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Building the Lab: European Public Sector Innovation Labs' Value Propositions and Strategies for Sustainability

Master Thesis

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Abstract

Amid shifts in socio-economic conditions, Public Sector Innovation Labs (PSILs) have emerged and expanded globally as critical environments for advancing government innovation and solving complex societal challenges. However, many PSILs still struggle with sustainability issues due to volatile political environments, funding instability and other contextual barriers to their existence in the public sector. This study investigates the value propositions and strategies employed by PSILs in the European Union to ensure long term sustainability. The study is based on the qualitative insights from semi-structured interviews with lab managers and founders carried out in nine national PSILs supplemented by document reviews. This study included Innovation Labs from Latvia, Lithuania, Spain, Austria, France, Belgium, Sweden, Estonia and Portugal. The research identifies four core value propositions of Public Sector Innovation Labs: (1) providing safe spaces for experimentation to reduce innovation risks, (2) offering organizational support for user-centric and efficient public services, (3) fostering collaboration and co-creation through network building, and (4) disseminating innovation knowledge through shared learnings, training, curriculum development and innovation toolkits.

The study further identifies several key sustainability strategies that enable PSILs to maintain their operation capacity and Legitimacy in the public sector. These include identifying a clear mission, embedding the lab within a politically stable host institution, developing robust funding models, cultivating motivated multidisciplinary PSIL teams, demonstrating and communicating impact, and continuously aligning strategically for systemic scalability. Building on Moore's (1995) Public Value Theory, the study operationalizes its three pillars: public value, legitimacy and support, and operational capacity into a six-step framework for PSIL sustainability. This framework offers actionable insights for policymakers and lab managers seeking to create or redesign sustainable labs that can navigate bureaucratic constraints, secure resources, and enhance societal impact.

Keywords: Public Sector Innovation Labs, Sustainability, Value Propositions, Public Value Theory, EU Governance, Design Thinking, Policy Innovation, Experimentation

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Abbreviations

AI Artificial Intelligence

AMA Administrative Modernization Agency

EU European Union

FEMP Spanish Federation of Municipalities and Provinces

GovTech Government Technology

ICT Information and Communication Technology

INAP National Institute of Public Administration

L&S Legitimacy and Support

NPM New Public Management

NVivo Qualitative Data Analysis Software

OC Operational Capacity

OECD Organisation for Economic Co-operation and Development

PS Public Services

PSILs Public Sector Innovation Labs

PSO Public Sector Organisation

PV Public Value

PVT Public Value Theory

R&D Research and Development

RCT Randomized Controlled Trials

1 Introduction

1.1 Background of the Study

The socio-economic changes and demands from civil society in recent years due to changes in technologies and budget constraints have created a need for governments to find new ways of working to increase efficiency. This has led to the creation of innovation labs at the national and local levels of government (Avecedo & Dassen, 2016). The OECD concept (2008: 434) defines the public sector as comprising of the general government sector and public corporations, including the central bank. Notably, in these public sectors, several trends have become apparent in recent years. For instance, over the past two decades, public sector innovation labs (PSILs) have rapidly been developed, expanded, and in some cases, faded away across the world. Despite the end of the original hype cycle for PSILs, governments in high, middle, and low-income countries continue to establish new labs (OECD, 2024), indicating that these structures play an important role in the progress of the public sector.

In the last decade it was observed that government organizations and citizens grew accustomed to certainty and failed to allow questioning of dominant knowledge and practices, however since the world is uncertain; governments are necessitated to create environments that embrace this inaccuracy to promote creativity and the birth of new ideas by allowing "ignorance" (Brugué et al., 2014). This concept is further validated by, (Gascó (2017) who notes that these micro-environments that involve users in creation and facilitate experimentation of ideas through projects are generally referred to as Innovation Labs or Living Labs. Others assume that PSIL are "islands of experimentation" for the public sector to pilot and deploy on a larger scale new ways of delivering public services (Tõnurist et al., 2017). Despite the diverse definitions of Innovation Labs, the common identifier remains that they exist to enable change (Schuurman & Tõnurist, 2017). These changes aim to improve the government's innovation capacity and address wicked challenges. PSIL facilitate Innovation by serving as platforms for value co-creation and collaboration towards better policies and outcomes (Carstensen et al., 2012; Ahner et al. 2023).

In terms of governance PSIL are generally operated with considerable independence from existing structures because the nature of experimentation calls for some autonomy. As a result, PSIL needs legitimacy that can be acquired through propositions and strategies that include expertise and specialization (Tõnurist et al., 2017). PSIL contributions are made by employing cross sectoral methods such as data analytics to help labs understand societal needs and trends and design thinking to fosters

creative solutions, making them good governance avenues in the contemporary world(Williamson, 2015). Outside of experimentation PSIL contribute to the overall knowledge management and innovation-focused strategies within government institutions (Timeus & Gascó, 2018).

1.2 Problem definition

Over the years Innovation labs have managed to achieve so much towards public sector innovation, defined as the development and implementation of new ideas for the creation of public value (Chen et al., 2020). PSIL have improved government services to enhance overall efficiency through agile methods and experimentation (Timeus & Gascó, 2018). However as primarily government initiatives PSIL have proven to be more transient than their recorded achievements and internet presence has displayed. This was evidenced in the closure of some of the worlds prominent pioneering labs such as Denmark's Mindlab and Finlands Helsinki design labs; attributed by its disillusioned founders and leadership to change in the political climate and policy priorities that led to lower "tolerance for innovation" from decision makers (Boyer, 2020).

PSIL tend to be isolated and unable to effectively influence their parent organizations, raising concerns about their overall impact and ability to maintain support from their organization leading to dependence on volatile political support for survival (Timeus & Gascó, 2018). The Weak organizational embedding frequently restricts their influence to localized and ephemeral initiatives meaning that the innovations they create often fail to scale or become integrated into the broader system. It is evident that labs operate in political environments, however according to Tõnurist et al., (2017) lab teams tend to avoid getting involved in political issues and could distance themselves from their sponsoring organizations as a result, this popular strategy weakens the position and puts their survival at risk creating a need for new ways to navigate the political issues. They also encounter difficulty in addressing central issues, demonstrating their value ,scaling up innovations, and ensuring their sustainability (Acevedo & Dassen, 2016).

PSIL leaders additionally have to navigate the "bureaucratic detachment/attachment conundrum" where they must be careful to protect their environment from the technocracy displayed by the underpinnings of bureaucracy while avoiding the PSIL's isolation from it; as it is still necessary to scale policy innovations post experimentation which can only be facillitated by parent organizations (Krogh, 2024). As the core purpose of a PSIL is to improve the innovation capabilities of the stakeholders in its environment (Timeus & Gascó, 2018), they must therefore be able to navigate the complex ecosystem. These numerous complex challenges faced by PSIL

underscore the need for smarter strategies to navigate the unique landscape so as to guarantee that innovations are not only successfully tested, as PSIL are mainly involved in early innovation stages, but also scaled and integrated into public sector frameworks solidifying their legitimacy and Impact to ensure sustainability.

Problem statement

Public sector innovation labs have emerged as essential spaces for fostering government innovation, policy experimentation, and addressing complex societal challenges. Despite their potential, many of these labs struggle with securing long-term support, lacking clear value propositions and strategies to navigate their volatile environment. This often limits their ability to scale their innovations and remain sustainable. Current literature and practice offer limited insights into how innovation labs can overcome this sustainability challenge. Addressing this gap is crucial for building future proof labs retaining their contribution to public sector Innovation.

1.3 Motivation

From the literature it is clear that Innovation labs are crucial for modernizing public services and testing new governance approaches (Williamson, 2015). Their long term survival is therefore important in enhancing innovation in the public sector. PSIL implement co-creation and collaboration with stakeholder methodologies while other units focus on scientific evidence, the significant differences which are attributed to context specific political and policy regimes (Lee & Ma, 2020). Having a clear vision for the creation of a PSIL, effective governance, well-defined financial models, ongoing knowledge generation, and a community-oriented approach ensures continous alignment with stakeholders and creates room for sustainable evolution during the lifecycle of the lab as the environment changes (Osorio et al., 2020).

Design Strategy is defined by Osorio et al. (2020) as: "the effective allocation and coordination of design resources and activities to accomplish a firm's objectives of creating its appropriate public and internal identities, product offerings and its environments" where they believe that each design strategy can lead to sustainable advantage.

Value propositions are defined the user focused arrangements of services provided in a certain ecosystem (Frow & Payne, 2011; Skålén et al., 2015). According to Public Value theory, value propositions in the public sector should be articulated to include a broader societal benefit (Symes, 1999). however ,PSILs operate in collaborative environements where different stakeholders often have varying perspectives on the processes and value that a PSIL should offer in the public sector (Waardenburg et al., 2020). This makes determination of value propositions unclear in the PSIL environment as there are competing value for the PSIL to provide.

Examining this strategic intention and defining the value propositions that ensure sustainability is therefore crucial for the lab's survival, as they provide a potential framework for PSILs to improve their resilience and adaptation. This research identified the specific strategies that PSIL employ, and their value propositions for ensuring sustainability.

1.4 Novelty

Criado et al. (2023) recommend that organizations in the public sector should adopt more long-term perspectives that spur successful adaptation to the unavoidable evolution in their environmental conditions, thereby succeeding despite their political and administrative dynamics and even further; the electoral cycles of a country. However, they further denote that the exact strategy for how this can be achieved remains a challenge that scholars need to explore in the future.

Building on the work by (Osorio et al., 2019) where they propose a strategic oriented maturity assessment operationalised through a survey; the framework focused on the physical environment noting that the conception, design, implementation, operation and value of a lab can be used to reflect on and re-design strategies for impact and sustainability. As the surveys provided limited information, (Osorio et al., 2020) built on the framework with a single lab case study in the city of bogota .This study explored indepth the National innovation Labs in Europe bringing forth detailed governance perspective on the design of sustainable PSILs.

This research aims to contribute to this discourse by exploring their formation, government guidance, relationships with decision-makers, and how they navigate the challenges they face to ensure sustainability creating a blue print for the redesigning of labs in the public sector.

1.5 Research Questions

Despite the increased interest in Innovation Labs the current literature landscape does not provide an actionable guide on how these institutions can maintain sustainability amid the challenges. To develop a solution this research poses the following questions.

Main Question:

Which value propositions and strategies do public sector innovation labs employ to ensure sustainability?

Sub Questions:

- 1. Which National Public Sector Innovation Labs are in the European Union, and what are their value propositions?
- 2. What are the strategies employed by the Public Sector Innovation Labs to ensure sustainability?

The first sub question maps the landscape of PSILs in the European Union and their value propositions showcasing the purpose of Lab creation in the public sector. The contextual profiles are also necessary to understand the strategic choices investigated in the second sub question. Together they answer the main question exhaustively leading to a guiding framework for designing a sustainable lab.

1.6 Scope of the research

This study focus is exclusively on public sector innovation labs with a nationwide reach in its operations within member states of the European Union. This primarily included federal labs and regional labs with nation-wide operations. The labs included were formed by government initiatives and primarily work in collaboration with government organizations to foster public sector innovation. They all utilised experimentation in their design methodologies and are active at the time of this study.

The qualitative data included in the study was collected in the Spring of 2025 through semi-structured interviews with the lab founders and current managers, supplemented by documents from official government website records and reports. The study focused on the lab as an organization and explored its value propositions and sustainability strategies employed since the inception of the lab from a governance perspective. It does not evaluate the physical lab environment or individual projects of the PSI labs.

1.7 Thesis structure

This thesis is organized into seven chapters. The first chapter provides the background and context of the study, it defines the research problem, motivation, novelty, research questions, and scope of the study. The next chapter explores the existing body of literature on PSI labs value proposals and strategies. Followed by a discussion on the Public Value Theory and the rationale for its selection.

The fourth chapter details the research design, data collection methods, and analytical approach and tools used in the collection and processing of data and their rationale and limitations. The next chapter presents the empirical findings of the study presenting the themes that emerge from the data, followed by a discussion analysing them in relation to the literature, research questions and theoretical framework. It discusses the implications for the findings in the form of a framework and reflects on their broader implications for sustainability of public sector innovation labs. The final chapter summarizes the study's key findings, offers recommendations for the PSIL, policymakers, and identifies areas for future research.

2 Literature Review

Public sector innovation labs are essential spaces for addressing complex societal issues by means of experimentation, co-creation, and adaptive policy formulation. Ensuring their long-term sustainability requires compelling value propositions and strategies that navigate their complex environment to motivate support both internally and externally. This study carried out a literature review on innovation labs focusing on studies relating to potential value proposition elements and strategies, sustainability concerns, and stakeholder alignment in PSIL.

2.1 Conceptual Framework

This section includes the definitions of the main concepts as utilized in the study.

2.1.1 Public Sector Innovation Labs

Public sector innovation labs (PSIL) are defined as experimental environments that are collaborative in nature created to foster innovation in the provision of public services and the development of policies in the public sector. To resolve the limitations of government approaches to policy making, these environments serve as adaptable testing spaces that allow for the prototyping and refinement of concepts in real settings before they can be adopted and scaled into the entire organization of country (Da Silva Junior et al., 2024; Tõnurist et al., 2017,) These PSIL engage multiple stakeholders, such as country residents, public servants, and the business community representatives, in collaborative processes to address societal challenges, employing methodologies such as design thinking to add public value (Cole, 2022; Fuglsang et al., 2021). PSILs also prioritize the creation of public value to improve government efficiency, accountability, and transparency, while also promoting citizen involvement and trust in public institutions (Tõnurist et al., 2017; Da Silva Junior et al., 2024). By employing digital tools and ICT solutions, they contribute to the development of scalable innovations and the mitigation of risks, which are in alignment with the objectives of the government (Fuglsang et al., 2021).

2.1.2 Public Sector Innovation Lab as an Institution

Institutional theory states that organisations operate in a framework of formal and informal rules, norms and cognitive structures that shape their behaviours and legitimacy. A core principle is that organizations adopt isomorphic behaviours where they mimic structures or strategies perceived as legitimate to secure resources, survival, and social approval (DiMaggio & Powell, 1991). Due to the positioning of labs in the context of other existing government institutions they can be said to have 'embedded

agency' as they have some autonomy in decision-making but are constrained by the institutional structures they are embedded, which is both a constraining and enabling environments for institutional change such as innovation (Farla et al., 2012). The strategies they use to navigate this challenge dubbed as 'embedded agency paradox' by Battilana et al. (2009) as one of its biggest challenges was necessary to explore to understand the right positioning for their sustainability. (See figure 1 below)

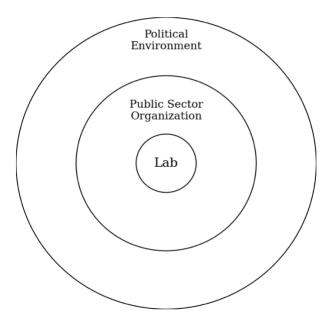


Figure 1.

Public Sector Innovation Lab operating environment. Author's own illustration

2.1.3 Value proposition

Value propositions are defined as arrangements of various practices and resources or tangible and intangible benefits provided within service ecosystems evaluated form a customer's perspective (Frow & Payne, 2011; Skålén et al., 2015) They can simply be defined as service offerings. These benefits are important for facilitating value co-creation between stakeholders and aligning value throughout marketing systems where there are multiple stakeholders (Frow & Payne, 2011). PSIL have multiple stakeholders and beneficiaries, In the context of public administration and innovation, value propositions are analysed across four specific areas: openness, quality, efficiency, and effectiveness.

Value innovation is meant to implement transformations for the public by addressing accessibility, satisfaction, and social impact of government services (Martins

et al., 2019). There is therefore a need to explore PSIL value propositions as Understanding value propositions from different stakeholder points of view can yield new insights into value creation (Frow & Payne, 2011).

To validate their purpose and secure support, traditional value proposition tools may not align with the Innovation lab approach, where user-centric innovation and cocreation is prioritized (Äyväri & Jyrämä, 2017). Some scholars highlight that a framework for identifying components of value propositions could aid in the discovery of new value propositions(Lindič & da Silva, 2011). Pruvot et al. (2023) suggests that PSILs must establish reliable networks to generate more and align their strategic objectives with the suitable lab type, each formulated for specific organizational goals (Van Der Meer et al., 2021). Some scholars suggest that PSIL could enhance their effectiveness and sustainability by emphasizing on value co-creation and fostering collaboration in value delivery(Ahner et al., 2023; Schuurman & Tõnurist, 2017)

2.2 PSIL Value propositions and Strategies

This research consolidates the academic literature on the prevalent themes identified in studies carried out on public sector Innovations and labs. The following themes showcase the explored innovation landscape leading to observations such as the identified methodologies and recommended practices for PSIL. This may be a guide for PSIL for formulating strategies to overcome the numerous cited challenges and ensure survival.

2.2.1 Value Propositions of PSI Labs

This section highlights the value propositions of PSIL according to the current literature landscape.

2.2.1.1 Creating Public Value

PSIL's fundamental aim is to generate and improves public value (Cole, 2022; Criado et al., 2021; Stoll & Andermatt, 2024), this involves enhancing the effectiveness and legitimacy of the public value creation processes (Gascó, 2017). Examples of public value generated by PSILs can include administrative improvements, better relationships with citizens, increased societal transparency and accountability, and overall economic benefits through improved service delivery and cost savings (Fuglsang et al., 2021). PSI Labs also support the development of policy and work towards

improving the design and delivery of public services and policies (Avecedo & Dassen, 2016; Ferreira & Botero, 2020).

2.2.1.2 Enabling Innovation

PSI labs are viewed as organizational tools specifically intended to increase the innovation capacity of public sector organizations(Stoll & Andermatt, 2024; Timeus & Gascó, 2018). They are designed as mediators that enhance the innovation process and serve as platforms or centres for value co-creation, within public governance frameworks (Ahner et al., 2023; Criado et al., 2021; Gascó, 2017; Osorio et al., 2020). They provide unique environments and a "somewhere else feeling" conducive to innovation, away from daily PSO challenges (Osorio et al., 2019, 2020). They spur innovation as avenues for resolving s extremely complicated, "wicked," or "unruly" issues that are challenging for traditional organisations or single PSOs to resolve(Olejniczak et al., 2020; Timeus & Gascó, 2018; Tõnurist et al., 2017). They also act as a means of assisting in the understanding of this increasing complexity(Torvinen & Jansson, 2023) and can help shape PSO culture towards greater responsiveness and collaboration (Torvinen & Jansson, 2023).

2.2.1.3 Driving Transformation and Modernization

Literature suggests that PSI labs are instrumental in the transformation of governmental frameworks, influence concepts of future governance, and aid in the modernisation of the state (Avecedo & Dassen, 2016; Ferreira & Botero, 2020). They are viewed as a renewal of innovation models and structures, associated with a move towards post-New Public Management strategies that emphasise collaboration and smart governance (Criado et al., 2021; Fuglsang et al., 2021).

2.2.1.4 Knowledge Management

A substantial value proposition is the capacity of PSIL to acquire and share knowledge from their experimental projects (Fuglsang et al., 2021). By recording effective tactics, insights gained, and best practices, innovation laboratories can guarantee that their legacy lives beyond individual projects and aids in continuous public sector reforms (Silva Junior et al., 2024). Acevedo & Dassen (2016) suggest that innovation laboratories should establish a knowledge library to enable future projects can leverage on lessons learned. This guarantees that the innovations facilitated by PSILs enhance continuous learning in the public sector, promoting an innovative culture (Tõnurist et al., 2017).

2.2.2 Strategies Employed by PSI Labs

This section highlights the possible strategies that PSIL employ for sustainability according to the current literature landscape.

2.2.2.1 Experimentation

The literature reveals experimentation as a core methodology at the heart of PSIL services, this is used for idea generation, to identify challenges and optimize a PSO's existing processes (Criado et al., 2021; Olejniczak et al., 2020; Stoll & Andermatt, 2024). Innovation labs are known to absorb the risks associated with innovation in the public sector (Avecedo & Dassen, 2016). By creating a secure environment for experimentation, PSIL allow for more risks to be taken by enabling innovations to be evaluated on a limited scale and feedback collected prior to broader adoption, limiting the cost of failure associated with the failure larger public sector reforms (Da Silva Junior et al., 2024; Fuglsang et al., 2021; Lee & Ma, 2020). The iterative design of experiments promotes continuous improvement, ensuring that only the most effective and viable strategies are scaled (Tõnurist et al., 2017). They provide value by managing risks related to public sector innovation by fostering a climate that encourages experimentation (Dekker et al., 2021).

2.2.2.2 Stakeholder Engagement

The literature on PSIL emphasize on the importance of collaboration to achieve Innovation in the public sector. PSILs tend to collaborate with other organizations and with various stakeholders, including staff, service users, private sector and the wider community(Criado et al., 2021; Gascó, 2017; Lewis et al., 2018; Osorio et al., 2020; Stoll & Andermatt, 2024). Collaboration is therefore essential for ensuring the lab's ideas stay pertinent and effective. McGann et al. (2018) asserts that ongoing stakeholder engagement enables innovation labs to adjust to the ever-evolving public needs and good governance goals. PSI labs must demonstrate their responsiveness to the real problems of the citizens and stakeholders it serves, to ensure the likelihood for the broad adoption and support for its innovative initiatives (Tõnurist et al., 2017; Silva Junior et al., 2024).

2.2.2.3 Design Based Methods

PSI Labs frequently use agile methodologies like design thinking and other human centered approaches from the business sector to improve their policy design processes and collaborations within the public sector (Cole, 2022; Criado et al., 2021; McGann et al., 2018; Olejniczak et al., 2020). One of the important strategies of a PSIL

is the ability showcase their service design projects to ensure citizens are at the centre of their initiatives (Tõnurist et al., 2017).

This approach ensures that that their technologies are flexible enough to address stakeholder requirements (Da Silva Junior et al., 2024; Fuglsang et al., 2021). They also enable PSILs to adequately respond to novel challenges and guarantee that solutions are informed by feedback and engagement with end users (Dekker et al., 2021). Da Silva Junior et al., (2024) assert that participatory research and agile methods also allow PSIL to respond to technological and governance advancements. These technologies promote a collaborative methodology guaranteeing that the innovations are robust and address public needs (Fuglsang et al., 2021).

2.2.2.4 Use of data and technology

To succeed PSIL requires technological resources and capabilities to innovate. They therefore leverage on the use of new computational technologies and big data to guide their design process to ensure alignment with user needs (Criado et al., 2021; Tõnurist et al., 2017). The staff and collaborators of PSILs often are required to possess technical expertise in areas such as data science, behavioural science, randomized and controlled trials and digital research and development (R&D) methods (Lee & Ma, 2020).

2.2.2.5 Alignment with government goals and stakeholder needs

Literature suggests that PSILs should ensure that they align their value proposition with the broader organizational and social goals of the governments that they are domiciled within, as Tõnurist et al., (2017) notes; parent organizations and the members of the general public have strong influence on the activities and strategies of the labs more than their own internal ambitions. This is because they are their main sponsor thereby controlling their funding, staffing and operational capabilities. These labs are encouraged to respond to the overall public sector needs and involve various stakeholders to collaboratively develop solutions that fulfil these societal goals (Fuglsang et al., 2021; McGann, 2018). Literature emphasises on stakeholder engagement as an essential approach for innovation initiatives to tackle complex societal needs and conform to governmental objectives (Tõnurist et al., 2017; Silva Junior et al., 2024). This is because to identify and sufficiently solve societal challenges the impacted individuals need to be involved in the process. PSIL are therefore deemed more likely to meet government expectations when they engage with the citizens, civil servants, and private sector partners in the projects (Acevedo & Dassen, 2016).

2.2.2.6 Impact Demonstration and Innovation measurement

The studies also emphasize that PSILs must demonstrate the impact of the activities on public services, budget savings, and governance (Tõnurist et al., 2017). Silva Junior et al. (2024) also assert that these public sector organizations are valuable when they can demonstrate their influence on the overall public policy objectives such as sustainability, efficiency, and social equity. They also must innovate and demonstrate the impact of their experimentations to illustrate their contribution to public sector objectives and justify the decisions with regards to the adoption of the innovations by certain services or other PSOs (Acevedo & Dassen, 2016). The ability of PSI Labs to measure the results of their experimentation and showcase to their senior management motivating them to support the lab (Fuglsang et al., 2021).

2.2.2.7 Bridging Institutional Logic

For the purpose of bridging the potentially contradictory ways of doing things between of traditional government institutions of top-down policymaking and more recent collaborative governance techniques, managers of PSI labs adopt strategies such as linking to relevant agendas, arenas, and actors (Krogh, 2024). Through this, the challenges between autonomy and authority can be resolved.

2.2.2.8 Institutional leadership support

The primary source of PSIL long-term survival and autonomy is highly dependent on the support they can garner from leadership (Tõnurist et al., 2017). McGann et al. (2018) adds that political support is essential also for the scaling of successful innovations within public sector organizations. Institutional embeddedness of PSIL to the parent organization ensures that the innovations are not isolated experiments but become part of broader public sector reforms (Silva Junior et al., 2024). This is because robust institutional embeddedness facilitates the alignment with government goals, therefore improving their chances of scalability (Acevedo & Dassen, 2016; Lewis et al., 2020).

2.2.2.9 Demonstrate Long Term support

Paradoxically for innovation labs to showcase their value and be sustainable in the long term, they must already have a strategy for securing ongoing funding and demonstrating their long-term impact (Tõnurist et al., 2017). McGann et al. (2021) examined the significance of achieving financial security through a synthesis of governmental and private sector collaborations, for additional revenue sources. Moreover, innovation labs must prove that their technologies are scalable and can be assimilated into the current structure of the public sector (Silva Junior et al., 2024).

3 Theoretical Framework

In the exploration of value propositions and strategies of Innovation labs, it is crucial to consider that innovation labs are public institutions that operate within the framework of government structures. In the determination and communication of their benefits to their stakeholders they are required to justify their legitimacy, strategic positioning and sustained support to be successful. Although this study is primarily inductive, it employs the principles of the Public Value Theory (PVT) as the underlying theoretical framework in the exploration of how innovation labs articulate their value proposition, maintain relationships with decision-makers, and ensure long-term survival. PVT provides a structured approach to understanding how public organizations generate societal benefits while securing the necessary political legitimacy and resources for their continuity. This section explains Public Value Theory, justifies its selection, and maps its key concepts to the study's core research themes.

3.1 Public Value Theory: An Overview

Public value theory provides a strategic management point of view on public sector organizations (PSO) that transcends the traditional Weberian bureaucracy and New public management models that focused on efficiency to laying emphasis on the creation of value for the broader society, while navigating political legitimacy and operational constraints in the public sector Moore (1995).

According to Moore (1995) Public sector managers should act like entrepreneurs who align their initiatives with the following core pillars.

3.1.1 Public value (PV)

Moore (1995) argues that public managers must identify what citizens truly value through dialogue and analysis, rather than relying solely on political mandates. This involves balancing short-term service delivery with long-term societal goals. PV hereby represents the needs addressed by a PSO and the impact to society. PSIL develop and articulate their service offerings to government stakeholders to advance innovation which improvs the lives of the citizens. This study assess' the motivations for the development of the lab and the value offerings they provide to their stakeholders to align with their mandate. It will also explore if and how they articulate their contributions to public sector innovation.

3.1.2 Legitimacy and Support/Authorizing environment (L&S)

Since public initiatives require social and political legitimacy to survive; public managers need to secure the approval of the stakeholders such as government officials, policymakers and public support to ensure long-term support. Some literature view innovation as a means for providing legitimacy to the public value creation process (Farla et al., 2012). L&S therefore focuses on PSO managers strategies to secure authority, stakeholder buy-in and political backing. Since PSILs depend on government support they must justify their role through impact. The study will explore the strategies the Labs employ to justify the importance of their role in the public sector to decision makers and citizens. This includes how they navigate political expectations and adapt to the inevitable political changes.

3.1.3 Operational capacity (OC)

This refers to skills, resources and partnerships needed to deliver public value. According to Avecedo and Dassen (2016) Public managers must ensure they have adequate funding, resources and institutional structures required to deliver their value offerings. The OC represents the practical capabilities of a PSO to deliver public value. PSIL require sustained funding and resources to foster Public Sector Innovation. The study explored how labs funding decisions are made and the strategies PSIL adopt to make a case for continued funding in order to continue delivering public value. These dimensions of PVT visualised as the "strategic triangle" guide the systematic exploration of the public value offerings and strategies of PSIL from their formation, engagement with decision makers and funding.

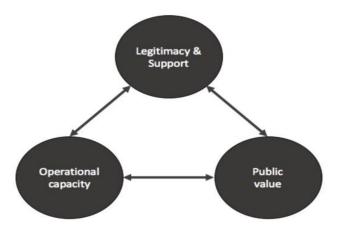


Figure 2.

Moore's strategic triangle of public value management (Moore, 1995)

3.2 Justification

Public Value theory offers a powerful analytical lense for exploring the strategic orientation and the social contributions of PSILs. This is because Moore, (1995) proposes public managers such as the heads of innovation labs as "strategic actors" who navigate operational capacity and legitimacy to provide public value as is the case in this study making PVT a vital framework for exploring these strategies. De Oliveira & Dos Santos Júnior (2018) argue that given its focus on the impact of governmental action, Public Value Theory is compatible for the analysis of public sector innovation.

Public value is understood as social value derived from democratic processes involving stakeholders with the aim of addressing complex problems (Hartley et al., 2019). Since PSILs are experimental spaces for the testing and enhancement of public services, governance and policy making solving societal problems; it yields public value. Hansen & Fuglsang (2020) further confirmed that innovation labs can operate as both platforms and frameworks for the creation of public value in a society. Additionally, through its methodologies that encourage cocreation and inclusion, PSI labs integrate citizen's perspectives not only aligning with societal needs but democratic values of inclusion (Skålén et al., 2015).

4 Methodology

This section highlights the research approach that was be used to collect, process and analyse data for the study on EU public sector Innovation labs. This study utilized a qualitative research design to investigate how do public sector innovation labs develop compelling value propositions and strategies to secure long-term support.

The research aims to find out which national Public Sector Innovation Labs are in the European Union, their profile and what their value propositions are and strategies which are employed by the public sector Innovation Labs to secure long-term support and ensure their survival. The study carried out in depth interviews using semi-structured questions and supplemented the information with document analysis for a two-step empirical approach and it further utilises a thematic analysis to answer the research questions.

4.1 Research Design

This study adopts a qualitative research design. This research design is research is particularly well suited for examining complex phenomena such as the value propositions and strategies of PSIL. This is because it allows the researcher to gain a thorough understanding of the interviewee's experiences, points of views, and the interpretations of their actions and interactions in relation to the subject matter (Creswell, 2013).

4.2 Data Collection Methods

4.2.1 Document Analysis

Prior to conducting surveys and interviews, the researcher conducted a document analysis to identify suitable PSILs and collect foundational information on the lab. This information aided in profiling the labs and identifying those to target for the study. Through document analysis, the researcher found Innovation labs and through their policy documents, mission statements, annual reports, and strategic plans; determine their activity for profiling and aided in the determination on their value propositions. This collection instrument was mainly to identify which labs exists in the EU and what their value propositions were, where the information was available. In most cases the value propositions and strategies were not identifiable at this stage. This instrument provided input into sub-question one as it can was used to profile as well as the value proposition where information is available. The website information and reports were also used to verify specific interview information such as the year of formation of the lab and more information on sample projects carried out by the labs.

Bowen (2009) states that document analysis is a systematic approach that can be used to examine and integrate information from multiple sources, allowing researchers to find trends, themes, and deficiencies in data. By using document analysis, the

researcher profiled the labs within the EU geographical area and identify those that align with the inclusion criteria for further study. This method addressed the first subquestion: "Which National Public Sector Innovation Labs are in the European Union, and what are their profile and value propositions?"

4.2.2 Semi-Structured Interviews

In depth semi-structured interviews were utilised as the primary method for data collection in this study due to their effectiveness in obtaining from participants nuanced and in-depth information. Interviews do this by facilitating the thorough examination of a participants' ideas and emotions on a subject matter, this approach helps the researcher identify underlying motives and beliefs (Rubin & Rubin, 2012). The interactive nature of in-depth interviews also gives room for the clarification of responses and further probing of complicated topics, which is beneficial for investigating topics that are not well understood or are sensitive in nature such as strategic decisions made by PSIL to navigate their political environment (Kvale & Brinkmann, 2009).

The Interviews were conducted with key stakeholders to collect primary data using both deductive and inductive questions. The study contacted founders and head of operations of the PSI Lab as the researcher was guided by the Innovation Labs. These roles were selected as managers have a wholistic view on the information on all the operations and ambitions of the PSIL. They also have the managerial power to direct the strategies of the lab. They possessed overall and privileged knowledge on the formation, government guidance, relationships with decision makers, and the challenges of their respective PSIL in their innovation journey. The interviewees were PSI lab managers and founders from: Belgium, France, Estonia, Sweden, Latvia, Lithuania, Portugal, Austria, and Spain.

The interviews were conducted online via Microsoft Teams and google meet, only one interview for Belgium was carried out in person due to close physical proximity. Each interview lasted about 40 minutes to 1 hour, spread out based on availability of the interviewees over the course of six weeks. All interviews were audio recorded for transcription on both Microsoft teams and an iPhone.

The Semi-structured interviews aimed to explore further the value propositions found in the document analysis for a more in depth understanding and explanations through pre-determined topics. The interview data answered both the first and second sub questions. The research employed a consistent interview guide for all the

interviews and analyse the interview data to identify similarities and differences allowing for comparability findings (Weiss, 1994). The interviews also utilized openended questions to enable participants to provide more details on the reasoning behind their strategies within the PSIL further expounding on their value propositions. The emphasis was to provide further insights into areas that were not well articulated during the document analysis stage. Bryman, (2021) asserts that interviews are an essential technique for qualitative research, because it offers in-depth insights into participants' perspectives and experiences.

4.2.2.1 Interview Guide Development and Operationalization

To conduct in-depth interview a semi-structured interview guide was used to ensure all the selected topics to answer the research questions are uniformly covered in the study. The Semi-structured interviews included a set of open-ended questions, grouped in predetermined topics operationalized from Public Value Theory to answer the first and second research questions on value propositions and strategies utilised by PSIL to ensure their survival in the public sector. The interview guide allowed for flexibility in both the questions and responses, enabling participants to share detailed insights based on their lived experiences.

Public Value Theory operationalization

The strategic triangle by Moore, (1995) was operationalised in the topics utilised for the interviews in the following ways.

Public Value creation represented the Value that the lab creates for society and its key stakeholders in the form of services provided to the PSO it is domiciled within as well as other PSO in their public sector.

Legitimacy and Support was represented in the nature of the relationships with its political, administrative as well as other stakeholders and citizens, from whom they gather support for their Innovation initiatives and existence.

Operational Capacity was identified as the resources that the PSILs need to deliver its Innovation initiatives towards their mission in the public sector.

These domains of the strategic triangle provided a robust framework to guide the interview themes that answered the research questions as the PVT provides an avenue to understanding the complex environment a PSIL operates within and the strategies to

develop the operational capacity to deliver PV, gain legitimacy and thereby ensure their sustainability.

4.2.2.1.1 Formation and Establishment of Innovation Labs (Operational Capacity)

This section pertains to Moore's Strategic Triangle's Operational Capacity component, which describes a public organization's capacity to provide value through the development of its internal structures, processes, resources, and capabilities.

Understanding the PSI lab's beginnings and early stages of development, including its core mission, internal preparedness, and early institutional hurdles, is the aim. This was necessary to understand the initial goals and expectations to assess how capacity was built and mobilized to foster innovation in each country case. These insights are gathered in this study through the following questions:

What was the motivation behind the formation of your lab?; What were the initial expectations for the lab?; and Did the lab face any challenges during its inception/creation? How were these challenges addressed?

These questions ensure that the study addresses both intentional and adaptive strategies that were used during the PSI lab's formation. This is useful in determining whether the strategies remain the same or change over time and how the motivation for formation influences those strategies which is crucial contextual information for the study.

4.2.2.1.2 Defining and Communicating the Value Proposition (Public Value)

This topic covers how the PSIL defines and communicates their value propositions to its stakeholders. The topic aligns with the Public Value component of Moore's framework; this topic explores the nature of the lab's value contribution to society. Public Value in this context refers to the initiatives, real world projects and outcomes that PSI labs aim to generate. This can be by solving specific public problems, meeting stakeholder needs, or improving services and trust in government. This section captures the PSIL's value proposition and its communication and alignment to stakeholders needs. The questions include:

What specific needs does your lab address in the public sector, and how?; Who are the main beneficiaries or stakeholders you serve, and how do you engage with them?; Can you share an example of a successful project? What contributed to its success?; How do you measure the impact or success of your initiatives?; and What do you consider to be the most important factors for

making a lab's value proposition appealing to government and other stakeholders?

Together, these questions help the researcher to identify how innovation is positioned as valuable and legitimate in the country specific public sector.

4.2.2.1.3 Relationship with Decision Makers (Legitimacy and Support)

This topic relates to Moore's PVT dimension of the strategic triangle: Legitimacy and support. The section focuses on the relationships that the PSIL have with decision makers such as their PSO leadership, legislators and other political actors, who provide them with the authorizing environment to operate. It aims to documents the specific strategies they use to gain and maintain political support and credibility. This captures both formal relationships and informal techniques they use to navigate this environment. The corresponding questions are:

How would you describe the lab's relationship with key decision-makers (e.g., ministers, policymakers)?; What opportunities exist for further strengthening the relationship between your lab and decision-makers?; What are the strategies your lab uses to engage with decision-makers and ensure their support and scaling of innovations?; and What role does the government play in promoting the lab's operations and development?

These questions aid to reveal how PSIL navigate the power dynamics and secure ongoing support for innovation.

4.2.2.1.4 Funding and Strategic Direction (Operational Capacity)

This section draws from concepts in the Operational Capacity dimension of PVT. It examines the financial and structural aspects of fostering PSI. This includes details on the budgeting processes, alternative sources of funding, overall governance structures, and long-term financial sustainability strategies. Public sector innovation is often constrained or enabled by resource availability; hence, this section explores how labs sustain themselves even in cases where those constraints are present. The questions include:

How are decisions on budget allocations, domicile location/organisation, or oversight of the lab made?; Could you give us some details about your budget and how you ensure sustained funding from the government? and If there are any, can you give examples of alternative strategies you employ to secure ongoing funding/resources?

This section also potentially gives room for comparative learning on how different country PSILs innovate, not just in methodology, but also in how they navigate finances and institution. (See Table 1 below)

Table 1.Operationalization of Public value theory in interview questions

Research Topic	PVT Element	Elements it captures
Formation and Establishment of Innovation Labs	Operational Capacity (OC)	Captures the foundational capacity, origin story, and early institutional challenges. Example: What was the motivation behind the formation of your lab?
Defining and Communicating the Value Proposition	Public Value (PV)	Explores the lab's mission, relevance, and outputs in relation to societal/public needs. Example: What specific needs does your lab address in the public sector, and how?
Relationship with Decision Makers	Legitimacy and Support (L&S)	Focuses on political support, influence channels, and the legitimacy of the lab's operations. How would you describe the lab's relationship with key decision-makers (e.g., ministers, policymakers)?
Funding and Strategic Direction	Operational Capacity (OC)	Examines resource allocation, financial sustainability, and institutional alignment. Example: How are decisions on budget allocations, domicile location/organisation, or oversight of the lab made?

4.3 Sampling Strategy

The study employed purposive sampling, or criterion sampling, to examine PSILs within the European Union (EU). This entailed the selection of cases that satisfy a criteria pertinent to the research subject (Stenbacka, 2001). In this study the researcher selected labs in the EU that created spaces for experimentation to foster innovation and design methodologies in their innovation initiatives in the public sector. (Da Silva Junior et al., 2024; Tõnurist et al., 2017)

The selected labs had a national reach in their operations to ensure that they were representative of the entire country it was selected from. As not all countries had a designated national innovation lab this was decided on the following criteria: Either it was a PSIL that was: Situated in the Federal level of government like NIDO the Belgian Innovation lab at FPS BOSA or that it worked with all levels of government across the

country; from federal and regional to local governments such as Experio Lab in Sweden and La 27e Regione in France.

The geographical scope of this study centred on public sector innovation labs within the European Union (EU). These are Labs that were initiated from within Public Sector organizations in an EU country to foster Innovation in a public sector domain. This geographical area was selected due to its diverse approaches to public sector innovation and the presence of established national innovation labs embedded within government organisations. This research intends to contribute to the limited literature landscape in the EU.

The PSILS that meet the following criteria will be included in the study: operate within the EU, identified as active during the research period, and established by or embedded within the government for innovation in the public sector. To Identify these labs a document analysis of publicly available official government websites, and publications was conducted to determine their alignment with the inclusion criteria.

The EU has 28 countries: Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden. Out of the 28 countries only 11 countries had a PSI lab that met the criteria in the scope of the research. However out of the 12 only 9 countries availed themselves for a 45 minutes to 1 hour interview with the researcher over the course of eight weeks. These interviewees were PSI lab managers and founders from: Belgium, France, Estonia, Sweden, Lithuania, Portugal, Austria, and Spain and a programme manager from Latvia. As a non-probability sampling technique was used, it enabled the researcher to intentionally choose individuals in the PSIL who were most likely to provide rich and important information such as the founders and present managers (Patton, 2002).

Purposive sampling is a suitable method for this qualitative research as it permitted the deliberate selection of information rich cases that were directly relevant to the research objective of the study (Palinkas et al., 2015). This selection citeria ensured that the findings were applicable to the selected geographical area and research objective. According to Creswell and Poth (2016) this method is suitable where qualitative research aims at indepth analysis rather than generalizable output as is the

case in the exploration of Innovation Labs value propositions and strategies in this study.

4.4 Data analysis

The data analysis process utilized a qualitative, thematic analysis approach as informed by Braun and Clarke's (2006) six-step framework for thematic analysis to analyse the data gathered from ten interviews of PSIL managers of nine EU countries. The approach was selected for to its suitability in identifying patterns and meanings within rich, textual data generated from in-depth interviews on the profiles, propositions and strategies of Public Sector Innovation Labs in this study. Braun and Clarke (2019) assert that thematic analysis enables researchers to discern reoccurring themes. The NVivo 15 software was used to facilitate the organization and coding of the data for this study. This analysis involved several iterative steps, familiarization with the data, code generation, theme generation, theme review, theme naming and reporting.

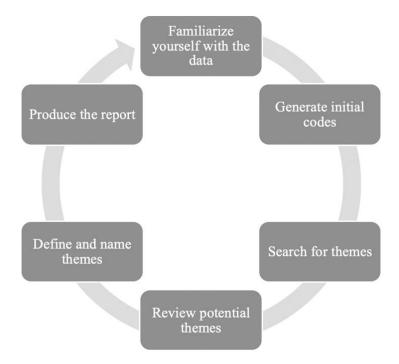


Figure 3.

The continuous cycle of thematic analysis (adapted from Braun & Clarke, 2006, 2012,2019)

4.4.1 Preparation and familiarization

The data analysis process began with the transcription of all verbatim interviews transcribed to ensure that accuracy of the data was maintained. The researchers then proceeded with ordering and storing the data electronically in a computer with a clear indexing and filing system for easy retrieval during the analysis process (Miles & Huberman, 1994, p. 45). Following immersion into the data; transcripts were reviewed multiple times alongside the audio recordings to check for accuracy familiarize the researcher with the content, identify preliminary patterns, and note emerging strategies and value propositions related to public sector innovation labs. The transcripts were then imported into NVivo15.

4.4.2 Generation of codes

The first round of coding was conducted inductively to generate initial codes; this step allowed for the codes to emerge from the data without reference to pre-existing theories. NVivo was used to assign the initial codes to the two overarching themes value propositions and strategies as indicated in the research questions. NVivo referenced the segments of the text in the interview transcripts to a code under the overarching theme. The codes were developed iteratively and refined by the researcher to identify patterns and relationships in the codes.

4.4.3 Theme development

Following the coding process, similar codes were grouped into clusters and examined for overlap and frequency across the different cases using NVivo15. The clusters of codes under each overarching theme were iteratively reviewed and organized into broader themes based on their relationship to a recurring theme across cases as well as insights related to the research questions, particularly the types of value propositions used by public sector innovation labs (PSILs), and the strategies employed for sustainability. The themes were gradually refined by referring to terms prevalent in previous literature and through the review of codes under each theme. This process ensured that the themes were coherent and distinct from each other to prevent overlap and redundancy.

This process led to the discovery of four main value propositions from the data. This included experimentation, collaboration and cocreation, creating context for emergence, knowledge management, and public sector support and efficiency. The final themes for strategies included alternative resources and funding, build strong networks,

innovation, design and delivery, internal culture, positioning of the lab, public image and reputation and strategic alignment. (See table 2 below)

 Table 2

 Thematic analysis summarised code book

Overarching Theme	Sub-theme	Key Codes	Sources	References
Strategies	Alternative resources & funding	Engage pro-bono services; Seek out alternative funding; Utilise talent-exchange programmes	6	15
	Build strong networks	Identify innovation promoters; Partner to re- organize funding; Seek international partnerships	11	37
	Innovation design & delivery	Develop experimentation framework; Measure impact; Secure partner commitment	10	50
	Internal culture	Focus on your expertise; Motivate PSIL team	6	11
	Positioning of the Lab	Collaborate with decision-makers; Constitute advisory board	9	23
	Public image & reputation	Showcase first successes; International recognition and awards	10	33
	Strategic alignment	Align challenges with geopolitics; Position lab in influential places	9	24
Value Propositions	Collaboration & co-creation	Collaboration and co- creation	10	20
	Creating context for emergence	Creating context for emergence of innovation	5	14
	Experimentation	Experimentation with emerging technologies; Host innovation awards	10	18
	Knowledge management	Training & community events; Create innovation awareness	10	28
	Public Sector support & efficiency	Process simplification; Consultation for individuals	6	12

Note. Table shows the overarching themes and sub themes developed and the key source codes. Full Nvivo codebook available in appendix D.

4.4.4 Triangulation and Interpretation

To enhance the accuracy and depth of the lab profiles, the information from interviews were triangulated with the documented official information from the webpages and reports. Triangulation entails employing various data gathering techniques to investigate the same phenomenon (Polit & Beck, 2012). This process allowed the researcher to fill the information gaps in the interviews that were noted at the transcription stage leading to more reliable PSILs profiles and value propositions and strategies for sustainability.

Kaplowitz & Hoehn (2001) noted neither strategy in a triangulation is superior; and instead, that the different approaches were complementary to each other. This approach was necessary because the information for profiling PSILs are specific facts that a human interviewee may forget requiring complementary verification from official documents.

Finally, All the themes were interpreted in reference to the Public Value theory theoretical framework and research questions. Attention was paid to the contextual differences between the different country cases involved.

4.5 Ethical Considerations

The empirical data collection process was carried out in accordance with the KU Leuven ethical regulations. and the. Prior to participation in the research, each interview participant was well informed through email on the reason for the interview which included the background of the research, the research objectives as well as the time it would take to conduct the interviews. They were then, sent the formal consent form for the Master thesis based on the template provided by the Faculty of Social Sciences within which the PIONEER programme is domiciled at KU Leuven in Belgium. The consent form was distributed in PDF form pre-signed by the researcher via the university's student email and were duly signed by all the participants of the interviews.

The consent form notified the participant of all the inconveniences from voluntary participation in the study including that each interview would be audio recorded, to which the granted explicit consent. In addition, verbal consent was also obtained at the beginning of each interview to ensure the terms were understood to reinforce the voluntary participation.

The data collected from the study was treated with utmost confidentiality and used solely for academic research purposes. The handling and storage of data was conducted in full compliance with the General Data Protection Regulations (GDPR),

ensuring participants' privacy, anonymity, and data security throughout the research process.

4.6 Limitations

While this study was designed to ensure methodological accuracy and relevance, several limitations should be acknowledged. This research employed a qualitative, case-based design with purposive sampling, which prioritizes depth over breadth. As such, the findings are EU context-specific and may not be generalizable to PSILs in all contexts. However, the goal of this research was to develop rich, situated insights rather than universal claims, which aligns with the principles of qualitative inquiry (Patton, 2015).

Given the inductive nature of the thematic analysis, the identification and interpretation of themes are inevitably shaped by the researcher's perspectives on the narratives. Although reflexivity and transparency were maintained throughout the process, including the documentation of analytic decisions on Nvivo15, the possibility of bias remains (Nowell et al., 2017). The use of NVivo facilitated consistency in coding but cannot be said to eliminate interpretive subjectivity.

The number of interview participants was sufficient for saturation within the specific selected lab cases, but time constraints limited the possibility of conducting interview to offer additional perspectives such as those of founders, partner agencies, or decision makers. The alternative perspective would have offered stakeholder insights into the strategic operations and public value initiatives of PSILs.

5 Findings

5.1 PSI Lab Profiles

This section provides an overview of the nine national Public Sector Innovation Labs with ongoing operations that were investigated as part of this study. For each lab, its founding year, reasons for formation, partner institutions, its design-based methodology, and institutional positioning was recorded. These profiles laid the foundation for identifying their value propositions and strategies for sustainability

 Table 3

 Public Sector Innovation Labs in the EU

Lab Name	EU Country	Year Established	Host Institution	Reason for Formation
Accelerate Estonia	Estonia	2019	Estonian Ministry of Economic Affairs and Communications	Test ideas and systemic change
GovLab Austria	Austria	2017	Federal Ministry of Arts, Culture, Civil Service and Sport	Create room for experimentation
LabX - Center for Public Sector Innovation	Portugal	2016	Administrative Modernization Agency (AMA, I.P.)	Create citizen- centered public services
State Chancellery of Latvia Innovation Laboratory	Latvia	2019	State Chancellery of Latvia	Reduce administrative burden
La 27e Région	France	2008	Independent	Develop a new culture for public services/post- NPM critique
GovTech Lab Lithuania	Lithuania	2019	Innovation Agency Lithuania	Encourage startups to work with government on GovTech
Experio Lab	Sweden	2013	Värmland County	Foster participation
Nido	Belgium	2017	Federal Public Services Strategy and Support (BOSA)	Enable experimentation in the public sector
Public Innovation Lab (LIP)	Spain	2022	National Institute of Public Administration (INAP)	Support change processes

Note. This table provides an overview of various public sector innovation labs in the EU, including their establishment year, host institutions, and reasons for formation.

5.1.1 State Chancellery of Latvia Innovation Laboratory, Latvia

Background

The Innovation Lab in Latvia was formed in 2019 as a result of a government initiative known as GovlabLatvia initiative started in 2018 that was aimed at improving the innovation culture of public Administration. The initiative was devised as an avenue for which persistent problems were to be resolved by incorporating novel methodologies such as prototyping. Initially there were three labs within the initiative. One was to reduce administrative burden another was improving the perception of the public administration. The third lab was for strategic human resource management. In 2019, they were transformed into one Lab: Innovation Laboratory of the State Chancellery following a discovery that the siloed approach was not proving to be as effective as they had anticipated.

For the next three years, the lab operated with a single employee due to budgetary restrictions until 2023 when they secured European Union Recovery and resilience funding for a project on developing the innovation ecosystem that they were then able to hire four additional people in 2023 and began implementing innovation sprints and design thinking trainings for public sector organizations.

As of 2025, the lab team consists of five experts highly experienced in both the academic and private sector. The lab operates de facto as a unit within the state chancellery. The interviewee emphasised that they are not in a separate department. It now boasts of having trained more than 1,200 PSO staff which it claims to be at least 40% of the government institutions directly affiliated to the state chancellery which are ministries and organizations under ministries including municipalities and planning regions.

The lab currently works on two major projects that predominantly funds its operations with a "*small budget*" from the state budget. It is also surrounded by some political volatility following some political developments ongoing in the Latvian government.

Methodology

The Innovation lab utilizes the relational design approach in the delivery of its innovation sprints. This includes design thinking with a strategic focus on speculative and service design. They aim to create scalable innovative solutions ensuring that they focus on the real needs within the context of the challenge. It is through design thinking which relies on prototyping and iterative testing that they create solutions for the public

sector focusing on long term vision. They also employ the use of conceptual prototypes to stimulate discussions about the future.

The lab has a predetermined number of sprints that they have to carry out each year for the EU funded project. The projects start with an open call where all the stakeholders: Ministries, PSO Organizations within the ministries, municipalities and planning regions can submit the problems that they have. Following the submission, they are invited to do a presentation of this challenge to a commission that judge the challenges and allocates points. Based on the number of points the best challenges are chosen each year. Following the selection of a challenge the PSO has to do a presentation and sign documents showing their commitment. The lab then hires an outside facilitator who is a neutral party that helps with the facilitation process. They follow the design sprint process within which they reframe the problem for better comprehension, identify some potential solutions and prototype them and test them. Following the completion of the sprint the PSO continues working with the prototype on their own and the lab checks in on them, less and less over time.

Sample Project: State Revenue Service Innovation Sprint "Putting People First"

Facilitated by: State Chancellery Innovation Lab; Partner: State Revenue Service (VID), Latvia

Challenge

Despite having digital tools, many users still elected to use paper-based services, often due to confusion and unclear guidance. A key barrier was the overly formal and legalistic language used in VID's communications to taxpayers.

Approach

The lab facilitated a five-week design sprint with VID staff, complemented by user interviews and a co-creation session. Using design thinking, teams worked together utilizing real user experiences to identify problem areas and develop solutions.

Outcome

The main solution was a shift to plain, user-friendly language in taxpayer communication. Long, formal messages were replaced with clear, actionable wording like: "You have unpaid taxes. You can resolve it here. Thank you." The redesigned communications and interface guidance were tested with users, resulting in positive feedback and improved understanding.

Impact

The changes have since been implemented, leading to an increase in use of digital services and reduced administrative workload. An impact evaluation assessment confirmed that the solution was effective. The sprint also strengthened VID's commitment to involving users in future service development.

Funding/Budget

The Innovations lab budget comes from the overall state chancellor's budget. The decision is made by a committee once a year. The lab can only advocate for what they need, however they are not able to influence this decision as they are "a five-person team within an organization of 150 people." In the wake of budget restraints. The wide mandate of the state chancellery limits this budget also as it must support the cabinet of ministers and the prime minister while innovation is still a relatively new concept. The geo-political climate has also led to an increase in the defence budget with the extra funding coming from other public sector institution's budget. Advocating for the innovation lab has become much harder in the wake of "actual potential military dangers". The lab is therefore underfunded as they depend on decent project funding which is "clear cut" therefore available for specific use which does not cover the entire scope of the work the lab does. As the first Innovation Lab in the country, they need to do more than the administrative projects, it is therefore underfunded in those roles.

5.1.2 GovTech Lab, Lithuania

Background

GovTech Lab Lithuania was started in 2019 as part of a government Initiative "create Lithuania" in collaboration with the ministry of economy and Innovation and set up in The Agency of Science, Innovation and technology. The founders of GovTech lab worked within the initiative "Create Lithuania" which was an initiative aimed at encouraging Lithuanians who ventured abroad to go back and work within the public sector and advise on issues in areas such as digitalisation, e-governance, sustainable development and innovation. Following the global trends and "buzz" that was going on at the time in relation to Fintech, health tech and other tech related initiatives. The founders desired to develop an initiative that would encourage startups to work with governments and more actively participate in public procurements to incorporate these new technologies into government operations. The lab had a strong support from the Vice Minister of Economy and Innovation. As well as, from the "strongest institutions

of Lithuania" and the entire public sector. Since August 2022 the lab operates under the Innovation Agency Lithuania under the Ministry of Economy and Innovation.

At the beginning the source of funding for lab activities was a European Union Project which was temporary and unsustainable as it did not facilitate all the lab operations. The lab's main activity is the GovTech challenge series which provides funding to PSO institutions to experiment with emerging technologies through subsidies that could not be funded by the EU project. was able to showcase first cases of success and finally got funding from state budget three years later.

Methodology

The Innovation projects are actualised through the GovTech Challenge series; a structured five step programme that takes approximately nine months to execute. This programme is used to build GovTech solutions for problems faced by government Institutions, entrepreneur communities, academia or NGOs. The process starts with an open call for public sector institutions to submit their problems which the lab then evaluates and select the most challenging and important problems. The second stage is an open call for ideas, where the lab helps the public sector institution to define challenge more clearly and transform it technical specifications. In the third stage, the best idea and team is selected, and the lab facilitates the public procurement process.

The lab utilizes the public procurement to design a contest for suppliers to submit their ideas on how the problem can be resolved. Because the ideas are submitted anonymously to prevent bias toward big tech companies; a company may give different ideas on how the challenge can be solved. After the ideas are submitted, the public sector institution will select the best idea and then work with the supplier to cocreate and develop an innovation prototype. This process ends with a demonstration that can be showcased at the demo day event and/or publications to other public sector institutions.



Figure 3

The GovTech Series five-step process. Reprinted from GovTech Lab website

Sample Project

Project title: Estimating bison damage using advanced AI-based algorithms and satellite image information

Partner: Municipality (in cooperation with National Paying Agency)

Challenge

The town needed to create a more precise and efficient method for evaluating crop damage brought on by wild animals, especially bison. Historically, the evaluation of damages by the municipal via on-site inspections, which the city found were highly subjective and resource intensive.

Approach

The Kėdainiai district used AI algorithms in conjunction with higher-quality satellite data (from the Copernicus Sentinel satellites) to detect damage patterns on crop fields, learning from previous attempts that used low-resolution satellite photos with unsatisfactory results. Differentiating bison damage from other factors, such as storms or droughts, was the main goal.

Outcome and Impact

During crucial stages of the growing season in the county, the AI-enabled technology effectively recognised damage regions and produced crop maps. It decreased the amount of manual labour, increased accuracy, and set the stage for the expansion of digital damage assessment techniques to other areas.

Funding/Budget

Annually, the lab goes into negotiation for their activities for the next year. The process is filled with uncertainty as they do not know until the end of the year if they will get financing. Funding remains a prevalent concern despite the GovLab being well known as a strategic tool for government efficiency. The lab currently has 9 members of staff, five who are funded by the state budget and 4 who are employed under the European Union Recovery and resilience fund.

Each year, typically in March, the innovation lab submits a proposal outlining the planned activities for the following year along with the estimated budget required. This proposal is included as part of a broader package of innovation-related initiatives submitted by the agency to the Ministry of Economy and Innovation.

In early autumn, budget negotiations begin between the Ministry of Economy and Innovation, and the Ministry of Finance. During this phase, the lab may be asked to provide additional justifications or ideas to support its proposals.

The lab's budget is not negotiated separately; it is part of the ministry's overall innovation funding request. The final allocation depends on how much the innovation portfolio receives as a whole. Toward the end of the year, the lab finds out whether its activities will be funded through the state budget, and at what level.

5.1.3 Public Innovation Lab (LIP), Spain

The public Innovation lab in Spain, known in Spanish as 'Laboratorio de Innovación Pública' operates under the National Institute of Public Administration (INAP) an organization under the Ministry of Digital Transformation and Public service based in Madrid. It was founded in 2022 through the imitative of a manager at INAP. The main objective was to provide a permanent space and meeting point that supports change processes in public administrations through discussion, analysis, experimentation and collaboration for better public policies and services. It also helps to increase the value of skills, technology, and experiencal knowledge that go into change processes. The lab hosts, different projects from other public sector institutions for the purpose of experimentation and collaboration.

Methodology

LIP projects are initiated and developed jointly with public sector partners, often tailored to the specific context and needs of the client PSO as there is no defined process for initiating projects. The lab predominantly uses design thinking as its core methodology. This includes stages like problem definition, ideation, co-creation, prototyping, and testing. The projects typically involve facilitated cocreation workshops, both in-person and virtual. Where necessary, the lab may bring in external legal and technical experts to address specific aspects such as regulatory frameworks or system design. The approach is therefore collaborative and interdisciplinary, often involving multiple institutions and stakeholders in co-design processes.

Since the process for securing challenges is open and flexible, in most instances public sector institutions and municipalities identify their challenges and contact the lab directly to partner in the solution of the problem. This has included municipalities and international organizations such as the OECD. They keep the channels open on their website inviting public sector institutions to reach out with challenges. Where the lab

finds potential for innovation to address a public issue; they may also proactively propose collaborations.

Funding/Budget

The funding of the lab comes from the budgetary allocation of the parent organization INAP. The lab does not play a part in the allocation and that is the only source of funding for the lab. The lab on occasion participates in European Union funded projects as partners but do not have any financial affiliation with the projects.

Project sample

Inter-Municipal Collaboration to Share Public Talent

Led by: LIP (Public Innovation Lab); Partners: Spanish Federation of Municipalities and Provinces (FEMP), Municipalities of Castro-Urdiales and Noja

Challenge

The Small municipalities in Spain often struggle to attract and retain specialized public sector talent; especially in competitive sectors such as technology and emerging fields due to their limited resources and capacity.

Objective

The project aimed to design and legally test organizationally viable processes that could enable municipalities to collaboratively share the staff in these sectors, as a result they would be helping each other meet talent needs more efficiently and effectively.

Approach

LIP facilitated a co-design process with two municipalities to prototype mechanisms for inter-municipal staff sharing. This co-creation project involved exploring the legal frameworks in place, ensuring operational coordination, and offering practical solutions for pooling public talent across local governments.

Outcome & Impact

The project produced a tested model for public talent-sharing that allows municipalities to better respond to skill shortages without expanding their permanent staff. It offered a scalable framework for collaboration that other local governments in Spain can adopt to build more resilient, flexible public administrations.

5.1.4 GovLab Austria

GovLab Austria was formed in 2017 as a result of a collaboration between the Federal Ministry of Arts, Culture, Civil Service and Sport and its scientific counterpart; the University of Continuing Education Krems, The lab was formed as a result of the international experiences that Innovation labs were emerging and imminent and the pressure from other countries expressing the desire to collaborate while questioning the absence of an Innovation Lab in the country. This external pressure was an indicator that building a lab was the right direction to go. The aim of the lab was to create room for experimentation in the public sector to mitigate the risks that come with deployment of new ideas and technologies without testing to assess the possible implications.

Methodology

The lab utilizes innovative approaches such as co-creation and agile management approach to develop solutions and secure projects. The lab is driven by top-down as well as network-based collaborations within the Austrian public sector. A majority of the projects are pressing policy needs are identified by the leadership of other ministries and PSOs or decision makers. The lab continuously engages in ongoing dialogue with high level decision makers such as section leads in the Austrian administration to understand topics of strategic importance. The insights are then used to prioritize projects with strong political support and systemic impact.

Govlab Austria also collaborates with the university who sometimes initiate projects such as Horizon funded projects they work on. The lab contributes the public sector perspective and contacts while the university provides scientific expertise. The lab bridges the gap between research and governance.

The lab has also created its own network for which it hosts annual events. During these events, the different stakeholders identify areas of shared needs for collaborations. They act as avenues for additional project generation. Some initiatives come from within the organization. While GovLab maintains a website that offers contacts for project suggestions most of its challenges come from its networks, decision makers and its host institution.

Funding

Govlab Austria funding is made up of two allocations. First, the Danube University Krems which has a budget for the Govlab each year and the ministry. Annually the Ministry declares a budget for its projects and Govlab being one of those projects falls under their purview. The lab sends out a proposal for projects they want to

work on each year and the budget they require for this, following which, the ministry then decides their actual allocation. The allocation is very limited and has gradually decreased over the years because the focus of the ministry has shifted in the last three years from GovLab Austria. The shift can also be dated to the step down of the previous lab head following the attempt to develop the GovLab as an autonomous organization that was unexpectedly shut down by leadership in 2021. The scarcity of resources is more heavily represented in the lack of staff that work in the Lab.

Project sample

Title: Future of Work - Reallabor

Led by: GovLab Austria; Partner: Austrian federal administration

Challenge

The landscape of work is constantly changing, there are new expectations around flexibility, autonomy, meaning, collaboration, and the use of digital tools. To stay relevant, the Austrian federal administration launched the "Future of Work Reallabor" in 2022 to explore how work should be redesigned to better meet the needs of employees and the state.

Objective

The aim of this experiment was to make federal ministries more modern, attractive, and efficient employers by rethinking work structures, the use of technology, and workplace culture. They sought to: understand social and technological trends on work, design user-focused ways to collaborate and organize tasks, explore employee expectations especially the younger demographic, test agile methods, modern tools and key perfromance indicators, improve health, inclusion and job satisfaction in the workplace.

Approach

The project set up an experimental, time constrained like a real life lab called "Future of Work meets Section III" to test ideas for improving the public sector work environment. The process for finding answers to complex questions was comprehensive and iterative carried out in collaboration with employees, managers and external stakeholders. The lab ran numerous workshops, interviews and studies with over 100 public servants alongside. experts and ran tests on changes in topics such as governance infrastructure, culture and health and wellbeing in the workplace.

Outcome

The lab sparked real change in ministries such as new methods of collaboration, updated performance indicators and an improvement in the work- life balance. The project remains open for further piloting tests based on new insights from the stakeholders and experts. The project demonstrated that cocreating with employees is important when rethinking the future of work.

5.1.5 La 27e Région, France

Background

La 27e Region is a non-profit association Innovation lab in France with eight full time salaried employees whose aim is to help PSO to shift from Silos towards a more systemic experimental approach. And the way we do that is that we have a range of activities. That partners with public administrations, local and regional governments and private stakeholders. It is cofounded by its members and a national sponsor Interministerial directorate of public transformation (DITP).

The innovation lab was launched in 2008 in France as a regional initiative by a regional elected official, a consultant and a philosopher as a critique of New Public Management (NPM) with the aim of exploring what a new culture in public service would look like if it was more user focused. Their aspirations included embracing experimental and systemic approaches, integrating human sciences into public administrations and connecting public services with user needs. Despite the foundational motivation, the formation of the lab by regional leaders initially envisioned it to be a response to the early wave of digital transformation characterised by digital tools and social networks. They therefore wanted to create the lab as a digital initiative, but it later transformed more towards a social focus.

The Association of Regions of France (ARF) provided the lab with its initial institutional and political legitimacy in 2008. This group envisioned the lab as a sort of "27th region"; a place to experiment on behalf of the other regions in France, which at the time had 26 regions. The lab was initially supported by ARF, the Caisse des Dépôts an investment group, European funding from "Europ'Act" and its initial member regions: Aquitaine, Burgundy, Brittany, Centre, Champagne-Ardenne, Nord-Pas de Calais, Pays de la Loire, Provence-Alpes-Côte d'Azur, Rhône-Alpes.

To avoid the premature institutionalizing of the lab, the association decided to place the lab within a non-governmental digital foundation named FING for three years. This provided a flexible and low-risk environment for trial and experimentation. With

financial and institutional backing from: The foundation itself, the French government and a public bank, the lab was given a three-year period to prove its value as a proof of concept. The lab was formed in itself as an experiment; the expectation was that it would either end if it failed or be spun off into a stand-alone organisation if it was successful.

Following its incubation period, the lab became an independent nonprofit association in January 2012. The Lab gradually expanded the scope of its collaborations. Initially, it primarily collaborated with regional governments. As time went on county governments and cities such as Paris, Strasbourg, and Bordeaux, and even national-level departments and ministries like the Ministry of Ecological Transition including individuals and Para public organizations expressed interest and joined the association. The lab devised a membership concept that allowed people from different governmental levels to join and work together. However, smaller and more rural communities frequently lack the resources necessary to take an active role.

Methodology

La 27e Région applies design principles to examine and solve societal problems. This methodology of policy design is user oriented to allow for a better understanding of challenges from the perspective of the end beneficiary. The end user is involved in the entire process especially with the testing and simulations of the proposed solutions. The main objective of the lab in the use of design is to organize policymaking differently to bring more value to public processes.

To identify challenges to initiate projects, the lab starts from individual connections with its members. They have individual conversations with members. Once a topic is prevalent in three to four members then it serves as an Indicator that there is need for further exploration of that topic. Sometimes there are prevalent topics such as new elections and many members begin to speak on how to better prepare for the elections as innovators. The needs come through inductively from the conversations the members are having amongst each other and with the lab. Following the identification of a challenge; The lab will then organise a webinar to open up the topic for collective discussions with members and gather ideas, good practices and resources and build scenarios for the future mandate. Should this not be enough and the members feel they require more support. Then, the lab, will create another webinar and invite experts for discussion, should there be need to go further from members; they build a new programme around the topic which can run for two or more years.

Funding

La 27e Region is partly funded by its national sponsor Interministerial directorate of public transformation (DITP) with whom they have annual agreements with on topics they will work on and by the subscriptions of the thirty-five local government members and from European and other international programmes. The rest of the funding comes from programmes that they work on which partially pays the salaries, structural costs, and for some external support when needed. The programme funding comes from the investment that a member puts into a project. To participate in projects and be part of the programme they have to also invest in the project. The lab currently has a budget of about 700.000 euros a year. The members pay an annual subscription fee of five hundred euros. They lab tries to explore new avenues of funding continuously.

Project sample

Title: "La Transfo"-Testing and co-creating an innovation lab within a public administration

Led by: La 27e Region: Partners: City of Paris, City of Mulhouse and Mulhouse-Alsace-Agglomeration, Urban Community of Dunkirk, Région Occitanie, European Metropolis of Lille, Metropolis of Metz and Eurometropolis of Strasbourg.

Challenge

In response to an increase in the demand from Public administrations with the desire to internalize further design principles into their operations following particiption in co-design initiatives, La 27e Region started an experimental, cross administration program called "La Transfo" which translates to "The transformation" to support Public administrations in France to create their own in-house innovation labs.

Objective

The intiative intended to simulate first; what the lab functions would be like within the PSO before formally instituting it. This enabled the participating institution to test and streamline lab operations in a low risk environment before launch.

Approach

The lab deployed multidisciplinary "resident" teams that comprised of the deployment of designers, sociologists and urban planners into a public institution and an internal team of twenty civil servants for sixteen to eighteen months. The purpose was

for the deployed team to work collaboratively with volunteered "ambassador" civil servants from the institution to co-design solutions to real complex challenges. They employ casework and live prototyping to run three to four real life projects using design led approaches in the first year followed by the exploration of structural challenges such as governance, staffing and funding that could impact the sustainability of the potential innovation lab.

Outcome

Half of the pilot labs established by La Transfo are currently in operation. The City of Metz, for instance, effectively formed a team that is still functioning and expanding, despite difficulties in addressing systemic innovation that goes beyond gradual transformation. Some of the pilots, such as the city of Paris, started a lab following the program but phased it out after a few years, citing the continuous conflict between long-term innovation capability and shorter political cycles.

The initiative has had a major impact on French public innovation, changing the country's approach from a top-down modernisation model to more user-centred, participatory approaches that prioritise systemic transformation and prototyping.

La Transfo also developed an open-source, replicable model for enhancing a government institution's ability to innovate known as "La Transfo Source Code". Similar initiatives in France and abroad have been sparked by this framework and documentation, which are made accessible for free by La 27e Region. Additionally, the initiative helped redefine the role of civil servants as co-creators of public value rather than merely policy implementers.

5.1.6 NIDO, Belgium

Background

Nido was founded in 2017 as "Fedlab" following the "frustration" by the head of the Cabinet who had noted that there were so many innovative solutions available on the market, yet it was seemingly impossible to test them for use in the public sector context. The formation was therefore a result of the government initiative of a Minister who was the head of cabinet and the Interim department head of DG Recruitment and Development in Federal Public services (FPS) Strategy and Support (BOSA) where it is domiciled to date. During inception, the lab had only three employees. It created a partnership with two university institutions: The Ministry of Defence's: Royal Military

Academy, and Vlerick Business School. This coalition tasked two PHD students with research on Innovative procurement and how to work efficiently in the public sector. This study resulted in a tailored innovation approach for the public sector. "Fedlab" was renamed to NIDO an abbreviation for nurturing ideas, developing opportunities. However just before delivering this mandate, the government changed and this was made impossible.

In 2018, the lab went from having three fulltime employees to only one. Despite this, they managed to launch "The challenge driven approach" a methodology that focused on accurately defining the problem and leaving the solution ideation open to the market to stimulate innovation. To set the continuously development of "the challenge driven approach" in motion, NIDO launched the online platform "Gov buys Innovation" in 2019. The also created an Innovation Network with FPS Home Affairs to share experiences on innovative initiative with other PSOs with the aim of creating inspiring the public sector to innovate. In 2020, Having secured one more employee, NIDO went ahead to test the approach themselves and launched its first challenges in collaboration with companies and PSOs such as the Data Protection Authority (DPA). It was at this point that it took up its first international role as the Belgian contact point for OPSI at the OECD.

Currently Nido has four fulltime employees working in the Lab. It brings together governments, companies, academics and citizens to co-create solutions to complex societal challenges

Methodology

Like most innovation labs, Nido utilises a design-based approach. Nido employs the four-step challenge driven approach to explore new solutions for challenges in the public sector. It starts in stage one by clearly defining the challenge. Here they analyse the problem using data and determine what the bottleneck is and for whom it is a challenge. This step ensures that they properly define the problem and identify the right stakeholders to involve in the process. In the second stage the lab validates the problem with their network of innovation managers and experts in the field. In this stage, they find potential solutions and sets up a jury to assess the viability of these solutions. They then post the challenge on the Gov buys Innovation platform and create an open call for solutions from the market. Collaboratively with the client, the lab assess' the submissions on their potential impact, feasibility and innovative capacity. In the last phase four, the experimentation occurs. The selected solution is tested and results collected and evaluated to gather insights for possible implementation. The entire process takes approximately six to seven months to complete.

Funding

NIDO's funding decisions are made by its sole sponsoring organization FPS BOSA. More specifically the managing department DG Recruitment and Development where it is domiciled. NIDO sends a budget for the following year requesting for a certain amount funding and the department decides how much to allocate the lab. The decision is final and not subject to negotiation. For instance, in the last year the lab requested 750.000 euros and additional staff for which they received 250.000 euros. It has provided the lab with three Fulltime employees (FTE) and 250.000 euros annually. The Lab is also explored European funding options but notes with concern that even with extra funding they would not be able to deliver on projects due to a lack of staff. Nido is currently exploring alternative models where they can secure commitment from other PSO through long-term partnerships where they can provide employees for secondment.

Sample Project

Title: RVA Career Break Challenge

Led by: NIDO; Partner: The Belgian National Employment Office (RVA)

Challenge

The application process for career breaks in Belgium, such as parental leave, was extremely complicated and burdened RVA employees, employers, and citizens alike. The application was characterised by long processes, unclear options, and legal jargon. This made it difficult for applicants to understand, which frequently resulted to applications that were either incorrect or incomplete. The need for simplification highlighted by the high-volume emails and phone calls it yielded: 40,000 calls and 28,000 emails per month.

Approach

Through a public sector innovation challenge supported by Nido and tied to the 2023 Federal Innovation Award, the RVA was able to explore the use of generative AI to improve the user experience of employees during applications. RVA partnered with a UX design company called Humix to prototype a solution. The process involved user research, stakeholder co-creation, legal validation, and iterative testing. This resulted in the creation of a fictional persona, "Sara," that was developed based on the pain points identified from the users.

Outcome

The project resulted in a simplified application flow for RVA characterised by simple language and reduced administrative friction. This was the result of the conversational assistant that reduced choice stress and made the application process simple. The feedback indicated an improvement in the confidence of users and more clarity in the processes.

5.1.7 Experio Lab, Sweden

Background

Experio Lab was launched in 2013 by the Minister of social affairs and the County Council Director of Värmland County Council. The formation of Experio lab was grounded in three components coming together. The first component was Academic. The founders of Experio lab had a long working relationship with the Center for Service Research (CTF) at Karlstad University. Fostered by a shared belief that value is created by people not organizations and that there was need to move from product logic to service logic. The second component was that service logic highly compatible with design, a background that the founders possessed. The third component came from the founders work on projects related to the healthcare system.

In Sweden healthcare is decentralised, albeit interconnected by national guideline, healthcare is run by the individual 21 regional governments. Through interactions with leaders in the healthcare space the need to improve participation of the citizens not only in healthcare delivery but also in Innovative initiatives towards better services and products in healthcare. The healthcare perspective also included the transformation of society to adopt better to unforeseen challenges such as mental health challenges. Participation of citizens in Scandinavia was a priority also because it is a manifestation of democracy which is a core mandate of regional governments. The founders viewed design as the tool that was missing in the government and therefore started Experio lab to bring design into the public sector.

In the first few years, the lab built on a diverse portfolio of projects to determine what worked best. The initial projects and networks built in the process led to an increased desire for collaboration and lab environments from other regional and national partners.

By 2015 Experio Lab was implementing national projects in other regions with funding from the Ministry of Health and welfare. It also garnered funding from Horizon 2020, an EU research program as a partner of Service design for Innovation (SDIN)

platform. In collaboration with five European Universities, it has facilitated 9 doctoral students to develop new insights into design and service Innovation. In 2017, the regional labs documented their intention and Experio Lab Sweden took up a coordination role for the different lab environments evolving into a competence centre. It therefore became a national Network of embedded lab environments in eight regions in Sweden who come together to share experiences.

In 2020, the lab was positioned to take the Initiatives of a national policy lab to collaborate with regions, municipalities and other stakeholders in design processes to explore policy, governance, culture and operations of health services. Experio Lab also collaborated with universities to develop "Health Lab" to explore and pilot in regions, user centric policy design.

In 2021, in partnership with Karlstad University's Centre for Service Research (CTF) they established "Samhällsnytta", a nationwide gathering space for innovative collaboration to address societal issues. In collaboration with CTF researchers, Experio Lab designers work with government offices, authorities, regions, and municipalities to solve difficult societal problems through service logic and system design. Experio Lab evolved into a public sector design competency centre.

Methodology

Experio lab uses design thinking principles to execute their projects. The method is predominantly based on an exploratory iterative approach to solve challenges from the user's perspective. It starts by understanding the needs of the user based on their real-life situation from which the problem will be properly described. Based on the information gathered on the user's situation, potential solutions are proposed and tested in collaboration with the user. This approach guarantees better experiences for the citizens and a transformation of public organizations through learning and continuous development from experimentation and exploration.

The lab however decided not to have their own design process as their collaborative process brings in designers from different fields of work with different design processes that they view as a strength. Predefining a design process as well as mode of sourcing projects would act as a constrictive measure rather than a positive influence on the process. The different regions have the autonomy to decide on their processes to foster participation as long as the shared value of design is embedded. "They're going to do that a little bit differently and that's the good thing, because. That's how we learn!"

Funding

Experio lab is funded by the local government funds and some project based national project funding. In the function as a competency Center, each region finances its own lab environment from local funding.

Project Sample

Title: From parts to whole: A reform for coordinated, needs-adapted and personcentered interventions for people with comorbidities

Challenge

People suffering from comorbidity and other psychiatric conditions are often forgotten in Sweden's decentralised healthcare and social service systems. They end up receiving inadequate support due to a misalignment in responsibilities between municipalities, regions and service providers. In recognition of this vulnerable group, the national government launched a comorbidity commission to investigate how to devise a new regulation to better serve this group from a user focused design approach.

Approach

Experio Lab was invited to bring the user centred design approach to the national level process to make the legislative process participatory and grounded in the experience of individuals living with this challenge.

The lab engaged in in-depth interviews and workshops with individuals and relatives of people with lived experiences of comorbidity across Sweden. They also organised for commissioners to visit with patients in their homes and communities. The insights from this exercise they created a structured understanding of the user's perspective of the problem.

They then carried out an analysis and reflection on the necessary changes in governance, management, policy, and culture based on the findings of in-depth interviews and workshops, including with employees and management functions in municipalities and regions. The insights were shared with the commission to inform the development of new legislative ideas on comorbidity.

The legislative ideas were brought back to the local contexts for piloting with three, municipalities and regions: Värmland, Örebro and Västernorrland. This was done in collaboration with the people impacted and affected by comorbidities, employees and managers. They explored what the laws would mean in practice, the competencies that

would be needed as well as unintended consequences that may emerge. This feedback was gathered and presented back to the commission.

Outcome & Impact

The initiative stood out as a transformation of how legislation was made by involving the impacted and affected people in the entire process. This made the policy making cycle more grounded in user reality, responsive to their needs and collaborative. Its success resulted in more inquiries leading to the collaborative development of the non-profit Samhällsnytta with Karlstads University to work on similar national challenges.

5.1.8 Accelerate Estonia

Background

Accelerate Estonia was founded in 2019 under the Ministry of Economic Affairs and Communications. The founder of the lab had a background in innovation policy developing the startup ecosystem in Estonia. It was through this that they noted that despite the "boom" of startups, few to no companies were committed to resolving the wicked challenges in the society despite the startup ecosystem in Estonia having been evaluated as one of the best startups ecosystems in the world. The founders noted that this asset was not being used to solve the right issues in society such as the digital divide, green transition and mental health challenges that were prevalent.

The Undersecretary for Economic development and innovation had also noted that entrepreneurs often came to him with brilliant ideas on things that could be done differently in the market, yet there were no avenues or resources in the ministry to explore the viability of those "crazy ideas". The dilemma of this two founders on how to figure out which ideas were worth investing in and changing the ecosystem to facilitate society led to a collaboration that started with research into the models being used overseas in Denmark and the United Kingdom and a shared understanding that it would not be resolved by Govtech as it was already possible in Estonia, but rather enabling a more systemic transformation to facilitate the market to solve societal problems. Accelerate Estonia explores which regulatory and legal barriers need to be removed at the system level not only for the "first mover" company bringing the innovative solutions to market to thrive, but also for others that are on the same mission to succeed.

Methodology

Accelerate Estonia searches for challenges from within the private sector globally, unlike most GovTech labs that procure innovation for challenges in the public sector. This one-of-a-kind approach enables the lab to develop policy recommendations that foster innovation for the Estonian government.

Accelerate Estonia has an ongoing open call on their website for companies with novel business models hindered by regulatory barriers to submit ideas that have potential to solve global societal challenges or frontier new markets to advance the Estonian economy. The applications are filtered based on three criteria: The presence of a clear need for regulatory change to deploy the solution, the company's product must be fully developed and ready for testing within a well-established B2B and B2C business with a committed team, and the solution must also have the potential to tackle a significant global challenge and be scalable; this is very important because as a government organization when the company comes from outside Estonia there should be opportunities how Estonia can benefit from the interaction. Accelerate Estonia has an advisory board which consists of private sector experts and public sector experts to provide companies with business advice and mentoring apart from the regulatory assistance.

Once the Application is accepted; the process has four stages that starts with validation that takes one to three months. Here they confirm the existence of a regulative barrier, assess' economic and scaling potential and conduct background research on the company and sector within which it operates. The second is the definition stage which takes three to six months. The legislative issue is well defined and legal solutions proposed, the development plan is defined and key stakeholders identified. This is followed by the proof stage where the legislation is drafted and the development plan implemented. This involves the piloting of the solution to analyse its impacts. The lab brings in interest groups around the solution area/sector together to explain them the change in the law and assess how it affects their current work to determine if it makes it better or worse. Based on these insights the negative aspects are taken out proceed to the law change. The last stage is aftercare the proposed law is submitted to the responsible ministry and the lab employs strategic communication to promote the implementation of the legislative change. The R&D value reporting and activation of the new market segment is concluded at this stage.

Funding

The budget of Accelerate Estonia comes from the Research and Development (R&D) budget of the Ministry of Economic Affairs. However, In the first year the budget came from the IT budget. Coincidentally, The Estonian society had decided that 1% of GDP needed to be invested into R&D projects and there was a political agreement that some part of that funding needed to be spent by ministries. And so, there was a lot of R&D funding available in the ministry. The Advisory board informally introduces their annual business proposition for the lab and explain how they would like to use the funds in collaboration with the Lab head. The under-secretary then deliberates with other under-secretaries in the decision board and determined the sum allocation to invest in the lab that year. The budget for the first and second year was about 90.000 euros; from the third year the funding model varied according to the projects.

Project Sample

Title: Enabling 24/7 automated pharmacies

Led by: Accelerate Estonia; Partner: Grab2Go

Challenge

The access to essential medication in Estonia, especially in rural areas is limited due to a shortage of pharmacists and restrictive pharmacy regulations. This has led to reduced pharmacy hours especially on weekends and an overuse of emergency services for basic medication needs. The current law in Estonia requires that a pharmacist to be physically present for medication sales. This law prevents the automated dissemination of medicine from being made possible 24/7 using available technology hindering the deployment of this innovation.

Approach

To the test automated medicine dispenser solution, Accelerate Estonia partnered with Grab2Go, a business that sells self-service pharmacy kiosks. These kiosks give users the ability to purchase drugs over the counter whenever the need arises, even during hours that walk in pharmacies are closed. Its technology facilitates virtual consultations with chemists to allow a pharmacist to assist patients.

Accelerate Estonia is coordinating the collaboration of public organisations, private companies, and industry stakeholders to co-create specific use cases, conduct an

impact analysis and propose and evaluate a new legal framework in accordance with the Medicines Act.

Outcome

The project intends to incorporate self-service pharmacies into Estonia's healthcare system and legalise its operations while upholding safe and competent standards of care. The approach is expected to reduce the strain on emergency medical services while maximising access to medicine in all areas of Estonia, especially rural areas.

5.1.9 LabX, Portugal

Background

LabX was formed in 2016 by the intiative of the Minister of presidency and administrative modernization who began many innovative ideas in portugal including the simplification programme that aimed at reducing bureaucratic red tape in the delivery of public services. She had expressed concern that public services were designed based on the needs of the PSO instead of focusing on the needs of the citizens. Gaining inspiration from prominent labs in Europe at the time, she envisioned the creation of a team that facillitated human focused publis service design under the cabinet of the minister. As this was close to election period, the minister foresaw that in the event of the political change, the Innovation lab may not survive. Before the first year ended she moved the lab the Portuguese Administrative Modernization Agency (AMA, I.P.) an environment less impacted by political volatility to ensure the sustainability of the lab. By 2017, the team was constituted and the lab operations began. For the first three years LabX was five people team experiment in itself facillitating experimentatio in the public sector on European funding.

Nine years later, the lab continues its operations as an intergrated unit in AMA as LabX-Centre for Innovation in the Public Sector with twelve permanent employees and an additional ten from EU Recovery and Resillience project funding. The mission of the lab is to contribute to the user focused innovation ecosystem in Public Administration and promote the renewal of public services.

Methodology

LabX methodology "design for innovation" is based on design thinking and service design methodologies. They have simplified this methodology into three simple steps: Investigate, cocreate and Experiment. The first step investigate involves researching to identify where the problem lies, the second stage involves cocreating with the relevant stakeholders to find solutions that can address the identified problem. The last stage is where experimentation takes place. The experimentation is carried out in collaboration with the real users of the service. This ensures that the solutions identified will solve the problem for the end users.

LabX does not have a specific call or process for securing projects. Their Internal projects come from AMA the organization they are domiciled in which is responsible for digital public services on the single point of contact platform they manage called gov.pt. AMA has citizen shops which provide in person public services. This AMA service flow may on occasion have challenges or require renewing and LabX works on resolving them. Some external public sector Organizations also reach out with their own challenges for assistance and some projects come directly from the government decision makers such as Ministers or secretary of state depending on the imminent political landscape such as elections. Lastly they create their own projects based on the lab team's areas of interest that they consider important for designing new public services and policies.

Funding

Each year, the lab's director develops the lab's activity plan to negotiate for funding for the upcoming year. The plan is submitted to AMA's Board of Directors for funding from the state budget, its primary source of funding. For projects related to creating capacity for innovation labs, they have always charged a fee when they create innovation teams and mentor for a year because it requires many hours and ensures commitment of the PSO towards the created Lab to run beyond the initiation period. It also charges for projects that require the investment of a lot of hours or the procurement of external experts. Based on this, LabX is testing a new self-funding model where the external projects from other entities are charged a fee for their execution of these projects and they Lab gets the money earned in a year allocated to them in the next year from the state budget.

In this model, when LabX works on a project, it predetermines the specific milestones of each project, each project has a fee which is charged to the PSO and is paid out at the end of each milestone. This self-funding model is sustainable because the

money is invested back into the government innovation ecosystem by funding the testing of other solutions creating a cycle in the public sector.

Sample Project

Title: RedeLabs Public Sector Innovation and Experimentation Network

Led by: LabX; Partners: Municiplaities and Other government Institutions

Challenge

Portuguese public sector organisations must respond to complicated societal issues more skilfully, yet they frequently lack the resources, know how, and ability to innovate. There is a need for more experimentation driven, user-centred problemsolving because traditional methods are slow to adapt.

Approach

LabX assists local, regional, and central public administration institutions to set up internal innovation and experimentation labs. These laboratories address real public service challenges by using prototyping and co-creation based on LabX's simplified design thinking process. LabX provides methodological and technical advice, five days of organised training and capacity-building, continuous mentoring for an experimental project lasting six to nine months, and a formalised partnership protocol between the organisation and LabX. The process begins in the preparation stage by defining the project's scope and roles. It then proceeds to capacity building where they execute two days of immersive training on methodology and three days of strategic coaching of the lab's team. The lab is the executed through co-design and prototyping the environment. This stage involves regular coaching and evaluation in the first year. At the end of the execution period the lab joins the network and gains access to continued support and shred learning and peer exchange with similar labs in the network.

Outcome and Impact

The RedeLabs program promotes innovation in public sector organisations by assisting them to develop their internal capacity to address wicked issues. A networked ecosystem of public innovation laboratories is supported by and encouraging the expansion of sustainable innovative practices in government.

5.2 Value Propositions

This section discusses the service offerings of the PSILs that emerged from the interviews as well as official documents analysed in relation to the study. The themes discussed below represents the activities that innovation labs take part in or initiate with the aim of fostering innovation in the public sector. Their activities represent the public value they provide or facilitate within the institutions they are domiciled within. This section answers the first research sub question on the value propositions of the Innovation Labs.

5.2.1 Experimentation

For all the nine labs that participated in the study, at the core of their value offerings to the public sector was the utilization of experimentation to innovate. They note that testing solutions was crucial as the introductions of new ways of doing things without considering the impact may go wrong very fast in the public sector.

Govlab Austria cite that there is need to give "room, space and time" for testing innovations before utilizing them to prevent monumental failings such as unprecedented ethical risks of using AI to make decisions on sensitive matters. They not only experiment with other stakeholders but also internally with themselves and their work culture. Accelerate Estonia uses experimentation to solve sensitive issues such as mental health challenges among the youth. The user focused testing phases have proven useful in detection of the most impactful solutions to wicked challenges.

Nido in Belgium cite that the public sector has a "big fear of doing the wrong things". To resolve this, they seek to experiment with unusual partners more often as the public sector in Belgium generally tends to work with the same companies over and over again. They believe that to have "fresh ideas" it is important to engage with new and sometimes smaller companies on experimentation projects. During their Federal Innovation Awards, they sometimes sponsor the testing of several solutions that they consider would have the most lessons learned or chances for scalability if they were successful.

In France, La 27e Région begins with a public problem and brings together different government institutions that would like to explore it albeit for different reasons. They work together on researching and testing various approaches towards a collective action. GovTech Lab Lithuania encourages the public sector to be more

receptive to change through the creation of safe spaces for experimentation with emerging technologies.

LabX in Portugal set experimentation as a necessary precedent in contrast to the previously prevalent "Big bang" Implementations that was custom in public administrations. These implementations were borne of the PSO assumption of awareness of the problems the citizens face as well as what the solutions needed to be. The need for experimentation is evidenced by the necessary adjustments that followed these big bang implementations. LabX views innovation labs as the little boats that go before the Titanic bringing back warnings to prevent the ship from hitting an iceberg. The experimentation allows for unprecedented impacts and roadblocks to be resolved before implementation. It ensures that only the parts of technologies and policies; that generate value for society are included in the solutions leading to more success in government initiatives.

Experio lab Sweden considers labs as spaces created with the intention to learn through experimentation. Despite other roles they play in the public sector they always strive to maintain experimentation as an ongoing activity especially in uncertain times such as the post COVID economic crisis we are currently living in. The Public Innovation Lab in Spain considers their lab as a meeting point for different public institutions with the purpose of experimentation. The State Chancellery of Latvia Innovation Laboratory places emphasise on understanding the needs of the public sector Organizations and citizens better so as to test and prototype on well-defined problems which have a higher chance of scaling. They also give subsidies to PSO with the aim of encouraging them to experiment by proving various resources.

5.2.2 Create Context for emergence of Innovation

A lot of initiatives carried out PSILs to foster innovation are not measurable, especially in the short term due to complex nature of innovation projects. However, these initiatives have a long-term impact on the innovation landscape. The PSILs in the study have some activities that are aimed at enabling innovation in ways that they cannot fully grasp the impact but needs to be done.

Accelerate Estonia evaluates parts of the economy where business models do not work and figure out why in order to unlock new markets. This includes areas such as regulatory barriers, restrictive laws and burdensome bureaucracy. Following a thorough assessment carried out using their methodology, the problem may redesign on a systematic level such as a recommendation to the Estonian government for change in regulations to "make illegal things legal" or a mediation between conflicting

counterparts leading to a resolution. The lab tries to give an "unfair advantage" to companies that operate in niche areas that can solve wicked problems in society. By resolving these systemic problems, not only for the single company, but the lab also opens up the market to resolve societal challenges in a new way.

Accelerate Estonia also, keeps up with the companies they work with on various problems, they however note that about a third are shut down right after the experiment ends because the hypothesis was disproven but some continue to operate for a long time not only in the country but others have had cross border impact, scaling the innovations to other countries that would not have been possible without the accelerator resolving the regulatory barriers first. The resolution of these wicked problems leads to expansion of the market, some of the economic impacts are yet to be realised and cannot be measured.

In Sweden, the impact of the projects carried out by Experio lab creates a ripple effect impacting areas such as a change in the culture of doctors and nurses as a result of a project that involved the participation of the patients and nurses and doctors spanning several months. Sometimes years later, they start their own similar improvement projects from lessons learned during their participation in Experio Lab's experiments. The value they bring is not only realised in the specific projects but the context that was created as a result.

This context is also created by developing new innovation lab teams. LabX is building an innovation ecosystem in Portugal by assisting government institutions to create new innovation teams that use design to address societal problems. This initiative has resulted in a Network of twelve innovation labs across Portuguese public administrations. LabX has given capacity to nine innovation labs in municipalities that work together, one in the region and one in the Tax authority. The team created is composed of a group of people with specialised expertise and abilities to tackle difficult problems in a novel and creative manner while utilising the right tools and methodologies. Following the end of the incubation period, the teams are left to carry out challenges on their own and continue running long after LabX is gone.

5.2.3 Public Sector Organizational support

Most PSILs are created within a public sector organization. In the context of this institution; Innovation Labs will work on projects towards supporting its own PSO or other institutions to tackle their problems. The inefficiencies experienced by PSO impacts the citizens and resolving them creates public value.

LabX considers PSO's as one if its two main beneficiaries alongside the citizens. Apart from redesigning their services, they also work with many PSOs on digital transformations and other internal processes. For example, their work with the Court of Auditors in Portugal involved analysing their processes and methodologies to optimize their processes to be simpler by mapping the entire processes and collaborating with them for redesign. The solutions will also be incorporating components of emerging technologies such as Artificial intelligence. Though this solution will not directly impact citizens it makes the public administration more efficient and effective in delivering their mandate. In return the citizens will benefit from better services and policies.

Govlab Latvia was formed with the purpose of reducing administrative burden. They carry out innovation sprints that are directly or indirectly focused on reducing the administrative burden which is a priority of the current government. They not only work with the PSO but also offer consultations to individuals from the public sector outside the context of innovation sprint projects. These sprints involve the understanding and simplification of processes to make them more user cantered and user friendly with the aim of reducing administrative challenges. The reduction of the administrative burden is also an inherent in the design-based methodologies they employ to resolve public sector challenges.

PSIL also provide public sector organizations with Innovation project management guidance. NIDO assists PSO with the procurement process for experimentation of solutions in the scope of their challenge driven approach. NIDO ensures that the PSO have the appropriate documents prepared to submit to their procurement department especially for the first challenges. Once they have guided them a few times the organization can do it on their own for future challenges.

The public Innovation lab in Spain helps other organizations to develop projects. These are organizations such as municipalities who come to them with a challenge such as how they can build a new human resource structure for their municipality. LIP guides and provides them with the materials necessary to develop the project. They also utilize their influential position and networks to assist them with their challenges.

The PSILs also facilitate the public sector itself to innovate. Govlab Austria does this by bringing them knowledge from science and different stakeholders to boost their knowledge which allows them to boost their own innovative capacity. Nido began by aiming at creating a culture on innovations. They help PSOs make innovation concrete by creating use cases and disseminating knowledge on innovation through inspiration sessions where they carry out interviews with innovation experts who give a view on

what is going well and what needs to be done better. They also help PSOs to embed innovation into their strategy through missions. Experio Lab builds the innovative capacity of public services by always pushing the use of service logic and participation in the government institutions they work with.

5.2.4 Collaboration and Co-creation

PSILs create spaces for different stakeholders with similar interests to come together to create solutions. All the labs in the study-built networks and created opportunities for these stakeholders to meet either through cocreation events and workshops. The stakeholders that work with the public sector innovation labs in the study include Citizens, Federal ministries and agencies, regional and local governments, companies, universities and other innovation labs.

LIP in Spain considers itself a permanent "meeting point" for exchange and collaboration between different institutions and ministries or departments in Madrid. This is crucial because government organization in Spain work in siloes and LIP tries to enhance collaboration to build better policies and public services.

In Portugal, LabX brings together external experts, private sector companies, civil society and research from academia to address challenges being faced in the delivery of public services. They co-create prototypes so they can experiment on them together. By connecting experts with public sector entities, they promote the innovation ecosystem. They reviewed the Innovation starter kit with their network of twelve innovation labs. This collaboration included various exercises of applying the guide with the network of labs and reviewing them together to develop more consistent processes. In a co-creation bootcamp in Lisbon, they reunited the entire ecosystem together with the challenge owners from Spain and the Netherlands and the OECD. They involved these stakeholders to cocreate a prototype to resolve the challenges in civic participation for the three countries.

In Lithuania, GovTech Lab hosts various events and meetings where they invite stakeholders including their leadership such as the ministers and vice ministers. In the solution development stage of their innovation sprint, the solutions are co-created with the end users and experts. A sprint team and experts follow the innovation process through ideation, prototyping and testing, the involvement of different stakeholders vary in each phase depending on the specifications of the product or process being developed or transformed.

La 27e Région cites that what they "...really bring different is Coalitions and cooperation between many different governments" since design is now mainstream and individual PSOs can develop this capacity on their own. The lab aims to build trust-based peer to peer connections where they don't hide problems from each other and meet regularly. For instance, they have a new program with ten governments in cooperation, they have a national agency involved and twenty-two associations of elected officials and two researchers forming part of the team and will be involved in the collective action research and experimentation. The added value of the PSIL is therefore building programs with large coalitions of public and private partners.

Govlab Austria had room for collaboration inside Vienna and also had a collaboration with Danube University. Some initiatives they worked on were created from collaborations between the governor of Austria and different stakeholders from the public sector, Science, economics and NGOs. These diverse collaborations and a sounding board from experts in the field led to more successful initiatives with support from policymakers. The lab organized annual meetings with its members as well as two other major events. These events were a platform to start collaborations and familiarise different stakeholders with each other from different sectors. One successful result of the collaboration was the development of a Govlab innovation course at the Federal Academy.

Accelerate Estonia agrees that it is not just the lab's team that should decide what is relevant for Estonia. This is why when a challenge is presented, they bring together a team of expert researchers in the field, companies and policymakers to advise on whether the experiment is valid and the best way to proceed with projects in the event that it is. Through collaboration the challenges are legitimised by the people.

"there's like many interest groups like people with disabled needs, the pharmacist Union of pharmacy. This Union of this and that and that so we have to bring all those interest groups together to explain them, , what if you change that law, how it affects your actually current work or does it make it like somehow better or worse? And then we put the output together and then there's like we basically take out the cons and then we proceed to the law change to change the law."

Experio lab on the other hand, in Sweden, is operated as a network organization composed of people that keep doing things together and learning from each other. The network-based competence centre brings together regions, municipalities and other public institutions with a shared design methodology to collaborate and develop capacity from shared experiences. Outside of individuals projects the organization itself

is a collaboration of design labs spread across Sweden each developing its own capacity for collective learning.

5.2.5 Knowledge management

Public Sector Innovation labs are competence centres for Innovation in the government. To create innovation culture and capacity in other PSO's is necessary for embedding innovation sustainably, as a result PSILs take up the role to disseminate knowledge on innovation in the public sector from learned experiences as well as collaborations with Learning institutions.

Following their successful participation projects in healthcare with regional governments in Sweden, Experio lab received offers to work on research projects on the science of service design for innovation capacity in the public sector. They are involved in Marie Curie projects as part of the European training network and have their own PHD around their research seminars. Experio lab works in collaboration with international universities such as Luca school of Arts that's part of the KU Leuven Association. Every year they train two hundred and fifty healthcare managers in design with the aim of creating capability in municipalities and regions to work on participatory innovation, transformation or democracy using their design method.

Additionally, every month Experio lab host research seminars where researchers from all-over the world are invited to share their knowledge with their network of labs and staff in the regional and local governments. They also host open seminars called exchange where they focus is put on specific projects in the network and explore various aspects of the methodology such as: "The tool of role-playing and gaming as a way to work with system design and policy designs". The project owners share their experiences, and time is spent reflecting on them. Annually the write some project reports where they also reflect and share knowledge. Their work is published under the creative commons license and is therefore available for all to learn from.

LIP in Spain give guidance to municipalities when working with projects and provide tools materials to aid their capacity. They have made available an innovation resources catalogue which comprise of a collection of tools under open license to support public entrepreneurship. The catalogue is comprised of open-source design toolkits, team coaching toolkits among others. They also share with institutions good practices that are working and successful elsewhere to facilitate their learning and application in their innovative projects. Their community of public innovation brings together people with an interest in public sector innovation to share experiences, news, articles or case studies.

GovTech lab Lithuania is also involved in organizing trainings and skill building activities where they train seventy-five public sector officials annually in their GovTech Innovation Academy. These are avenues that aim to enhance innovation knowledge and competencies. The civil servants learn and collaborate on leadership, design thinking methodologies, change management, and emerging technologies from experts in the fields to apply back in their organizations. The lab delivers these sessions based on learnings from case studies, shared experiences and participant perspectives; complemented by practical workshops and project-based learning.

The State Chancellery of Latvia Innovation Lab has implemented eight training programmes. The lab gives trainings to the highest civil servants with the aim of promoting design leadership in the Public Sector.

Govlab Austria collaborates with Danube university Krems on the EU horizon project where the university brings in the scientific perspective while they contribute to the public sector experiences. This collaboration is a source of knowledge transfer and communication for the PSIL. Knowledge is also shared in the annual meetings with members where collaborations are started. The Govlab collaborated also with the Federal Academy and developed their own innovation course which is still in place and updated regularly. Through these initiatives the lab serves as a source for innovation skills and knowledge in the public sector.

Nido helps public organizations to be more innovative and future proof by providing practical tools and inspiration. Inspiration sessions interviews carried out by Nido with innovation experts and leaders in the field on innovation and share it with their network. They share case studies from successful innovation initiatives locally and internationally in the interviews as well as through the Federal Innovation Awards where unique solutions are showcased and rewarded. The lab also hosts workshops to discuss about the future of innovation in Belgium and share experiences with members from different public organizations. Nido maintains continuous collaborations with learning institutions often giving talks on Public Sector innovation and hosting students carrying out research on innovative initiatives for the public sector.

La 27e Région promotes knowledge sharing by publishing guides and manuals in their resource centre for their network to build capacity. For example, their members expressed a strong desire to improve their connection to research, to which the lab is facilitating them by providing a manual for building relationships between civil servants and researchers while also engaging them in a series of guidance sessions.

La 27e Région has noted with concern over the years that there is an innovation skills gap in the public sector in France. Most of the civil servants in charge of Public Sector Innovation have no background, practice or skills in innovation, neither are they improving despite the effort the lab has made in providing training sessions. The problem appears to be more systemic in nature and requires more systemic approaches. The lab is working on possible collaborations with schools for administration, innovation researchers, practitioners and other partners to test and determine the possible roles they could play in developing innovation skills in France.

LabX has a longstanding research and capacity development culture. They carry out research to determine the problems the citizens face when interacting with public services. They carry out training to new innovation teams on design for innovation programmes based on their own methodology to teach them how to facilitate innovation projects in their institutions. They have developed a team within LabX that works on network building for capacitation programmes for public administrations and leadership for innovation. These trainings provide sills needed to facilitate innovation and collaboration among different individuals and organizations. They also work in collaboration with the OECD and other partners across the world, they collaborate in working groups to develop tools for anticipatory governance. They involve the network of innovation labs, civil servants and innovation champions in their training workshops and newsletters. They have also reviewed the anticipatory innovation starter kit they developed with OPSI at the OECD to come up with a better process for PSO to implement.

LabX has additionally, brought in an expert on Anticipatory governance to help define a process that can be used by their public sector. It involves and exercise with a vision board on which they establish future scenarios and position themselves at the Center of those scenes. Through buying this skill and developing it themselves they will come up with a simplified process they can then disseminate into the Portuguese public sector to enhance their skills and innovative capacity on anticipatory innovation. Their investment in these skills will transform the entire public sector in the long run providing public value.

5.3 Strategies for sustainability

This section discusses the strategies that PSILs have employed to work around the challenges they endure make themselves successful and sustainable in the public sector. The labs that participated in the study have had to overcome numerous challenges to continue their operations over the years. Below are the most prevalent strategies that were gathered from the study.

5.3.1 Internal Culture

These strategies involve the internal culture of the innovation lab itself as well as its employees. The management of the internal team and lab operations requires staff with a specific profile and management style reflected in the PSILs in the study.

The founder of Accelerate Estonia states that the partnerships required for a PSIL to innovate in cooperation with emerging companies is an unusual in the public sector as usually they would work with companies with longstanding reputations. This new way of working comes with high risks because:

"...you don't know what exactly the business value that will come out of this, what their investors will say about that. It's difficult to explain because it's a very non usual way of cooperating. So, the risk is very high, which means that you actually need to keep your cool as much as possible".

The staff working on these projects have to remain calm and keep a "poker face" in these very testing environments as it is difficult for both sides to get into the risky business without knowing what the outcome will be.

Nido not only emphasizes the need of creating a "great team" but also giving them autonomy, a vision and keeping them motivated amidst the tensions that brew with other services within the host organization and negative feedback coming other domains as: "people don't like nosy people that go on other domains to try to disrupt what's going on. So that's why it's important to have a have a good team of people that believe in this. But the things we struggle still with is make sure that you have a good sponsorship so that's why we set up this Advisory Board." The sponsors of the organization are expected to reduce the pressure coming to the PSIL when other domains do not agree with their approaches. The constitution of the advisory board gives them support where the main sponsor may fail keeping the PSIL staff motivated.

LabX motivates its cocreation stakeholders by preparing for the implementation of the cocreated solution long before it is developed by creating enabling conditions such as securing funds and political support for developing the prototypes. This gives the people working on the project a sense that they are contributing to an important real-world project which motivates to bring in their best effort towards a positive outcome.

"...we are creating conditions and that they role is very important to create real solutions and people when people are committed. With something they don't give only 100% they give you 200% if it's needed. So, I guess this is the secret, it's. People need to have the conditions they deserve to have the conditions."

Additionally, LabX the Innovation lab has to have diverse member of staff. They have the technical people like service designers, researchers and sociologist. But it's more important to have someone who can build connections with other government entities and leadership. This is someone with a high-level view of government able to scan the main challenges so that the lab can be part of the solution. They should also be able to effectively communicate the work that they have done and results they have achieved to demonstrate impact and maintain support.

LIP in Spain keeps the motivation of their team at the core because the Innovation projects take long periods to deliver and sometimes the prototypes are not implemented. The long periods it takes to see results coupled with unscaled projects can cause disillusionment. When the PSIL staff get frustrated, it becomes difficult to retain them in the team. This is especially difficult in the public sector as civil servants have the freedom of voluntary mobility between departments and ministries who are competing to attract and retain talent. Govlab Austria lost the head of the Innovation Lab in 2021 to a similar disillusionment, the lab declined significantly following that loss. They however note that as the public administration gets younger and younger they are viewed to develop better ways of working.

NIDO believes that for a PSIL to succeed it must have people who persevere. This is often because of the amount of resistance they receive from different groups in the Belgian public sector. Driving change therefore requires a relentless mission-based focus with multiple attempts towards the end goal. In building partnerships for example, the lab often gets nonconcrete verbal confirmations and to solidify this alliance they have to keep knocking on the same doors over and over again until there is a solid commitment to the lab.

Accelerate Estonia notes that politicians are always on the outlook for new ideas to invest in. The lab and its sponsor always need to keep up and probe for what the minister would like to do and how they can support those initiatives. The staff therefore need to have enough charisma to convince the pollical figures to take more risks and invest in their initiatives.

5.3.2 Alternative resources and funding

Many PSI Labs have challenges in securing maintaining a sustainable source of funding. La 27e Région is encountering short term funding and less long-term funding as the years go by, the membership subscription model is also unreliable as sometimes a PSO may opt out of subscribing in a year as it's not a mandatory obligation. They have a desire to balance the long-term and short-term funding to remain sustainable. In Belgium where Nido has limited support from its main Sponsoring organization, they sometimes have a budget allocation they are unable to utilize due to procedural roadblocks from stakeholder departments such as Information Technology or Procurement who view them as competition. GovTech Lab in Lithuania also experience temporary, short-term funding that doesn't support all its activities. In the beginning Experio lab had national funding that lasted three years. The PSIL's either have limited funding from their state budgets or short term funded projects. To remedy this, they diversify their sources of funding and other resources in the following ways: They applied for external project funding.

Experio Lab works with Marie curie project under the European union training network to fund PHD research to expand knowledge management initiatives. These projects were secured following the initial successful projects they carried out using National funding in the first three years of inception of the lab. This later also secured sustainable funding from their domicile organization and main sponsor Värmland. However, when there are limited resources; to be able to keep experimenting they apply for external funding to keep it going.

"...Because you want to create a safe space for experimentation. So, we have been fighting a lot for sort of having that base to for experimentation with a little bit of extra outside money."

Nido in Belgium also considers applying for alternative funding sources such as EU funding, however this funding for delivering projects coupled with their shortage in staff will be difficult to implement. They in turn seek partnerships from the public sector in Belgium as the operate within the same civil service. In the scope of being shareholders at Nido, they can supplement the human capital through the talent exchange programme in the Belgian public sector. Each partner can invest a certain number of Full-Time employees to support the PSIL team through secondment at the lab for an agreed period of time. Through seconded employees and the occasional trainees Nido hopes to supplement its limited resources and possibly be able to apply for external funding.

GovTech Lab Lithuania supplements its limited state budget funding with EU and Baltic funded projects. This funding helps them to keep their employees in the lab. They also Initially negotiated for pro-bono activities from startups which helped to showcase their first projects for additional state funding leading them to be more sustainable in the long run. The alternative resources and funds can be used to demonstrate the impact to secure support. The lab currently runs on external funding as well as state budget funding each supporting different lab initiatives.

Latvia has a similar staffing challenge as Nido and a funding model similar to that of Lithuania. They have few staff and are seeking alternative funding to resolve that issue as their staff is currently overburdened to carry out both projects and design the innovation ecosystem. They utilize and are seeking to improve both internal funding from the state as well as external funding from the EU. Internally they are looking for avenues where the money in other public sector organizations can be reorganized to fund the labs initiatives.

La 27e Région highlights an ongoing reflecting on funding models for non-profit organizations in France with many organizations favouring a shift towards more long-term funding of organizations rather than short term project-based funding especially for social innovation research initiatives in the public sector. The government in France has made large funding allocations to research in private companies and not towards social entrepreneurs such as La 27e Région. The lab however still diversifies its funds through member subscriptions, national sponsors and additional financial commitment by project partners for participation in programmes.

LabX has utilized alternative funding from the European Commissions since their experimental inception where they had funding for three years before being promoted to the Center for innovation. Currently they are running some EU funded projects such as a project on civic participations in collaboration with Spain and the Netherlands that is still ongoing.

5.3.3 Build strong networks

The leaders of PSI labs denote that the success of their lab depends on the networks that they have built over the years. The people a PSIL chose as partners determine their chances of success. Accelerate Estonia borrows the concept from a book on innovation and bureaucracy that stresses the importance of "picking the willing" to focus on the individuals who have the right mindset to understand the system and what is needed to bring impactful change rather than individual agenda.

"It's being naive about rules and then if you're naive enough. You can actually convince people that it can also be done differently."

For Govlab Austria, building communities in the public sector is important to facilitate the exchange of ideas with external experts and other innovation labs from outside the country. Collaborations with external partnerships such as NGOs, academia and economy impact the quality of the output of PSIL.

After years in Innovation, Nido has discovered that the main strategy for sustainability is partnerships. The building of a coalition and identifying what the coalition needs to achieve is key. The network of supporters helps the innovation lab to deliver bigger impacts and better outputs. The presence of Communication channels to be able to reach them in order inspire them as they are the lab's ambassadors. Through partnerships they are able to resolve their resource constraints by shared resources from partners to support the lab.

La 27e Région builds community with individuals in the public sector with the shared goal of building a new culture for public services. Together they discuss pertinent issues and build programmes to resolve them. Through the diverse membership, the lab has advanced innovation across France through collaborations in projects and shared capacity development. The Lab's founders believe that outside of experimentation projects; their capability to bring organizations and individuals together is their main value addition to Innovation in the public sector.

Latvia hopes to leverage on partnerships with other PSO to reorganize their funds for their initiatives. Lithuania on the other hand has international partners that they invite to their annual events. During these events they interact with their ministers, vice ministers and other officials and represent the impact of the lab's initiatives internationally and creates an opportunity for the politicians to showcase Lithuania and gain visibility. Through these partnerships they are able to secure support from their leaderships. The networks showcase the labs potential and motivate investment into their initiatives.

LabX runs three networks in Portugues public sector. First is a network of civil servants called innovation campions who have access to all the workshops and methodologies they use for innovation, they are impacted with skills and capacity to foster innovation the PSO they are employed within. They also have the open government network in Portugal that was created as part of the international open government partnership that was created by the former United States president Barack Obama for anticorruption and transparency. Third is the network of Innovation Labs

they have helped build capacity for. These networks collaborate in LabX projects such as reviewing the Anticipatory Innovation Tool Kit. They work with partners across Europe and globally such as the European commission and the OECD on innovation in public services to develop tools and foresight. The networks are important in building the public sector capacity in innovation and also supporting to co-creation or prototypes and ideation and testing phases during experimentation directly impacting the scalability potential and overall, of PSIL projects. The lab engages and are engaged by other governments and

Innovation labs, multinational organizations and even banks. The international collaborations ecosystem of the lab enables it to continue its work albeit in a different sphere of influence when they don't have funding to carry out local projects. Their contingency plan is also based on the networks they have built and has enabled their survival in different situations. Maintaining their work throughout is important as it keeps them relevant until their organization has funding and projects for them once again. It enables their survival in uncertain times; weather they have sponsorship or not.

LIP says establishing networks was easier for them as they are within INAP which has a strong reach and well-known reputation across the public sector setting a groundwork for their networking efforts. They also reached out to decision makers in other institutions with similar goals as the lab to promote their initiatives from within their organization. This enabled them to attract talent for the lab and introduce the lab. LIP is also involved in the Partnership on civic participation with LabX and the Netherlands which is funded by the European commission and facilitated by the OECD. They also partner with municipalities and utilise their strong networks and access to experts to facilitate them with their challenges while impacting them with knowledge to develop their own capacity. They are also promoting their relationships to build a network with the innovation labs in South American institutions.

Experio Lab being a network organization enables regions to build their own capacity to foster participation and transformed into a competence Center where this network comes together to share learnings and resources. Due to the partnerships Experio lab has about sixty to eighty people working in the Experio context across Sweden. The network enabled the lab to live on as the network organizes operations and enhances continuous, shared learning. As each region builds its own capacity, the relational organization keeps learning and collaborating ensuring its sustainability.

5.3.4 Public Image and reputation

When it comes to gaining support and legitimacy, PSILs have to build and maintain their public Image. The strategies highlighted in this section are geared towards building and upholding a good public image.

Labs like LabX and Government Innovation lab Latvia believe that the lab should focus on the work rather than individuals while building their reputation. Latvia brings back emphasis to the recognition through the projects and not pursuing individual politicians or decision makers. LabX knows that they work they do impact the efficiency of public services positively by making the more efficient as they are designed according to the user's needs. When the priorities of individual politicians' shifts, the lab aligns with the users in the new priority areas. Takin the worry or political volatility out of their scope.

The PSILs in the study agree that showcasing the first cases of success after formation is important in gaining sustainability. Accelerate Estonia measured their early impact by the number of experiments they were able to launch to build a portfolio in the first two years. According to them, clear and simply communicated use cases will showcase the benefits that the lab is bringing to the economy and society in general.

GovLab Austria observes in hindsight that demonstration of a direct impact of the projects to the people coupled with the communications of these successes would have allowed the lab to earn more project opportunities and have a bigger impact. Nido's strategy is to keep themselves visible always when opportunities present themselves. They showcase their successes through the provision of presentations and ideas in events and panels they are invited to with decision makers or other public stakeholders. By showcases the first cases of success in the first three years, GovTech Lab Lithuania secured state funding for innovation subsidies and became more sustainable outside of short-term project funding. They incorporate impact assessments to display the economic and social success of initiatives. They also and host study visits annually for visitors to learn more about their programmes. This is similar to LabX's first three experimental years were following the successful work they displayed they were permanently embedded into the institution. LIP in Spain also have an annual event to display their projects and achievements during the year to their sponsor institution INAP. By showcasing their first projects from National funding, Experio lab gained the internal resources needed to fund their innovative participation projects sustainably.

All the PSILs also have their own social media and websites to communicate to their networks and report the work they are doing and their impacts. Accelerate Estonia

communicates mainly through its own web page and their ministry's web page on their activities and achievements. They note that the relationship of mainstream media and the government can be somewhat "toxic" hence the need to build relationships and keep the communication channels open to provide explanations and create an understanding for the risks the public sector must take to solve societal challenges. In Belgium, Nido has several communication avenues. First, they have a marketplace to launch challenges for participation from the public. Secondly, they have a website that showcases their work and concrete vision and ambitions. They also maintain a vibrant LinkedIn community for their network to communicate their ongoing initiatives and broadcast events for capacity building and collaboration. Nido emphasises that these communication channels are important to keep the network inspired.

LIP in Spain have a webpage to introduce their services to their public sector. They also utilise it to encourage civil servants that feel attracted to their vision for public innovation to contact them. This helps them to identify people who are interested in similar topics and wants to participate in certain projects or follow their activities. Experio Lab posts their open-source research and other initiatives on their website. By making this information available to their network they attract collaboration opportunities.

The image of PSILs have also been improved by their participation in international award ceremonies. Nido has previously been awarded a European Public Sector Awards from the European Institute of public administration (EIPA) for their experimentation methodology "Govbuys innovation". They went ahead to hold talks at the United Nations and OECD on their approach which gave them exposure and recognition. Nido is also the contact point for Belgium at the OPSI- OECD. Lithuania was also recognized as a top three GovTech team in the world by Public. In 2023 LabX also won the "Global Government Excellence Award" in Dubai for being a distinguished Initiative in government innovation based on the work they have done in the public sector. GovLab Austria insists that showcasing a truthful image of the organization's state of affairs to leadership is important as it will be more beneficial in gaining support than a false image of success.

5.3.5 Innovation Project design and delivery

The strategies in this section involve the selection and preparation and execution of projects. Different PSILs have different approaches to innovation project management.

In the early years of an innovation lab, the overall vision is known, however the specific projects depend on the selection of the PSIL and its sponsors. Experio Lab in Sweden knew that they wanted to foster participation and with this goal in mind they built a portfolio of different types of projects for the purpose of learning from them. They tried out different participatory methodologies and varied the process with each initiative to create learnings to improve their capacity in creating and supporting local projects. With the aim of staying relevant, LabX spreads their efforts in different lines of activities so that when they are unable to cater to one stakeholder, they can discover new ones and provide value to another remaining relevant when they lack support from both their sponsor and political decision makers.

PSILs should also select projects with reliable partners. LabX prioritises projects where the partner PSO is willing to support the project and utilise the results to scale the initiative after the experiment is complete. A strong sponsor organization creates enabling conditions for work, proper process documentation, communication and implementation creating visibility for the Lab. They also charge a fee for capacity building of other innovation labs to make sure their money was well invested. In Experio Lab, the cost of joining the network is a show of commitment through building their own internal capacity and participation in the projects.

In France, to be part of a programme, a PSO must sign contracts and shows a financial commitment. Additionally, they must also ensure the active participation of civil servants in the pilot projects to learn from designers and researchers. Innovation Lab Latvia prefers to work with institutions where: "workers of an institution are very happy to participate in innovation projects." and whose leadership is proactive and have an innovation mindset.

Accelerate Estonia experienced challenges in earlier years where companies on the brink of bankruptcy applied for experiments to stay afloat. The now ensure that they have selected the right partner company by delaying the delivery of project funds requiring a company to showcase their commitment and financial feasibility by funding the initial efforts.

Nido has observed from previous experiences that PSO's would be more engaged if the service they provide was not free. The impression from some partners appears to be that "...the fact that you're free a free resource means also that. They think you're not serious or that that you're not professional."

Following the selection of the project with a good sponsor and enabling conditions. The PSIL should prepare for the project beforehand. LabX does this by convincing political

actors that the project is important and securing funding for implementation before the prototyping phase is even complete. France dialogues with its partners and members before the start of a new programme to set the criteria for success. They implement a theory of change for their programmes.

PSILs agree on the need to seek systemic change and impact in the public sector to foster innovation. LabX is doing this by creating an innovation ecosystem in Portugal through creating innovation teams. Accelerate Estonia is working towards an experimentation framework to give public servants the surety that supporting the risky innovation initiatives has a policy backing beforehand.

Different PSILs manage their projects employing different methodologies. Experio lab maintains an agile design method as designers from different backgrounds have different methods and they try to maintain agility to allow them to learn from each other rather than have a predefined process.

PSIL's emphasise that the projects need to be well documented. La 27e Région keeps hundreds of logs by the projects team reporting what they have done and the feedback they get on certain activities. At the end they write reports and publish on their blog and carry out an evaluation to ensure continuous learning. Their reputation also comes from their transparent documentation and open-source publishing similar to Experio Lab. LabX create reports showcasing the deliverables, activities and insights gathered during the research and experimentation projects.

Learning from previous mistakes is also a success factor for innovation projects. Nido cites that creating time for feedback from the network enables the creation of better solutions for better projects. GovTech lab in Lithuania evaluates previous solutions when a similar problem is presented to familiarise the project team with what did not work so as not to make similar mistakes and develop more successful solutions. LabX have a more wholistic approach to learning from previous mistakes. They carried out research onto other innovation labs when starting their own

"...We have studied why they have died, what are the causes, what are the mistakes that they have made. It's always okay to make mistakes here, but we try to make new ones. We are not going to make mistakes that already were made by others. So, we welcome to mistakes, but new ones. So, navigating all these contexts and we have survived. We are still here."

Measuring the impact of projects is also a good way to showcase success. From the preset success metrics. Latvia carries out impact evaluations on major projects with the

help of consultancy firms, the evaluation criteria vary from project to project. GovTech lab Lithuania carries out impact assessments for successful projects to show the economic and social impact of the lab. LabX is also working towards a more structured way of measuring impact as the numbers enables people to recognise the value in their method of working. Accelerate Estonia invests in impact analysis from experts to showcase to decision makers who need to make data driven decisions from the reports. While developing insights from projects, GovLab Austria endeavours to give scientific inputs.

5.3.6 Positioning of the Lab

The governance of PSIL is highly impacted by the position of the lab in the public sector. Labs-like LIP in Spain is positioned within the National public Institute with strong standing and influence in the public sector which the lab views as a "good way to start".

LabX was moved by the founding minister to the agency AMA located at the Center of the government to ensure their continuity as opposed to being dependent on a single minister. "... We have already crossed four different governments, and we are still here. it works". Now promoted to the Center for innovation, this gives them the mandate to invest in innovation and "make things happen". The state chancellery Innovation lab in Latvia is centrally located in the chancellery which has given them recognition within the public sector.

PSILs aim to create spaces for agile decisions and autonomy to enable innovation. Guided by the belief that the lab needed to be more flexible that the public administration itself; In 2021, GovLab Austria made a proposal to be transformed into an autonomous organization, however the proposal was shot down by decision makers and the lab has not recovered since. Likewise, Nido in Belgium is positioned within a department in the federal agency BOSA. The position has left them without their sponsor's support. To navigate this challenge, they constituted an advisory board to support the lab operations. "...because you do not have the support from your sponsor institution. The outside cannot support you." Nido is still lobbying the revaluation of their position in collaboration with their sponsor and cabinet to be better positioned in the government to gain more autonomy: "...With enough autonomy, with enough space for entrepreneurship" Accelerate Estonia acknowledges that for public private partnerships to thrive the public sector needs to refrain from building too many processes as the landscape is constantly changing and requires more agility.

5.3.7 Strategic Alignment

To advocate for resources PSILs begin by determining clear goals. Accelerate Estonia has a clear and understandable value proposition for the public sector that benefits the country to gain support from government officials. GovLab Austria believe that the lab must have a clear time constrained goal and has written a report and decision paper to present to the cabinet in the wake of a new legislative period to secure resources and commitment to these goals. Nido has rewritten an ambitious strategy to innovate within the public service and is engaging with the cabinet with a similar ambition to have aligned goals and support the initiative of the lab. Experio Lab had a clear ambition and vision to enhance participation. The ambition is backed up by clear philosophies of shared learning and inspiration for collective impact.

PSILs unanimously agree that the goals and projects need to align with those of their stakeholders. These priorities change with environmental factors such as national politics and geopolitics. Latvia's state chancellery's lab in response to the wars in neighbouring countries which led to the government diverting funds to defence; they have developed some innovation sprints in 2025 that are more focused on defence to stay relevant politically. Experio Lab notes the as the world is heading out of the COVID induced economic crisis there is more need for experimentation projects.

To align the goals of a PSIL with the decision makers, Accelerate Estonia holds conversations with their minister to understand their priorities and visions and showcase to them how they can contribute. It also works to be able to determine what different ministries needs are and help them to achieve that through their work. GovLab Austria believes that having similar goals start by determine what the decision makers want and working towards them together. Nido emphasise understanding the needs of the lab's customer and making them shine as every public service has its own ambitions that the lab can help them to deliver better. GovTech Lab Lithuania evaluates government ideas and shows them how they can use GovTech to achieve those goals through collaboration. This brings more sustainability to the lab. In Portugal, the ministers often bring to LabX challenges of their own and ideas for implementation. The lab views these as opportunities to make them shine and builds initiatives that they need and give policy recommendations. Experio Lab began as the founder's solution to the region's goal to improve participation. Because Experio Lab's goal was aligned with the region's needs from the beginning the embeddedness and sustainability followed its success. Latvia attributes the success of its initiatives to alignment with the PSO noting that when the problem is not incepted by the PSO itself, they have less enthusiasm for actively participating in the process to make it work.

6 Discussion

This chapter interprets the findings on nine public sector innovation labs across the European union and utilises a checklist approach to answer the research question: Which value propositions and strategies do public sector innovation labs develop to ensure sustainability?

The Public Sector Innovation Labs selected span a diverse range of the European Union context: Latvia, Lithuania, Spain, Austria, France, Belgium, Sweden, Estonia, and Portugal. They all represent varied administrative traditions, political systems and levels of institutional embeddedness. By synthesizing their varied approaches to PSI, the study analyses how they develop their operational capacity, secure legitimacy and create public value as described by Moore (1995) Strategic triangle to achieve long term sustainability. Finally, the findings are translated into a practical framework that can be used to guide the design of sustainable labs that can withstand prevalent challenges such as funding instability, political volatility, and scalability. From the understanding of how these existing PSILs survive and create value, the framework will guide struggling existing and future labs to design for legitimacy and longevity in the public sector.

6.1 Define and Deliver a Compelling Public Value Proposition

To be sustainable the PSIL must identify and define its mission and societal impact. All the PSILs in the study had a reason for formation since the beginning spanning from fostering an innovation culture, testing and experimenting with solutions, tackling particular policy or service concerns, enabling digital transformation, and creating networks for collaboration. This is evidenced in cases such as Nido and GovLab Austria's aim to foster experimentation, Accelerate Estonia with systemic change or Experio Lab with the vision to embed participation in healthcare, while La 27e Région aimed to develop a new culture of public services like GovTech lab Lithuania.

The vision comes before everything else and guides what the lab's core value propositions will be. This insight aligns with previous scholars who argue that value articulation precedes operational design and supports lab legitimacy within host institutions (Tõnurist et al., 2017). PSILs must provide value that is aligns with institutional agendas and complex public demands that PSOs have challenges delivering on their own in order to endure and be successful. The results show that four essential functions form the basis of a PSILs' value proposition.

6.1.1 Enable Experimentation and prototyping

PSILs must offer a safe space for experimentation to test innovative solutions before fully rolling them out. Experimentation in the public sector is viewed as a risk management as noted by Accelerate Estonia who frame prototyping as core to their identity, reducing fear of failure and increasing risk tolerance among bureaucrats. Latvia's State Chancellery Lab conducted design sprints such as the tax declaration simplification with the State Revenue Service to test solutions in low-risk environments. GovLab Austria observe that experimentation mitigates the risks that come with deployment of new ideas and technologies without testing as it gives room for the assessment of possible implications of the innovation. This validates the observations of previous literature that state that innovation labs absorb the risks associated with innovation and act as a learning mechanism for systemic change in the public sector (Avecedo & Dassen, 2016; von Wirth et al., 2019).

6.1.2 Solve Societal Challenges through Citizen focused Co-creation

The PSILs show that public value can be increased when labs create services in collaboration with end-users through co-creation. For PSILs to be successful they should prioritise the creation of opportunities for stakeholders such as citizens, federal ministries and agencies, regional and local governments, companies, universities and other innovation labs with similar interests to come together to create solutions through cocreation events and workshops. This aligns with Haug & Mergel (2021) and Fuglsang et al. (2021) who show that co-production increases perceived value and institutional relevance of a PSIL.

La 27e Région in France deploys multidisciplinary "resident" teams comprised of designers, sociologists and urban planners into a public institution and an internal team of civil servants for sixteen to eighteen months to pilot innovation labs in the scope of the "La Transfo" program. In order to reform mental health services and incorporate user feedback into policy, Experio Lab in Sweden and LabX in Portugal were formed to enhance participation and human centred services respectively. The involve citizens and civil servants in projects from inception to the testing of services. The prioritization of cocreation aligns with Moore's argument that public value must be identified through engagement with citizens and not just through top-down political mandates.

6.1.3 Drive Public Sector Organization Transformation

PSI Labs work on experimentation projects towards supporting its own PSO or other institutions in their public sector to tackle their problems. This improves the creation of public value as they innovate to reduce inefficiencies experienced by PSO impacts the citizens and resolving them creates public value According to the study, labs that promote design capacity across government institutions embed innovation long-term as evidenced in the case of LabX Portugal helps PSO to analyse and redesign processes and methodologies to increase their efficiency. Previous scholars highlight that building design capacity in the public sector acts as a systemic tool for the transformation of governance (Janssen et al., 2023).

They additionally invest in building innovation teams across municipalities to support institutional internal capacity for innovation. LIP in Spain supports other municipalities with challenges such as building a human resource structure them to attract and share talent with other municipalities by utilizing their network and influence.

6.1.4 Create and Disseminate Knowledge

Knowledge management is an important PSIL function in the public sector because it transforms individual project experiences into replicable, scalable learning opportunities. Through capturing insights, open sharing of tools, and nurturing networks, PSILs guarantee that innovative capacity is embedded in the broader public sector, fostering a more resilient and adaptive government. Through capturing and reporting on innovation experiences by Experio Lab' monthly research seminars on service design tools and their Creative Commons licensed project reports which collaboratively shares knowledge from learned experiences. PSIL share resource tools with the public sector, these activities are consistent with Santonen et al. (2024) and Tõnurist et al. (2017), who underscore that the development of knowledge infrastructures are necessary for public innovation.

Labs such as LIP in Spain publish an "Innovation Resources Catalogue" of open-source toolkits. Through targeted skill building initiatives such as structured programmes like GovTech Lab Lithuania's Innovation Academy that trains seventy-five officials annually, Latvia also offers design leadership courses for senior civil servants, and GovLab Austria co-developed an innovation course at the Federal Academy. They also utilise regular network exchange forums. Monthly "exchange" seminars at Experio Lab, Nido's inspiration sessions and Federal Innovation Awards in Belgium, and annual member meetings at GovLab Austria establish ongoing networks where practitioners

share case studies, reflect on lessons learned, and co-create new approaches. Partnerships with academic institutions such as Experio Lab with KU Leuven; GovLab Austria with Danube University Krems) and organisations such as the OECD's OPSI guarantee that PSILs incorporate advanced research into effective governmental innovation initiatives. Through these diverse avenues PSILs integrate design thinking, change management, and foresight into public sector.

6.2 Choose the right Institutional Positioning

The governance and sustainability of a PSIL is heavily impacted by its positioning within the public sector. Drawing on the nine country cases, there are four key contextual factors to guide the positioning decisions.

Locate the lab in a stable, high level hosting institution: This positioning ensures that the lab is embedded in an organization that is not directly impacted by political volatility. This can include agencies whose mandate and leadership is not changed by electoral cycles as opposed to ministerial offices which highly depend on the minister, an individual impacted heavily by politics. This argument was previously supported by Hansen & Fuglsang (2020) who found it essential for PSIL to be properly anchored to an organization for long-term survival.

Experts' Perceptions of Living Lab Value This is evidence by LabX in Portugal which was instinctively moved by its founding minister into the Administrative Modernization Agency (AMA) in 2017 so they wouldn't be dependent on a single minister's support whose position changes periodically. The lab has survived four different governments. Similarly in a stable position, Latvia's Innovation Lab is a de facto unit in the State Chancellery, boosting recognition and uptake evidenced by its success in training 1,200 PSO staff despite the limited budget. Spain's LIP operates under the National Institute of Public Administration an institution with permanent, cross-party stature which the lab calls "a good way to start" as its already influential and legitimizes them in line with the PVT as positioning determines access to resources and political backing.

Full embeddedness versus autonomy trades off: when labs are located in a central location, it gives them visibility and political reputation but risks being overly controlled by the embedded institution. The labs need to balance autonomy and legitimacy. Labs such as GovLab Austria have had a failed autonomy bid that left it dependent on shifting ministerial priorities, leading to a steady decline in support.

Sponsor dependence and compensatory structures: In situations where labs are unsuccessful in their bids for autonomy and lack support from their sponsors despite their positioning. They may establish external governance support to partially offset the lack of sponsorship. NIDO in Belgium, limited by its sub optimal placement in a department within FPS BOSA and lacking dedicated sponsor backing, alternatively constituted an advisory board and continues to lobby for more resources and autonomy.

Agility of processes and regulatory flexibility: While PSILs take pride in developing strong networks, navigating public private partnerships requires simplified procedures to collaborate efficiently. Accelerate Estonia stresses that for public private partnerships to thrive, the public sector needs to refrain from building too many processes and maintain the freedom to pivot as societal needs evolve.

6.3 Build PSIL Team and Governance Structure

The sustainability of a lab is highly impacted by the internal team and how the lab is operated.

PSILs should develop a diverse team profile. The PSIL team should be carefully curated to include technical roles such as designers and researchers who implement the design methods and incorporate research. Accelerate Estonia brings together a combination legal expert, data scientists, and startup mentors while LabX in Portugal involved service designers, sociologists, and policy experts in its activities.

The team should also include strategic roles for building partnerships and navigating the political environment in the government. This is evidenced in some of the cases, like LabX who emphasizes having team members who can build bridges and negotiate value to leadership. Wirtz et al. (2023) supports these observations by pointing out that team profiles can affect the ability of a PSIL to bridge the political, technical, and user domains.

The PSIL team should be constantly motivated and given room for autonomy. Nido in Belgium emphasises the need to create a motivated team with shared vision, supported its advisory committee to buffer conflict with other departments. The motivation gives the team resilience under pressure. Accelerate Estonia is also supported by and advisory board that helps with the decision making for the lab.

6.4 Design a robust funding model

Financial sustainability of a PSIL requires the combination of available predictable core support with flexible, value-driven revenue streams. Based on our nine PSIL cases, labs should consider three interlocking funding pillars.

Stable Core Allocation: Anchor the PSI lab with a guaranteed base budget from a host agency or ministry. For Example, Experio Lab secures multi-year funding from Värmland County Council, ensuring operational continuity while it pursues external grants for additional experimentation projects. In Latvia the State Chancellery Lab receives a small but reliable annual budget from the Prime Minister's Office, then supplements with EU Recovery and Resilience grants to hire additional staff and expand its sprint portfolio. Rossi et al. (2022) assert that public funding continues to play an important role because it allows them to have a long-term vision and strategically reallocate the resources required to be successful.

External Grant and Project Funding: PSILs with inadequate base funding should pursue competitive calls for grants from institutions such as the EU, national R&D, or philanthropy to fund additional Innovation initiatives. For Example: GovTech Lab Lithuania complemented its initial EU project grant with state budget support in 2022, then used Baltic-region innovation funds to retain its core team. Experio Lab funded doctoral research under a Marie Curie network to build out its knowledge management capabilities, it also converted its initial national funding success into sustained local funding.

Priced memberships and services: within the scope of its operations a PSIL can charge fees for its initiatives in capacity building and specialised services to reinforce partner commitment and informally build an innovation fund ecosystem in the public sector. This is evidenced by the operations of LabX who are piloting a model which charges a predetermined fee on each prototyping project it facilitates for a PSO. This is paid to the state budget which is then allocated to LabX via its AMA budget line funding the public innovation ecosystem. La 27e Région offers an annual paid membership subscriptions to PSOs; this fee model gives them organizational capacity.

These three pillars: core allocations, targeted grants, and fee for service combine to create a robust finance structure that can support ongoing operations, stimulate innovative initiatives, and unite partners behind a common investment. It also enables the lab to maintain autonomy and flexibility through the hybrid approach, which also solidifies its standing as a significant player in the public sector.

6.5 Communicate and Demonstrate Impact

PSILs not only need to have impact in the public sector but its support is heavily anchored on its ability to demonstrate this success. Govlab Austria observe in hindsight that they should have communicated their initiatives better to maintain momentum and support. Tõnurist et al. (2017) found that the communication of success to stakeholders leading to visibility and measured outcomes had to do with providing legitimacy for the lab's activities to the public. The labs in the study achieved visibility in the following ways.

PSILs utilize awards, websites and public recognition. The PSILs should use their website to report on ongoing initiatives, achievements and post reports on projects. Public visibility improves the labs perceived credibility and gives them opportunities. From documenting sharing their work, Experio lab were offered opportunities to participate in the Marie curie projects and build their own PHD. The countrywide network was organically created by interest from other PSOs based on their showcased work. Lithuania's GovTech team were recognized globally and awarded for their work. LabX Won the Global Government Excellence Award in 2023, while Nido has been awarded an ESPA award.

PSILs tailor communication to stakeholders. In their communication PSILs should speak the language of government: results, alignment, impact. Accelerate Estonia submits strategic reports to facilitate data driven decision making by decision makers. Govlab Austria and Nido wrote papers to the cabinet to showcase and defend their work to acquire resources to continue their work.

PSILs showcase measurable impact. PSILs invest in experts to develop Impact assessments for successful initiatives, for example GovTech Lab Lithuania quantified savings from AI crop damage assessments. Latvia, LabX, Lithuania, Austria all are working to develop more structured impact assessments.

6.6 Continuously Adapt and scale

The strategies for sustainability vary based on institutional, political and geopolitical changes. The ability to adapt to external shifts and embed their learnings into lasting public sector change is imminent to the continuity of a lab. Wirth et al. (2019) and Haug & Mergel (2021) agree that institutional learning and adaptive capability determine whether labs grow or stagnate. The labs implement this in the following ways.

PSILs must continuously align with government priorities. Governments are bound to change through electoral cycles, PSILs must be able to scan for change and realign their priorities to cater to the prevailing government. Labs stay relevant by scanning policy signals and reorienting their portfolios accordingly. A good example is Latvia's lab that is working on more defence innovation sprints in 2025, following their governments redirection of resources towards defence initiatives. This will guarantee interest from decision makers and funding for the projects.

PSILs should invest in systemic change. Beyond one-off projects, leading labs codify their methods and create new capabilities across the public sector. This is evidenced by labs such as LabX that created an entire innovation ecosystem through its Rede Labs program, where it established twelve new embedded labs. Accelerate Estonia through resolving regulatory barriers continuously adapts the public sector to accommodate new innovations. The ability to replicate successful models and institutionalize them throughout government departments is key for attaining sustainability (McGann et al., 2018; Lewis et al., 2020).

Lastly, agility not only by utilising design thinking but also in how the lab acquires projects. LabX has four avenues of identifying challenges remain open to new methods. Experio Lab does not employ their own predefined design method to allow different stakeholder groups the autonomy to utilise the methodologies they see fit creating case studies to learn from each other. Agility in all of the lab's operations enables it to adopt strategies to resolve common challenges.

6.7 Framework for creating and Sustaining Public Sector Innovation Labs

By incorporating the guidelines from the lab profiles, value propositions and strategies. These insights are adopted into steps can be utilised by decision makers when creating PSI labs to guarantee its sustainability. The managers of the labs encountering difficulties can use the framework as a guideline for redesigning and navigating the public value creation context specific challenges encountered in obtaining legitimacy and operational capacity in the real world. The framework begins with the identification of a vision based societal needs in line with Moore (1995) PVT and incorporating the four core value propositions of a PSIL. The first step combined with the right institutional positioning and governance structure sets a strong foundation for sustainability. The PSIL team with the right profiles and a funding model can then utilize the recommended project design and delivery to create and demonstrate systemic impact while adapting to change in government priorities over time as shown below.

Table 4Public Sector Innovation Labs Sustainability Framework

Step	Checklist Elements	PVT Element(s)	Lab Examples
Define & Deliver a Compelling Public Value Proposition	-Identify and define mission based on societal needs Enable Experimentation and	Public Value (PV)	-State Chancellery of Latvia Lab: tax-declaration redesign sprints with VID.
	Prototyping: offer safe, low-risk pilots to test solutions before scale-up Solve Societal Challenges via		-La 27e Région (FR) : "La Transfo" resident teams pilot design labs.
	Citizen-Centered Co-creation: involve end-users, PSOs, and stakeholders in design workshops.		-LabX (PT): redesigned service processes and spun up 12 minilabs via RedeLabs.
	 Drive PSO Transformation: embed innovation capacity by redesigning processes and building internal teams. Create and Disseminate Knowledge: capture insights in open toolkits, run training programs, and exchange forums. 		-Experio Lab (SE): monthly research seminars and publish Creative Commons reports to share service-design learning.
2. Choose the Right Institutional Positioning & Governance Structure	- Embed in a high level, nonpolitical host (agency, department) and negotiate formal autonomy clauses - Balance proximity to power (visibility) with operational freedom (flexibility) - Create an advisory or steering board where sponsor support is weak	Legitimacy and Support (L&S)	-LabX (PT): moved into AMA for stabilityLIP (ES): under INAP, leveraging influence -State Chancellery of Latvia Lab: centrally located for visibility -NIDO (BE): advisory board buffers conflict.
3. Build PSIL Team	- Recruit multidisciplinary core team (policy, design, tech) - Appoint strategic liaison roles for stakeholder and political navigation Foster team motivation via autonomy and shared vision	Operational Capacity (OC)	 Accelerate EE: combines legal, data-science, and startup mentors LabX (PT): service designers, sociologists, policy experts, scanners LIP (ES): Motivates team to prevent migration.

4. Design a Robust Funding Model	- Secure a guaranteed base budget from sponsor Pursue competitive grants (Supranational (EU), national R&D, regional) -Charge service fees to PSO -Membership subscription models	Operational Capacity (OC)	-Experio Lab (SE): local funding + National Health Ministry funding + EU Horizon 2020 grants -State Chancellery of Latvia Lab: state budget + EU Recovery & Resilience grants (2023) -GovTech LT: EU Recovery & Resilience grants + state budget support + Baltic funds • LabX: service fees reinvested via AMA budget + state budget +EU funding • La 27e Région (FR): annual membership subscriptions + programme funds +National sponsor -NIDO: department funding + staff secondments
5. Communicate Impact & Demonstrate Value	-Publish impact reports, case studies and successes - Leverage awards, media and peer forums to boost reputation Tailor communications to government decision-makers (datadriven, outcome-focused) - Conduct and disseminate rigorous impact assessments	Legitimacy & Support (L&S)	-GovTech LT: GovTech events + GovTech awards -Experio Lab: monthly seminars, Marie Curie project invitations -LabX: Global Government Excellence Award 2023 -NIDO: EPSA award recognition -Accelerate EE: strategic reports to ministryGovLab Austria & NIDO: cabinet papers defending lab work
6. Continuously Adapt, Iterate & Scale	 Regularly scan policy agendas and pivot to new priorities. Seed train the trainer models to spread innovation capability. Maintain agile processes. 	Public Value (PV)	-State Chancellery of Latvia Lab: launched defense innovation sprints in 2025 -LabX: rolled out 12 RedeLabs embedded mini labExperio Lab: flexible methodology channels

Note. Checklist synthesized from nine EU PSIL cases; PVT refers to Moore's Strategic Triangle elements.

6.8 Theoretical contributions

6.8.1 Contribution to Public Value Theory

The six step PSIL sustainability framework operationalises Moore (1995) strategic Triangle by demonstrating how PSILs can implement each corner in practice to remain sustainable.

Public Value (PV)

The Public value aspect is operationalised in the first Step: "Define & Deliver a Compelling Public Value Proposition". This step identifies the value that innovation labs bring to the public sector which mainly involves the use of design methodologies to create user centric public services around the needs of citizens. The last step with adapting and iteration the PSIL ensures that it still creates public value through its initiatives.

Legitimacy and Support

Choosing the right institutional positioning in the second step, impacts the lab's access to access to Legitimacy and support. The central positioning within a stable institution gives it influence and support from the sponsor ensuring reception from other PSO's while delivering its mandate. Labs such as Nido which are not properly positioned lack legitimacy even within its own agency with other departments. LIP and LabX on the other hand thrive within their institutions with support from their organization. Communicating and demonstrating value is also important as the public perception of a PSIL impacts its legitimacy and support.

Operational Capacity

In step three and four through creating a team and a robust funding model, a PSIL's operational capacity is developed. A motivated well-equipped team and finances are the resources needed to carry out innovation projects. Maintaining access to these resources long term impacts the sustainability of the lab.

6.8.2 Contribution to Existing Literature

The study confirms that experimentation gives room for risk management allowing for the public sector to test new policies as in the Experio Lab sample case and

technologies as with GovLab Lithuania in the public sector. Previous literature cite experimentation as absorbing risks associated with innovation (Acevedo & Dassen, 2016), and limiting the overall cost of failure by limiting the scale (Da Silva Junior et al., 2024; Fuglsang et al., 2021; Lee & Ma, 2020). Experimentation is both a value proposition and strategy in itself for as it mitigates risk and generates public value simultaneously.

Previous literature cited that PSIL ability to survive long term and scale innovations was impacted heavily by leadership support (Tõnurist et al., 2017) and political support (McGann et al., 2018) This has been confirmed by cases such as Nido and Govlab Austria that struggle with sustainability due to lack of adequate sponsorship support from their host institutions and decision makers. By positioning the lab in a location where it garners adequate support and influence, the framework offers a solution for the redesign to solve this problem.

The embedded agency paradox observed that PSILs struggle to balance autonomy and institutional constraints (Farla et al., 2012). From the study this is confirmed as embeddedness gives the PSILs legitimacy based on the institutional positioning. The labs in the study however insist that the lab need to be created to be more flexible that the public administration itself, the PSIL The framework therefore resolves this dilemma by negotiating for formal autonomy clauses.

While Silva Junior et al. (2024) and Tõnurist et al. (2017) previously identified PSILs as knowledge disseminators, they fall short in describing how labs could institutionalise this function. Step one on value definition operationalizes this function by prescribing material ways labs can implement this such as open-source toolkits and case studies, trainings, academic courses, monthly exchange seminars, and capacity development programmes. This is evidenced by Experio Lab's Creative Commons reports.

7 Conclusion

The study set out to identify which value propositions and strategies public sector innovation labs develop to ensure sustainability. The first sub questions explored public sector innovation lab profiles in the European Union and their value propositions while the second question explored their strategies for sustainability. The study interviewed managers and founders from nine innovation labs who gave an in-depth explanation into how PSILs navigate the Moore's (1995) strategic triangle. From these findings the study identified which value propositions and strategies PSILs should employ to ensure sustainability.

7.1 Key findings

To answer the first sub question, the study identified nine lab profiles: State Chancellery of Latvia Innovation Lab, GovTech Lab Lithuania, Public Innovation Laboratory (LIP) in Spain, GovLab Austria, NIDO in Belgium, Experio Lab Sweden, Accelerate Estonia, La 27e Région in France, and LabX Portugal. These labs embraced design methodologies which prioritize their main value proposition to create a safe space for experimentation of solutions to societal problems. The prevalent value propositions included providing organizational support to public organizations to streamline their internal processes and services, building networks for collaboration and cocreation of public services, creation and dissemination of knowledge on innovation through capturing learnings from their diverse portfolio as well as conducting trainings and providing tools for capacity building. The value propositions represent the public value of public sector innovation labs.

The second sub question on strategies identifies how PSIL develop and maintain their operation capacity as well as their Legitimacy and support in the public sector in order to continue providing public value. The study identified the following strategies: define a clear mission, position the Lab in a central, politically stable host institution, build and motivate a multidisciplinary team that can develop strong networks, secure a robust funding model, demonstrate and communicate impact from innovation projects, continuously adapt through strategic alignment and scale through systemic initiatives. These strategies have enabled the labs in the study to maintain their sustainability, however for new labs, using this as a guideline for designing the lab ensures its sustainability throughout its lifetime. Existing labs can adopt these strategies to mitigate ongoing challenges.

By mapping these empirical steps to Moore's (1995) strategic triangle, this thesis also advances public value theory from abstract pillars to an actionable model of

PSIL sustainability. The six-step framework incorporates the lab profiles, value propositions and strategies into a guiding framework for the creation and redesign of existing labs to anchor them as key players in the public sector.

7.2 Policy and managerial recommendations

The policy makers can gain prescriptive measures from this study. This study can guide important decisions such as anchoring the lab in stable agencies to prevent the negative impacts of political cycles on the PSIL. They can also mandate the development of a robust innovation funding models borrowing from successful labs such as LabX Portugal. The study encourages decision makers to design labs that embed systemic innovation initiatives as opposed to isolated project approaches. Inspired by Labs such as Accelerate Estonia who focus on regulatory barriers opens up the economy to resolve societal problems rather than solutions geared towards a single company or organization.

It also gives the managers of innovation labs mitigating strategies for their current challenges for instance most of the labs that participated in the study are highly impacted by lack of adequate funds to carry out the innovation initiatives. Based on the framework such labs can source alternative funding sources based on their national and regional context such as resource sharing from partnerships, subscriptions, grants from supra national organizations such as the EU and service fees among others. Managers lacking sponsor support can opt for supporting governance strategies such as the creation of an advisory board or lobbying for autonomy through repositioning by demonstrating and communicating impact to decision makers. Observations on the lab's findings shows that it is impossible for a PSIL to succeed without aligned goals with sponsors and decision makers. A lab can be formed in alignment, or the managers can continuously align during its operations, but it can never successfully force the decision makers to change priorities.

PSILs have been unable to come up with a reliable method to measure impacts. Despite popular belief labs understand that it's the government's responsibility to take risks to solve societal problems, sometimes this is done by creating a context for emergence and managers and policy makers should therefore take the pressure off from measuring impact and focus on facilitating citizen centric solutions.

7.3 Limitations and Future Research

The focus on the study of national PSILs within the EU limits the study to a European, developed nations context that may not be applicable in developing regions in the global south which have different political, administrative and resource dynamics. This may limit their ability to implement some guidelines due to limiting contextual factors. For instance, all the labs in the study have access to supra national organizational funds such as EU. Such grants may be not available to isolated developing countries. The sustainability of PSILs would benefit from future research being carried out in new contexts outside of the EU. The replication in other contexts by future researchers to build up to more generalizable recommendations.

The findings of the study also relied on self-reporting from the managers and founders of the labs. The interviews and documents were originated from the Innovation labs founders, managers and official websites. This may have led to positive reporting bias. Future research should replicate the study with a different research approach to mitigate the possible self-reporting bias.

Additionally, due to time constraints, the study research approach limited the interview to the PSIL self-reported perspective. Future researchers should explore additional perspectives on the strategies of PSILs for sustainability such as those of key decision makers such as the leadership of the host organizations, politicians and partner public sector organizations for a user focused perspective into the strategic operations and public value initiatives of PSILs.

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Appendix

A Declaration of Authorship

I hereby declare that, to the best of my knowledge and belief, this Master Thesis titled "Building the Lab: European Public Sector Innovation Labs' Value Propositions and Strategies for Sustainability" 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.

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