind of change would you consider a success from Tata's point of view?

P2: (...) Implementation of our climate Action Plan the way we have. Said, but for or at least to. Implementing it in the best belief and in the spirit of what the action plan was written in, because things change. You have to always adapt and you have to change your course of action. But. Changing the course of action is okay when when your goals remain the same, when you start lowering the your goals, then it's that is the wrong way.

P1: (...) K and. What do you think would be necessary to make the climate neutrality transition actually happen by 2030?

P2: (...) What is.

P1: Needed? Yes. What is needed?

P2: Brave decisions. Praying decisions and. (...) In a city. It's a lot of decisions that that will affect a lot of people and how people live. In short term, it might be uncomfortable, but in long term it usually pays off and in financially and emotionally and. As wise as well. So, yeah.

P1: (...) I would say that that is a good end to this interview. A good last statement. Is there anything else you would like to add on the topics that we discussed?

P2: No, I don't think so.

E.s Umeå

P2: Perfect. So, maybe to set the scene, could you briefly explain what your day to day work looks like around the transition to climate neutrality?

P3: Yes. So, I'm a development strategist in the Department of Strategic Development. It's located at the city Development department. You could say it's a little bit more than that. But within the municipality and my department is I'm a climate strategist, but we have my colleagues are strategists within gender equality, public health brought environmental issues or whatever. And I have different responsibilities. I'm appointed municipal officer for our. (...) How should I? It's a new steering function within the municipality, which was adopted by the city council last year, actually, I think exactly a year ago. And where our politicians wanted to have more possibility to steer towards our overall goals. Which one of them is climate neutral? Umea. We have four of them. And for each of these overall goals, the politicians decided on what they call a program where they appointed different political committees. And also. Municipal companies to be in to be a kind of steering group for this overall goal, which is kind of neutral. So, I'm the appointed municipal officer for that work and my boss, who is our sustainability. I don't know what it's called sustainability CEO or something within a municipality. He is like the responsible for this program. So, that's a part of the governance that before this we had I mean, we had steering towards climate neutrality. [...] We had, of course, steering towards climate neutrality before, but this is a huge advantage because we have, like, a steering group which can. Which can make the steering better, more efficient. More powerful. Yeah.

So, that's one part. And then I'm responsible for our local climate contract, which is called climate roadmap. I mean, I have a colleagues working with it also, but I'm like overall responsible. And here we have since last December, we have almost 40 organizations and that's public, academic, private, and we have one large civic society organization which signed a local climate contract. So, this is also, of course, a part of our governance structure where we want to have this broad. [...] Committee, tremendous problem, important actors within our where we live - our place in the world. So, that's kind of the internal. Is this program starting.

P1: At.

P3: You as a place? Is this a climate probe? And then I'm partly responsible for. Our Climate Contract 2030 with the national governments. I don't know if you've heard about that. The [...] cities are running... Do you know about that?

P2: Yes, I know about most of it. Yeah.

P3: Yeah. Okay. So, I'm like the governance that I'm working on is. The span is like from kind of...

P3: [CONNECTION INTERRUPTED] Okay. So, like I will say, I was talking about, like, the scope of my governance responsibility. So, it's like this progress steering, which is internal and then to the like. Local actors and towards the national. And then I have colleagues working with the climate city contracts with the EU Commission. So, I'm involved in all levels of governance.

P2: You already touched on quite a lot of topics that I wanted to ask about. I would maybe first like to come back to the contract that you have in place and ask in general, which frameworks are you using or which governance frameworks are you working on or using to govern the climate neutrality transition?

P3: And what of the contracts? Do you mean the local climate contract? Or is it the national?

P2: Yes, because I just know that some cities have multiple different frameworks they're using in parallel. Some are working on, for example, the SDGs in parallel to other contracts and so on. And I'm just interested like, which frameworks are such use?

P3: (...) Yeah. This climate roadmap, the local climate contract is just. It's just about climate. But of course, it's within our. Is that what you're asking? I don't really understand, actually, what you're asking about.

P2: Okay, so. I understand correctly, on the one hand you have the climate contract, right? And that is also the same one that you would submit as part of the Net zero Cities program or whether it be separate.

P3: Oh, you mean like that? No, they are separate. The climate said the contract with the cities, but of course they are connected because we write, but like the templates are not the same. So, we found our own template for, for our local climate contract mostly because, I mean there weren't any templates that we made it up ourselves inspired by different.... Yeah, for example Leuven in Belgium and yeah.

P2: Okay. How far along is the climate City Contract for the EU mission currently?

P3: (...) We will submit our contract in September and finalize in October. I think it is. So, we're working on it right now.

P2: All right. Then maybe I would jump to the organizational setup. You already mentioned a couple of different entities that are involved. I would be interested to hear why was this particular setup chosen to facilitate the neutral transition?

P3: (...) Along with the internal program steering mechanisms that was a part of like. Like an overall. Update of the of the municipality's steering functions and since one of the overall goals were already before this last decision. Already before was one of the overall goals for us was to improve this steering function. So, actually that was a very political work. It was initiated by the politicians because they felt they couldn't steer enough, so they wanted to have a better steering mechanism. And I think it's I mean, as I say, it's crucial for us now to have this kind of mechanism and then for the local climate constructive and climate roadmap. It was actually. That has been. Like slowly evolving from our work within viable cities. Because in 2019, we when we got the first national funding, we were set to find out how those climate roadmap would look like, what are the decisions or whatever. And then we started talking a lot about this; whatever you want to call it. [...] arena or... You need actors in order to make this transition happen. And we are working we have been working in this way for a long time and we are... We usually see ourselves as a quite close city. I mean, we're not very large, so a lot of people know each other already. So, we have a pretty easy time to put people together. And when we suggested this. It was actually I was quite nervous, but it was actually quite an easy road to get these 40 signatories and they are the ones that need to be on board. It's like large companies, like the cymbal companies, all the public organizations we need. So, they are the ones that need to be. Then we can have loads of more. But as a start, it was really... I'm really satisfied about that.

P2: Maybe a quick follow up question. You mentioned that part of the change was made to create a more efficient steering mechanism.

P1: Or to take feedback.

P2: So, [...] think about that?

P3: I think it's a little bit tricky right now. [CONNECTION ISSUES] Also, if you just repeat it?

P2: Yeah. You mentioned that the organizational changes were also made to create more efficient steering mechanisms. I was wondering whether that works, whether it is more efficient now and why?

P3: And then. I mean, the internal mechanism or the internal steering mechanism within the public administration?

P1: Yeah.

P3: I mean, it has only been the decision was made last June and it was officially launched at the 1st of January. So, we only been doing this for a couple of months. So, I can't really say that. But what I can say is that this is what we need in order to do this properly. Because already with I think we had three meetings within the steering committee and already we can see some really large advantages for these CEOs of municipal companies. And like directors from different municipal departments that they have to talk about climate transition together.

P2: Interesting. Could you maybe elaborate a little on how the steering committee works and why it works?

P3: (...) So, we have very practical... We have I think it's four meetings per year with this, like the steering group. But between meetings, of course, we have these. And it's actually true for all these overall goals that we have, like a structure for what to be done during one year. This first year we should work a lot of... A lot with the. (...) How we can follow up. How the work is be done. We have to set the structures for following up. So, this this is like true for all the programs for our overall goals. But then within the the climate neutrality program. (...) Yeah. It's also that we. As I said, these municipal companies and I think it's three political committees, the technical committee, the environmental committee and building committee are appointed to this group.

P2: So, maybe I'll jump ahead to the next question, which would be: If you consider the governance of climate neutrality in your city in general, what are the biggest challenges you're facing?

P3: (...) That. For example, for the municipality, we are primary... What we primarily do is not working with climate neutrality. I mean, we have schools, we run elderly homes. We yeah, we do all these things. And of course, we have tried to do the best climate neutral and environmentally friendly as possible before, but the primary. (...) Within the different departments. What they primarily do is not climate neutrality. So, this is a huge barrier. This is actually also why what we are talking about. Maybe you can read that because that's in English. We also got this money from the pilot program. Yeah. So, we are talking a lot about in the application, we are talking about a lot about these barriers. Or succeeding with climate neutrality. I think you should read that actually, because then we try to describe what we think about what are the barriers. Yeah. So it's these classical... The municipality goes this way and the climate neutrality has to go this way. It's not new but these various... And then we're working a lot with the climate investment planning now and. We concede that it's profitable that we do the climate investments in

the long run. But the investments needed now are so expensive, in the long run, they will be very good investments. But this is a huge challenge as well, of course. (...) What else? And I think that's mainly the biggest challenges, I think. And if we talk about the organizations who have signed the climate roadmap, I think. I mean, of course there are barriers there as well. But they are very, very much into doing a lot of stuff right now. So, I don't think between them and... That's not where the huge barriers are. And yeah, as I said, I think you should read the application that we made part of the program because it's also says this is about like. Internal transmission capacity we are talking about there and there. We got the money for doing that, for boosting this organization within the climate roadmap for them to be. They have a higher transmission capacity.

P2: Okay. That is actually like a perfect transition to the next segment, because the next topic that I was going to introduce was definitely capacity. Could you maybe just explain what capacities do you need as a municipality for the climate transition?

P1: That's interesting. Yes, we need people like me and my colleagues who are, like, dedicated to these questions because there are a lot of questions. And for example, now with the climate investment planning, that's not my profession. So, I need colleagues who know these things. And so that's one part. And we also need these kind of structures that we're talking about, like this program steering mechanisms. They are very important because if you don't have them, it's like, okay, we do this project and then we do this initiative and it's like it's not coordinated and it needs to be coordinated. And also of course it has to be... All these things has to be really politically, in a true way, adopted. It's also classical like you have to have the goals adopted. You have to have the structures for implementing these goals and whatever. (...) And we also had these I mean, we had various. Stable, stable, what's called an English operative. The Social Democrats has been running the municipality for years and years. And of course, that's very important to have a political stability. Or the organization. In the climate roadmap, it's a bit harder, but I think in some ways the municipality is way behind these organizations because for example, we have a. A unit of Volvo trucks (...) and they have 100% control of their all their emissions. What what does what it's like these large companies they have because they need to report in different ways. They do is they have better they. And of course, it's because it's is such a diverse. I shut my camera up again. It's such a diverse. We have to do a lot of things. But I think that's actually also a capacity. We lack that; How to follow up.

It's hard to do that in a municipality. (...) So, that we need to enhance. Yeah. Follow up, I mean, towards our goals, but also like very concrete. We have this new adopted climate action plan internally. (...) We have to follow up. If the appointed political committees

are doing these actions that city council has adopted, and how fast is it going? Is it going? So, it's a huge organization needed for this. And again, it comes back to it: That right now maybe we don't have all these... I don't want to say persons always, because it's also a... We can... Maybe we have enough resources, personal resources within the municipality, but we need more competence within different fields like reporting and the connection between the economy and climate and those kinds of competence. This Climate neutrality oversight is currently done... We have different reporting. This is not my best view. This is my colleague [OMITTED], actually, who is best at this. But we do this reporting to the Covenant of Mayors. And then we do... We have these newly adopted updated climate codes. And this newly adopted action plan. We're working hard on, like finding out how to how this reporting actually should be and how it's most effective. So, we have actually a deadline now at the end of - What is it? The end of August? - to make a one picture of how the things are going with the climate neutrality to present to first this program steering group and then to the politicians. But we haven't we don't have the method, the whole method yet. We have some parts of it. (...) [TALKING OVER EACH OTHER] I just wanted to add because, I mean, the municipal companies, they have these they have to have some kind of environmental and sustainability reporting. And we are actually talking about that. And also these new EU legislation that comes next year. I think that we could. The municipality doesn't have this. We don't have to do that. But we actually are talking about that. We should have kind of the same reporting of the municipal companies in order to make it also the same system for the whole municipality and its code. So, this is what we're working on.

P2: Interesting. Maybe coming back to a point that you just mentioned, you said that in principle you have enough human resources for people but are missing specific skills competencies around which one in particular?

P3: (...) We don't have this person talking about specifically the climate investment plan. This person working for the economic department who also have knowledge climate emissions and how they are connected and how to count on these things. And the people working at the economic department right now, they don't have these skills we need; Someone who can, put or take these two different fields together. And actually, this is something I have been talking to other cities with the Viable Cities operation, and this is still lacking in many municipalities.

P2: Very interesting. Are there any other lacking skills or capacities that you would want to highlight?

P3: But it's actually about this. The reporting and follow up and it's a bit also about connection to this economic person. It's actually where we have been talking about that

we need like a sustainability controller like this, the person that's in the economic department. It can work be like in the middle of reporting. But also that's the key to making reports to the heads of the economic department, but also the heads of the sustainability department. And so, it's like people in the middle, a wild person in the middle like this, I don't know what it's all in English, but when you give when you have this. (...) Was the space in between when you when you talk about innovation research. I don't know what it's called. Which actually, but.

P3: It's this kind of person that has also the capacity and the ability to talk to people with different skills. So, this is this is something hopefully we will this year. We I think we will be able to recruit person like that.

P2: That actually leads right me to my next question. What are you doing to build the capacities that you need for climate neutrality transition?

P3: Yeah, that's one example that we. We have to identify what kind of persons or skills that are missing. (...) And for example, that visualizing and. It's the main thing our work. We also use I don't know if you know about the company Climate view. They have this tool called Climate Atlas. It's actually a small company situated in India, which have this really interesting tool to visualize the system as our climate transitions. So, we have this also, these digital tools in order to help us. And we have to work on that. But that's also a thing. [CONNECTION LOST] You were asking about how we build capacity or. (...) We also put a lot of emphasis on finding the right (...) national and European financing for doing the things that we know we need to do, but we can deal with them in both with extra funding, but also in an environment where we can learn a lot from the partners that are involved. So, we yeah, we do a lot of those. Looking very thoroughly into what calls are coming and what calls are most important for us. And that could we. Like fit this really important question for us into what are these costs? So, we're trying also hard not to do the opposite because that's actually [...]. (...) We have to put things that we need to do into the cause that are coming and we not the upset that we see what cause our coming. And then we do these things that the calls say that we should do. So, this is important for us. So, this is actually also an organization that we have put in place. We have colleagues from different departments that meet regularly to talk about what calls our out and how to position Umea in both national and European contexts. And actually I know now I remember that I forgot to talk about this structure that we have within the in line with this program for climate neutrality, the internal program. We also have a similar group with different colleagues from different departments that all work with climate. So, we tried to do like a team structure inspired by the all the fantastic teams in Google. How to work

best within the team? So, we meet regularly, and I have like a strict structure for how to meet or what to talk about and whatever.

P2: (...) Does this follow some particular framework or is that mostly based on experience or why was it organized?

P3: No, it's actually I mean, we have... In the City Development Department, we are encouraged to use new structures from scratch. And my boss is very interested in how to make the organization actually the best organization possible in order to make our different things happen. And that's climate neutrality and that's a gender equal city and whatever. So, we are trying to put these structures into place and we are working on as much as we can with research based on how team works best and what to do. But it's quite new for a lot of us. So, it's also kind of a learning phase.

P2: Interesting. Were there successes so far in that regard?

P1: (...) Yeah. Just a small practical thing is that we have like. And we have meetings in our calendar every other week where we structured talk about what we are doing and we're talking a structured way. So, and it's actually not a small thing to have this because people are so busy doing a thousand things, but this is okay. Every other week we have a digital meeting or shorter; and every month, every fourth week we have this digital consortium meeting and every fourth week we have this little longer physical in place where we meet at the office, talk about things. So, (...) yeah. It's hard. It's also this is also like we started out last year. It's quite a long learning process for us - all being in the group. But I think it's the right way to do it.

P2: Interesting. And what were the main learnings that you can take away after this?

P1: Time. (...) We have tried to put up the most important things that we need to work with within the climate transition. And by doing that, we also put up the things that we should not work with because we can work with a thousand things. And some of those things are funny to work with and others. But. In this like this group is. We have the mandate to propose that these things are most important right now and we have to focus on that. And that means we can't work on these things. And that's actually a really important thing for us, in order to focus in the most effective actions.

P2: Would you say that your governance capacity has changed somehow as part of this process?

P3: Yeah, I think so. And it's not I mean, it's not the theme of climate neutrality, and it's not just the program, this politically adopted program for climate neutrality. It's these

things together and also the climate roadmap. It's interconnected. I have been telling to quite a lot of friends now that we have been working with so many things regarding structure and governance and different things for many years. And now last year and this year, a lot of these things are finally being implemented. We have a lot to do because they have to be implemented at the same time, but it's also very good that they have to be implemented at the same time because then we can coordinate them in a very good way.

P2: Interesting. What has changed in the last two years? Why is it suddenly possible to implement those changes?

P3: So, we our climate goals. It's actually the start. I mean, in February 2020, we the City Council adopted our updated climate goals and that's kind of started the process. I mean, we had worked a lot before that as well, but this more formally. More formal governance, I think started there. And then we had these... The politicians worked with these steering mechanisms. These programs. It has also started at the same time approximately. So, I think those decisions are new. But we can see the effects of those decisions now. Does that make sense?

P2: Yes, that made a lot of sense. Very interesting. Is there anything else about the processes and routines that has changed as part of the climate neutrality implementation?

P1: Well we also have that [...] may be important as well: For a long, long time we've had this. The politicians put quite a lot of money aside for both internal and external actors to apply to in order to do development projects and initiatives or whatever. And this has been used for... [CONNECTION INTERRUPTED] I said before that we focus a lot of project financing in order to do the things that we need to do. And now the politicians have really arranged and put more money into these financing structures. So, we have we still have this development financing mechanism, but it's not called. But climate neutrality has also got this financing for internal development work also to be used as like co-financing at European and national initiatives. So, we the politician's [...]. This has been important in order to have the money to support.

P2: Interesting. Very interesting. So, if I understand correctly, financing for internal development. You mean within the municipality?

P3: Yeah. This new this is that's for the like the different committees if they want to do it or test things, or they want to do. Because lot of these large projects are situated either in my department like the Strategic Development Department or at like the overall municipality level. But we need to push the initiatives also out in the other departments.

So, there's a way of doing that we also have these finance and mechanisms for social sustainability.

P2: (...) Okay, Interesting. What is done to diffuse this into other departments?

P1: Um. Not much. Not much right now because it's so new. But this is this is something we will do in the fall. And I mean, we're a large [...], not that large. So, I know the person who has been working with it's former, but I think it's very. Well yeah, we can.

P2: Interesting and in terms of concrete actions that you take beyond like governance and internal coordination, has any action been taken to implement climate neutrality as like on the ground?

P3: Do you mean within the municipality or within [...]?

P2: Within, through and by the municipality.

P3: Yeah, I know loads.

P1: Could you give a recent example, maybe?

P3: Um, actually, I was just looking at a presentation that I held for [...] cities last... a year ago. Maybe you should just get that and you can see what I would have been talking about. Yeah, I think that's actually the easiest because there are a lot. I mean, we have made a lot of things but we're still missing important parts.

P2: What is the major gap in that regard? What is missing?

P3: Our major challenge is mobility and transport, and that's personal transport. And that's hard. (...) [...] switched. (...) And then we incinerate waste....

[INTERVIEW ENDED DUE TO PERMANENT CONNECTION LOSS]

E.t Velenje

P1: Okay, Let's see if this works. That looks good. Perfect. Then maybe to set the scene and start out. Could you briefly explain what your day to day work looks like around the implementation governance of climate neutrality?

P2: Okay, so maybe two to yes [OMITTED]. I work in [OMITTED]. We are working on European projects, so applying and implementing them. And then, of course, we we cooperate with other departments when implementing the different projects. We are facing two different things. One is this mission 100 climate neutral and smart cities, and another one is called Phase Out. So we are a city in transition. We are a coal mining city. So we decided that. Okay, we have to close the coal mine. And we decided that this is good for us, even if our economy economy is really depends on it. And we saw this mission as an excellent opportunity to speed and scale up our climate actions. We are also Greenleaf winner for 2024. I'm not sure if you know that. So a Green Leaf award is similar like green capital, but this is a word for smaller cities, for cities up to 100,000 inhabitants. So a lot of actions are going into this direction. But of course, we are still. Working on it? Yes. We don't know everything yet. We try to figure out.

P1: Perfect. Thank you. You already briefly touched on it. Could you maybe explain which organizations in your city are responsible for governing the transition to climate neutrality?

P2: Actually, our department is responsible responsible for that. But of course we are cooperate with other space department and department for that, manage waste and other things. So we formed like internal group for Mission and we have employees from all these departments. So we cooperate actually with all five departments, even with finances, with SpaceX, with social departments and so on.

P1: And how is the city administration coordinating the transition process? Is it via this team or is there anything else?

P2: Yes, I'm responsible for coordinating the mission. What we still have to change is the mindset, the mindset of all our employees and our citizens. We are not bad. We are. But I am really realistic. We have to to motivate our employees to feel this degree, know this transition. So we are putting a lot of energy into this. Tomorrow we have in our city big city hall presentation of all our main projects and initiatives to all our employees so they can really feel this transition. We will also implement a digital platform for managing the the climate all climate actions. And right now we are in the face of preparation, the climate strategy. Our energy office is also preparing to take up. So, yes, we are trying right now

to figure out all main fields that we will work on. And of course, behind every field is responsible person, employee within municipality. And this platform will enable us to work better to improve, maybe data exchange, to have all informations on one spot, and even what is really important to see the timeline, the action. So we will set the timelines and we will see where we are, what we are have to do and so on. So I think this this is like a game changer maybe for us for our work.

P1: So how would you pinpoint the main purpose of this platform? Is it for horizontal governance in the.

P2: Actually, it's for both. It's for insight, communication and for work to see our progress. And we will also use this platform to communicate with our citizens. But of course they will not see everything. The information we will choose to to. Are important for them because we we are really. We also have to. To somehow motivate our citizens to change their habits, especially maybe in the field of mobility.

P1: I see. So if you think about the governance of the climate neutrality transition as a whole in your city administration, what are the biggest challenges?

P2: Mindset. And of course, all of because this is this is somehow additional work for them, we will of course, we will maybe get some new employment or something. But we have to work with the people we have. And it's it's not a small administration, but really a lot of different fields are covered through this mission. And maybe what you know, you always have people like ten people that are working in in different projects all the way. But we have to somehow motivate other employees to to feel this transition. And I think this is the next step and to include them more.

P1: Okay. But what are your approaches to overcome that?

P2: (...) Um, we are still somehow dealing with it. We have maybe some small actions. Like, I don't know if you are coming into work by bike, you can get some reward and like small actions like that. And we have, um, sport activities. And through all this we always try to, to present them. Why is this important? And maybe also through some study visits we we take them to different. True. We are also part of this exchange program. So I think it's really important for our employees that are not working in European project to because for us that are working in this field, we know but for others it's important to, to maybe take them to some. Yeah, something like that.

P1: Thank you. Then maybe next. Looking at the time, I would like to move towards the question of administrative capacity and capabilities. So maybe first up, if you think about

the climate neutrality transition in your city, how would you define the role that the public administration is playing?

P2: Um, I think it's important because we are like. On the top and then everything is under us. We include our companies like utility company and company responsible for waste. So we really have to cooperate a lot. We are. We inform each other.

P1: (...) Oh I didn't want to cut you off.

P2: Yea, no...

P1: Then I would maybe next be curious. What are the key skills, processes and resources that you need in the public administration to actually achieve and govern the climate neutrality transition?

P2: Of. I think we have expert on all fields. So maybe into finances and then I'm into, I don't know, mobility and waste. So we I think we have all the experts that we need and we also have. I'm searching for the word we have some funds that are we have for this mission and for implementing the activities. So when we need we have some money for taking some other experts that help us. We are trying to also work a lot on European projects and through these projects we finance a lot of things related to this. Actions.

P1: Okay. So there are no. Are there any legs or shortcuts? There are.

P2: Always legs. Yeah. All of this. But I cannot maybe say which field are we really in which we feel we are really short or something like that.

P1: Then maybe asking the other way around Is your city doing anything to develop specific capacities for the climate neutrality transition?

P2: (...) We were part way through this Net-zero city's consortium. We have also Citi as advisor and we were on many, many, many workshops. So we are constantly trying to improve our knowledge. And what was important that when you were creating this transition team or like a work group, we really try to cover all fields.

P1: (...) I see. So there's not a particular focus in terms of specific knowledge. So there's no particular focus of skills and knowledge that you're looking for in particular? No.

P2: No. No. No. No.

P1: Okay. And then maybe moving on to implementation and implementation actions. I would be curious, how is your city changing administrative processes and routines in the process of governing the climate neutrality transition?

P2: Um. (...) Maybe we have. We adopted several different strategic documents like Sustainable Urban Strategy, dense, sustainable, sustainable urban Mobility Plan, environmental protection program. And through all these strategic documents, of course, behind them are action plans. So we are following to these documents. And I say, I'm not sure if I said we are now preparing this climate strategy and this is maybe the main. This next year is really important because we will set the we have the goal, but the action that will lead us to this goal will be set in next few months.

P1: Okay. Are there any actions that are already being implemented on the ground? Oh, um. (...) Well.

P2: Uh, right now we try. Maybe this is the latest thing. We will try. We have different tenders, so different public or private companies, companies applying for different actions and for co-financing different things. And we will put green note into this standards. So, you will have additional points when for getting the money. This is maybe the latest thing. And in all measures and actions we implement, we really try to follow sustainable principles. So it's like a we have this. Into us. And then we really try to follow this. We also, I don't know, maybe into we invested a lot into cycling and pedestrian infrastructure. And we this year we. (...) Built first underground waste collection points so into different fields. A lot of small actions were done in this direction.

P1: Safer then maybe as a last topic, I would like to talk about the mission itself. Since you joined the EU Mission four 100 climate neutral cities, how has joining influenced the way that climate neutrality is discussed and governed and implemented?

P2: The when we were chosen to participate in this mission, we got a lot of invitations into different EU projects. So this is of course something really positive for us. And maybe what is interesting. Three Slovenian cities were chosen to participate in the mission, Ljubljana, Grant and Bologna, and we really decided to work together. Our mayors signed the documents for that. We will work together and everything because we did not receive any support from the state until now. And right now, maybe a month ago, we received an answer from our Ministry for Space Spatial. I do not know how it is, how can I translate this? And they will co-finance our monitoring, environmental monitoring. So this is something positive. We got, as I said, a lot of different invitations into different projects.

P1: It's interesting if you think about the EU mission as a policy tool for achieving climate neutrality. Do you think it works?

P2: (...) I think it works, but it's a mess because if I'm honest, this Net-zero Cities consortium, of course they are doing the best. But it's. But they also said this is something that it's like an experiment. So we will see how it will and how it'll work. But right now, yes, because we also I don't know, of course, right now the all green topics are really interesting into and this is spread around everything but. We really got this invitation. And right now we are part of, I don't know, different projects like Horizon Project and also the we are a pilot city for net zero cities Call that were released. So I think it's really positive and maybe because we are also facing coalface out, the word about Melania was spread into Brussels. So this is also good. Ten days ago we had our event of Municipality of Bologna in Brussels and it was good because we got attendees from parliament and yes, so.

P1: Okay. So do you think Melinda will be able to become climate neutral by 2030?

P2: It's also depends on our country, because in the short term, this is nearby city. There is a big thermal power plant, and because of that thermal power plant, we have the second biggest district heating system in Slovenia. So we have a really good quality of air even if we are industrial and coal city. And we will see what the state will decide about this thermal power plant even. But this thermal power plant has the label of best available technology. So it's quite new and with a lot of filters and everything. And it's a strategic point because it produces like a third 30% of Slovenian electricity. So it's not depends just on us. But of course we will put a lot of energy into it and we will try to to. Let's do it. Yes.

P1: Okay. Perfect then. Looking at the time, I think I want to respect your 20 minutes. Maybe as a last point, is there anything else relevant to this topic that you would like to mention as a last comment?

P2: Um, I don't know. We. We were maybe just that. That we were really happy when we were chosen to participate in the mission. Also, because we are a coal mine city and also winning this Green leaf award, it's somehow, you know, it's, it's like a prize. So, you know, you're going in the right direction. So you have the all previous activities were good for our city. So. Just that. Yeah. And if you need anything else, just please write me. I will send. The answer's yes.

E.u Vilnius

P1: Okay. That looks good. Perfect. Then maybe to set the scene a little. Could each of you briefly introduce yourself and explain what your kind of day to day work looks like and how it relates to the climate neutrality transition in your city?

P2: It's a pleasure to meet you. [...] [OMITTED] filled the application form and all the questions. So, yes, you are meeting us. Well, we are a present within city municipality, but working with 100 climate neutral and smart cities. And my name is Agnes, and I work as managing director in this climate neutral. Trial Vilnius It's public entity, public institution. It's established by the city and municipality. Municipality council. I mean, but I saw you have more question about this, so we will come back to that. Okay. So, talking about my work, what I do, I do a lot different. We have different skills, and I don't know if it's connected to. To your questions. We participate in two missions. So, one is 100 climate neutral and smart cities, and the other is also European Union mission adaptation to climate change. And we also have other projects. So, like three different sorts what or what we do. And here we have different representatives from all four of the work. So, what they do. So, I'm trying to manage everything to communicate with different stakeholders, including the municipality and other public institutions. And now I will give floor to [OMITTED] to introduce their self and tell a little bit to Dominik. What's your duties in in our public institution. Thanks.

P3: Thank you.

P4: Hi. I'm working as a climate change consultant, but because my background is more at national level, I worked with climate change policy, so I'm consulting on climate change policy and so on. Also, on greenhouse gas emission evaluation at municipality levels of the challenging now and what else? I'm also now, and I am more related with work on the other missions adaptation mission to climate change and ocean work to you.

P3: Yeah. So, hi everyone. My name is [OMITTED] and I'm a [OMITTED]. That would be the name of my position. So, as it already says, I'm working on the climate neutral, 100 climate Neutral and Smart Cities mission. So, basically my work is directly related to this mission. Mostly, I'm focusing on this climate neutrality mission and what my day of work looks like. It's a very. Very various. So,metimes it's called more like writing the applications to various programs that are related incorporated in this mission, for example, twinning program, or there's going to be a call for Pilot Cities program. Yeah, and I'm always checking and checking what's up with this mission on the Net Zero Cities platform is a very nice and very informative and very complex platform for this mission created where you can find all kinds of events like webinars or even live events,

information about live events coming up. So, I'm always checking what's going on, all the updates. And yeah, recently we were in a very nice. Then you in in in the conference we I participated. So, there was also lots of information and the disinformation and lots of information that platform is related to actually Climate City contract, which is like the core set of documents that every mission city that participated in this EU mission needs to prepare. So, it's a big set of documents, it's action plan, investment plan and a commitments of various stakeholders that the city could actually make this transition towards climate neutrality.

P1: Okay. Thank you very much.

P3: (...) Hello.

P2: Hi. Are you able to talk?

P3: Yeah, I able to talk. I'm driving now so my connection could be the worst. So, I'm in [...], and I'm working here in this institution as project manager. But now I'm help. I'm helping to establish our institution. I'm doing everything now and. And, yes, shortly. Thank you very much. Thank you.

P1: All right. It's great meeting you all and understanding more about what your day-to-day work looks like. That is certainly very helpful context. And as you probably saw from the questions. There are certain topic areas which I would like to talk about maybe first regarding the Climate city contracts. Could you briefly elaborate on what the current state of your Climate City contract is and why?

P2: (...) So, maybe I will explain a little bit. I don't know how or what do we know about them? Climate City Contracts. So, there are like three, three sorts of documents. One is commitment. The second one is action plan, and the third one is an investment plan. So, till now we're working on action plan, but action plan, it consists of many different parts. So, we are preparing those parts. And what we've done is we've calculated greenhouse gas emissions for the city from [...] till 2021. And next, what we are doing, we are collecting different measurements from public institution and our third parts of our outsource. They are working on scenarios, different scenarios. So, now it's prepared. Two scenario one is business as usual scenario. What would be if we if we change nothing, if we do nothing, just the trend from 2017, 2019, how it would look like. And the second scenario, how would Vilnius look if we if we establish... I'm not sure if that word all the measures from a public institution and national level measures. And the third scenario will go according to to become a climate neutral. So, we expect to have it in in a month. And one more document. As I mentioned, it's an investment plan. So, we are looking for

help or support our sourcing and so on. Who could help us to prepare this investment plan? This is challenging thing for us.

P1: Interesting. Maybe follow up question on that directly. Why is it challenging?

P2: (...) It's a good question. You know, we work I will talk personally from us. It's personal, in my opinion, as you see all of us. We work in environmental skills. Our basics is environmental. You know, she worked as my mother. My basic is also environmental skills also in there also. And we can work an action plan. We can work on greenhouse gas emissions inventory and so on. But we personally, we as the climate neutral Vilnius, we do not have competence working with investments, funding, financial and so on. So, we need a deeper understanding. At the moment we do not have human resources to work on that. So, so this is challenging for us to, to find the find the. Great people and the sending all was so great.

P1: So, how are you going about resolving that? Are you looking to hire people or are you looking for [...]

P2: Any way we are public institutions. So, we have public procurement and that that's not a question. But as [OMITTED] mentioned, we have a platform for climate neutral cities. For 100, I mean, climate neutral cities. And we have advisors. So, we have meetings with them and we are we have how to see assistance from consortium, which works with net zero cities. So, we also expect some support for them. For example, they share with us economic models. So, but we received it, I don't know, a few weeks ago. So, we are ongoing still.

P3: Interesting.

P1: (...) So, are these finance-oriented skills and capabilities? Is that a skill set you will seek to build internally?

P2: (...) What do you mean? Explain more.

P1: Well, within your team or within the city administration, is that a skill set that you look to actually develop in-house, so to say, on the long term or.

P2: You know it. It will depend. Now we focus on action, plan and measure on involving stakeholders. And at the moment what we think that we can outsource it, you know, but maybe in the future we will understand what that we need this team member in our team. So, we will have. We will take the decisions then.

P1: (...) Interesting. Let me just quickly note that down. All right. Then maybe returning to another follow up question from the survey. So, the survey was mentioned that the EU Green Deal kind of structures the framework under which Vilnius is trying to pursue climate neutrality. Could you maybe elaborate on that a little?

P4: (...) I can just repeat what I already forgot what I had in mind. So, it's like. It's like a main focus now in the EU and obviously these missions are also like a part of this European Green Deal. There won't be if there will be only a Green Deal. Also, we have this national ambition because of European Green Deal. The ambition increased at the European level and also our national policy politics like agreed on also more ambitious reduction target of greenhouse gas emissions. So, all this also the new government, it's already not a new government, but they also had some kind of ambition to create like not only climate neutral, but also, well, they call it neutral climate or something like that, environmental city or. And they also have this kind of ambition. So, all this like atmosphere of Green Deal and so on. So, I think that what's and also Vilnius had before and also today has kind of ambitious politics. And they also are pushing this green wave, as we call it. So, I guess that's what I had in mind, all this green atmosphere and so on. But it's a political level. We still are not sure about the citizens. That's a bit tricky now. We have some problem with transport sector, especially in Vilnius, so. We have, as I mentioned in your questionnaire, that which we need to increase our capabilities in communication with the citizens maybe, and so on. And. Just kind of.

P1: (...) Yes. Actually, then exactly a follow up question on that. I was going to ask about that point. As you said, you mentioned that Citizens Trust is one of the key capacities that you would seek to improve. And why is that? And what are you seeking to improve about that capability?

P4: (...) It's also a philosophical question, but. In my opinion, that also European Union is seeking to like to implement measures more on municipality level. They are trying to reach people like just normal citizens and more because these kind of ambitions on a very high level, it's not very far from just normal people. It's a cult. So, that's why I think if we gain trust, we gain, not trust. That's like maybe not the right choice of words, but if we. How he talked. He involved in the wall. Yeah. Yeah. In wall to engage. Yeah. Very good.

P3: Words.

P4: Engaged citizens. And so we can reach our goals more easily. Easier. So, also education is very important and so on and so on. So, as we are closer and our for example, our now public body institution is more will be closer to the people. So, maybe we can make.

P3: More.

P4: Foster change in the minds of people. So, this is kind of my thinking. Maybe my colleagues can add more.

P2: I can add more. Yes. Thank you. Thank you. And what we suggest to do to make a survey for inner city citizens and to see the temperature. What do they think about climate neutrality? Grievous also mentioned that we where we were in Brussels and conference and we met our colleagues from other cities, from ministry level, I mean, from Lithuania and what we discussed that in different cities we have different citizen opinion and we thought that we don't know what the Vilnius citizens think. And we have around 600,000 in Vilnius. We can't ask all of them, but we suggest to make a survey to get their opinion. And then it will, you know, show us the way, which direction we should go to accelerate climate neutrality and to find the ways, ways to engage citizens in this process.

P1: Hey, thank you very much. Then you mentioned a few times now your organization, etc.. And I assume that is climate neutral. Vilnius Right. The term was mentioned in the survey. So, could you maybe elaborate on what climate neutral Vilnius is structure in its purpose within the larger public administration?

P2: (...) Okay, So, maybe I can add here. It's a tricky question and I will tell you why. We're quite new. You know, we work for half a year, and we were established because Vilnius participates in this 100 climate neutral mission and so on. So, the structure. (...) The structure. You know, when we became a part of this mission, we get access to platform and platform gives a lot of advice. So, one of the advice is how to create the, let's say, transition team or how to create the people, how to get, let's say, get all the people in the team, what, what, what positions you need and so on. So, one of the model, how should cities work or could work is like this like Vilnius do. For example, you can have a person administrator in city's municipality administration working with this climate neutral mission. It's one option. Another is option like outsourcing this, but it's also risky, you know, and what Vilnius did, the established public institution and it's a little bit mixed, you know, anyway, we depend on municipality and on its decision. And on the other hand, we are different. We are, yeah, we're different public body, like independent and all the positions, let's say. They were [...]. And they were involved to this because it was like recommendations from net zero. Of course, we added others, for example, project manager and so on. But anyway. And it's only half a year. You know, we're testing we are like pilot project for Vilnius it and it will take time to find out is it good our structure or not?

P1: Very, very interesting. Is there other some first conclusions you can draw? Is this structure effective so far?

P2: Until now? Yes, till now. Yes. And we're looking for more for more colleagues or for more team members were suggesting about communication, people working with communication. Because not everyone in municipality knows that business participates in this project. We need more to talk with the citizens, with businesses and involve them. So, this is crucial to have a communication person and we also need a project manager more to prepare the different projects, to apply for different projects and to be more involved in the process. So, we will see in the future if it works.

P1: (...) Okay. Very, very interesting. You of course said that this kind of institution was established only half a year ago. Are there any other upcoming changes?

P2: (...) It's quite difficult to say. Now. We don't see any upcoming changes. So, you know, we have a new mayor. So, we don't think something will change, but we will have new government election in two years and new mayor election in four years. So, maybe then we can expect some changes.

P1: Interesting. (...) So, what would you say is the kind of responsibilities and the scope in which climate insurance is working?

P2: Um. It's also difficult, you know, to say. (...) Our scope. We work only with velocity stability. So, we're not like national, regional or so on. Our mission, let's say, is to show direction for Vilnius to municipality how to become a climate neutral. Other point is to involve as many stakeholders as we can, but those stakeholders who can accelerate the transition, who are interested. And one more thing, as you mentioned before, that we need to prepare TCC Climate City contracts. So, after all, we will get an emission label that will when these all documents will be approved by European Commission. So, you know, we need to brand that emission label to that everyone wants to join us. So, this is how we see our public institution. And one more thing that we want to have a smooth conversation with European Commission, with zero city platform and also with adaptation to climate change platform. That we are like coordination coordinators and coordinating centre.

P1: (...) So, that is actually. Very interesting point. In the survey, it said that the internal communication and coordination processes are still being developed. Could you elaborate on that a little? Are these actively in development? Which particular kind of processes or mechanisms are you looking at?

P2: (...) You know, it will depend, of course, on the. To members of positions that we will start work with. With us, we expect to have persons who will help us to make a structure

for the transition. And of course, we expect to have communication person working with, I know social media with and so on and. We expect to have like a plan you know, and directions how we should work on these. So, it's for now I could say it's for me personally, it's quite difficult question. You know, I can't say very smoothly, but maybe if my colleagues want to add so, so, so you are welcome. But it's quite, quite tricky. Now. Maybe you could ask me in autumn.

P1: (...) Is there anything anyone else wants to add on this topic of kind of internal communication, communication, coordination?

P4: (...) I know. So, currently we are developing in our organization. I don't know how to call organization, institution, public body and strategy. It's like focus on only anonymity. But we also have [...] coordinators above us in a city administration. Maybe Agnew could add this more about what is the process with this administration?

P2: Yes, we are a public institution, but we yeah, we may be a public entity. Public body? I don't know. It depends on which language we use. But anyway, we belong to municipality, and we belong at the moment. We belong to energy division. I mean energy division in the municipal system, in the specialty and energy division and above us, we have like a board team. So, they will also coordinate our new task, our goals and so on. But as I mentioned before that we have a new mayor and some positions and some structure in municipalities changing. So, so we could also come back to this question in autumn.

P1: Okay. And as of now, what kind of. How does your unit relate to all these other units? Do you have any kind of formal authority that would allow you to pursue neutrality actions in other parts of the public of the municipality?

P2: But I will say now it's a little bit house now and because we are just after election. But I have to say, mostly we work with an end to division and division of infrastructure. And as I mentioned, our ward team is in progress.

P1: (...) Very, very interesting. And. (...) Let me just quickly check something. (...) Okay, maybe thinking about this entire topic of governance that we talked about. What would you say are the biggest challenges that you're facing when it comes to governing the climate neutrality transition?

P2: (...) Yesterday, we discussed with Serena what the challenging things. (...) I think the most important thing is support from, from politicians and support from national level. I don't know what's in your country, but for example, other countries we have national limits or for climate neutrality I mean to helping cities to become climate neutrality and

for example for Vilnius is challenging. Also, it's challenging to find the finance, for example, for our institution. You know, yes, we get support from disability. But if economic situation will change, we also are not sure what will happen. And I think the most important thing and crucial is. Stakeholders and we see the main stakeholders could be public institutions, academia, businesses and citizens. So, if we could have the support of all of them, you know, it would count like more from bottom to above to politician, and then we can get really great support. But. But it's a work and we've just started, so. So, I think these things politicians, stakeholders and funding. And funding not only for us, but I mean funding for all the measures to to be implemented, to become a climate neutral because it's a huge amount.

P1: (...) Very interesting. What would you what do you think would be needed to address these challenges?

P2: [OMITTED] would you like to join us and to tell? We've just discussed it yesterday a little bit.

P3: Pardon? Could you repeat the question one more time? Like, elaborate more?

P1: I was I'm just curious, what would you need in terms of. Maybe skills, processes, resources, knowledge, etc., to overcome these challenges that were just outlined.

P3: Yes. So, probably. Yeah. We need the financing funding to, let's say, even to prepare and. Like make this, for instance, the survey of the of the of the people in our city. The citizens. Yeah. Because probably, as I mentioned, we probably will need first to talk to people to know what they think. And then also at the same time, I think we need to work with the big companies that are actually mostly related to this topic of climate neutrality, climate change, let's say heating. What is it called? The company that is responsible for heating and business, city or transportation companies? They already have strategies, but. I think it is really important not just only to have strategy, but also to make them real, you know, to bring it to life and establish them. Uh, yeah. So, funding for these also. Yeah. So, money basically is needed also to, to involve these stakeholders and the I think it is also very important to, to, to give this the message about climate neutrality, about the issues of climate change and how we can reach the climate neutrality or to world to, to like citywide public. You know, it's really important that every consumer would change somehow its behavior. Let's say we have a big issue with the transportation sector. Yeah, it's like according to our estimates. Estimated greenhouse gas emissions calculations. So, it's over 50. I think it's like 53% of the greenhouse gas emissions are coming from the transport. So, it's really important that the people who are commuting, especially commuting every day, they would change their habits. So, how to make them to change

it. So, probably first starting with a survey, but then also. Like involving them to take an action to change their means of transport. I don't know. Yeah. To take a bus or walking or ride a bike to work or school, etc.. But then the. And then also at the same time, the system of transportation, let's say, should change. Yeah. I think like I also read that it's not only electric vehicles or taking bike, you know distances are pretty long and business, for example, is pretty hilly. So, not everybody would probably take a bike, especially regular bike, if it's not like electric bike. So, probably we need to work a lot on public transportation, like, I don't know, park and ride system or 15 minutes city. Maybe that could work somehow.

P1: (...) We're much very interesting and thinking about the governance issue the other way around. What would you say is the biggest success you had so far in governing the climate neutrality transition?

P2: (...) It's really good. Good question. And I think the first success that wellness works on this topic. Success as we were selected to become pioneers and to accelerate liberate our journey to. To climate neutrality. And we will see how we will deal with it. So, I think this is the success and it inspires, you know, we can't stop now or we can see, No, we're not. We will won't work on this in this mission anymore. No, we can it will be, you know, the step back so we can't do so. I think this is success that we are on this mission. And I personally, I think it's great that Vilnius has established this public institution. It doesn't matter who works me or Serena Davila, but this is the centre, you know, the right person who understands the problems, who has who can deep dive in this topic and that we don't like it. Vilnius hasn't human resources working in municipality, but it's great that they have the centre, let's say public institution work on that. And I know this is slow process. Everything takes time, procurements and so on. But we have greenhouse gas emissions inventory, we have measures and we are working, you know, we have a plan or what we need to do. So, so I see this three things, but we are working. We are doing our best. The second that we were selected in the in this mission. And third, that municipality established public institution that it has resources to work on this on this topic and does as I can see, they trust us.

P3: Yes. As an instructor. Yes. Yes. It's not the question. They trust us.

P1: Who are 'they' in this scenario? Who trusts you?

P2: Municipality and city council. So, mayor, to write....

P2: (...) This is not the question. This is a mayor to two mayors previously and not what they [...]. So, yeah. So, this is like a transition time, the election.

P1: (...) Very interesting. Then maybe let me quickly check my notes for some of the topics that we already talked about. Can you address all of that? (...) In the survey. It was also mentioned at one point that climate neutral Vilnius you're focusing on building capacities. Could you elaborate what you mean by that and which capacities you may be thought of there?

P2: (...) [OMITTED] Could you help us?

P4: Well, like building capacities in climate and this topic. I think this was because maybe an administration, the web people working on climate change issues, but they are more focused on energy or infrastructure or greening Vilnius and so on. But no one was more focused on climate change issues and so on. So, I guess that our institution will build this kind of capacity. My coordinator... I don't know, raise awareness not only for citizens, but also for an administration itself.

P2: Yes. And now we call ourselves, you know, coordinators. But one day I believe we will become an expert for velocity on in these skills. So, we're building. This is not right. More building, but we're building our muscles.

P3: And maybe I can add probably our capacity, one of our capacities will be the connection between different. Fields like domains like government, hopefully municipality, regular people, business entities. Academia, like high education or like universities or schools.

P1: So, you mentioned previously, both in the survey and the interview, that kind of the EU mission contributed to establishing climate neutral Vilnius and I'm just curious about this process a little more. What exactly happened? Who made that decision? How did it all come together initially, etc.?

P2: Okay. I'm sorry. I won't be able to tell you all the details, because in this case, I would need to get, let's say, permission from municipality. But the idea was that let's say they didn't know where to put a. A nut person. Let me find the word. Okay. The positions in municipality structure. I mean, you know, for example, if we work in one department. Energy. So, it will be more focused on energy. If we work in an environmental department, it will be focused more on the environmental. But when we talk about climate neutrality or adaptation to climate, so it's not vertical, it's more horizontal structure. I mean, we need to have input and in environmental skills and in energy and transport, financial and so on. So, we're not able to to create like a new structure in municipality, of course, because it's quite long process and so on. So, this is what I can comment now.

P1: Okay. Yes, sure. Okay. (...) Maybe let me quickly check whether we skip any other issues. Otherwise, I would like to ask, do you think that Vilnius will be able to attain climate neutrality by 2030?

P2: Yes, yes. Yes. This is our official opinion, of course. And no doubt. And let's come back to this question in seven years to discuss more of our challenges and our fails.

P1: Okay. What would you say are the biggest roadblocks right now? The biggest kind of challenges that might potentially put that goal in danger?

P2: We just yesterday discuss with Serena about barriers that Venus is facing socially now. Florence is yours.

P3: I'm not sure. Like I think the financial field, the funding, you know, like still all these changes. Need money. Need the financing. The funding. Because it will be a big transition if we want to reach this goal. Okay. Like people, let's say buy electric vehicles, etc., but like energy. Yeah. It needs to become more and more efficient and how we use it and the buildings, there's refurbishment project going on like more and more multi apartment buildings are being refurbished. But it's pretty slow. It's like not catching up to, you know, the... it's not speeding up as it should be, but hopefully it will change. And yeah, the people's attitude. Yeah, the people's attitude. We still don't know yet what's the general climate of people's, of citizens, of the city. Is the the mindset. So, this survey, I think it's really crucial. And then yeah, hopefully they are really into this topic already or they will make their mind change their mind and become more. Climate change aware, Climate neutrality aware. And let's say there are lots of people living in those old Soviet Union apartment buildings. So, hopefully they will be like, hey, it's this is really great, you know, to invest, actually. Okay, it costs lots of money. You get some funding from the let's say you funds government, etc., but like it's still like from their pockets. The money needs to go from their pockets to refurbish their buildings, the apartments where they live in. But then when they make this decision, they, they, they, they make this happen. They actually save the energy. It's like energy efficiency. And yeah, it's also really great for the climate you make like, you know, savings on energy and the. Yeah, it's done better. Even looking, you know?

P1: Okay, I see. And the media's last question that I would be curious about is what are your general thoughts on the EU mission as a policy tool for achieving climate neutrality?

P2: (...) It's my personal opinion. I think this is just beginning. Why I think like this. Because this mission is the project of Horizon 2020. So, I think this is just beginning. Europe, Continent. We want to become climate neutral by 2050. And we are like pioneers,

you know, the first 100 frontrunners to reach climate neutrality and previous question will be will is Vilnius able to reach it? This is still a question. Yeah, I said yes, but I think everyone understands the reality. So, we are cities that will be tested. You know what is our needs, what financial support we need and so on. And when we all cities when we will all prepare action plan, investment plan, then European Commission, they can calculate how much it will cost, how this is real and so on and what new maybe governance, what new fundings should be found and so on. So, yes, he had a villa I think can add a European Commission works a lot for this. And this is not topic. This is maybe the highest topic, the most popular topic. Always green things. I mean, climate neutrality, climate change, adaptation to climate change. But truly saying on the one hand, I think this is just beginning where yeah, there are countries that works. I don't know, for 50 years, for example, Sweden, that we have national networks and so on. But when Norway, when I meet them and ask them 'How do you involve citizens', they say, "oh, we don't know", are working for 15 years, but still we don't know. For example, they have municipalities or sorry, not municipalities, ministries for climate change. So, all the all the countries and all the all the cities are in very different states. And I think this project is only the beginning and the size doesn't matter. And I see when I speak with, for example, Sweden people and let's see history, what we have or what we work with the citizens for, let's say for 58, it also doesn't matter. So, sometimes I think we are in the same stage. I don't know. So, I think it's just a beginning.

P1: Thank you. Very interesting. That almost sounds like good closing words. And is there anything else any of you would like to add regarding this topic area we talked about?

P2: For me. It was a pleasure to meet you, to improve my English. We have to have a conversation because we usually communicate in our own language. So, it's really a privilege to see my colleagues here and here. You can see all our team. So, so, so really. Thank you. [OMITTED] Thanks for [OMITTED] last time that she filled the questionnaire and we can discuss more and understand more and understand what you as let's say. Student Yeah, well what is what's interesting questions for you for your country. And we're also very interested to hear the final results. So, I hope you will come back to us.

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P1: All right, Perfect. Let's just set the scene a little. Could you briefly explain what your respective day to day work looks like and how it relates to the climate neutrality transition in your city?

P2: Okay, so maybe I will start. I'm [OMITTED] in the [OMITTED] and I am mainly hired to support Warsaw's participation in EU mission. So, that's my main task here. And.

P3: So, to build up on this a bit. So, I march in grand scheme of climate policy, you need, and we do let's call it internal consulting job so we do not implement investments. For instance, we provide knowledge, we provide consultancy, and we provide, you know, material. Advice to the other bodies, departments, and offices to the Warsaw. And we try to mainstream climate, both adaptation and mitigation, to as much processes and as much documents as possible. And this is our role within the municipality, including the formal documents like local spatial plans, etc. The old documents go through our office, including our office, and we provide some position on that. And at the same time, we are responsible for the greenhouse gas inventory. And our role is to do as much as possible and to accelerate the transition towards net zero. Net zero. To propose new investments. To propose new actions. To propose new measures to help different offices, different units, streamlines and processes to achieve the reductions, the expected reductions. So, that's how I would describe our role as let's call it internal consulting.

P1: Very interesting. Thank you. That summary. So, then I will maybe just jump right into the first block of questions, which is about governance. So, essentially the steering and coordination mechanisms and the structures around the climate neutrality transition. So, I'm curious, which organizations, departments, etc. are responsible for governing and implementing the carbon neutrality transition?

P2: So, mainly it is our department, our protection and climate policy in City of Warsaw. But there is some there was some task group which the members were from different department, but our department is leading in this.

P3: Yeah. And we also we are supervised by so called deputy mayor. It's not official deputy mayor, but director coordinator and she's responsible for sustainability, greenery and climate issues and she's at the level of the deputy mayor. So, she's in the management board of the city. However, as you know, city operates in silos. So, it doesn't mean we have an all it doesn't mean we have an influence over the other offices that are. Let's say rather independent. Yeah. So, we are trying to, you know, vertically go beyond the silos and provide that supervision over the climate. However, you know, many, many things

happen from the bottom up. So, we do not coordinate each measure, each action that is implemented within the city. We also have districts; districts are independent units as well within the municipality with independent mayors and deputy mayors. So, we don't have any influence over them. We do as much as possible, but they make their own decisions. And, you know, we are trying to keep an eye on everything that happens. But sometimes it's, you know, in such bottom up process, it's not possible, basically. So, we don't know about every climate action that happens in Warsaw. We would love to, but it's not possible. But the opposite side of that is that. You know, things happen without our coordination. So, it will happen even if we are not here, if we are not in the municipality, which is good.

P1: Interesting. So, you briefly mentioned that, of course, it's a bottom-up process. Your department is responsible, but there was also a task group. And I was wondering: Why was this particular organizational setup chosen? And are there any current or upcoming changes to it?

P2: Mhm. I don't think it was chosen. It follows the law and we have a municipality and as [OMITTED] said, there is departments and districts and yes it comes from the law also. Change.

P3: But it's worth mentioning that our office is, is a new one within the office. So, when the office was not present, we didn't have one body responsible for Climate zero transition. So, such task group was to somehow connect all the dots and make the most important decisions together. And once our office has been opened, then a lot of competencies was transferred from the task group to our office to to have a supervision over the transition and net-zero actions.

P1: (...) So, what is kind of the formal responsibility of your office?

P2: (...) To coordinate all the climate actions to monitor them. To. Recently, the Council of Warsaw enacted Green Vision of Warsaw, which is a roadmap document to climate neutrality. So, our main responsibility is to. To monitor the actions and to support other units.

P1: (...) Very interesting. How are you coordinating and communicating internally when it comes to climate neutrality issues? Are there any strategies, methods, mechanisms that you would want to highlight?

P2: What we do internally. [OMITTED], could you help me, please?

P3: Well, for many, many years, we done a lot of separate projects and investments that was implemented. That could be. Shown under climate neutrality umbrella, but it was not an organized process, right? So, each institution, each office has some agenda. Climate was included, but the dots were not. I mean, they were connected, but they were not streamlined in an efficient way or optimized. And for a couple of years, we were working on the net zero strategy, which is called Green City and Climate Action Plan. It has been it's been done with C40 organization and European Bank for Reconstruction and Development. And the aim of that document was to first of all connect all the dots and make better decisions that leads to more efficient when it comes to climate actions to make better decisions based on the specific pathways that were modelled with C40 and to, you know, to have a single package of long term and mid-term goals that we need to deliver and how we deliver the goals, it's up to the institutions. But now. Starting from this year, they know what the main goal is. I mean, they know what's the direction, they know what's the goal, they know which KPI. They are contributing with, with the the actions they they taken. So, now it's more streamlined, more efficient, more organized. At least we think so. We will see in a couple of years.

P1: Okay. So, if you think about this entire domain of governing, the climate neutrality transition, what are the biggest challenges that you're facing as a city administration?

P2: In my opinion, it is multiple of documents. I think it is a hard job to try to combine them and work within all and to monitor the actions. And so, I think that is pretty hard.

P1: (...) Could you maybe expand on which conflicting or overlapping documents there are, that you think of?

P2: And it's not like they're overlapping, but I think that from my perspective, it is difficult to only see things on paper and not act.

P1: Ah, I see.

P2: That's my perspective.

P3: Yeah. So, I would have a couple of things, to be very honest. And first of all, it's like we are talking about net zero [...]. I mean, we [...] long term perspective and we especially currently have a whole package of more urgent problems that we have to be focused on. And also, it's really important in the context of budget, speaking about COVID, speaking about Ukraine and the immigration wave we had. So, we had a lot of more urgent issues to work with. That would be another case. Another case would be: We are a climate office with the aim of achieving climate neutrality, and our role is to somehow make some other processes more difficult or make some other processes more

costly. And not every office is a fan of our, let's say, politics because it makes their daily life much harder because of, I don't know, they have to evaluate a bit more than decision making. They have to include climate governance into the processes. They have to do more. Or the third one would be a silo structure. So, our goals are not. And not always. Same goes as, for instance, transport office. So, the good case would be the parking spots in the downtown area. So, we want to get rid of them and to reduce the cars that are coming to the city center. And at the same time, one of the goals of the transport office or the Road Authority office is to explain and offer I mean, expand an offer of the parking, underground parking, and parking spots within the city. And the fourth challenge, but also some. It's a good example of how our work looks like we have we always have to find a compromise because we are not representing only climate positives. We are representing also climate sceptics and we are representing, and we serve all inhabitants of also the people who use cars. And we have to find a compromise between those two groups. So, we can't be focused on, you know, about being climate neutral by any costs. We can't leave anybody behind. We have to includes things like energy, poverty, transport, poverty, etc., into a decision-making process so that, you know, finding that compromise makes things really difficult, especially if you have a specific agenda, climate agenda as a top priority.

P2: And I would also add a challenge when it comes to monitor actions, because we have very low availability of data and uh, it is very dispersed across all units.

P3: Yeah. Very sensible point. We do a lot of data analysis and it takes a lot of time. And many, many times we collect the data for the similar purposes like covenant of Mayors, C40, BRT, European 100 cities, mission, etc. So, we collect different data for different initiatives and it takes a lot of time and it could be streamlined somehow.

P1: Or.

P3: Organized in a more efficient way from the EU level.

P1: And maybe asking you the other way around, what are your biggest successes in governing the climate neutrality transition?

P3: Mm hmm.

P2: I have a very short experience, but I asked that my colleagues and they said that the inaction of Greene vision of Warsaw was there because success here.

P3: Yeah. So, to explain a bit more why, it's a document that. We had to reach an agreement from every unit, including involved into investment processes in Warsaw, so

over 50 different units and bodies. But also it has to be accepted by a city council, so a political body leading the city of Warsaw. And we were able to. Who? Well, convenience. All of the different parties, including external stakeholders, that this is a valid document. The goals are material. The purpose is pretty clear and that's the portfolio of actions we are proposing, and they're the best tailored for the local needs. And that was a huge success to reach an agreement with so many different institutions, but also external stakeholders, including residents, because of the public consultations, workshops that that's been done. And, I would say the climate is getting higher and higher on the. Policy agenda of our management. It gets more important every day, which is a huge success of our team. So, the internal education awareness raising and, you know, some small steps that has to be done to. To reach an understanding within the municipality on the climate and what's the goal?

P1: Interesting. Then looking at the time, I would maybe transition to the next topic area, which is more about capacities, administrative capacities, meaning the skills, processes, resources, etc. that the administration has available. So, which capacities do you think your city needs to advance? And governance? The climate neutrality transition. But.

P2: I think. The main thing is awareness, but also dedicated people. And to this topic, because as we said earlier, we have a lot of current tasks and uh, we can't fully involve just in this transition and.

P1: (...) That maybe the deeper here. Which capacities are you lacking currently that you would need? (...) Fields, processes. Food services.

P3: That's a difficult question, Dominique, because the city is very complex organism. And we are we are talking even about the people to do some work. So, the human resources. (...) But at the same time, I would say the like the one. That's a that is on the top of my list. Would be having a good rationale behind the decision making and behind our recommendations in the meaning of reliable and credible data-based analysis and well insights that we provide to our colleagues so they could make the better decisions or the better investments in their areas. For example, if we want to expand greenery areas within the city, we must make that decision based on the concrete data in the meaning of where are the where the needs are the highest, for instance, or where it should be done because of the society, because of the social issues, and not only based on what we think, what we thought or or based on the political sympathies. So, create credible and reliable rationales behind decisions behind spending budget. And etc..

P1: So, what are you doing? Maybe in your department, maybe more broadly, to identify and build the kind of capacities that you need for the coming transition.

P3: So, we provide data-based recommendations. I mean, we have greenhouse gas inventory, very detailed one. And every year we go a bit deeper in that analysis so we know where the, you know, the most urgent areas and where are the low hanging fruits to achieve the targets. And based on that, we propose, or we push some additional actions measures. We've our partners from different offices and different institutions like the electrification of public transport, for example, or we do have I mean, the majority of our emissions comes from the building sector such that energy, energy. So, now we streamline and now we focus within our office on the energy efficiency and retrofitting of buildings as a top priority. And that's where we would recommend spending most of the investment funds when regarding buildings. So, we provide very tailored and detailed recommendations or at least we try to because of the what [P2] said, the limited human resources. We cannot be in every process, but we try to be as in as much as possible, as many as possible.

P1: (...) And when it comes to processes, how are you changing processes and organizational routines as part of governing the climate neutrality transition?

P3: It depends on depends on the case. I mean, we the main focus that we do have on the processes is, well, even including climate analysis or climate components into the processes that are already happening. For example, the idea of building permits so they are evaluated from the environmental point of view, but also, we provide a climate, let's say, component to that when it comes to local spatial plans. Again, it used to be more environmental oriented, environmental protection oriented, and now we evaluate from the climate perspective. So, we consider also renewables, efficiency, greenery, etc. but also, we do some pilots to. Plan includes climate governance in a, you know, in an organization wide scale. You know, however, it's not it's not an easy one. It takes time. It takes a lot of a lot of dedication. But we are currently trying to incorporate climate governance into the budget planning, into the actions that it's taken in, in a citywide meeting.

P1: Pretty elaborate a little on these pilots. And you just mentioned the budget plan. Which kind of titles are those and where are you kind of trying these administrative innovations or new experimental?

P3: Yeah. So, our vision, our vision is, or we aim to it's not done yet and probably it won't happen in a in the next years. But we want to, for example, include a detailed climate risk into the investment process. Much more detail than that nowadays. To evaluate climate risks for the investments, for the the strategies that we are developing. Yeah. And to and to provide such analysis also to the current scope that is happening.

P1: Interesting and then maybe being aware of time. Last question regarding the you mentioned for 100 Smart Cities. How has joining the EU mission influenced the way that climate neutrality is discussed and governed and implemented in your city?

P3: [P2]?

P2: And I don't know if I can say how it's changed, but we have we are part of a pilot city program, and I think it has the potential to change how it is discussed. And our pilot is a zero emission and sustainable territories, and we will try to revitalize and retrofit and district in Warsaw. But we want to engage citizens and involve them as much as we can. And yes, I think this project has a lot of potential to do this.

P3: And Marissa mentioned the pilot project. And speaking about the mission 112 neutral, I mean, net zero cities mission. So, the expectations were high. The reality is. Extremely low and not meeting the expectations. We are not satisfied. We as a city is not as a Warsaw because two days ago, we came back from Brussels from annual conference and well, basically. (...) Yeah, we are not satisfied. It's not an efficient it's you know, until now the mission has yielded nothing, to be very honest. And we still don't know the, the overarching goal and the long-term goal of the mission, the commission, the funds are missing. Still, the city label is a question mark. Definitely the process needs to be somehow reshaped because currently it's not meeting the expectations of the cities. But the pilot is great. I mean, having funds for specific pilot projects are the. The very good case. However, we could apply even if we were not a mission city. That was an open call.

P1: (...) Interesting. So, what would you change about the mission to make it more.

P3: Having more having more tailored support from the city advisors? Having more clarity on the fund, the available funds, or the mechanisms that will support mission cities for the cities that has and there are maps by 2030. Having more clarity about the city label, we don't know how it will look like and what would be an added value because now we see we see none. Having more opportunity to talk with other cities more than on the annual conferences. But, you know, on a daily basis we should cooperate with other cities, which is not happening. So, I would say the consortium is not working efficiently. It's too many stakeholders, too many people involved. And apparently, you know. It's not non manageable considering the scale. So, reshaping the domain goals, reshaping the scope and listening to cities and cities feedback would be great.

P1: (...) It is not perfect. That is a very interesting point. Looking at the time, I think we are at the end of the half hour that you set out. Is there anything else you would like to add regarding the topics that we talked about?

P2: No, no, I don't have anything to add.

P1: All right.

P3: No, I mean, as you know, it depends on the depends on your goal. You know, you are I guess you're talking with European cities right on that. So, you know, having a perspective of other cities would be fun. And at the end of your work, we'll be happy to check the product. You must study this and go through it to add something. I don't know. I mean, it's a huge challenge to incorporate or to plan. Achieving net zero, especially in the countries like Poland, which are coal based at this point. I mean, I assume you live in Germany, so it's your case as well for now, for at least next decades and having a transition from the coal-based economy nationwide, as I said, is extremely difficult because we are responsible only for some percent of our emissions. And the other, you know, it depends on the energy sources, the national, why the state owned companies, etc.. However, we do as much as possible. We want to become climate neutral. We want to be climate resilient. The recent situation, the recent war in Ukraine shows that there is no there is no other option than to accelerate the transition and to become independent as soon as possible. It's material now. It's you know, all the risks, all the risks have materialized. Yeah. And you know, maybe some reflection, the discussion, current discussion on the EU or the global topic like, you know, we should not. We should utilize now the momentum of the net zero transition towards renewables and energy efficiency and such measures and not to gas, not to natural gas and that kind of sources that should be interim and they're not ultimate solutions. So, we should not redirect the attention of the stakeholders from renewables to gas, because it's easy. We should still focus on the transition. Focus on energy efficiency? Sure. Attract business without third parties. It won't happen because of the CapEx, because of the investment that are needed. So, well, it's a joint it's a joint effort to be very honest from all stakeholders. And yeah, we have. We have an EU supervision that could help. Also, from the city perspective, I have to say that. We are dependent on the national government when it comes to funds, for example, when it comes to large scale investments. So, having an option to sign, I don't know, a direct agreement between EU, between multilateral financial institutions would help a lot because in the case of Warsaw, for example, our mayor is number one opposition leader. So, the. You know, the communication and cooperation with government is not an easy one for us. Yeah. So, that political should be should go. You know on the back of that the whole. Story and we should focus on going beyond the political differences and on the same goal. But it's difficult. So, having more cooperation between cities and EU global organizations would help to achieve those targets.

P1: Sounds like a perfect closing statement. Thank you very much for sharing your opinion on this. Very interesting. But to be mindful of your time, I would say that at the end of the interview from my side.

F Survey Responses

F.a Bratislava

Which municipality, city, or metropolitan area are you professionally affiliated with?

Bratislava

Which country is this city located in?

Slovakia

Which of the following initiatives is your municipality, city, or metropolitan area participating in? - Selected Choice

EU Mission for "100 climate-neutral and smart cities by 2030", Other initiatives pursuing climate neutrality (please specify)

Which of the following initiatives is your municipality, city, or metropolitan area participating in? - Other initiatives pursuing climate neutrality (please specify) - Text

Covenant of Mayors

Which type of organization or department are you primarily employed in? - Selected Choice

Municipal government or administration

Please briefly name your usual professional tasks and responsibilities. This helps us understand your point of view.

I handle the Climate neutral cities Mission and work on the development of our SECAP.

Which (if any) organizations, departments, and roles are responsible for planning, governing, and implementing the transition to neutrality in your city?

Please briefly explain how they relate and what their responsibilities are.

In Q4 2023 a Climate Office should be established in our city administration. This office will be responsible for coordination, strategy and communication of climate projects and actions in Bratislava. It will be under the supervision of our new vice-mayor for Climate. There are also many other relevant departments with expertise in various climate related

topics, such as the Environment department, Transport department, Data and Innovations department etc. An important part of planning is under the Metropolitan Institute of Bratislava, where various strategies are developed (incl. urban development strategy Bratislava 2030). Our waste management organisation is responsible for a huge part of our energy transition and circularity projects. And other city organisations/firms have their specific role, such as the Water Management company, the Public Transport company etc.

Which (if any) are the key reference framework(s)* your city government is using to address sustainable urban development in the broader sense?

Please describe how (if at all) these frameworks relate to any climate neutrality ambitions in your city.

Our city has its own Sustainable urban development strategy - Bratislava 2030, which in part uses the SDGs framework. Other than that, we follow the JCR framework for our SECAP and NetZeroCities framework will be followed for our CCC (we have not started working on it yet).

How (if at all) is your city changing its organisational structures to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

As already mentioned, there will be a new Climate office in 4Q 2023 under the vice-mayor for Climate. This office should create a more horizontal governance for our transition to climate neutrality, overcoming the current silo structure.

How (if at all) is your city changing its oversight and reporting mechanisms* to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

This is not yet formalised but will probably become more concrete with the submission of our SECAP (1Q 2024) and possibly with the development of our CCC (2024).

How (if at all) are your city administration and government changing its ways of communicating and coordinating internally to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

As already mentioned, the Climate office will be responsible for internal coordination and communication. While preparing for the establishment of the Climate office, we already did a mapping exercise with all climate relevant departments about their ongoing and planned projects, strategies, problems and expectations. On an informal level we are constantly communicating with these stakeholders. The new vice-mayor for climate also has an important role in communicating internally with involved departments, organisations and politicians. The exact form of communication and coordination will be finalised with the creation of the Climate office, in parallel with the development of our SECAP, which also gives some direction regarding these topics.

How (if at all) is your city changing its ways of communicating and coordinating with external stakeholders* to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

This is not happening yet but will be covered in our SECAP and we are planning to start more intense communication with companies for the CCC but also in general to learn about their sustainability goals and how we can work together. This will probably take the form of some MoU or climate partnerships.

How (if at all) is your city changing its funding mechanisms to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

This is not yet happening in a systematic way but we are seeing more and more funding being directed towards climate goals, which is a good argument in negotiations with our politicians about their support for climate related activities.

How (if at all) is your city changing its ICT* infrastructure and use to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

We have a strong department of Data and Innovation which is working on various projects, including Climathon Bratislava, where we try to come up with challenges that can be implemented on city level. Winning teams then develop their solutions in partnership with the city (i.e. improvement to our mobility app). The innovation department develops many smart solutions that can help us move towards climate neutrality and are in general very open to cooperation. We are also pushing for the implementation of some energy management system for our buildings.

How (if at all) have your city administration's available skills, processes, and resources influenced its ability to advance the climate neutrality transition?

Please briefly explain why you think so.

Skills: We have many skilled people in various sectors, including urban planning, green and blue infrastructure, transportation, waste management, circular economy, data and innovation, finance and funding... These people work on projects that help us move towards climate neutrality.

Processes: We do not have any in place yet.

Resources: Our resources are very limited due to a lack of funding from the state. We rely on EU funding a lot and it will not be enough to advance the climate neutrality transition.

Which are the most important skills, processes, and resources your city needs to successfully govern and implement the transition to climate neutrality?

Feel free to consider both current and potential future needs.

Skills: We need people who are experts in climate related fields but also good leaders/strategists and people who have strong communication skills.

Processes: Establishing solid horizontal governance of climate projects and finding a balance between having everyone on board and not taking too much of their time and

capacities. Securing continuous political support. Climate mainstreaming into all municipality projects and actions. These are not happening yet.

Resources: Obviously, we need more financial resources (i.e the state should give us more opportunities for us to apply for funding; or EU funds to be also targeted on cities that need basic things - we are not Sweden and often we do not qualify for some advanced research and innovation projects). Additionally, we would need more human resources, especially because our universities are weaker than in other EU countries and many Slovaks go study abroad (we are experiencing a serious brain drain hampering our development).

Which (if any) of these skills, processes, and resources is your city currently lacking?

Already described above. The most important is that we are lacking technically skilled people who can also think strategically. Specifically these days we seem not to be able to find energy managers on the market.

Which (if any) new human, organizational, and technical capabilities is your city administration developing to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

The establishment of the Metropolitan Institute of Bratislava was a big step forwards, focusing on sustainable urban development and planning, recently also on aligning our work with existing strategies of the city. Also, the creation of the role of our new vice-mayor for Climate is something that brings political recognition to the topic. Lastly there will be the new Climate office. Human and technical capabilities will hopefully be developed along these lines.

Which (if any) new knowledge, analytical, and data capabilities is your city administration developing to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

As already mentioned, Bratislava has its own annual Climathon which brings many young and enthusiastic people together to help the city advance climate neutrality and sustainability using data and analytical capabilities, implementing the solutions as widely as possible. The Bratislava Innovation team works on many other solutions in this regard.

Which (if any) new formal responsibilities or political authority is your city administration seeking to gain, to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

We are seeking to improve the political situation, specifically the relationship between the government and Bratislava, which is currently very bad. Big cities in Slovakia are in an unfortunate situation where they are the first to experience budget cuts and also have limited competences over their territory. Many different levels of governance are also a problem we are trying to solve.

Which (if any) new types, sources, and amounts of funding is your city administration seeking to access, to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

We do not have any new types of funding, relying heavily on EU funds because we are not supported by the national level. The Climate office is planning to begin some partnerships with companies in order to access more funding for climate neutrality. We are also trying to learn about possibilities innovative funding.

How (if at all) is your city's administration changing its processes and routines to govern and implement the climate neutrality transition?

Please highlight which changes you consider most important and urgent.

Not yet happening.

Please give a short example (if available) of a recent project that your city's public administration is undertaking to pursue climate neutrality and sustainability in your city.

If applicable, feel free to reflect on the project's success or failure.

Projects are not yet labeled as something to pursue climate neutrality but we have some that will be considered as such when we have the plans in place (like SECAP and CCC).

1) Project "Climate resilient Bratislava" with the main aim to increase adaptation measures (green and blue infrastructure), develop our SECAP and plant 10 000 trees, among others. All of this should happen involving citizens and also leading to some organisational changes. Adaptation measures and green spaces are easier to deliver than mitigation.

2) We are now exchanging old light bulbs for LED in 30 000 (?) spots of our public lighting, which will decrease electricity consumption and CO₂ emissions. This should be a success, our company took a loan for it and will be able to pay it back from savings.

3) Our waste incineration plant is being modernised so that it can provide heat to 30% of our district heating system. This is not completely carbon neutral but still a good step away from fossil gas.

Please give a short example (if available) of a recent administrative innovation* your city is implementing to pursue climate neutrality and sustainability.

If applicable, feel free to reflect on the project's success or failure.

There is no such innovation happening yet. We have introduced green public procurement, so maybe that could count?

It has now been about one year since the participants of the EU Mission have first been publicly announced in April 2022.

How (if at all) has joining the mission influenced the way climate neutrality is discussed, governed, and implemented in your city?

Joining the mission gave us a very needed push to start taking action for climate neutrality and in climate issues in general as a city. It has helped us build a strong mandate for the creation of the Climate office. Climate issues are getting more and more attention even from the managerial and political level. Additionally, it made us cooperate more closely with the city of Košice, which is very valuable for us.

You are almost at the end of this survey.

Is there anything else you would like to add about how climate neutrality and sustainability are governed and implemented in your city?

We will probably not have the time, resources and capacities to actually achieve climate neutrality by 2030. We are still discussing what is the best approach to this dilemma and talking to other EU cities, we know that we are not the only ones. It would probably help to push or at least open the "deadline" until 2040. Although we need to be ambitious, the unrealistic goal can also cause trouble, frustration and despair, which could in the end be destructive to the mission.

F.b Bydgoszcz

Which municipality, city, or metropolitan area are you professionally affiliated with?

Bydgoszcz

Which country is this city located in?

Poland

Which of the following initiatives is your municipality, city, or metropolitan area participating in? - Selected Choice

Eurocities, Other initiatives pursuing climate neutrality (please specify)

Which of the following initiatives is your municipality, city, or metropolitan area participating in? - Other initiatives pursuing climate neutrality (please specify) - Text

EUKI, EPAH, Covenant of Mayors

Which type of organization or department are you primarily employed in? - Selected Choice

Municipal government or administration

Please briefly name your usual professional tasks and responsibilities. This helps us understand your point of view.

Energy Management Office - law regulations, energy optimisation and reducing GHG.

Which (if any) organizations, departments, and roles are responsible for planning, governing, and implementing the transition to neutrality in your city?

Please briefly explain how they relate and what their responsibilities are.

Both Energy Management Office and Department of integrated development and environment

Which (if any) are the key reference framework(s)* your city government is using to address sustainable urban development in the broader sense?

Please describe how (if at all) these frameworks relate to any climate neutrality ambitions in your city.

It's mostly focused on monitoring various aspects - starting from greenhouse gas emission inventory and strategic documents such as sustainable energy and climate action plan (SECAP), Sustainable Urban Mobility Plan (SUMP). All of the documents drafted by the city is in constant reporting of completing certain task that are shown in specific documents. It allows to show condition of which we are as a city and what needs to be done.

How (if at all) is your city changing its organisational structures to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

A number of organizational units have been set up inside the office to carry out activities in this area as well as to monitor the results of activities carried out previously. The city responds to threats that are detected by these units and implements an appropriate action plan.

How (if at all) is your city changing its oversight and reporting mechanisms* to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

It all depends on the issue at hand. Given that we have committed to a number of pro-environmental measures by resolutions of the city council, it was necessary to develop mechanisms for overseeing the fulfillment of certain goals

How (if at all) are your city administration and government changing its ways of communicating and coordinating internally to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

The previously mentioned units were established to coordinate activities in this area and draw up further development plans

How (if at all) is your city changing its ways of communicating and coordinating with external stakeholders* to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

The city has limited legal options to act with third parties and few options to require the fulfillment of specific tasks it has established

How (if at all) is your city changing its funding mechanisms to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

The city is limited by statutory mechanisms that do not allow much freedom in this regard

How (if at all) is your city changing its ICT* infrastructure and use to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

It is necessary to upgrade the infrastructure both in terms of the direct use of the device and changing network parameters to ensure optimized performance

How (if at all) have your city administration's available skills, processes, and resources influenced its ability to advance the climate neutrality transition?

Please briefly explain why you think so.

Above all, it is necessary to recruit high-ranking specialists who will be able to draw up appropriate processes, which, in turn, will optimize operations and, above all, set new directions in action. However, this is very difficult to implement due to the fact that salary rates do not remain at market levels

Which are the most important skills, processes, and resources your city needs to successfully govern and implement the transition to climate neutrality?

Feel free to consider both current and potential future needs.

Odpowiedź podobna jak w poprzednim pytaniu. Najważniejszym zasobem pozostają wysokiej klasy specjaliści

Which (if any) of these skills, processes, and resources is your city currently lacking?

It's not so much a lack of any particular skills as a shortage of staff

Which (if any) new human, organizational, and technical capabilities is your city administration developing to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

miasto prowadzi liczne szkolenia, które pozwalają na pozyskiwanie takich umiejętności

Which (if any) new knowledge, analytical, and data capabilities is your city administration developing to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

-/-

Which (if any) new formal responsibilities or political authority is your city administration seeking to gain, to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

-/-

Which (if any) new types, sources, and amounts of funding is your city administration seeking to access, to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

-/-

How (if at all) is your city's administration changing its processes and routines to govern and implement the climate neutrality transition?

Please highlight which changes you consider most important and urgent.

This is obligatory due to the previously cited resolutions of the city council, in which we pledged to reduce energy consumption as well as optimize it

Please give a short example (if available) of a recent project that your city's public administration is undertaking to pursue climate neutrality and sustainability in your city.

If applicable, feel free to reflect on the project's success or failure.

H2020 eNeuron project - Optimising the design and operation of local energy communities based on multi-carrier energy systems

Please give a short example (if available) of a recent administrative innovation* your city is implementing to pursue climate neutrality and sustainability.

If applicable, feel free to reflect on the project's success or failure.

Introduction of a robot for impersonal handling of settlement documents

You are almost at the end of this survey.

Is there anything else you would like to add about how climate neutrality and sustainability are governed and implemented in your city?

-/-

F.c Grenoble

Which municipality, city, or metropolitan area are you professionally affiliated with?

Grenoble

Which country is this city located in?

France

Which of the following initiatives is your municipality, city, or metropolitan area participating in? - Selected Choice

Eurocities,EU Mission for "100 climate-neutral and smart cities by 2030"

Which type of organization or department are you primarily employed in? - Selected Choice

Municipal government or administration

Please briefly name your usual professional tasks and responsibilities. This helps us understand your point of view.

Officer in charge of European affairs

Which (if any) organizations, departments, and roles are responsible for planning, governing, and implementing the transition to neutrality in your city?

Please briefly explain how they relate and what their responsibilities are.

Coordination by "Climate Unit" (located on General management Directorate)

Many Thematic Departments : Energy transition, public space, mobility, environment-food-biodiversity-forest., ...

All the dministration is focused on the impact of climat and the goal on climate neutrality on their own thematic focus

Which (if any) are the key reference framework(s)* your city government is using to address sustainable urban development in the broader sense?

Please describe how (if at all) these frameworks relate to any climate neutrality ambitions in your city.

SECAP, SUMP, Energy strategic framework, Circular economy strategy, Green-blue axes framework, ...

How (if at all) is your city changing its organisational structures to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

Yes recently by :

- putting the "Climate service" at the General managing Directorate to better organise the transversal approach

- creation coordination bodies through "inter-service circles" gathering many Dpt to address specific issues: water, cooperation, biodiversity, ...

How (if at all) is your city changing its oversight and reporting mechanisms* to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

the annual report if focused on sustainable goals and works to develop a "green budget"

How (if at all) are your city administration and government changing its ways of communicating and coordinating internally to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

Communication is strongly focused on sustainability in terms of topics addressed in its global narrative (reducing energy consumption, behaviour changes, ...)

Work to reduce the carbon footprint of communication (eg. new "sustainable" website, less paper, more targeted communication,

F.d Vilnius

Which municipality, city, or metropolitan area are you professionally affiliated with?

Vilnius

Which country is this city located in?

Lithuania

Which of the following initiatives is your municipality, city, or metropolitan area participating in? - Selected Choice

EU Mission for "100 climate-neutral and smart cities by 2030"

Which type of organization or department are you primarily employed in? - Selected Choice

Municipal government or administration

Please briefly name your usual professional tasks and responsibilities. This helps us understand your point of view.

GHG emission assessment and climate policy consultant

Which (if any) organizations, departments, and roles are responsible for planning, governing, and implementing the transition to neutrality in your city?

Please briefly explain how they relate and what their responsibilities are.

Vilnius municipality established an institution called Climate Neutral Vilnius which will coordinate the issues related to the transition to neutrality.

Which (if any) are the key reference framework(s)* your city government is using to address sustainable urban development in the broader sense?

Please describe how (if at all) these frameworks relate to any climate neutrality ambitions in your city.

The EU Green Deal and its initiatives and regulations push the city's climate neutrality ambition.

How (if at all) is your city changing its organisational structures to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

The main change was establishing an independent institution as a coordinator responsible for the city's climate neutrality transition.

How (if at all) is your city changing its oversight and reporting mechanisms* to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

This process is still under development; however, we are working on GHG emission assessment methodologies and data collection intending to build a continuous process. In addition, we will put more effort into reporting and disclosing city data as transparently as possible.

How (if at all) are your city administration and government changing its ways of communicating and coordinating internally to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

The process still needs to be fully developed.

How (if at all) is your city changing its ways of communicating and coordinating with external stakeholders* to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

As a new institution coordinating the transition to climate neutrality was established, it will be responsible for stakeholder engagement and communication regarding this topic.

How (if at all) is your city changing its funding mechanisms to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

Currently, we can't provide any information regarding the funding mechanism change.

How (if at all) is your city changing its ICT* infrastructure and use to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

No, not currently.

How (if at all) have your city administration's available skills, processes, and resources influenced its ability to advance the climate neutrality transition?

Please briefly explain why you think so.

First of all, the city administration, in light of political will, showed a strong will to participate in different initiatives related to increasing the sustainability and environmental development of the city. Participation in initiatives, one of which is Net Zero Cities, pushed to build additional human resources and other capacities to help advance the climate neutrality transition.

Which are the most important skills, processes, and resources your city needs to successfully govern and implement the transition to climate neutrality?

Feel free to consider both current and potential future needs.

The most critical skills: are knowledge, analysis, communication, leadership, and confidence.

The most critical processes are planning, agreement, strong political will and citizens' mandate, implementation assurance - securing funding, data collection and monitoring the implementation.

The main resources to successfully govern and implement the transition to climate neutrality: are data, knowledge, funding and will.

Which (if any) of these skills, processes, and resources is your city currently lacking?

A lot needs to be improved, but the most important is citizens' trust; we should work on communication.

Which (if any) new human, organizational, and technical capabilities is your city administration developing to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

Establishment of delegated institution - Climate Neutral Vilnius.

Which (if any) new knowledge, analytical, and data capabilities is your city administration developing to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

In Climate Neutral Vilnius, we focus on data collection, analysis, and building capacities.

Which (if any) new formal responsibilities or political authority is your city administration seeking to gain, to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

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Which (if any) new types, sources, and amounts of funding is your city administration seeking to access, to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

All the kinds depend on the project.

How (if at all) is your city's administration changing its processes and routines to govern and implement the climate neutrality transition?

Please highlight which changes you consider most important and urgent.

Different institutions which are under the municipality are focusing on increasing sustainability. For example, the institution responsible for public lighting set a target to replace bulbs with LED ones, and the Vilnius heating company set a target to switch to biomass by 2030.

Please give a short example (if available) of a recent project that your city's public administration is undertaking to pursue climate neutrality and sustainability in your city.

If applicable, feel free to reflect on the project's success or failure.

In Vilnius, about 2.7 TWh of heat is supplied to district heating (DH) networks annually. In 2018 the share of RES in the DH network of Vilnius reached 44%; in 2019 – 54%; and in 2020 – 61%. Upon full completion of the biofuel cogeneration facilities currently under construction, the share of RES in the City of Vilnius in 2024 should reach 90%. By 2030, City plans to abandon fossil fuels in DH completely.

Capacity building in organizing urban gardens, inspiring and training people to manage urban gardens (Gardeners) and governance & regulations. Furthermore, urban gardens can be a temporary activity in nonutilized or underutilized urban land.

As a continuation – in October 2021, the city's mayor launched a very ambitious initiative -The Green Wave - with hundreds of thousands of trees, millions of shrubs and vines. Over 100,000 trees, 10 million bushes and 300,000 climbing vines will be planted in Vilnius within that period.

Please give a short example (if available) of a recent administrative innovation* your city is implementing to pursue climate neutrality and sustainability.

If applicable, feel free to reflect on the project's success or failure.

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It has now been about one year since the participants of the EU Mission have first been publicly announced in April 2022.

How (if at all) has joining the mission influenced the way climate neutrality is discussed, governed, and implemented in your city?

As mentioned before, the municipality administration decided to establish a new institution that will work only with climate neutrality issues.

You are almost at the end of this survey.

Is there anything else you would like to add about how climate neutrality and sustainability are governed and implemented in your city?

We are just starting our journey towards climate neutrality as the city and are more ambitious than the national government. However, communication and citizens' involvement in the implementation and planning process is critical on which we should work and focus.

F.e Tallinn

Which municipality, city, or metropolitan area are you professionally affiliated with?

Tallinn

Which country is this city located in?

Estonia

Which of the following initiatives is your municipality, city, or metropolitan area participating in? - Selected Choice

Eurocities, Other initiatives pursuing climate neutrality (please specify)

Which of the following initiatives is your municipality, city, or metropolitan area participating in? - Other initiatives pursuing climate neutrality (please specify) - Text

Covenant of Mayors, Green capital

Which type of organization or department are you primarily employed in? - Selected Choice

Municipal government or administration

Please briefly name your usual professional tasks and responsibilities. This helps us understand your point of view.

I am the advisor on sustainability governance, working on a governance model to achieve the SDG-s

Which (if any) organizations, departments, and roles are responsible for planning, governing, and implementing the transition to neutrality in your city?

Please briefly explain how they relate and what their responsibilities are.

Strategic management office is the horizontal coordinator of the effort.

Which (if any) are the key reference framework(s)* your city government is using to address sustainable urban development in the broader sense?

Please describe how (if at all) these frameworks relate to any climate neutrality ambitions in your city.

SDG-s.

We are also setting up service design principles which relate a bit to it.

Plus I am leading the effort to put together a framework ourselves to make sense about how we should govern in order to address sustainable urban development

How (if at all) is your city changing its organisational structures to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

Major structural reform has already been done with the establishment of Strategic management office. Right now there are no additional plans to change the structure, although a realignment of departments is always a possibility.

How (if at all) is your city changing its oversight and reporting mechanisms* to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

We are working on the monitoring system of the city strategy. We have localized the SDG-s and have a long list of indicators that we need to follow. However the quality of the indicators and data is still questionable in many cases. and we don't have a good tool to have an overview of the indicators which could be used by different stakeholders. We are currently in the process of designing that tool.

How (if at all) are your city administration and government changing its ways of communicating and coordinating internally to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

Right now most of this effort is done via Green capital award. this is quite an extensive program of communication with many activities, too long to list here. After the green capital year we will communicate mostly through our city strategy

How (if at all) is your city changing its ways of communicating and coordinating with external stakeholders* to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

The same answer as previous. We don't have a comprehensive guideline for stakeholder engagement, but we want to do that during the next year. Besides green capital year, city department do stakeholder engagement in different ways and we need to improve that. Biggest thing this year in this regard is climate assembly in autumn.

How (if at all) is your city changing its funding mechanisms to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

There are some additional measure in the green capital year, but in general we have not changed our funding mechanism. This is one question that should be tackled in the future. For example green budgeting or something like this.

How (if at all) is your city changing its ICT* infrastructure and use to govern the transition to climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

I don't really have an answer to that. ICT infrastructure and use tries to support different processes, but I'm not sure we specifically do something in this regard due to climate neutrality. For example I don't know how much we deal with our digital footprint.

How (if at all) have your city administration's available skills, processes, and resources influenced its ability to advance the climate neutrality transition?

Please briefly explain why you think so.

After the structure change a lot of new people have joined the administration and this has definitely increased its capability. But there are still a lot of processes that work against climate neutrality and a lack of people to change that.

Which are the most important skills, processes, and resources your city needs to successfully govern and implement the transition to climate neutrality?

Feel free to consider both current and potential future needs.

There's a lack of manpower but probably also inefficient processes that waste manpower. There's a lack of strategic planning and results oriented planning capabilities.

Leadership skills are improving but still lack in many cases.

A consensus on what climate neutrality means is also needed.

Which (if any) of these skills, processes, and resources is your city currently lacking?

The same as above.

Which (if any) new human, organizational, and technical capabilities is your city administration developing to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

We are working on implementing service design and management into our processes.

KPI Monitoring system.

City wide workplan information management system

Which (if any) new knowledge, analytical, and data capabilities is your city administration developing to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

We have establish a green transition unit and are increasing it's capabilities and we have changed the waste management department into circular economy department. We are working on the digital twin of the city, traffic modeling tool,

Which (if any) new formal responsibilities or political authority is your city administration seeking to gain, to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

There probably is something but I'm not sure what:)

Which (if any) new types, sources, and amounts of funding is your city administration seeking to access, to advance climate neutrality and sustainability?

Feel free to address both past developments and future plans in your reply.

We have a foreign funding unit who is looking at all the EU funding opportunities and we try to find possibilities in Horizon, Urbact, EUI etc.

How (if at all) is your city's administration changing its processes and routines to govern and implement the climate neutrality transition?

Please highlight which changes you consider most important and urgent.

Mainly with the establishment of development planning unit and green transition unit. They are responsible for establishing a holistic planning system so that all departments know what they have to do. But we are more in the beginning of this process.

Please give a short example (if available) of a recent project that your city's public administration is undertaking to pursue climate neutrality and sustainability in your city.

If applicable, feel free to reflect on the project's success or failure.

We are designing a concept for how to provide enough public charging points for electric vehicles. This is an example of cross departmental cooperation as opposed to some departments needing to do their work better.

Please give a short example (if available) of a recent administrative innovation* your city is implementing to pursue climate neutrality and sustainability.

If applicable, feel free to reflect on the project's success or failure.

It's again the establishment of strategic management office and it's unit to holistically plan bot the strategic level but also facilitate innovation.

You are almost at the end of this survey.

Is there anything else you would like to add about how climate neutrality and sustainability are governed and implemented in your city?

I probably I'm not aware of all the initiatives city has taken and I have not listed every project initiative that I know of. I would say that the theoretical system and structure is in place on the top civil servant level but it is not so well integrated with political level and the execution in departments is also lacking.