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The road to the Single Digital Gateway:
Implementing cross-border digital public services in Belgium

Master Thesis

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Abstract

The emergence of eGovernment initiatives and the launch of the Single Market in the European Union led to increasing cross-border transactions and communication between European Union citizens, causing a demand for cross-border digital public services. Various initiatives have been set up by the European institutions to comply to this demand, reality however, still shows discrepancies between national and cross-border procedures. The Single Digital Gateway Regulation aims to improve this. Current research focuses mainly on the general implementation of cross-border digital public services, without tacking into account the impact on specific services and their managers in specific contexts. Therefore, this master thesis looks into the perception of service managers and experts on the implementation of the SDGR in the Belgian "posting staff abroad" service, through change factors from change management theory by Kuipers et al. (2014).

The data for this research was collected through expert interviews with Belgian managers of the "posting staff abroad" service and SDGR coordinators. Additionally, the research was supported by document analysis. The results showed that the Belgian administration perceived a relatively positive, yet not significant impact of the SDGR on the context, content, process, leadership and outcome factors of change. Issues like, organisational structures and capabilities, national laws, cross-border access and authentication, accessibility and coordination were identified by the respondents. The ongoing implementation of the Single Digital Gateway Regulation consequently requires improvements to foster the successful implementation when considering the findings from the Belgian "posting staff abroad" service.

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Abbreviations

ICT	Information and Communication Technologies
OECD	Organisation for Economic Cooperation and Development
MS	Member States
EU	European Union
DSM	Digital Single Market
SDGR	Single Digital Gateway Regulation
EIF	European Interoperability Framework
eIDAS	Electronic Identification and trust services for electronic transactions
OOP	Once Only Principle
OOTS	Once Only Technical System
GDP	Gross Domestic Product
EESSI	Electronic Exchange of Social Security Information
GDPR	General Data Protection Regulation
NPM	New Public Management
TQM	Total Quality Management
EES	Estonian e-government System
PEPS	Pan European Public Services
CBE	Crossroads Bank for Enterprises
FPS	Federal Public Service
BSSN	Belgian Social Security Number
SME	Small and Medium Enterprises
EEA	European Economic Area
BOSA	Federal Agency for Policy and Support

PDA1   Portable Document A1

NSSO   National Social Security Office

ELA   European Labour Authority

1 Introduction

Digital technologies changed the way citizens go through their daily life, the way they work, do business, travel and relate to each other. This trend caused rising demands and expectations concerning public services delivered by governments. The first electronic government (eGovernment) initiatives emerged in the 1990s. Public administrations started to implement Information and Communication Technologies (ICT) to improve the efficiency and effectiveness of their services. Although this was mainly focused on providing services in a digitized way in the first decade, reports of the Organisation for Economic Cooperation and Development (OECD) show that the emergence of eGovernment became an important enabler for long-term transformation of governments (OECD 2003).

Together with the appearance of eGovernment initiatives, the European integration process led to significant changes in the lives of citizens. In 1993, the single market was launched, establishing free movement of people, goods, services and money between Member States (MS) in its territory (European Union n.d.-a). This fostered the increase of cross-border transactions and communications between different societal actors leading to a demand for coordination and regulation. With establishing more density and structure in the European Union regulation in the following years, new and intensified linkages were encouraged between private and public actors (Sweet and Sandholtz 2011).

The disappearance of borders and growing interconnectivity through ICT in the European Union (EU) caused a demand for cross-border digital public services. This became apparent in the policy initiatives and priorities initiated by the EU in the past decade. In 2015 the European Commission formulated the set-up of a connected Digital Single Market (DSM) as one of their priorities. With this policy the European Commission aimed to improve access to digital goods and services by removing barriers and creating an environment fit for digital networks (Eurostat n.d.). The Digital Single Market Strategy for Europe launched the eGovernment Action Plan, running from 2016 to 2020, to accomplish these policy goals. The action plan aimed at joining up efforts, by modernising public administration with ICT and enabling cross-border mobility through interoperable digital public services (European Commission 2016).

Some core initiatives supported by the eGovernment Action Plan are the initiation of the Single Digital Gateway Regulation (SDGR) and the further development and support of the European Interoperability Framework (EIF) and eIDAS services (European Commission 2016). The Single Digital Gateway Regulation, implemented since 2018, launched the 'Your Europe' portal to facilitate online access to information, administrative procedures and assistance services throughout the European Union. The

goal is to offer access to 21 online procedures in EU countries by 2023 (European Commission n.d.-a).

The regulation on electronic identification and trust services for electronic transactions (eIDAS) was released in 2014 and is considered a key enabler for secure cross-border transactions. It provides the ability to use national electronic IDs to access public services in other MS and creates an European internal market for trust services, giving them the same legal status as the paper based alternatives (European Commission 2022). In 2017 the new European Interoperability Framework was published, promoting seamless services and data flows in public administrations. The EIF is a generic framework that lays out basic conditions for achieving interoperability on all relevant levels of government. This framework was set up as part of the ISA2 programme running from 2016 to 2020, to support the development of digital solutions that enlarge the benefits from interoperable cross-border and cross-sector public services (European Commission 2017-a).

The commitment of the Member States to cross-border digital public service provision was reaffirmed in the Tallinn Declaration on eGovernment in 2017 and the Berlin Declaration on Digital Society and Value-based Digital Government in 2020, were progress on the linkage of eServices and the implementation of eIDAS and the Once Only Principle (OOP) was promised (European Commission 2017-b; European Commission n.d.-a). Currently, one of the most important initiatives regarding digital transformation is the Digital Europe Programme (2021-2027). This EU funding programme aims to promote interoperability and cross-border and cross-sector public services to enable the digital autonomy of the EU by using building blocks. These standards-based open and re-usable solutions offer basic capabilities for diverse projects by facilitating the delivery of digital public services. The building blocks consist of eDelivery, eSignature, eID, Once Only Technical System (OOTS) and eInvoicing (European Commission n.d.-b).

1.1 Motivation for research

Despite the various policy initiatives referring to the importance of cross-border digital public services in the European Union, reality shows a different tendency. The eGovernment Benchmark of 2022 concludes in its research that cross-border (digital) public services are overlooked and not on par with services that are currently provided to national users. While 81 percent of services can be completed online by national users, international users can only access 46 percent of online services. Additionally, only one in four services can be accessed through an eID from another Member State, at the same time national citizens can authenticate with their eID in two out of three cases. On top of that, 52 percent of services do not allow international users to upload or obtain

eDocuments. The main barriers named in the report are the availability of information in other languages and the requirement of face-to-face contact (Capgemini, Sogeti, IDC and Politecnico di Milano 2022).

Research however, suggests significant benefits caused by the implementation of cross-border digital public services for citizens, businesses and governments. The Single Digital Gateway Regulation focuses on the cross-border access of 21 services by 2023, categorized in different life events like, birth, residence, studying, working, moving, retiring and starting, running and closing a business (European Parliament and European Council 2018). The study of Fritsch and Bertenrath (2019) shows that cross-border (digital) public services in the working as well as the starting, running and closing a business category have significantly contributed to employment growth in the European Union, accounting for five percent of total employment. Additionally, positive effects on a countries Gross Domestic Product (GDP) are observed, it could increase 0,05 percent if the cross-border (digital) public services increase by one percent. The availability and correct implementation of these services allow entrepreneurs to set up and run a business anywhere in the EU, independent of their own location. Enabling the registration of these new legal entities across borders could have direct spillover effects to national and European growth and employment, providing economic benefits, cost saving and increased competitiveness to both businesses and governments (European Commission 2013).

Considering the above-mentioned economic impacts, this thesis will focus on cross-border digital public services that are designed to facilitate the starting, running and closing a business procedure, more specifically on the registration of employees with compulsory pension and insurance schemes, also referred to as the "posting staff abroad" service. Research conducted by De Wispelaere, De Smedt and Pacolet (2022) shows that the scale of intra-EU mobility and thus posted workers is large nowadays, around 1,5 million frontier workers and 650,000 to 850,000 intra-EU seasonal workers are counted in 2020 as well as 25 million cross-border trips for professional reasons in 2019. Practice shows that sending and receiving Member States are not always informed about the posting activities in their country, because of discrepancies in declaration and registration processes. Sending Member States receive data from the Portable Document A1 (PDA1), but receiving Member States are dependent of declaration systems they introduce and manage themselves (De Wispelaere et al. 2022). The obligation of the SDGR to implement this cross-border public service completely online, forms an interesting case for research, since there are a lot of different practices and procedure prevalent in the European Union. This research therefore aims to look into the cross-border digital public

service provided by the receiving European Union Member States to register staff posted to their country.

Currently businesses are still expected to provide extensive information to cross-border service providers for posting purposes in contrast with the procedure for national companies and despite the fact that a substantial part of the information is already available in sources managed by other Member States. The data is currently often retrieved through paper, e-forms or manual uploads making the procedure time consuming and lowering the quality of the data. Most data is still saved to national base registries, while the opportunity exists to gather data immediately from other Member States registries without the need to store it. Additionally, there is significant diversity in company types and social security and tax regulations in the EU, making harmonization and semantic interoperability a complex matter (van der Burght and Bekkum 2020). This alignment would however be necessary for the success of the Single Digital Market and Once Only Principle. Besides the differences in company types and legislation, Member States of the European Union show different levels of digital maturity concerning the provision of cross-border digital public services and their governance and data infrastructures. This discrepancy leads to hindering effects on the successful adoption of the Single Digital Gateway (Krimmer, Dedovic, Schmidt and Corici 2021).

When considering the Single Digital Gateway Regulation, literature often emphasizes the current barriers and drivers and the potential positive impacts for citizens and businesses. The European Commission names the cross-border users and single market as the main beneficiaries for the implementation of the SDGR (European Commission n.d.-a). One important stakeholder group seems to be forgotten in this narrative, namely the service managers and experts of the Member States that are expected to implement and manage this change in their institution. These actors are often part of different governmental departments and institutions that are subject to varying regulations and organisational constellations. This thesis aims to contribute to existing academic literature by looking into the perception of service managers and experts on the changes caused by the Single Digital Gateway Regulation.

Since cross-border digital public services are a relatively new concept and have still been evolving in the past years, the service managers and expert perspective in a specific service context has not been researched thoroughly. Additionally, the existing change and reform literature often focuses on transformations on a macro-level, disregarding the importance of micro-level processes and the impact on specific procedures and services in organisations (Kuipers, Tummers, Higgs, Kickert, Tummers, Grandia and Voet 2014). Examples of these kinds of research are Krimmer, Dedovic, Schmidt and Corici

(2021) and Kalvet, Toots and Krimmer (2018), who studied the barriers and drivers of cross-border and once-only services, on an EU-wide level, without distinguishing between different stakeholder perspectives.

The study performed by the eGovernment Benchmark on the status of cross-border digital public services in the European Union Member States applied a methodology of mystery shoppers, solely looking at the procedures that can be accessed through the available websites of national governments, without considering the back office in this process. This does not provide insight into the change factors that can have an impact on the implementation and provision of these services by service managers and national governmental institutions (Capgemini et al. 2022).

Kuipers et al. (2014) specify the need for in-depth empirical studies of change processes within various contexts through the viewpoint of actors that are managing or are affected by this change. In this case service managers and experts are valuable resources in the implementation process off change. They are highly involved in providing the cross-border digital public services and the incorporation of the SDGR in the existing structures and procedures of their organisation. This research therefore aims to improve theory building in change management literature by focusing on the understanding of the practice of cross-border digital public services. Furthermore, Kuipers et al. (2014) perceive a need for studies of the management of change in different national contexts to gather better knowledge of the interaction of change within organisations and the European Union as a whole. The in-depth research on the Belgian case can show the impact of the implementation of change on the public sector in varying contexts and organisational constellations.

The research objective of this master thesis is to contribute to change management theory by looking into the perception of service managers and experts on the change factors applied to the implementation of the SDGR in a specific country and organisational context, while focusing on the "posting staff abroad" service. Focusing on micro-level processes contributes to the gaps in current cross-border (digital) public services research. Additionally, the in-depth study of change processes improves the theory building of change management theories in the public sector. Furthermore, Gatenby et al. (2014) mention that there is a lack of empirical evidence on the role of middle managers in public services and their perceptions on the ability to enact change roles in different organisations. Enlightening their perspective on the implementation of new legislation in their service context, will thus contribute to existing academic literature.

1.2   Research questions

Following the various findings from previous research on the Single Digital Gateway Regulation, change management theory and cross-border digital public services this thesis aims to answer the below-mentioned research questions:

How do service managers and experts perceive the change factors from Change Management Theory, applied to the implementation of the Single Digital Gateway Regulation in the cross-border digital public service "posting staff abroad"?

The central question will be answered by the following research questions:

1) *What is the perception of service managers and experts of Belgium on the change factors provided by change management theory applied to the implementation of the SDGR in the cross-border digital public service "posting staff abroad?"*

2) *Which recommendations are perceived as valuable by service managers and experts of Belgium for the further implementation of the Single Digital Gateway Regulation?*

To answer the research question a single case study will be conducted in an exploratory manner, to gain an in-depth understanding of the way service managers and experts perceive the change factors when implementing the SDGR in the "posting staff abroad" service in their country (Yin 2018). The selection of the Belgian case and the "posting staff abroad" service will be discussed in the methodological part of this Master Thesis. The change factors will be analyzed through Change Management theory by Kuipers at al. (2014). The research will be conducted using qualitative research methods, namely a combination of document analysis and expert interviews.

1.3   Structure of the Master Thesis

The Master Thesis will first provide more information through a background chapter on the context of the emergence of cross-border digital public services. The evolvement of digital government in the European Union will be discussed, using the different policies, regulations and frameworks available in literature. Thereafter the applied theoretical framework and literature will be explained by going more into detail about the concept of organisational change, the selection of the theoretical framework and the different change factors that play a role in Change Management Theory as proposed by Kuipers et al. (2014). Eventually the literature review will explain the concepts relevant for this research; namely cross-border digital public services and public service managers.

Secondly, the methodology of the thesis discusses the research design, data collection, coding and data analysis. The research design will elaborate on the qualitative research method using a single case study approach. In this chapter the choices for the case of Belgium and the "posting staff abroad" service will be further explained. The data collection will consist of the selected literature for the document analysis and the expert interviews that will be conducted. Furthermore, the coding will show the coding method and code tree applied to the research. Finally, the data analysis techniques will be discussed. Throughout the methodological framework the limitations of the chosen research design and methods will be considered.

In the next chapter Change Management Theory will be applied to analyze the selected "posting staff abroad" service in Belgium. In this part different change factors as perceived by Belgian service managers and experts will be portrayed. Additionally, recommendations will be formulated for the further implementation of the SDGR as perceived by Belgian service managers and SDGR coordinators. Furthermore, the discussion will expand on the observed factors in the country and attempt to link these to the findings in previous research.

Finally, the concluding remarks will aim to answer the formulated research goals. The chapter will consist of critical notions on the limitations of the research and discuss the potential generalizability to other countries in the European Union. Lastly, the thesis will suggest further implications for studies and potential topics for future research.

2 Background

To gain a better understanding of the emergence of cross-border digital public services in the European Union and its Member States the most important steps towards the current status will be highlighted in this part. The first step is the Digital Single Market Strategy and the compliant eGovernment Action plan (2016-2020). Additionally, in 2018 the Single Digital Gateway Regulation was launched, which can be considered as one of the main enablers of cross-border digital public services and therefore the centrepiece of this master thesis. Furthermore, the Electronic Exchange of Social Security Information, the eIDAS regulation, European Interoperability Framework, and Digital Europe Programme will be discussed.

2.1 eGovernment Action plan (2016-2020)

In 2016 the Digital Single Market Strategy for Europe decided to set up a new eGovernment action plan as a result of the promising outputs of the action plan conducted from 2011 to 2015. While the previous plan already provided more coherence and interoperability between national governments of the EU's Member States, the full benefits of seamless digital services were not yet achieved (European Commission 2016). Consequently the new eGovernment Action Plan focuses on removing these barriers and the ongoing fragmentation in the MS by providing a long-term vision across the EU. The eGovernment action plan aims to join up efforts and provide benefits to businesses, citizens and public administrations (European Commission 2016).

The vision of the action plan states that open, efficient, inclusive and borderless, end-to-end digital public services should be available to all citizens and businesses by 2020. Achieving this goal would increase the efficiency of public administrations and free movement in the EU (European Commission 2016). To accomplish the plan's aim several initiatives and principles were decided upon. Some of the most noteworthy in this paper's case are digital by default for public services, the once only principle and cross-border and interoperability by default (European Commission 2016).

The policy priorities of the eGovernment action plan point out the importance of long-term sustainability of the cross-border digital services infrastructure beyond the existing funding programmes. According to the European Commission (2016) the issuance of cross-border services fosters access and competition across the entire Single Market. Additionally, the existing procedures and information are not considered to be consistent and interoperable across the EU and the Member States. Therefore the Action Plan proposed the launch of a Single Digital Gateway, ensuring smooth and seamless services throughout the whole European Union (European Commission 2016).

2.2   The Single Digital Gateway Regulation

The Single Digital Gateway Regulation was launched in 2018 by the European Parliament and European Council to foster access to information, procedures, assistance and problem-solving services in the European Union. The Regulation can be considered as a key element derived from the aims of the Digital Single Market Strategy, since it is expected to provide more opportunities for people and businesses within the European Union. The Digital Single Market Strategy recognized that the needs of citizens and businesses can be better met through extending and integrating existing portals, systems, solutions and services on a national level through cross-border cooperation assisted by a single entry point or 'gateway' (European Parliament and European Council 2018).

The SDGR clearly states that the success of such a gateway exclusively depends on the efforts of both the European Commission and its Member States. Cross-border service users throughout the European Union should have access to all online procedures in all Member States. This would be feasible through the same technical solutions, alternatives or solutions with the same outcome. Additionally, discriminatory barriers like national designed solutions dependent on national identification numbers, postal codes or payment possibilities should disappear. This also entails that means for electronic identification in the national governments should accept and authenticate access to online services in cross-border situations (European Parliament and European Council 2018).

The regulation is mandated with the full digitalization of key services for cross-border digital public service users, as stipulated in annex II of the document. The criteria for these services comprise that all steps, from the access-step to the completion-step, as well as all additional interactions with the government can be fulfilled online. These steps concern the identification of the users, information provision, signatures, final submissions, acknowledgments of the receipt and the output together with a notification of completion of the procedure. Important to note is that the substance of the procedures at national, regional and local level is not affected by the regulation, solely the criteria for full online availability are ought to be implemented (European Parliament and European Council 2018).

To ensure the reliability and credibility of the Single Digital Gateway Regulation, Member States should comply with a minimum list of requirements. All services should be accessible in a clear and user-friendly way, the fulfilment of this objective is in the hands of the MS. Additionally, the websites of national institutions should comply with the principles of perceivability, operability, understandability and robustness. Furthermore, the payment in the service procedure should be available through generally used means, like credit and debit cards, in cross-border settings. Moreover, indicative

time periods and deadlines that are crucial for the completion of the service procedures should be clearly informed to cross-border users (European Parliament and European Council 2018).

Verifying electronically provided evidence by users can be considered as another important requirement for the SDGR, since electronic seals and verifications are often not submitted, recognized or directly exchanged by competent authorities. A solution for this lack of administrative cooperation is the Internal Market Information System that can be used by Member States on a voluntary basis. It is necessary to reuse existing data in cross-border cases to avoid additional burdens for the user and comply with the Only Once Principle. On top of that, the handling and management of data should always be compliant with the data protection rules and principles of security and privacy by design (European Parliament and European Council 2018).

The European Union offers a set of building blocks to the Member States that provide the required capabilities for the set-up of a technical system, some examples are the Connecting Europe Facility, eDelivery and eID building blocks. The use of the eIDAS framework can ensure secure transactions across Member States, this will be explained further in the section concerning the eIDAS regulation (European Parliament and European Council 2018).

The Once Only Technical System (OOTS), as mentioned in Article 14 of the Single Digital Gateway Regulation, provides a dataspace for the government-to-government exchange of evidence for the Annex II procedures (European Parliament and European Council 2018). The technical system will be established by the European Commission in cooperation with the Member States and is expected to be implemented by December 2023 (European Commission n.d.-c). The technical system has several functions, such as the access and exchange of evidence by authorities and the control over such requested evidence by the user, as well as interoperability and security. Important to note is the fact that the system will only be permitted on the explicit request of its users and will thus not be obligated, unless stated otherwise in law. The European Commission and Member States are responsible for the management of their parts of the system in case of development, maintenance, supervision, monitoring and security (European Parliament and European Council 2018).

Several advantages are linked to the implementation of such a technical system. First of all there is expected to be less administrative burden for the execution of cross-border digital public services. Manually uploading data over and over again would be a thing of the past since evidence can be fetched and reused at any time and place. Secondly, there will be increased efficiency, since the OOTS will be integrated with EU-wide building

blocks, such as eDelivery and the eID (European Commission n.d. -c). Thirdly, the protection of personal information can be ensured, since all procedures will be in line with the General Data Protection Regulation (GDPR) and the user will be at the heart of the data management. Fourthly, the OOTS would provide the first European Union wide data space, connecting all public authorities in the exchange of official documents. Lastly, its implementation is expected to have a positive impact on the success of the Single Digital Gateway (European Commission n.d. -c).

2.3 Electronic Exchange of Social Security Information

Although the role of the Once Only Technical System is specified in the Single Digital Gateway Regulation as an important enabler for the exchange of evidence for the annex II procedures, another system is already in place for the exchange of social security evidences (European Commission n.d.-c). The Electronic Exchange of Social Security information (EESSI) is an IT system that helps social security institutions across the European Union to exchange data rapidly and securely. This data is related to the applied legislation on social security coordination. To promote cross-border digital experiences between citizens, businesses and social security institutions in the future, the European Union is currently working on piloting an European Social Security Pass. This pass would consist of a digital wallet with social security credentials issued by trusted authorities, which is owned by mobile European Union citizens that are able to control their own data (European Commission n.d.-d).

The EESSI ensures faster and more efficient information exchange between social security and citizens and businesses in the EU, promoting the protection of the social security rights of European Union citizens across borders. Additionally, they focus on more accurate data exchange, through multilingual communication and standard electronic procedures. Furthermore, the EESSI helps to combat fraud and errors as well as the secure handling of personal data, without the storage of it in data bases to comply with the General Data Protection Regulation (GDPR). Lastly, the EESSI collects statistics about the coordination of social security to oversee the general trends and to verify the social security rights of citizens that are mobile throughout the European Union (European Commission n.d.-d).

2.4   eIDAS regulation

The regulation on electronic identification and trust services (eIDAS) was launched in 2014 to provide a secure means of electronic interaction between citizens, businesses and governments, aiming to increase the effectiveness of online services and trust in electronic transactions within the European Union's internal market. Additionally, the goal to set up a Digital Single Market by 2015 where cross-border online services are facilitated contributed to the need for secure electronic identification and authentication. In 2014 citizens did not have the possibility to electronically authenticate themselves in other Member States because of the exclusive availability of national identification schemes that were not recognized by other MS. Mutual recognition of electronic identification will thus have a positive impact on cross-border digital public services and remove existing barriers of authentication and access to services (European Parliament and European Council 2014).

Security and trust should be fostered through cooperation between the Member States regarding technical interoperability of the electronic identification schemes and the exchange of information and best practices. Currently different formats of electronic signatures are prevalent in the Member States, to make cross-border digital public services feasible multiple formats should be technically supported in a Member State, supplementary to the one applied on the national level. The eIDAS regulation consequently aims to provide a legal framework for electronic signatures, seals, time stamps, documents and services for authentication, making interoperability possible across the Member States (European Parliament and European Council 2014).

2.5   European Interoperability Framework

The European Interoperability Framework (EIF) was established by and is currently maintained through the ISA2 programme, as stipulated in the 26th, 170th and 171st Article of the Treaty on the Functioning of the European Union. The programme aims to develop interoperable trans-European networks enabling citizens to benefit from the European internal market. This legal framework contributes to the main purposes of the EIF. First of all it wants to inspire the Member States' public administrations to deliver seamless, reusable, cross-border digital public services. Secondly, guidance will be accommodated to hand Member States the opportunity to update their national frameworks, policies and guidelines concerning interoperability. Lastly, the contribution to cross-border and cross-sectoral interoperability for public services is desired to foster the Digital Single Market (European Commission 2023). The EIF is meant to be used as a generic framework, providing basic conditions for interoperability within initiatives on all levels of government related to the definition, design, development and delivery of

public services. In doing so national specifications should be taken into account and changes complementing the framework are expected to be made on a national, as well as on an European Union level (European Commission 2023).

The European Interoperability Framework aims to coordinate and align the already existing national and domain-specific interoperability frameworks, while taking into account their specific requirements. This can be accomplished in two ways, on the one hand it can provide bottom-up support to national interoperability frameworks to extend the scope of their public services across borders. On the other hand, through a top-down approach the EIF, when considered in EU legislation and domains, can maximize the interoperability potential in national actions following these legislations or domains. The desired end result, in both narratives, is the establishment of an European public services ecosystem, where all actors collaborate and are aware of interoperability requirements, making information flow seamlessly and eventually fostering the Digital Single Market of the European Union (European Commission 2023).

2.6 Digital Europe Programme

The Digital Europe Programme was introduced by the European Commission in 2021 and provides funding in order to accelerate the relationship between digital technology, businesses, citizens and public administrations in the European Union. The European Commission defines climate change and the digital transition as the two mayor challenges in today's society. Consequently the European Union institutions focus on these issues with the set-up of the Green Deal and Digital Europe Programme. The Digital Europe Programme supports these digital transition challenges with strategic funding of 7,5 billion in five areas; supercomputing, artificial intelligence, cybersecurity, advanced digital skills and the wide use of digital technologies across the economy and society. The programme mainly complements already existing EU initiatives, as mentioned above, with extra budget and is part of the Multiannual Financial Framework (2021-2027) (European Commission 2022-b).

Work packages are formulated annually to support technologies that are perceived to have a strategic importance for the future of the EU. More specifically they aim to achieve certain objectives, of which one, as relevant in the context of this master thesis, refers specifically to the interoperability of digital public services. The 2023 to 2024 work package freed a budget of 21,5 million euros to support the development of interoperable trans-European digital public services. This objective thereby supports the implementation of the Once Only Technical System as mentioned in the Single Digital Gateway Regulation, to enable cross-border automated exchange of evidence between public administrations across the European Union (European Commission 2023).

3 Theoretical Framework and Literature Review

3.1 Organisational change

When defining organisational change, several categorisations are used to explain the different approaches existing in literature. Burnes (2004) points out that there is a consensus on two dominant approaches, namely the emergent and planned change approach. Until the eighties the planned approach dominated the literature on organisational change, through the viewpoint of Lewin (1947) who presented it through four main types of change theory. The first element comprised field theory, aiming to understand group behaviour by drawing out the field in which it takes place. Secondly, the understanding of group dynamics and interactions was considered as crucial when addressing change to behaviour. Thirdly, action research emphasizes that change requires action and successful action is based on the analysis of situations and solutions (Burnes 2004). Lastly, Lewin (1947) identified a three-step model to foster a successful change project. The first step aims at unfreezing the stability of an organisation, to discard old behaviour and adopt new behaviour. The second step contains the moving principle, where all forces should be considered to predict and steer the direction of change. The last and third step is refreezing the change in the organisation to stabilize the behaviour.

In the early eighties, oil shocks and economic downturns in the West led to a need for organisations to transform fast and radically to be able to survive in their environment. This did not align with the consensual and slow nature of the planned change approach, therefore attracting a lot of criticism to its efficiency (Burnes 2004). Kanter et al. (1992) stated that the approach by Lewin was merely linear and static, whereas organisations are fluid and dynamic entities consisting out of multiple behaviours and overlapping and mutually influencing stages. Culture-excellence proponents therefore argued that innovation and entrepreneurship should be promoted while continuously changing in a bottom-up, cooperative and continuous manner within an organisation (Burnes 2004).

Other literature draws attention to the role of power and politics in the decision-making process related to change. While consensus and rational decision-making are highlighted in research Pfeffer (1981; 1992) claims that the outcomes of change programmes are often determined by the power dynamics that are prevalent in organisations (Burnes 2004).

Besides the attention for power and politics within the change context, the processual approach emerged in the eighties, arguing that change is continuous, unpredictable and political (Burnes 2004). Dawson (1994) describes that the processual framework considers change as a complex and dynamic process where the analysis of the politics managing the change is the central object of research. These criticisms on planned change

literature led to the rise of emergent change literature (Burnes 2004). Hayes (2000) defines emergent change as the alignment of resources owned by the organisation with existing opportunities, constraints and demands in its environment while the ongoing evolvement is the outcome of the prevalent cultural and political processes in organisations.

Alongside the evolution of the planned change to the emergent change approach in the eighties another shift took place during that time period. Until the late seventies research advocated for the incremental model of change, within this approach individual parts of organisations and their managers deal with one problem and one goal at a time in an incremental and separate way to foster the transformation (Burnes 2004). In the eighties two new perspectives emerged, namely the punctuated equilibrium model and the continuous transformation model. Romanelli and Tushman (1994) describe the punctuated equilibrium model with the fact that organisations tend to have long periods of stability, referring to the equilibrium, but are afterwards confronted with short revolutionary phases of change, eventually installing the basis for a new equilibrium. The continuous transformation model explains that organisations should always have the ability to change continuously in a fundamental way in order to survive in their environment (Burnes 2004). It is important to consider the change factors and implementation of the Single Digital Gateway Regulation in the context of the continuous transformation model. The current, digital age, requires organisations to be fit for continuous transformation and improvement.

3.2   Selection of Theoretical Framework

When considering theoretical frameworks related to change for this research it is important to take multiple factors into account. First of all, it is essential to look at change in the context of public organisations. The literature review on organisational change conducted by Fernandez and Raney (2006) observed that there are few studies that explicitly examine organisational change in public sector organisations. Moreover studies of Stewart and Kringas (2003) and Klarner, Probst and Soparnot (2008) address that most change management theory does not make a clear distinction between change management in the public and private sector. There are however a lot of relevant cases on organisational and sectoral change in the public sector reported in academic literature (Kuipers et al. 2014). The Change Management Theory provided by Kuipers et al. (2014) aims to fill this gap by reviewing recent change management theory, incorporating critiques and eventually to employ a framework taking into account previous findings and shortcomings.

Secondly, it is important to consider the time frame and context of the change that is analysed. As explained in the section of organisational change, viewpoints, internal and external environments and change approaches evolved over time, immediately affecting the theoretical frameworks that should be applied. The theory of Kuipers et al. (2014) is a relatively recent theory that takes into account established theories and adds recent research approaches to it. This approach makes the theory applicable to current change research, like in this case the changes caused by the Single Digital Gateway Regulation on cross-border digital public services.

Lastly, the theory provides a flexible theoretical framework with room for multiple and varying findings and cases. The framework was based on an extensive literature review of 160 articles that focus on change management in the public sector, entailing that multiple research approaches, methods, levels and sectors are included and considered in this theory. This is important when researching a case in the European Union context, where a lot of different domains, actors and diverging contexts play a role. This broad view on change management in the public sector forms a compliant theoretical approach for this master thesis (Kuipers et al. 2014).

3.3   Change Management Theory

Studying change requires researchers to consider various factors that help identify specific characteristics related to change management, processes and implementation in public organisations (Kuipers et al. 2014). This research will focus on the Change Management Theory and theoretical factors raised by Pettigrew (1985), Pettigrew et al. (2001), Armenakis and Bedeian (1999) and Kuipers et al. (2014). These factors, as explained below, examine the context, content, process, leadership and outcomes of change.

3.3.1   Context

The first factor is the context factor, referring to the external and internal environment the organisation operates in. When comparing the public sector to the private one, the biggest difference observed is the political context of democracy and accountability as well as the juridical context it operates in (Kuipers et al. 2014). Pollitt and Bouckaert (2004) state that socio-economic forces, political system characteristics, elite decision-making and change events are the main forces that affect change in public organisations. Studies in By and Macleod (2009) add the influence of the emergence of New Public Management (NPM) practices and the complexity of the stakeholder field as impactful to the context factor.

Contextual factors should always be considered in a specific frame of reference and time when researching and comparing cases. While some literature focuses on the societal level as a whole, others mainly consider the organisational or actor levels (Kuipers et al. 2014). Furthermore, looking at drivers of change in a contextual background portrays the demand that is placed on public organisations, more specifically the client and citizen demands, the availability of new technologies and innovations, financial crises, central government decisions and policy changes. The context to manage change is observable in the direct interaction between the organisation and the relevant actors in its environment and network. Additionally, the theoretical framework supporting the change and the approach to implementation often guide the establishment of the context (Kuipers et al. 2014).

3.3.2   Content

When analysing the content factor of change it is useful to distinguish between three possible orders of change, relating to different purposes. The first-order changes introduce new processes, systems and procedures without affecting the existing, primary organisational processes or structures. Second-order changes refer to reorganisations or agency turnarounds, impacting the entire organisational culture, climate and other behavioural factors. Third-order changes can be considered as impactful public service reforms like privatization, public-private and other forms of partnerships and European Union reforms (Kuipers et al. 2014). The content of these orders of change is mostly dependent on the mandated political and administrative decision makers. The change plan can contain full, detailed descriptions of the change or more technical descriptions ranging from macro-level changes to micro-level changes in procedures and structures of the organisation (Kuipers et al. 2014).

3.3.3   Process

The process factor can be divided into planned and emergent change processes. Rusaw (2007) proposes four approaches to change in public organisations ranging from incremental to planned changes. The first approach is a means-end, rational, top-down planned change approach with examples of Total Quality Management (TQM) and re-engineering. The second one is an incremental approach that consists of small-steps and is predominantly decentralized, considering visible, short-term results as being the most successful for change. The third, pluralistic approach involves multiple mental models and varying stakeholders, useful to attempt to solve wicked problems in society. The last approach refers to an individual, learning model where individuals and groups change the organisation together with formal and informal learning behaviour (Rusaw 2007).

A second crucial concept in the change process is the (employee) resistance to change and its impact on the change process. Literature does not display consensus about the possible causes of this resistance. While some perceive personality of actors and context of changes as the most significant influences to resistance, others focus on the clash between public and private tools (Kuipers et al. 2014). Piderit (2000) distinguishes employees reactions to change in three categories; namely cognitive, emotional and intentional. The cognitive dimension refers to the believes of individuals towards the changed object. The emotional dimension entails the feelings, moods, emotions and sympathetic nervous-system activity that people experience towards the change. The intentional reaction refers to the set-up or idea of a plan or resolution to take direct action for or against the planned change.

The third aspect coming forward in the change process are the factors that define success and failure. This aspect is mostly dependent on the definition of success that is applied during the change process, usually based upon the objective of the organisation or change plan. These success and failure ratio's are often measured through the consultation of stakeholders that are involved in the change process, to gain insight in their perspective of success or failure related to the change (Kuipers et al. 2014).

3.3.4 Leadership

Leadership in the public sector can be distinguished into administrative, bureaucratic and political leadership, executed by political supervisors. Administrative leadership is often linked to first-and second-order changes, as explained in the change content, while political leadership mostly relates to third-order changes in public organisations. Additionally, political leadership is considered to be particularly influential in the decision-making phase of the change process, whereas administrative leaders mainly contribute to the content of the change during the implementation phase. The relationship between the two forms of leadership is expected to be mediated by trust (Kuipers et al. 2014).

While most literature about political leadership does not directly address organisational change, some recognize the role of leadership in it. Organisational change literature, however, sees leadership as an important driver of change (Kuipers et al. 2014). Some authors only address the existence of vertical leadership of change in public organisations, where an all-powerful, hierarchical leadership role is envisioned. In contrast there are two authors that relate different types of leadership to different change approaches. Borins (2002) describes that emergent, bottom-up changes require informal and decentralized forms of leadership, while political directed responses to crises and organisational turnarounds are based on traditional, hierarchical leadership models. On top of that Rusaw

(2007) explains that incremental and pluralistic changes require decentralized and shared leadership, while planned, rational changes require the hierarchical leadership variant.

3.3.5   Outcomes

Change outcomes can be described as relevant results of the implementation of change that can have both an intended or unintended outcome and positive or negative connotation. It is important to distinguish outcomes from outputs that portray clear decisions and are often easier to measure. The outcomes also differ dependently on the chosen change management approach. Planned change approaches have an understanding of the desired results and objectives, whereas emergent approaches did not specifically consider these beforehand (Kuipers et al. 2014).

Research suggests a variety of outcome criteria that are often related to change processes, these outcomes are mainly dependent on the values of the organisation. The introduction of New Public Management in the government enlightened the importance of increasing efficiency, effectiveness, client value, transparency and frugality in public organisations. Traditional public sector values on the other hand emphasize equity, legitimacy, equality, fairness, reliability, safety and due processes. Currently, most planned change approaches are observed to be focusing on the improvement of organisational efficiency (Kuipers et al. 2014).

The measurement of outcomes is a complex practice and involves different methods and techniques. Some authors refer to the measurement of the behaviour of actors, whilst others highlight stakeholders experiences, attitudes or outputs. Furthermore, most research does not explicitly address the successes of the change, while unsuccessful projects seem to be named more easily. The explanation for this tendency could be linked to the everlasting possibility to change things for the better (Kuipers et al. 2014).

3.4   Cross-border Digital Public services

Cross-border digital public services are one of the central objects of this research. To understand the emergence and concepts related to these types of services, different subject matters will be discussed. First of all cross-border cooperation will be explained, to recognize the environment and structures these services operate in. Secondly, the concepts of Pan-European Public Services (PEPS) and cross-border digital public services will be defined. Lastly, the barriers and drivers related to the implementation and management of these services will be clarified.

3.4.1 Cross-border cooperation

When defining cross-border digital public services it is important to look into the broader subject of cross-border cooperation. De Sousa (2013, p. 673) describes cross-border cooperation as "any type of concerted action between public and/or private institutions of the border regions of two (or more) states, driven by geographical, economic, cultural or political factors with the objective of reinforcing neighbourhood relations, solving common problems or managing jointly resources between communities through any cooperation mechanisms available". Cross-border cooperation is however considered to be more complex than this definition since it often originates from the emergence of various factors and circumstances. Some examples of these factors are; an overlap of interests, shared historical memory, strong interdependence due to geographical or economic factors or a shared political objective for future joint action (De Sousa 2013).

De Sousa (2013) specifies that the above-named factors produce different types of cooperation practices, involving different levels of commitment from countries. The first type is awareness raising cooperation, which requires a low level of political commitment and values the maintenance of good neighbourhood relationships. The second one refers to mutual aid cooperation, where emergency responders work together across borders. The third type points out functional cooperation, aiming to solve problems, create business opportunities and reduce labour mobility barriers. Lastly, there exists a common management of public resources or services, consisting of joint strategies to reorganize and rationalize services across borders rather than focusing on state interests and jurisdictions (De Sousa 2013). The providence of cross-border digital public services will thus fall under the category of the third or fourth type of cooperation, depending on the role and decision-making power of the European Union and national governments.

Aavik and Krimmer (2016) recognize four models for cross-border cooperation in specific contexts in the European Union, their case focused more specifically on the Estonian E-Government System (EES). The first option concerning digital cross-border cooperation is the formation of bilateral agreements between Member States of the European Union. This entails that two countries decide to cooperate while maintaining their own information system. A second possibility would be to grant access to non-residents of a country for the same electronic benefits and public services as residents. The most known example of this is the Estonian e-residency project, where e-residents receive digital identification with a smart card identical to an Estonian electronic identification certificate (Aavik and Krimmer 2016).

The third option refers to the set-up of a neutral non-governmental body that offers cross-border public services. So far no clear public sector examples have emerged regarding this option. The last solution is a supranational framework for cross-border cooperation where transnational interference can be seen as the most effective and efficient solution, based on the subsidiarity principle. This is the case for the eIDAS regulation, aiming to create mutual recognition of national identification systems in the European Union by providing a strong legal framework for electronic identification and authentication services (Aavik and Krimmer 2016).

3.4.2   Pan European Public Services (PEPS) and Cross-border (digital) public services

One important aspect of cross-border cooperation is the emergence of cross-border (digital) public services, defined as "services supplied by a public administration, which can be accessed by or delivered to users based in another country" (Peristeras, Tarabanis and Loutas 2007, p. 3). Peristeras, Tarabanis and Loutas 2007, however state that this definition is rather vague and ambiguous. To counter this the research set up a typology of Pan-European or cross-border public services based on recurring patterns of interaction. The first type refers to clients from one European Union Member State executing a service provided by a public administration agency of another MS. The second type entails inputs or outputs of a service from one Member State being sent to another MS. The third case concerns public administration agencies of different MS working together in a common workflow, where the Erasmus programme is one of the most known examples in the EU. Lastly, cross-border services exist when consequences of a service executed in one MS should be communicated to another MS (Peristeras et al. 2007).

The policy brief of ESPON (2020) concerning cross-border public services in the European Union defines them by explaining eleven characteristics. They state that cross-border public services cover a specific cross-border area (1) where a joint problem or development opportunity is being addressed (2). This entails that there is a target group on both sides of the border (3) where access is non-discriminatory (4) and actors of all sides are involved in the provision (5), which is publicly organized (6) and financed (7). The term service refers to the fact that it is more than a mere infrastructure (8) and it can be related to any policy area (9) where a long-term service provision (10) is expected. Lastly, the service is supposed to deliver (11), encompassing that it exists and runs on the time of analysis (ESPON 2020).

Although Pan-European Public Services (PEPS) are implemented in several domains in the European Union, the same semantic conflicts keep returning. Semantic differences in evidence are often identified, where evidence refers to the piece of information, such as the Social Security Number or birth date, that agencies use to execute public services. Additionally, these evidences contain specific and diverging meanings depending on the countries perception and use. Similar to the first conflict are the differences in placeholders, mostly known as administrative documents that exist in MS; examples are Birth Certificates, Address Confirmation Certificates or Tax Compliance Certificates (Peristeras et al. 2007).

Furthermore, the occurrence of semantic differences in preconditions are observed to be a common challenge, especially when citizens or businesses are subject to different national legislations. Moreover, the service providers vary from country to country, institutions and agencies can have different mandates, tasks and decision-making power and can operate on different authority levels. Even the public service on its own can vary between MS, while some services and procedures are non-existent in some MS they can be prevalent in others. Another discrepancy is the effects of the public service in the different country contexts, legislation and regulations can have a serious impact on their outcomes. Lastly, several versions and procedures of services can exist depending on the age, job, address and gender of the citizen in question and the categorization applied by the government (Peristeras et al. 2007). More barriers and drivers of the cross-border digital public services will be discussed and categorized in the part below based on more recent academic studies.

3.4.3   Barriers and drivers

Since cross-border (digital) public services are still developing in the European Union and the process of implementation is still ongoing, several barriers and drivers can be identified. These barriers and drivers are mentioned in several academic studies, this research will mainly focus on the recent contributions of Kalvet, Toots and Krimmer (2018) and Krimmer, Dedovic, Schmidt and Corici (2021).

The first important factors that are prevalent in both researches are technical and interoperability factors, caused by the heterogeneity of the existing national information systems and structures. Kalvet et al. (2018) recognize four main challenges regarding the technical aspect. The first one concerns the data alignment; metadata quality, data models and data definitions are considered as crucial concepts required to be harmonized across borders to deliver successful services. Additionally databases and data handling systems are often subjected to unclear ownership, fragmentation and variations in data handling systems. Thirdly, interoperability challenges emerge because of the heterogeneity of the

ICT systems, lack of interoperability on a national level, semantic interoperability problems and differences in language and concepts. Lastly, the overall national ICT infrastructure can form a challenge towards availability and accessibility of digital public services as well as the general digital maturity of the Member States that are involved. Krimmer et al. (2021) support these statements by considering that the different digital maturity levels and heterogeneity in ICT systems and data management could have hindering effects on the implementation of the Single Digital Gateway Regulation.

The technical and semantic interoperability barriers deserve to be highlighted. Local solutions do usually not meet Once-Only Principle requirements and are thus generally not designed for efficient cross-border data exchange. Moreover, local practices are regularly embedded in the organisational structures of Member States, making them reluctant to changing their existing legacy systems. These local and national approaches handle specific types of data, leaving limited opportunities to the development of common access tools that involve non-base repositories, access to scattered data sources and query-based access to data (Kalvet et al. 2018;Krimmer et al. 2021). Alongside these barriers, technical drivers are recognized by literature, national systems of base registries can be considered as an important enabler to national level implementation. Additionally, reusing existing interoperability frameworks and building blocks provided by the European Union across Member States can be considered as a crucial factor in the reduction of the above mentioned challenges (Kalvet et al. 2018).

The second aspect relating to the barriers and drivers of cross-border digital public services is the legal interoperability. One crucial step in the right direction is the eIDAS regulation, launched in 2014, that aims to remove barriers in the cross-border use of electronic identification schemes by providing a framework for mutual recognition. Secondly, the Single Digital Gateway as adopted in 2018 provided the Your Europe portal to act as a single access point to existing national portals (Krimmer et al. 2021). Kalvet et al. (2018) perceive that this regulatory and legal context in the National environment and European Union can promote innovation, but can also hinder it.

Even though harmonization and coordination is expressed as an essential objective at the European Union level, it is important to consider that this entails that existing gaps in national legislation on data protection, data sharing and information management should be addressed. Therefore, Kalvet et al. (2018) mention that a more extensive, common legal basis on the EU-level might be fundamental to successfully implement once-only cross-border digital public services. Accessing cross-border public services encompasses that evidence is exchanged between different MS, causing that appropriate control mechanisms should be in place to ensure legal value, validity, accuracy and protection.

These legal barriers and challenges specify the requirements that are crucial to safely exchange data across borders (Kalvet et al. 2018).

Thirdly, organisational, administrative and political factors can influence the implementation of cross-border digital public services. Within organisations these barriers often involve governmental silo's, lacking communication, the complexity of changes and high implementation costs (Kalvet et al. 2018). Furthermore, factors like weak political will, cultural resistance, cautious behaviour towards innovation and change, as well as a low awareness towards the benefits of data sharing can have hindering effects on its implementation. The willingness to implement changes often depends on national experiences regarding the topic and the benefits that are already demonstrated for individuals, businesses and public administrations (Kalvet et al. 2018). Drivers regarding these factors can be triggered externally by competitiveness, legal obligation, political priority and public demand. Besides these external triggers, participation in cross-organisational and cross-border knowledge networks and strong leadership by administrative and political managers can foster the implementation (Kalvet et al. 2018).

3.5   Public service managers

The service managers, as referred to in this paper, concern the administrative workers mandated with the delivery of the cross-border digital public service "posting staff abroad", as will be further explained in the methodological part of this master thesis. These managers are often employees of Labor Inspectorates or Social Security Departments. On top of that, employees linked to the policy implementation and coordination of the SDGR will be included since they influence the overall implementation and budget for the service. The term 'public' highlights their involvement in governmental organisations and their function of delivering public services to citizens. Research regularly mentions public service managers as middle managers, since they serve as a linking pin between the strategic objectives and operational imperatives of public organisations (Gatenby, Rees, Truss, Alfes and Soane 2014).

Two viewpoints in research are prevalent when talking about the role and contribution of middle or in this case service managers in public organisations. The first narrative addresses middle managers as unsuccessful channels for strategic objectives of top management, that have hindering effects on organisational structures and processes. The complex bureaucratic environment in which managers operate limits their position and has an impact on the knowledge and communication flows throughout the organisation. Moreover, academic literature supporting this view points out that strategic adaption is

often resisted by middle managers to protect existing interests and minimize operational changes and risks (Gatenby et al. 2014).

The second group displays a more optimistic view on the role of middle managers in organisations, considering that they are described as strategic assets that mediate and implement strategic imperatives. Their intermediate position provides opportunities for the enabling of change, they can assist top-level management in the formulation of concrete strategic objectives and can disseminate alternatives they do not agree with. This role gives them influence over entrepreneurial ideas, informal networks and the coordination of tension between continuity and change (Gatenby et al. 2014).

These conflicting viewpoints demonstrate that public managers can have both a negative or positive impact on the implementation of change in an organisation. The typology of roles that service managers can adopt, as described in the part below, will give more insight in their impact and role.

3.5.1   Public service managers as change agents

To place public service managers in the context of change within the public sector it is crucial to discuss the different roles they can adopt. Existing literature on the subject is fairly limited, nevertheless three dominant and often conflicting roles prevail. The first role can be linked to the stream of New Managerialism and is described as the *entrepreneurial leader*. Service managers in this role adopt private sector techniques and practices to deliver innovative public services and enable cultural change. This role goes hand in hand with the decentralization of public service delivery to more autonomous agencies and the conviction of successful public sector leadership, where leaders lead and managers manage (Gatenby et al. 2014).

The second role refers to *government agents*, who align central government policies to their situation and are held accountable through their performance, which is measured against the central strategic objectives. In their role as a policy implementor, the change agency for government agents is rather limited and their focus is merely on the enactment of the prescribed government policy. This entails that these line managers do not adopt local entrepreneurial strategies or leadership transformations, as mentioned within the entrepreneurial role. This role is however still very prevalent in today's society, where the external relationship with central government actors remains vital (Gatenby et al. 2014).

The last potential role public service managers fulfil is the one of *diplomat administrators*. Line managers in this role act as negotiators between the top management and low-level employees, where they handle the managerial imperatives on the one hand, and the demands and needs of professional elites, on the other hand. Academic literature shows that the dependence on professional groups and their power varies greatly across sectors. Additionally, political power can have a significant influence on middle managers, while also taking into account the management of employees and the service they are responsible for (Gatenby et al. 2014).

Currently empirical evidence on the enactment of these role archetypes in public services is limited. While there is a shift towards a more dynamic and responsive public sector with the emergence of New Public Management, there are no significant changes to organisational structures and managerial practices visible yet (Gatenby et al. 2014).

4 Research Design

To formulate an answer to the research question this master thesis opts for a qualitative single case study research approach, to portray the perspectives of service managers and experts on the changes caused by the implementation of the Single Digital Gateway Regulation on cross-border digital public services, more specifically on the "posting staff abroad" service. It is important for generalization to select cases that are representative to the European Union context, the choice of Belgium will therefore be further discussed in the case study part (Creswell and Poth 2016).

The data collection will be performed through the analysis of relevant documents and the conduction of interviews with service managers and experts. The interview questions are set up according to the change factors of the change management theory. The findings will eventually be coded and analysed according to the chosen framework. The detailed explanation of this process is available in the sections below.

4.1 Single Case Study Research

Different ways to collect and analyse empirical data can be distinguished, based on different research methods. The choice for a qualitative method, namely the single case study approach in this master thesis can be explained through defining the concepts and characteristics of a case study. Schramm (1971) explains the essence of a case study as its willingness to enlighten why decisions are taken, in which way they are implemented and what the final result will be.

Yin (2018) adapts a twofold definition of the case study as a qualitative research method, on the one hand there is the importance of the scope and on the other hand there are the features that play a role. The scope of the research refers to the contemporary phenomenon, better known as the case, that is investigated in its real-world context. This is important to consider, since reality shows that the boundaries between such phenomena and contexts are often hard to distinguish. Second, the features of a case study, as mentioned by Yin (2018), portray that it copes with distinctive situations that carry a great variety of interests and data points. Additionally, case studies benefit from previous theoretical propositions that form a guidance for the design, data collection and analysis. Furthermore, the research approach relies on multiple sources of evidence where data converges in a triangulating fashion.

The chosen case in this master thesis is the implementation of the Single Digital Gateway Regulation in the cross-border digital public service "posting staff abroad" by the Belgian National Social Security Office. Considering the scope of this case, there are a lot of

contextual factors playing a role. Furthermore, theoretical propositions in previous research will be consulted, such as cross-border digital public services literature and change management theory literature, as described in the literature review. Besides, the sources of evidence in this case will be expert interviews complemented with document analysis. These observations portray that the case study approach is a perfect fit to reach the research objective of this thesis.

When applying a single case study design, five possible rationales can be observed, namely the critical, unusual, common, revelatory or longitudinal case. The case of the posting staff abroad service in Belgium, can be considered as a critical case where theoretical propositions are tested. The case will test if prior literature about change and the barriers and drivers of cross-border digital public services and implementation of the Single Digital Gateway Regulation applies to a specific service case, in a specific country context (Yin 2018 pp. 49-51).

The master thesis will opt for an embedded case study design, since multiple units of analysis are involved. In this case it involves the European Commission, European legislation, national institutions and coordinators mandated with the general SDGR implementation and service managers specifically mandated with the "posting staff abroad" service. Contrary to the embedded design is the holistic approach, where the global nature of an organisation or programme is analysed. This type of case study design is avoided to make sure that clear measures and operationalized data can be distinguished rather than formulating conclusions solely on an abstract level (Yin 2018 pp. 51-53). It is however, important to keep in mind, while applying an embedded case study design that the analysis of the subunits complies with the larger unit of analysis, instead of solely focusing on certain units and their perceptions (Yin 2018 pp. 51-53).

This research takes into account that multiple case studies are preferred over single case studies since there are more analytical benefits and there is a possibility of direct replication (Yin 2018 p. 61). This was the original plan for this research, by adding the analysis of the "posting staff abroad" service in Estonia and Slovenia. This did, unfortunately, not seem to be feasible due to the lack of response of service managers and experts in these countries. Applying the multiple case study research design in future research about the implementation of the SDGR in cross-border digital public services is thus advised, to compare different cases in the European Union.

4.1.1 Limitations

Traditional concerns related to the use of the case study as a research method often emerge during the research process, since multiple researchers perceive it as an unsatisfactory method compared to traditional surveys or experiments. The first concern relates to the lack of rigor, referring to the absence of established systematic procedures and the possibility of bias (Yin 2009). Therefore this research will follow the procedure as suggested by Yin (2009; 2018), who attempted to provide a detailed guide for the conduction of case study research. Secondly, worries often arise about the possibility of scientific generalization, when the focus is only on certain cases instead of opting for large samples. This research conducts a single case study causing that the generalizability is low, however this limitation is taken into account and findings are limited to mere theoretical propositions about the case rather than entire populations. Additionally, the master thesis aims to get an in-depth view of the implementation of the SDGR in cross-border digital public services in a specific country context, rather than general insights that are already available in existing literature (Yin 2009). This entails that, future, comparative research can be conducted through the same research design to test the findings in different country contexts and formulate cross-case conclusions, fostering generalizability.

The third misconception entails the length of case studies, often recognized as solely depending on ethnographic or observed data (Yin 2009). This will not be the case in this research, where a triangulation method will be applied, consulting service managers and experts in interviews while supporting these findings with available documents in academic literature, retrieved through a document analysis. Lastly, case studies are generally underestimated and diminished because they are not able to prove causal relationships, minimizing the fact that they can provide important knowledge complementing these relationships (Yin 2009). In this particular case, insight in the perceptions of service managers and experts, can explain the status of change and the implementation of the SDGR in different contexts. This could clarify discrepancies or successful changes of the applied policy, thus revealing important information about possible causal relationships without explicitly measuring them. The results of this research could thus contribute to later research on the measurement of causal relationships between the implementation of the SDGR and the impact of cross-border digital public services on our society and economy.

4.1.2   Selection of cases

This section describes the "posting staff abroad" service, as well as the country that was selected as part of the single case study of this master thesis. The first part explains the choice for the service from annex II of the SDGR and its expected impact on our economy and society. The second part declares the choice for the case country that was picked out of the 27 Member States of the European Union. The last parts refer to the specific procedures as currently deployed in the case country, to gain a better understanding of the background of the service and its general procedure.

4.1.2.1 "Posting staff abroad" service

Research conducted in 2013 already showed that more than one million citizens would benefit from using online cross-border public services. On top of that an estimation of around 140,000 businesses indicate that they would consider cross-border business services as beneficial to their organisation (Capgemini, Tech4i2, Time.lex, and Universiteit van Antwerpen 2013). Currently approximately 1,5 million frontier workers, and 650,000 to 850,000 seasonal workers are counted to be working across the national borders, as well as 25 million professional trips in 2019. Additionally, the demand for cross-border digital public services can be expected to grow significantly due to the increasing focus on remote work during the COVID-19 crisis and the continuous evolution of ICT use in governments and businesses (De Wispelaere et al. 2022).

The case that will be considered in this Master Thesis is the "posting staff abroad" procedure, as described in Annex II of the Single Digital Gateway Regulation as "Registration of employees with compulsory pension and insurance schemes" as part of the starting, running and closing a business life event. These posting rules apply when a business has a contract with another business in the European Union and their employees are needed in another Member State for the purpose of providing services or when staff members are sent to a business owned in another EU country (Your Europe n.d.). The rules must also be respected for agencies providing temporary staff outside of their national borders. An employment relationship is crucial in all cases (Your Europe n.d.).

Currently, practice shows that sending and receiving Member States are not always informed about the posting activities in their country, because of differences in the provided declaration and registration processes. Sending Member States receive data from the PDA1 document, but receiving Member States are dependent on data gathered through their own declaration systems (De Wispelaere et al. 2022). The obligation of the SDGR to implement the cross-border digital public services completely online, forms an

interesting case for research, since there currently are a lot of different practices and procedures in the European Union.

To ensure the alignment of the research case across the interviews, the same situation for registration will be followed. The process will exist out of a foreign employer from Member State A wanting to post an employee to Member State B, in this case Belgium. The company is not looking to set up an additional company or branch and all involved companies are not capital-related. The company from Member State A thus has a contract for the sale of services to a company from Member State B, based on which an employee will conduct services for them (European Commission 2021-a).

4.1.2.2　Case country: Belgium

Belgium receives a fourteenth place for its e-government maturity (with an amount of 74 percent) in the latest e-government benchmark conducted by the European Commission in 2022. This place assumes that Belgium belongs to the middle group of Member States when it comes to digital government, making it an intriguing case for research. Furthermore, there is a lot of deviation in the West-European area where Belgium is located, since The Netherlands receives a fifth place, Luxembourg a third place, France an eighteenth place and Germany a twenty-first place. This is relatively different to other areas in the European Union, the North and South-West mainly score high, whereas the East and South-East seems to be lagging behind (Capgemini et al. 2022).

Looking more specifically into the cross-border digital public services provided by the Belgian government, the e-government benchmark report scores the countries on online availability, user support, eID and eDocuments. The benchmark shows that 43 percent of the public services are available online for cross-border users, scoring below the EU-average. The user support and eDocuments however, score higher than the average of all Member States. Lastly the incorporation of the eID in cross-border digital public services, scores significantly lower, whereas 80 percent of the national services are available through eID, only 13 percent of cross-border digital public services are (Capgemini et al. 2022).

The Belgian federal government has some important systems and elements in place that can perform as enablers for cross-border digital public services. The first part consists of the Crossroads Bank for Enterprises (CBE), a database owned by the Federal Public Service (FPS) Economy. This digitized database increases the efficiency of public services and simplifies administrative procedures for companies (FPS Economy 2023). The second part is the Federal Service Bus, better known as a secure platform to exchange electronic information between governmental organisations (FPS BOSA 2016).

Furthermore, the Single Digital Gateway is mentioned on the website of the Federal Public Service Policy and Support (BOSA) as an important enhancer of the digital single market. This shows that there is attention for the implementation of the regulation in the governments of the country, being an important factor in the selection of this case (FPS BOSA 2016).

Besides the digital maturity of the country and their involvement with the Single Digital Gateway Regulation, the Belgian federal state structure forms an interesting case to study. The structure of the federal state entails that the exclusive decision-making power is not solely in the hands of the federal government and parliament but is divided among various partners, independently exercising their authority in their given domains (Belgian Federal Government 2023).

Two powers can be distinguished when talking about the redistribution of power, on the one hand, there are the communities and on the other hand, the regions. Communities concern all things related to language and culture, hence they are divided along these subjects in the Flemish, French and German-speaking community. The regions are focused on economic interests and autonomy resulting in the Flemish, Brussels Capital and Walloon region. It is important to note that the federal state remains in power for topics like foreign affairs, defence, finance and most importantly in this case, social security (Belgian Federal Government 2023). While the implementation of the Single Digital Gateway Regulation and the emergence of digital government in general in Belgium is scattered among different institutions, the authority in the case of the "posting staff abroad" service remains in the hands of the federal state. The actors that are involved in this case are described below.

4.1.2.3 Belgium: LIMOSA Declaration

When looking at the Belgian case to register an employee as a foreign company, it is important to take into account the length of the registration. There are namely some exceptions to the payment of social security taxes for workers registered for less than 24 months. These workers can obtain a deviation and pay their taxes in their European Union Member state of origin (Social security n.d.).

The regular route to register a new employee to a Belgian company from another member state is through the Limosa declaration. The LIMOSA-project was enforced in 2007 to simplify administrative obligations and provide an unique electronic platform for the general registration obligation as well as other employment and settlement documents. Limosa thus stands for a cross-border information system set up for migration research for the social administration (Federal Parliament 2006).

The first step on the website of the international social security displays the creation of a user account by the employer of the foreign company. The employer will need to add personal data once to be able to register an employee later. This data concerns an e-mail address and a Belgian Social Security Number (BSSN), if applicable. Most foreign companies will not have access to a BSSN and need to provide additional data, more specifically surname and last name, date of birth, gender, home address, national identification number, enterprise number and a mobile phone number. After entering this data a confirmation e-mail will be send within 72 hours. Additional information might be required for the registration and will be requested through the same e-mail correspondence (Social Security n.d.-b).

Once the user account is set up by the employer, the declaration can be filed. Several details are required in this process, distinguished into basic details and additional details dependent on the kind of employment. The basic details should provide the work place of the employee, limited by five places of employment. Additionally, the details of the Belgian customer should be specified, together with the start and end date of the employment as well as the work schedule. Furthermore, the details of the employee are provided in this stage, registration could be done for up to ten people in one declaration (Social Security n.d.).

The additional details consist out of the identification details of the employer and the liaison officer. A liaison officer is responsible for liaison with the Belgian authorities forwarding or receiving notifications. In case of temporary agency work, an accreditation number of the foreign temporary employment agency is necessary. Moreover, the nature of the service should be specified, in case of construction, it will be requested whether the employer pays a premium to the employee on top of the wage compatible to the Belgian fidelity stamps (Social Security n.d.-b).

The Limosa declaration should be presented to the Belgian client before the work in Belgium commences. The client is obligated to contact the Belgian authorities if this is not provided in advance. The Limosa-1 declaration consists of a QR code to register employees in Checkinatwork. Since 2015, this code also contains the personal details provided through the registration. When the work continues for a longer period than initially indicated, a new declaration should be delivered (Social Security n.d.).

The National Office of Social Security (NSSO) from the federal government is authorised with the registration of foreign employees in Belgium. The federal department Social Security exists out of different Directorate Generals mandated with different fields of expertise. In this case the most important ones are the Directorate General Legal Expertise and Policy Coordination and International Relations. Additionally, there is a close

partnership with the Federal Government Agency Employment, Labour and Social Consultation. The authorised ministers for this agency are minister Frank Vandenbroucke (Social Affairs and Public Health), minister David Clarinval (Middle Class, Independent Workers, Small and Medium Enterprises (SME)'s and Agriculture, Institutional Reform and Democratic renewal), and minister Karine Lalieux (Pensions, Societal Integration, Persons with a Handicap and Poverty) (Federal Government Agency Social Security n.d.).

Social Security manages a database containing data from posted workers, independent workers and interns originating from other institutions. This database, named the Crossroads bank of Social Security contains an identification number linked to the establishment of the organisation and an overview of identification numbers related to the involved person in their country of origin of the European Union. Data from the Crossroads bank can only be shared with different institutions when approved by a sectoral committee and only for the fulfilment of tasks as prescribed by the law, decrees or ordonnances (Federal Act 2006).

4.2 Data Collection

The data for this research will be collected through two qualitative research methods. First, the document analysis will give more insight into the background of the research and the available documents in academic literature regarding cross-border digital public services. Secondly, the expert interviews will gain a deeper understanding of the application of change factors on the "posting staff abroad" service, as perceived by the interviewed service managers and experts. The triangulation of both methods leads to multiple sources of evidence causing more credibility of the research. By applying different methods, findings can be corroborated across different data sets, reducing the impact of potential bias (Bowen 2009).

4.2.1 Document Analysis

Document analysis can be described as a systematic procedure to review, evaluate and ultimately select relevant documents related to a certain research topic. Documents consist of text and or images that are not previously manipulated by the involved researcher. Various forms of documents, as used in this research, can be distinguished (Bowen 2009). In this particular case the selected documents will mainly consist out of policy and legal documents, organisational reports, public records and academic resources provided by the national government of the selected case country, relevant academic research or the European Union's institutions.

The documents retrieved in this research will mainly provide a contextual understanding of the current situation in the national government and the service design in the case country as well as the current status in the European Union. This provides knowledge about the historical roots of certain decisions and design choices made by different authorities (Bowen 2009). Furthermore, the information obtained raises additional questions and gaps that need to be addressed in further research, in this case during the expert interviews. Data from the document analysis will also be used to complement the interview findings in the case study, entailing that the document analysis is a continuous process throughout the whole research process (Bowen 2009).

When applying document analysis as a research method, certain advantages and limitations should be considered. The first advantage relates to the efficiency of the method, rather than collecting empirical data the documents can be merely selected, making it a less time consuming and more efficient task. Secondly, documents are frequently available in the public domain and through internet resources, causing that there is large accessibility and availability. Thirdly, document analysis is significantly more cost effective than other research methods since it only gathers existing, public data. Fourthly, documents cannot be affected by the research process and researcher, causing them to be unobtrusive, non-reactive and consequently relatively stable and safe from bias. Lastly, the research method often provides exactness and broad coverage regarding time, events and details (Bowen 2009).

Contrary to the above listed advantages, document analysis also contains certain limitations. First of all, insufficient detail in available documents is a possibility and risk, since they are created independently of the posed research questions. Some topics might have an overflow of information, while others have rather limited information. This often goes hand in hand with the newness and popularity of certain topics. Following this is the plausibility of low retrieval for certain documentations, due to the lack of access rights in some cases. Policy documents might contain sensitive information, not available for the public and some academic resources might be hidden behind paywalls. Furthermore, there could be the danger of biased selectivity, where the selected documents will always align with the organisation's values or the researchers perspective, ignoring diverging viewpoints. Therefore, this research will contain and describe all viewpoints available in literature, to give an accurate and neutral view of the existing research field. Although these limitations are taken into account while conducting the document analysis, it is notable that the above-mentioned advantages outweigh these disadvantages (Bowen, 2009).

4.2.2 Semi-Structured expert interviews

In-depth interviews are explained as an one-to-one data collection method aiming to gain a detailed understanding of a topic, in this case change in cross-border digital public services in Belgium, more specifically the "posting staff abroad" service and the implementation of the SDGR in it. This method discovers deep insights into important issues guided by a semi-structured interview guide. In-depth interviews are often referred to as meaning-making partnerships where interviewers and interviewees co-create knowledge and meaning while conducting the interview (Hennink, Hutter and Bailey 2020). The semi-structured interview guide encompasses a set list of topics that have to be covered during the interview, but ensures that the respondent has room to steer the direction it goes to. The questions might thus not be handled completely the same as suggested in the schedule of the interview guide since additional questions can be asked following on the interviewees replies. The interview process is more flexible this way to be able to grasp the viewpoint and understanding of the respondents on the topic, consequently lowering the possibility of bias through steering of the interviewer (Bryman 2016).

The interviews will be conducted with service managers and experts from Belgium involved in the implementation and coordination of the SDGR in general and more specifically in the "posting staff abroad" service as provided by the National Social Security Office of Belgium. More specifically two groups of people will be questioned; civil servants and top managers in the service delivery of the "posting staff abroad" service and general SDGR coordinators and implementors. These respondents can be considered as experts in the field. Therefore a semi-structured interview guide will give them the opportunity to elaborate on their knowledge and their experience with the service or regulation in their organisational context.

The interview guide is based on the different change factors as defined in the Change Management Theory by Kuipers et al. (2014), namely the context, content, process, leadership and outcomes factors. Additionally the change factors are supported by findings from previous research regarding the barriers and drivers of the implementation of cross-border digital public services as stipulated in the literature review. **Table 1**, pictured below, shows the combination of the change factors, characteristics of the service, data collection approaches and interview questions. These interview questions are derived from research findings obtained from (Kalvet, Toots and Krimmer 2018) and (Krimmer, Dedovic, Schmidt and Corici 2021), as can be consulted in part 3.4.3 of the literature review.

When conducting in-depth interviews, some strengths but also limitations come along. Interviews have the strength of obtaining in-depth and often personal level data on experiences of respondents, in this case within their work environment. Additionally it can be useful for sensitive topics and the collection of contextual information. These advantages are important since this research will focus on perceptions of relevant actors and will consider the change factors playing a part in the implementation of legislation (Hennink, Hutter and Bailey 2020).

On the other hand there are also some limitations that should be considered, like the lack of feedback in one-to-one interviews. The researcher makes sure in this case that all findings are supported by document analysis if questioned and that feedback from the respondent after the conduction of the interview is possible if clarifications seem necessary. Furthermore, certain skills and flexibility are required to rapport, motivate, listen and react to interviewees. This disadvantage is countered by interviewers that have previous experience in the conduction of interviews. Lastly, the transcription of interviews can be a time consuming task (Hennink, Hutter and Bailey 2020).

Table 1. Relationship between Kuipers et al. (2014) framework and data collection approaches

Change factors	Characteristics of 'posting staff abroad' service	Data collection approach	Specific question examples
Context (Why ?) – motivation, external/internal environment, judicial context, demands	• Local/national approaches – governmental silos • Systems of base registries • Existing frameworks & building blocks • Legacy systems – organisational structures • External triggers • Digital maturity	• Document analysis • Expert interviews	• Which other stakeholders are involved within the process? Who are the main stakeholders • Which databases/national registries are used in the process? (data types, data manager, efficiency, interoperability, burdens?) • Which building blocks and frameworks provided by the European Union are reused in your service delivery? (eIDAS, eSignature) • Do existing systems and structures within your organisation affect the changes from the SDGR? (digital maturity) • What is the perceived demand for your service? • What is the burden for foreign businesses to post a worker? (recommendations, language) • What is the burden for national services to receive a worker from abroad? • How does national law influence the implementation of the SDGR?
Content (What ?) – change plan, micro-macro level changes	• Technical & interoperability factors • Implementation costs • Semantic interoperability	• Document analysis • Expert interviews	• How does the financial cost of the change influence the provision of the service? • What is the impact of semantic interoperability between MS on the service provision?

			• What is the information infrastructure behind the service? Are digital means involved?
Process (How?) – resistance, success/failure, stakeholder perspectives	• Cultural resistance to change • Participation in networks/best practice sharing	• Document analysis • Expert interviews	• Does the implementation of the SDGR change the design and steps of the current posting staff abroad process? • Do you communicate/collaborate with foreign administration? How? (cross-organisational, cross-border knowledge transfers? Does this influence the service provision?
Leadership (Who?) – administrative/bureaucratic/political, hierarchical/shared	• Political will • Leadership style	• Document analysis • Expert interviews	• In your opinion, how important is it to have a strong leader in implementing the EU regulations for this service? Who should do it? • What is the influence of the political will in the implementation of the SDGR in your service delivery? • Which role do you take in the changes in your organisation regarding the implementation of the SDGR?
Outcomes – results, values	• Reduce burden – efficiency – quality • Process optimization	• Document analysis • Expert interviews	• How beneficial is this service to be digitalized? What is your need/goal? • How did the SDGR affect your procedures? • Will you experience any changes? • In your opinion what changes are happening with SDGR?

Table 2 shows the timeline of the conducted expert interviews, together with their job function, the date of the interview, the interview duration and the means through which the interview was conducted. The experts were contacted through available information on governmental websites and through contacts of the researchers network. The snowball effect is applied in the data collection method, where possible respondents are advised by and contacted through previous respondents. The respondents can be distinguished into two different groups, namely the service managers and top management of the "posting staff abroad" service, and respondents that are experts in the general implementation or coordination of the Single Digital Gateway Regulation. Consequently, the content of the questionnaire is different when interviewing respondents with different backgrounds, this distinction can be consulted in **part A of the appendix**.

Table 2. Timeline expert interviews

Respondent	Job function	Date	Duration	Means
Respondent 1	Expert National Social Security Office	09/06/23	00h58mins	Microsoft Teams
Respondent 2	Single Digital Gateway Coordinator	22/06/23	01h06mins	Phone call

As is shown in the table above, only two expert interviews where conducted in this research. This can be explained though lack of response by relevant actors on the one hand and the small group of people involved in the implementation of the Single Digital Gateway Regulation in this specific service on the other hand. While the specificity of the "posting staff abroad" service can be seen as an advantage for the uniqueness of this research and as a contribution to existing theory, it formed a pit fall for validity of the research and its generalizability. It is however, important to note that all required information was gathered through the two interviews to apply the change factors to the SDGR implementation in the "posting staff abroad" service in Belgium. Nonetheless, it is important to keep in mind that the perceptions, as presented in this research, are based solely on the viewpoints of two experts, and can in no case be extended or generalized.

While the interviews and general research approach currently only consider the Belgian case, the initial research questions and research objective involved a multiple case study approach with expert interviews from Estonia and Slovenia. This did not seem to be feasible due to the lack of response from the relevant actors and institutions in these countries. As was also mentioned for the Belgian case, the specificity of the service makes

it difficult to contact the right persons. Information on service managers and experts is generally not available online and e-mail addresses linked to the involved institutions are often unresponsive. This greatly affected and limited the conducted research. It is thus advised to have a well-connected network in advance before the case countries can be selected. Further research on the "posting staff abroad" service in other Member States of the European Union would form an interesting addition to literature to be able to formulate cross-case conclusions about the applicable change factors on the implementation of the Single Digital Gateway Regulation in the "posting staff abroad" service.

4.3   Data analysis

4.3.1   Document analysis: coding

The documents that come forward in the research will firstly be examined and selected according to their relevance and validity concerning the research topic, through a critical review by the researcher. In the second step the selected documents will be categorized into the code tree as pictured in chapter 4.3.2 below. This code tree is set up through the provisional coding technique, where the set of codes is decided before the start of the empirical study. In this case the code tree is based on preliminary research, namely the Change Management Theory and its change factors, as described in the Theoretical Framework (Saldana 2013). The codes portray the different change factors, namely context, content, process, leadership and outcomes. During the collection of documents the provisional codes can be modified or expanded based on the needs that arise (Saldana 2013).

The documents that offer a contribution to the research and complement to the data collected through the expert interviews will be used in the data analysis. Coding is a continuous process, since information gaps need to be filled throughout the research process. Part of the coding will happen before the interviews will take place, while supportive documents on the interview findings will be coded afterwards.

4.3.2   Semi-structured expert interviews: coding

The first step in coding findings from expert interviews is the transcription of the recordings of the conducted research conversations, that become primary data for the later analysis. Transcriptions are often seen as a routine task in the research process, where the interpretative power of the researcher is underestimated. For this reason transcription quality should be ensured by anticipating and reducing error and paying attention to the interpretative nature of the transcription (Given 2008). The researcher conducting the

interviews will be familiar with the subject and take a neutral stance to ensure understanding and minimize errors. Additionally the quality of the interview will be guarded by high-quality microphones and the consideration of language and cultural barriers. To contribute to the interpretive nature of the transcription the verbatim technique will be complemented with the notation of non-verbal and interpersonal communication during the interview (Given 2008).

The first interview in this research was conducted through Microsoft Teams and transcribed using the verbatim technique. The second interview, however, took place through a phone call, causing that the transcription happened based on notes written by the researcher. Literal quotes and findings used in the research are reaffirmed by the interviewee, to ensure that no errors or false interpretations by the researcher are described in the analysis.

The anonymity of the interviewee will be guarded throughout the transcription, any names or potential identifiable information is deleted or hidden from the transcripts prior to its analysis (Given 2008). All respondents signed an informed consent to ensure that they are aware of their rights and the goal of the research. The interview transcriptions and informed consent as provided to the respondents are available in **appendix B and C**.

The interviews are coded with the help of the programme Nvivo, where the different transcripts can be coded into a code tree. Similar to the method used in the document analysis, the initial code tree will be determined through provisional coding. Since interviews provide new insights in theory through primary data the provisional coding will be complemented with descriptive coding. The code in the descriptive coding technique refers to the substance of the topic of the relevant qualitative data in a few words. This way additional codes are added to the code tree as main or subcodes to contribute to or fill in the gaps of the change factors provided by the Change Management Theory (Saldana 2013). The final code tree, used for the document analysis and interview analysis, with the main and subcodes can be consulted below in **Table 3.**

Table 3. Code Tree

Code Tree				
Context				
Base registries	Existing frameworks and building blocks	External triggers	National approaches	User burden
Content				
Costs	Semantic Interoperability		Change plan	
Process				
Resistance		Networks and best practices		
Leadership				
Leadership style		Political will		
Outcomes				
Positive impacts		Shortcomings and hazards		

4.3.3   Data Analysis

The coded data gathered from the document analysis and expert interviews is analysed through a directed content analysis. This type of data analysis is commonly used when there is existing theory about the subject, but additional evidence and research is required (Hsieh and Shannon 2005). This is the case for the examination of the implementation of the SDGR in cross-border digital public services by service manager and experts through Change Management Theory. While previous research and empirical studies of the topic exists, the specificity of the service, the nature of in-depth research and selection of the Belgian case contributes to gaps in both change management research and research concerning cross-border digital public services.

The directed content analysis provides supporting or opposed findings to the theoretical framework (Hsieh and Shannon 2005). The analysis will hence portray how the change factors apply to the "posting staff abroad" service in Belgium. Additionally, gaps in the theoretical framework can be determined and supplemented with findings derived from the qualitative data. It would be beneficial if future research applies the change management theory factors to comparable cases, to derive similarities and differences.

Although the support and extension of existing theory is one of the most important advantages of the directed approach, challenges can prevail. Starting from theory can cause a strong bias for researchers, the findings can be more likely to be supportive of the initial theory because the research is structured around it (Hsieh and Shannon 2005). To combat this bias, the research applies both provisional and descriptive coding to leave room for unsupportive, additional information that will still be included in the findings and pose recommendations for the existing theoretical framework. Secondly, interview guides that started from theory can give cues to interviewees about the expected answer (Hsieh and Shannon 2005). For this reason the research will set up a semi-structured interview guide that is open to additional information from the respondents, without guiding them in certain directions. Thirdly, the use of theory can blind researchers from the prevalence of contextual factors (Hsieh and Shannon 2005). Interviewing multiple persons from multiple organisation will give the opportunity to compare differences and similarities and the causes related to them.

5 Results

This section contains the findings from the expert interviews supported by additional information retrieved through the document analysis. The change factors, more specifically the context, content, process, leadership and outcomes as proposed by the Change Management Theory of Kuipers et. al (2014) are applied to the case country, Belgium, in this chapter. Furthermore, recommendations for the further implementation of the Single Digital Gateway Regulation are formulated according to the viewpoint of the interview respondents. The findings are based on expert interviews with two respondents. On the one hand a service manager and expert for the National Social Security Office, mandated with international relations and on the other hand a coordinator of the Single Digital Gateway Regulation from the Federal Agency for Policy and Support (BOSA).

5.1 Context

The first change factor, the context, relates to the 'why'-question of the change, this entails the motivation behind it, the external and internal environment, the judicial context and the posed demands (Kuipers et al. 2014). When interviewing experts in the Belgian context different perceptions related to different topics came forward.

The first important topic, as part of the context factor, is the influence of **national and local approaches** to change. Respondents mentioned three relevant factors related to the national context that they perceive to have an influence on the changes of the Single Digital Gateway Regulation in their country. The first one refers to the *existing organisational structure and the complementary legacy systems*. The state structure of Belgium is a complex network of governmental powers, existing out of various political and administrative actors on different levels and structures that all have their own territory, decision-making power and mandates. This fragmented structure of the country causes that there are multiple governmental organisations affected by the SDGR that have varying degrees of digital maturity in their organisations and a wide range of existing legacy systems, creating governmental silo's throughout the state.

Secondly, the *national law* is perceived to have an impact on the implementation of change in the "posting staff abroad" service and the SDGR implementation in general. Respondent 2 explains that especially the Belgian language laws have a big influence on the service delivery of Belgium. The European Commission, in accordance with the Member States, decided that all cross-border digital public services should be available to citizens in English. Which might sound as a given, but is not as self-evident in practice, in a multilingual country such as Belgium. The national law in Belgium on the use of

languages in governmental services from July 18th 1966 prescribes that all public services should be provided in the three languages of the country, namely Flemish, French and German, before the possibility exists to provide services or documents in a fourth language. Services such as the one stated in annex II of the SDGR, do however not only contain electronic forms or websites that need to be translated, but comprise of whole procedures, making the required translation a time-consuming task. Respondent 1 explains this challenge for the "posting staff abroad" service:

> *The issue that we have, we are obliged to issue our decisions in either, in one of the official languages of Belgium, so that is Dutch, French or German, we can not issue in English. Now that is a bit of an issue, because service provision, especially for foreign workers, we have some Polish workers, that do not speak a word of Dutch or French, so they could be benefited by a decision in English, but then the only thing we got out of the legal assessment was that, we have to issue in Dutch, French or German and then you can if you want to add a cover note in English. This makes it a bit more difficult because we have to make implementations, and of course with budget everything has to be justified.*
>
> *(Respondent 1)*

The third factor refers to *gaps that are still present in the national procedure of the service*. Respondent 1 explains that the use of the eBox, as provided by the National Social Security Office, for communication with employers is still a barrier in some situations, especially when talking about use by foreign employers. The respondent believes that this issue can mainly be solved by providing extensive guidance in case of national users, foreign users are however harder to contact and attain. Currently approximately thirty percent of the Belgian users activated their eBox, even though a lot of campaigns were set up and the Covid-19 crises fostered the use of online applications. The barrier for foreign users to activate and use the eBox is significantly higher, making the procedure less efficient and accessible for them. The National Social Security Office (NSSO) would thus like to evolve towards a digital wallet with an open source code, to combine and coordinate multiple wallets from different Member States and to use it for the storage of important files, like the Portable Document A1 (PDA1) file, as is also suggested by the European Social Security Pass. The respondent addresses that this is a goal that will not be achieved in the near future, since it would require a lot of data management, coordination and cooperation between the Member States.

Furthermore, there is a problem of access management for foreign employers, nowadays only employers from countries that are eIDAS compliant or use the Belgian Digital Identification scheme through the application itsme Digital ID, can have direct access to the provided services and eBox. Because of this, most foreign companies are still using third party service providers to register their employees to Belgium. This process is consequently fully digitalized but not yet automated like the national posting procedure. The Limosa-declaration, in its current use, only demands personal data from the employer

filling in the declaration, not providing them with access to other information or automated processes, thus requiring a low level of security and authentication. The NSSO, however, aims to provide its application to foreign employers as well by ensuring a secure authentication scheme. Respondent 1 explains the access management and authentication issues as following:

> *What we do have in the application euhm working abroad, you get access to the data about a worker that you are putting in, so you get a Demona, you get out of the DMFA, you get the previous declarations that are made for that employer and employee, so you get access to that data. So that means that we need to make a secure entry, and we need to make sure that we know, this is that person and he has access because the employer has given him access to the data and to the application. That is difficult for foreign employers because they have to appoint specific persons to fulfill a roles of management and access management and everything that ties into that so that is a really big challenge. That ties into SDG because SDG obliges us to provide access to the applications for foreign entities, that is a bit tricky. That is where we have an issue and if everybody, all member states would be eIDAS compliant, it would deviate a lot of burden, euhm but still then we still have the issue about authentication level that we need to attain. Because if it is the drivers license, it is not at the highest of level so that also a bit of a challenge to see where do we put our line, because we have to do it for the foreigners but also for the Belgian users, so there is a bit of risk assessment there as well and that is always an ongoing challenge that we know, we know off.*

> *(Respondent 1)*

Another barrier related to the access management issue is the gap between the foreign employers that are familiar with the procedure and system and the ones that are not. The National Social Security Office observes that the way towards the "posting staff abroad" service and International Social Security website is not always self-explanatory, even though the Your Europe platform tries to contribute to the accessibility of information. The services provided remain part of a relatively niche market, according to respondent 1, where sometimes even colleagues from different Member States are not aware of the existing procedure and website with all available information. Because of this registrations are sometimes filed through local offices referring them to the NSSO, leading to the fact that a great deal of required information needs to be exchanged through the Electronic Exchange of Social Security Information (EESSI) system. This often entails that a lot of information needs to be exchanged back and forward between institutions and that a large amount of additional information needs to be provided by the employer. This causes a lot of slack in the procedure and feeds into the inefficiency of case handling. Respondent 1 explains how he perceives this shortcoming:

I think that is the main issues so the big divide with the employers that are already familiar with the system being Belgium or foreign that is not that much of a difference I think but it is the main issue is with the employers that need to contact us for their posted workers in the broad sense but are not familiar with the system itself and there you have the access issues also the issue with the eBox and how to really make sure that everything is set up. On the other hand once they have done it once, it is not really an issue anymore, they know how to contact us and it is just that first barrier.

(Respondent 1)

The second topic refers to the existence and consultation of **base registries** in the organisation and "posting staff abroad" procedure. The most important base registry linked to the posting staff abroad service is the Crossroads Bank for Enterprises (CBE). This database, owned by the Federal Public Service of Economy contains all relevant information about enterprises and their business units. The aim of this database is to increase efficiency of public services and to simplify the administrative procedures for enterprises (FPS Economy 2023). The National Social Security Office mainly uses the information of this database to look into the availability of data on and the existence of enterprises that use their services. The NSSO has his own repository of employees through the information gathered from the Demona declaration. Additionally, connections to the self-employment and unemployment databases will be made available within the next two years.

The respondents mention that the Crossroad Bank for Enterprises is very well regulated for Social Security. If there is a well-explained need for access with a clear purpose that is proportionate to the demands, a request can be put in with the management of the Crossroad Bank to check the feasibility of realization. The organisation will then look into the feasibility and justification of the connection. When the requested connection is approved, the CBE provides the NSSO with guidance on how to attain and manage the connection as well as the access to other databases.

And it is there something the Belgian does right, its that access to data, cross-platform access, cross-competence access, that is something that really works. Euhm, there has been a lot of criticism about how we organize the country and regionalization and everything like that but this still works.

(Respondent 1)

Respondent 1 emphasizes that a connection to foreign databases is something they aspire in the future, especially with their neighboring countries, but this remains a big challenge. There is a lack of a clear legal framework to foster these connections in the European Union. Furthermore, a lot of Member States lack competences regarding base registries and data connections, often MS even experience difficulties in exchanging data within their own borders and across their own institutions. Although this might be perceived as

solely a lack of digital maturity or joint European regulation, the respondent clarifies that even the Netherlands, a country that scores very high on digital maturity in the eGovernment Benchmark, with a fifth place and 85 percent on its maturity score, has a lot of barriers in the access to data registries, lowering the efficiency of the "posting staff abroad" service (Capgemini et al. 2022). The following quote by respondent 1 describes this discrepancy in detail:

> *The Netherlands is a prime example of that because they always say well we are a leader and we are very innovative and everything like that and that is true except for here what we see is, the "Sociale Verzekeringsbank" (SVB), which is competent for social security of applicable legislation, but they need information from the UWV, the unemployment office because they have the data on the employment on the salaries, the SVB does not have that but they do not get access to that data. And even if they would the systems do not talk amongst themselves and then they have to look at the tax authority, so the "belastingsdienst" to see if contributions have been paid by the employee, if he has been doing everything that he has to do and also the employment record is still with another institution because that is labor law and they do not have access to that. So for the Dutch the main issue about automatization is access to data, for us in Belgium it is quite easy because we have that crossroads bank that is, that is this center of our data hub that has to do with social security and then because we have that already in place we have a way to ask for data with the tax authorities with labor law authorities, it is not easy, it takes about a year and a half to get something through if not longer. But still it is possible, and we have a playbook.*

> *(Respondent 1)*

The respondent also links this lack of competence and connection to the implementation and success of the Only Once Principle (OOP). There need to be connections between multiple organisations and base registries to be able to provide and deliver this principle in the European Union. This is however not a straightforward case, and differences between Member States are still large and significant, making it very difficult to realize in the near future on a large scale.

Respondent 1 adds that access to data and data exchange between Member States often leads to a legal swamp. Currently, for Social Security, the data access is regulated mainly through EESSI, which provides them with more opportunities for secure exchange. Member States are working on developing more possibilities for data exchange between borders, but the respondent perceives that it remains a very tricky situation because of the different legal frameworks, procedures and social security practices. Nowadays, more ad hoc exchanges between Member States are happening, because there is always clarity and proportionality to the case file. This is not the situation for the structural exchange they are aiming for in the long term.

In Belgium there is one example of structural data exchange with Germany. Both Germany and Belgium have a system of fidelity stamps for employees in construction. When activities in the construction sector are filed, it is requested if employers pay

premiums to employees similarly to the Belgian fidelity stamps. The stamps refer to premiums like the end of year bonus, Christmas bonus, or thirteenth month, on top of the normal wage. It often entails an annually allocated premium corresponding more or less to a monthly salary (Social Security n.d.-b). To ensure that these stamps are not provided twice, a Treaty was set up between the Member States, to exchange data on the fidelity stamp scheme received by the employees. The respondent addresses that this data exchange was straightforward due to a similar legal framework and practice and its reciprocal characteristics. This is however not the case for most national social security regulations and practices.

The third topic related to the context factor refers to the reuse of **existing building blocks and frameworks**, as provided by the European Union. The most important building block that was mentioned by the respondents is the electronic identification (eID) and more specifically the eIDAS regulation. This regulation on electronic identification and trust services provides a secure means of interaction between citizens, businesses and government (European Parliament and European Council 2014). In Belgium both national and foreign citizens and employers can authenticate themselves with the help of their eID. The respondents however still perceive issues with the access to applications for foreign entities and mention that a lot of burden would be deviated if all Member States would be eIDAS compliant. Additionally, there are still questions about the authentication level that should be provided in the European Union, causing that this remains a risk assessment that puts the administrations to a challenge.

Besides eIDAS, the Once Only Technical System (OOTS) can be perceived as a relevant building block in cross-border digital public services. For the National Social Security, and the "posting staff abroad" service in this specific case, another system is in place, namely the Electronic Exchange of Social Security Information (EESSI). This IT system was set up to help exchange information between social security offices in the European Union in a fast and secure manner (European Commission n.d.-d). The European Commission approved that this system should not be replaced by the OOTS, since it provides a more detailed exchange specified for social security purposes, according to respondent 2.

Lastly there are also some perceived **external triggers** that influence the context factor, in this case it refers to the demand, need and use of the "posting staff abroad" service. Respondent 1 mentions that the use of the posting procedures and applications has been increasing over the years. Different reasons can be considered for this, the respondent however explains that there is no proper research done for the Limosa declaration, to give well-founded conclusions. Their available data, however shows that the PDA1 file is

increasing significantly, the posting of workers increases, but also temporary missions and people that work structurally from multiple Member States know a growing trendline. Another important observation is the increasing amount of telework that emerged during the Covid-19 crises and maintained its position in todays society.

There recently has been a change in the regulation regarding the use of telework. A framework agreement on habitual cross-border telework was set up as a result of an ad hoc working group of the Administrative Commission for the Coordination of Social Security systems. When a person teleworks for more than fifty percent of the time for a company situated in another Member State other than its residence country, the social security obligations will be transferred to the country where the company is situated in. This only applies when both the residence as receiving country have signed the framework agreement. Currently it has been signed by Germany, Switzerland, Liechtenstein, Croatia, Czech Republic, Austria, The Netherlands, The Slovak Republic, Belgium, Luxembourg, Finland, Malta, Norway, Poland, Portugal, Spain and Sweden (FPS Social Security 2023). This entails that more applications for PDA1 files and foreign employment will be filed in the coming years, since the amount of telework is increasing significantly in the digital decade.

The findings from the interviews clearly show that the context factor plays a big role in the Belgian case. Multiple topics regarding this factor have a huge influence on the changes from the SDGR and their service delivery.

5.2   Content

The second factor refers to the content of the change, this comprises of the change plan and the micro-macro level changes, in this case it entails the content as provided by the Single Digital Gateway Regulation (Kuipers et al. 2014). Although the **change plan**, as set out in the SDGR by the European Parliament and Council is exactly the same for all member states, the reality of the implementation is perceived as very different depending on the country of residence. While the prescribed changes might require micro-level changes in some countries, other Member States will need macro-level changes to comply to the legislation. Additionally, the change plan is strongly dependent of the context in which the nations operate, its digital maturity and competences, as discussed in the context factor of change. Respondent 1 describes it as follows:

> *You can not just say well this is the implementation for everyone and it is the same*
> *because it is literally the same text but the reality for employers and employees is*
> *very different in the different member states.*
>
> *(Respondent 1)*

Especially when talking about the "posting staff abroad" service, respondents emphasized that regulations and practices across countries are very different depending on the prevalent social security practices and procedures, influencing the **semantic interoperability** between Member States. Respondent 1 explains that this causes a lot of error in the checking of posting conditions due to limitations in national law and the absence of a clear legal framework for data exchange. The respondent therefore proposes additional legislation and coordination from the European Union to facilitate this in the future. Respondent 2 highlights that there were already initiatives set up to foster this through the next citation:

> *There was an initiative as part of SDGR for a semantic harmonization but this failed. So now what we do is look at existing standards and see who complies with what and take these as a minimum requirement. In this way we want to get an understanding of the requirements in every country because the impact for citizens can be big. For example, birth certificates are very different across countries and some do not even have certificates but solely databases. Some countries choose birth dates in different ways, and this can make a lot of difference for citizens. This is also something that is important for social security and for example in the EESSI.*

> *(Respondent 2)*

Semantic interoperability can hence be considered as an essential concept to ensure the similar implementation of EU regulations in different Member States according to their different national regulatory frameworks and capabilities. Cross-border data connections, access to foreign public services and secure data exchange is only feasible when the semantic interoperability is harmonized throughout the European Union.

The second factor that plays a role in the content and level of change is the **availability of resources and the financial costs** that are expected to be made or required to fulfil the change plan. Respondent 2 mentions that no specific budget is allocated to the implementation of the Single Digital Gateway Regulation by the European Union and that services are expected to be changed with own, national funding. Belgium, however, applied for funding from the European Recovery and Resilience Facility, that was set up to overcome the economic crisis intertwined with the Covid-19 crises. The funds, borrowed from capital markets, are available to Member States for ambitious reforms in line with the European Unions agenda (European Commission 2021-b). Belgium received a grant of 5.92 billion euros, where 26,64 percent of the funds is allocated to the digital evolution in the country (European Commission 2023-c). This budget is partly used for the implementation of the Single Digital Gateway Regulation, as well as other digital ambitions of the Belgian federal government. The National Social Security Office also received budget from this funding to fulfil the necessary changes in their service provision.

Respondent 1 mentions that budget for the implementation of the SDGR is still perceived as a difficult matter in the administrations. There is namely no clear budgetary return on investment from the demanded changes, other than improved public service provision for the citizens and businesses. Although both respondents perceive client centricity and better service delivery to citizens and businesses as an important aspect, other actors in budgetary meetings do not always agree to this viewpoint. Respondent 1 sees this as a limit to the management of the SDGR, since constant explanation of necessity is needed to the political level due to budgetary constraints. Respondent 2, however, thinks that the general attitude on the political level and in the administrations should shift from investing in making services easier to control and manage for administrations to ensuring the best possible service provision for our citizens and enterprises, regardless of the budgetary profit or loss. The SDGR specifically emphasizes this requirement and viewpoint in their change plan, being the first regulation of this kind in the European Union. This attitude change is something that will not be feasible in the short term, but respondent 2 perceives the ambition of the SDGR as an important step in the right direction in this regard.

While the written content of the Single Digital Gateway Regulation, might be the same for all Member States, the change factor clearly shows otherwise. The context, capabilities, semantic interoperability and budget of a country largely influence the way the content of the change plan is interpreted and applied.

5.3 Process

The process factor refers to the 'how?'-question of change, where resistance to change, networks and best practices play a role according to the interviewees (Kuipers et al. 2014). The respondents mention that the **resistance** that is felt during the implementation process is not necessarily linked to the public administration and the employees that are involved, but more to the political level and actors. Politicians and lobbyists are often sceptical about the required changes to existing processes, therefore, often slowing down the process by lengthy discussions on the topic of change.

Respondent 1 perceives that service managers and governmental employees, on the other hand, show a real voluntary to implement the SDGR in their procedures and organisation. It is however a fact that, the National Social Security Office in Belgium already has a lot of digital and automated procedures as well as access to data registries, whereas some other Member States and even other Belgian governmental administrations do not have the same competences and structures. Respondent 2, overseeing the general SDGR implementation and coordination, addresses that the NSSO is one of the better students in class. These differences in competence levels and existing structures influence the

change process, personnel structures and the experience of employees in organisations. Belgian respondents in the "posting staff abroad" service perceive the change process on a more micro-level while the SDGR can significantly change macro-level procedures in other Member States or institutions. Respondent 1 shared some examples about this, regarding the implementation of the PDA1 for telework in other Member States:

> *We are really tied into the electronic automation and everything that has to do with that, so for us it is an easy implementation and the Dutch they are focusing, well focusing on I can not say that but on the short term they have to use additional staff to fix their problem and that is of course not really that interesting because it will lead to a lot of delay euhm and, and slow case handling. They are not happy with it of course as well, but it is the reality that they have to work with so it is difficult for certain Member States. The Swiss for example have said the same thing they need to have the initial year to deal with the applications because they have an enormous amount of frontier workers, euhm so that makes sense as well. So challenges are different for the different member states as well.*

> *(Respondent 1)*

The second aspect refers to the **networks** that national administrations are part of for cross-border knowledge sharing and the exchange of best practices across Member States. Respondent 2 mentions that this can be distinguished between two main levels of information exchange. On the one hand there is continuous dialogue between the Federal Public Service Policy and Support of Belgium (BOSA) together with the European Commission, overseeing the general implementation and coordination of the SDGR in the country. Additionally, BOSA is in close contact with other national administrations, such as their neighboring countries the Netherlands and Germany about their progress and best practices. On the other hand, there are the existing connections and structures between the different sectors and domains that are affected with the service changes required by the SDGR, in this case the Labour and Social Security sector. The content and context of these changes in these specific sector procedures and services will hence be shared and discussed in existing communication structures, to share best practices and combat misunderstandings or challenges. Respondent 2 mentions the Electronic Exchange of Social Security Information (EESSI) here as an important example for the "posting staff abroad" service.

Respondent 1 refers to the role of the European Labour Authority (ELA) as a sector specific organisation, which has as its mission the support of the MS and European Commission in enforcing the rules applied to labour mobility and the coordination of social security. ELA continues to emphasize the importance of structured coordination and data exchange between national authorities, as well as the performance of joint activities like labor inspections and training of staff on cross-border mobility regulations (European Labour Authority n.d.). The respondent perceives that the funding that ELA receives to perform scientific studies and format recommendations for social security

improvements is a lever for the national administrations to inform and push the political level about the necessity of the change process.

Although both respondents highlight the existence and importance of networks, structures and information exchanges, respondent 1 emphasizes that this is still very scattered across the European Union. The interviewee therefore advocates for a more coordinated best practice sharing approach, as it would be beneficial for a better implementation and cooperation between Member States. It is however challenging to select the correct authority to foster and lead this best practice sharing approach. Respondent 1 sees a bigger role for the European Commission as a possibility in this regard, but also understands that this might not be in line with the other roles and responsibilities of the European Commission in the European Union, the interviewee therefore explains it as follows:

> *Because, we do not always know what is happening in the neighboring countries even with colleagues, direct colleagues, we meet and we talk and we exchange information but if we would have some more best practices, like the European Commission putting out look this is good but that is a difficult role for the Commission, that is difficult because they are the guardian of the treaties so it is more the police rather than to say look this is a good way of doing things so it is a bit of a schizophrenic approach but the SDGR in my opinion has been very good euhm just to make sure that all noses are pointing into the right direction, to push that narrative and then I think we are going in the right way.*

> *(Respondent 1)*

Concluding can be stated that the change process can be constructed very differently across the Member States of the European Union and even within national structures. On the one hand, political resistance and a countries digital maturity, legacy infrastructure and competences can form a barrier for the change process, but on the other hand networks and best practices sharing could enable the change process.

5.4   Leadership

When addressing leadership in the Belgian context it is crucial to first take into account the **complex governmental and state structure** of the country. Belgium is a federal state consisting out of multiple Regions and Communities with decision-making power in their own territorial domains, as is explained further in the case study part of this Master Thesis. This entails that there are also different governments and Parliaments in Belgium, more specifically the Federal, Flemish, Walloon and Brussels-Capital ones. These governments and Parliaments all have responsibilities in different domains and thus control their own institutions and agencies (Belgian Federal Government 2023). This structure has consequences for the implementation of regulations and causes that often, multiple parties, from different governmental levels, are involved and competent.

Respondent 2 mentions that this complex infrastructure of the Belgian Federal State has an influence on the way the leadership is divided in the country. Every institution and department works in their own silo. Regulations and Directives from the European Union get forwarded directly to the mandated institution and no other institutions are made aware of this. This has a lot of consequences for the implementation of the SDGR and forms a challenge for the provision of an unified approach that aims to transform all public services in the country. Therefore, respondent 2 emphasizes that there should be a change in this habit of not communicating and coordinating amongst another and that the SDGR is the perfect way to change this behaviour. Furthermore, the user centricity in the regulation also entails that administrations should not solely think about what is best for their efficiency, but look at the efficiency in terms of the users of their service.

Respondent 2 hence perceives **strong and coordinated leadership** as a very important aspect in the successful implementation of the Single Digital Gateway Regulation. Additionally, there should be raised attention for the linkages of the SDGR with other European Union regulations, directives, frameworks and institutions to ensure that the investments are not lost over time and further efforts can enforce it. At the moment there are two coordinators at the Belgian Federal Government Agency Policy and Support (BOSA) who oversee the general implementation of the SDGR and are in contact with top managers from other departments and institutions who are obliged to change their services and procedures as is portrayed in Annex II of the regulation. Respondent 2 mentions that BOSA is the right department for this coordination in the federal structure, but emphasizes that the launch of an additional central coordinative institution, solely mandated with the implementation of these overarching regulations, directives and frameworks would be beneficial for good leadership and coordination of these initiatives provided by the European Union.

Another important aspect when talking about leadership is the influence of **the political will** on the implementation of the SDGR. Respondent 2 mentions that this can be described as one of the biggest challenges for Belgium. Politicians often have their own agenda when it comes to policies, in addition lobbyists often have a big influence on their decision-making. Administrations are said to be put in place to provide stability and continuance in government, contrary to the changing political landscape. This is however not how the respondents perceive the reality of the Belgian administrational landscape, where political steering of the administrations remains very prevalent to this day. This mainly has consequences for the time frame of the implementation and its strength. Political discussions and the influence of lobbyists slow down the implementation process through lengthy discussions and often form resistance to change, as was discussed in the process factor. Administrations consequently need to continuously remind the political

leaders of the importance and most crucially the obligation to implement the SDGR and other European Union regulations. Often political leaders try to set them aside for other national issues, that are more attractive on the public agenda, diminishing the requirements set out by the European Union institutions.

While leadership is perceived as a very important aspect by the Belgian respondents, there is still a lot of change necessary to foster the implementation of the Single Digital Gateway Regulation. There is a clear need for high-level, and most importantly aligned coordination across the Member States and within the national institutions. Additionally, the political landscape in Belgium is perceived to be one of the main struggles when implementing the change.

5.5   Outcomes

The outcome factor refers to the results of the implemented change and the values that come along with it (Kuipers et. al 2014). Important to note here is that the implementation of the Single Digital Gateway Regulation is currently still an ongoing process, which is in different stages across the Member States. The Belgian respondents perceive that the SDGR did not have a large **impact** on the service delivery of the "posting staff abroad" process in Belgium as such. Respondent 1 mentions that the majority of things demanded by the SDGR were already on the agenda of the National Social Security Office, but that the budget provided by the European Union through the Recovery and Resilience Facility fostered the implementation.

Although the Belgian impact is perceived more on a budgetary level, respondent 1 mentions that the SDGR has a bigger impact on Member States that have a lower digital maturity or a lack of the needed competences or resources in their organisation. Additionally, the obligation of the implementation through the regulation pushes the narrative and harmonization in the European Union. The following quote highlights this:

The SDG has really helped to push the narrative we need to do this, we must do this. It is no longer a choice and that has really helped I think, to get, to go that step forward and in that sense it is also been timely because it was pre-Covid that we had the first obligation to implement and now we have Covid and the digitalization and a lot of member states forcing to be more aware that we need to provide services at a distance and that has also I think facilitated the implementation and the digitalization. So, in that sense it is a bit of a perfect storm, where we see EESSI being implemented, SDG coming out, Only Once being also a bit more implemented and then the entirety of the pandemic, that has really enforced institutions and employers and employees to look at what are we doing physically can we do it electronically more efficiently, all those things tied in I think we are going into the good direction.

(Respondent 1)

Respondent 2, who is concerned with the general implementation of the SDGR points out that it can be seen as a crucial lever in both Belgium and the European Union. Because of the regulation, more attention is given to the digitalization of the total governmental administration and the importance of user centricity in it all. Therefore, the respondent perceives that it is essential to keep addressing the good practices and relevance of the digital aspect for administrations, ensuring that the impact of the EU regulation does not fade over time. The respondent adds to this that it is important to keep in mind the guidance of different citizen groups in this process of continuous digitalization. Besides the providence of information and contact points, physical touchpoints should be preserved for people who need it. The respondent emphasizes that this is not only the case for digital illiterate or elderly people, but also for people that might be in a vulnerable position in their lives and need help and physical contacts to address their problems through these services.

Although respondents mention mostly positive outcomes of the SDGR, there are also some **shortcomings and hazards** in the implementation. The first one is the coordination of the European Union for initiatives relating and fostering the success of the SDGR. While a lot of promising initiatives regarding the Single Digital Gateway, interoperability, Once Only Principle, digital wallets and so on emerged in the past couple of years, a great deal of them fizzled out due to a lack of coordination or the lack of budgetary requirements. Respondent 1 gives the example of the eIDAS regulation combined with a digital wallet and joint authentication method, that could have had a positive impact on the secure exchange of data between countries and foster access to cross-border digital public services, if implemented. The reasons these initiatives do not always work out are mostly due to the political will according to the respondents.

The second limitation is the access to information across institutions due to a missing common authentication method, missing linkages between base registries and a missing common legal framework. Respondents, nonetheless perceive a real voluntary within organisations and institutions to move forward in the digital age. One positive aspect about this is the involvement of the European Labour Authority in Social Security services that pushes the electronic delivery of services and accessibility of data in accordance with the SDGR. Respondent 1 addresses that ELA gets the funding required to do research and perform studies to provide recommendations for national institutions as well as the hierarchical and political power to pursue things.

The third shortcoming refers to the accessibility of information, while the European Union is trying to centralize this through the Your Europe platform, the Belgian

authorities notice through communication with their clients that the barrier is still high for small businesses to find this information.

> *What they say to us is also, if you have a small business, they will not be able to find it through Your Europe it is also not that clear that they can use it to go through there euhm and they can find that information, it is available but finding the path to the available information is still a quite a big of a challenge. And even if I talk to colleagues from other institutions or foreign institutions, they are not aware that we have the website even though they know that we have to implement the SDG and they know what SDG is but then they do not know that we have the entire website put up, so the information is available but because it is a bit of a niche market, its still remains a bit of a niche market its really the challenge, how do we inform people that the information is there and its easy. Once they find its okay but really guide them through it, that is a bit of a challenge and a hurdle and something that we will try to address now also with telework.*

> *(Respondent 1)*

Overall can be concluded that the change outcome of the Single Digital Gateway Regulation for Belgium is relatively positive but not perceived as a significant change to the current "posting staff abroad" procedure. More significant outcomes are mostly hindered by the lack of coordination of projects and access to and accessibility of information.

5.6   Summary of results

Table 4. Change Management Factors applied to the Belgian case

Context	
National and local approaches to change	*Organisational structure and complementary legacy systems*
	National law
	Gaps in national procedures (access Management/gaps between foreign and national users)
Base registries	*Crossroads Bank for Enterprises*
	Connections to foreign databases / Competences of Member States
	Legal environment

Existing building blocks and frameworks	*eIDAS regulation*
	Electronic Exchange of Social Security Information (EESSI)
External triggers	*Covid-19 and telework*
Content	
Change plan	*Differences in competences and levels of change*
Semantic interoperability	*National Social Security practices and procedures*
Availability of resources and financial costs	*European Recovery and Resilience Facility*
	Budgetary constraints and political accountability
Process	
Resistance to change	*Political will and lobby groups*
Networks for cross-border knowledge sharing and best practices	*General SDGR implementation dialogue – BOSA, EU Commission and other Member States*
	Sector specific dialogue – EESSI, European Labour Authority
Leadership	
Governmental and State structure	*Belgian Federal State – Regions and Communities – Silo's*
Leadership style	*Strong and coordinated leadership*
Political will	*Political agenda – Lobbyists*
Outcomes	
Positive impact of the change	*Digital maturity – competences of Member States*
	Harmonization – Digitalization narrative

Shortcomings and hazards	*Coordination of the European Union*
	Access to information
	Accessibility of information for citizens

5.7   Recommendations

Six recommendations for the improvement of the Single Digital Gateway Regulation implementation for the Annex II public services from the perception of experts from the Belgian "posting staff abroad" service can be derived. Important to address here is that these recommendations can solely be considered in the context of the Belgian case, within its own structures and competences. Moreover, the perceptions are based on two interview respondents, the results in this part can hence not be generalized further than the SDGR implementation in the Belgian "posting staff abroad" service.

The first recommendation addresses the consideration of the **background and structures** countries operate in. To understand the context in which the change is implemented, a *needs and capabilities assessment* of the country should be conducted. Currently, the content and expectations of the Single Digital Gateway Regulation are the same for all Member States, while they do not start from the same capability level. Although initiatives like the eGovernment Benchmark provide an overview of this every year, the methodology used in the analysis can be considered as a shortcoming. The barriers and drivers in the back office of the country, providing the services and procedures is not researched thoroughly. Member States have different governmental structures, legacy systems, competences, budgets and digital maturity. Taking these differences in to account from the start instead of treating all countries equally throughout the change process could foster the successful implementation of the regulation and cross-border digital public services.

The second recommendation is to present an **overview of the applicable national laws and practices** in Social Security and other public domains, to make harmonization across the European Union feasible. Especially in the case of the "posting staff abroad" service, the complexity of national social security laws, procedures and concepts play a big role. Additionally, there is a lack of semantic interoperability because of the divergence in these practices and requirements, leading to a lot of errors in the checking of social security conditions. A clear, extensive overview and eventually the harmonization of data, concepts and documents would avoid a lot of unnecessary mistakes and challenges and

could enable structural data exchange over time. Systems like EESSI and the existence of the European Labour Authority already contribute to this, respondents nevertheless still perceive that a lot of change and coordination is essential for further improvement.

The third recommendation concerns the **access to data and services across institutions and country borders**. First of all respondents believe it to be very beneficial if all Member States would be eIDAS compliant, to ensure access to cross-border digital public services throughout the whole EU in a similar and secure way. For this to work, a common legal framework and understanding of the authentication level that is required for the specific services should be constructed and agreed upon. Secondly, access to foreign data registries is perceived as essential to provide fully digitalized and automated cross-border digital public services in Belgium. Currently, some Member States do not even have access to data registries from institutions within their own country. Despite the fact that systems like OOTS and EESSI, contribute to this, structural data exchange is still perceived as a legal swamp in need of a common, detailed European Union framework by respondents.

The fourth recommendation refers to the **accessibility of information by users** of the cross-border digital public services. While the European Union supplied the Your Europe platform to citizens and businesses as a single entry platform with all necessary information about cross-border digital public services, the respondents still notice that small and medium enterprises, that are not familiar with the procedures yet, have trouble with locating the right information. This causes that different pathways are used towards the correct registration processes of social security, initiating less efficient case handling and more error in the procedure. The Your Europe platform can be seen as a crucial step in the right direction, but more promotion and visibility of the correct information, sources and pathways is crucial for the guidance of users and the efficiency of the procedure.

The fifth recommendation addresses the **budget** for the implementation of the Digital Single Gateway Regulation. The respondents mention that no specific budget is allocated by the European Union for the implementation of these changes in the services. Whereas Belgium has received funds from the Recovery and Resilience Facility that are used for the implementation, this might not be the case for all Member States. Additionally, the budget and resource requirements for changes are very different across the Member States based on their needs and capabilities, as mentioned in the first recommendation. It would thus be beneficial to link budgetary provisions for Member States to needs and capability assessments adopted prior to the implementation of the change. This also ties into the fact that respondents perceive that there is no clear budgetary return on investment for the implementation of the SDGR, making it difficult to advocate for more budget in

discussions. With a set and justified budget Member States would have the possibility to carry out the changes necessary to transform their services. This could foster the harmonization of service delivery in the European Union, since more mature Member States also profit from progress in digitally less mature MS.

The last and overarching recommendation is the preference for a more **unified and coordinated approach from the European Union Institutions**. Respondents mention that the coordination is currently fragmented across Member States, sectors and different European Union initiatives or authorities. More coordinated best practice sharing and knowledge sharing between Member States could facilitate the change process and contribute to harmonization rather than fostering fragmentation. Further, the coordination of the European Union could be important in countering the resistance of national political actors, that are often slowing down and questioning the change process according to respondents. Overall, the respondents perceive that there should be more communication and coordination between the different Member States in implementing this regulation, the help of an overarching institution could contribute to this.

6   Discussion

This chapter will combine the findings from the interview results with the academic literature about organisational change, change management theory, the Single Digital Gateway Regulation and cross-border digital public services. The change factors as provided by Kuipers at al. (2014) will be discussed and reflected upon together with findings from previous academic research. Moreover, the theoretical framework and change factors will be critically discussed by the researcher.

The first change factor that was treated during the interviews was the **context factor** of change. Kuipers et al. (2014) mention in their framework that this refers to the political and juridical context the organisation operates in. This mainly indicates to the prevalent economic forces, political system characteristics and the complexity of the stakeholder field. This complies with the perceptions of the interviewees on the context of the changes caused by the SDGR. Three main points mentioned by the respondents highlight the importance of the organisational and juridical context.

First of all, the context of the *national and local approaches* has an impact on the implementation of the regulation. Belgium has a complex structure of institutions, scattered across regions and communities, with their own competences and legacy systems. Furthermore, gaps in the national "posting staff abroad" service are recognized by respondents, although they are mainly linked to the lack of structural data exchange across borders and challenges with authentication and access management for foreign employees. Both Kalvet et al. (2018) and Krimmer et al. (2021) mention in their research about the drivers and barriers of cross-border digital public services that the existence of heterogeneity in national information systems and structures leads to technical and interoperability challenges for administrations. Additionally, the national law plays a significant role in these national approaches, for Belgium it mainly concerns law that prescribes the use of national languages in service delivery. Specific Social Security laws and practices like the fidelity stamps also challenge the possibility of structural exchange between member states.

Secondly the Belgian *base registry* the Crossroads bank for Enterprises is perceived as an important enabler in the context of change. This aligns with the findings of Kalvet at al. (2018), who name national systems of base registries as an important enabler for national level implementation of the Single Digital Gateway. On the other hand, the lack of well-connected base registries and competences in other countries of the European Union was mentioned by the respondents as a big challenge for the linkage and coordination of databases for data sharing across borders, influencing the possibilities for automated cross-border digital public services in Belgium. Kalvet et al. (2018) and Krimmer et al.

(2021) add to this that these different data handling methods limit the development of common access tools involving non-base repositories, access to scattered data and query-based access to data.

The third point related to the political and juridical context is the existence and use of *building blocks and frameworks*, as provided by the European Union. Krimmer et al. (2021), mention the eIDAS regulation and Your Europe portal as important drivers to foster the Single Digital Gateway Regulation. Whilst the respondents partially agree with the positive effects of the eIDAS regulation, they still perceive its impact to be very dependent on the implementation in other member states and address the difficulties they experience with authentication and access management without a common legal framework. Besides that, the respondent do not perceive a significant impact from the Your Europe portal in their organisation, since SME's still seem to struggle with finding the correct information and pathways towards the single entry portal, if they are not familiar with it.

Besides the political and juridical context in the change factor, the *client demands*, in this case demands from foreign employers and employees, play an important role according to the Change Management Theory. Kalvet et al. (2018) add that external triggers like public demand can be considered as significant drivers for implementation. The respondents noticed that there is an increasing amount of registrations for posting and that the emergence of telework due to the changing work environment in the Covid-19 period plays an important role in this trend. The digital age promotes mobilization in the internal market and is thus expected to have a continuous impact on the demands for cross-border digital public services.

The explanation of the context factor in the Change Management theory of Kuipers et al. (2014) can be interpreted in a very broad manner. This entails that a lot of findings, related to the other change factors can also be placed in or be connected to the context factor. This can be perceived as both an advantage and disadvantage of the theoretical framework. On the one hand, there is a lot of room for researchers to point out important subjects in this part, giving them the creative freedom to apply the framework as wished for their research. On the other hand, a too broad framework can cause discrepancies between the findings of comparable research subjects because there is too much room for interpretation. The freedom the context factor provides makes it difficult for the researcher to define the borders of its research scope and the possibility to truly select the most relevant findings for the change factor. These observations are important to consider when conducting further research on the subject or when applying the framework to other cases.

The second change factor is the **content factor** of change, where according to interview respondents, the interpretation of the change plan, the semantic interoperability and the availability of resources and financial costs can play a role. Kuipers et al. (2014) refer to three orders of *change plan* content, with different purposes. The Belgian respondents perceive the changes to their organisation and the "posting staff abroad" service as first-order changes. This entails that the implementation of the Single Digital Gateway Regulation introduces new details, processes, procedures and systems in their organisation, without affecting the primary processes and structures. This is due to their existing competences and the prior attention for the digital aspect and innovation in their organisation as well as the automation and digitalization of their service delivery.

Respondents however, did address that other countries that do not have existing ICT infrastructures and base registries in place, will most likely deal with second-order changes in their organisation. This encompasses organisational and agency turnarounds, as well as changing the organisational culture, climate and behaviour. This is mainly the case in countries where the digital narrative is not yet implemented and accepted throughout the whole administration (Kuipers et al. 2014). While the content of the change plan is thus the same, the level of change, ranging from micro to macro-level changes differs from country to country according to their existing structures and competences. Important to not here is that this can also be different within Member States themselves. Although the "posting staff abroad" case is considered in this research, Belgian institutions mainly operate in governmental silo's, meaning that other administrations might consider the content of change on another level according to their background. This research can not formulate conclusions regarding the content of change for other Member States or other Belgian institutions and services, it would nevertheless be an interesting topic for further research.

The barriers that come along with the *semantic interoperability* between Member States were mentioned often by the interview respondents and by academic literature. Kalvet at al. (2018) and Krimmer et al. (2021) highlight that the harmonization of metadata quality, data models and data definitions is crucial for a good service delivery. On top of that the authors recognize that semantic interoperability problems and differences in languages and concepts foster challenges for interoperability between Member States. The respondents approve of these findings by referring to differences in procedures and practices of national social security organisations, forming a disadvantage for structural data exchange. Furthermore, semantic harmonization was mentioned by the respondents as an important enabler for managing the content of change. Currently, however, initiatives regarding this topic seem to be missing or failing at the European Union level. Consequently, this entails that Once-Only Principle requirements in the "posting staff

abroad" cross-border digital public service delivery can not be met due to the lack of semantic interoperability for social security services.

Finally, the *availability of resources and the financial cost* of change were mentioned by respondents as important for the content of change. Kalvet et al. (2018) mention high implementation costs as one of the key challenges within organisations for the implementation of cross-border digital public services. In case of Belgium, the funding from the European Recovery and Resilience Facility, fostered the implementation of the Single Digital Gateway Regulation. Especially, because additional budget was freed for implementations they already aspired. The respondents do, on the other hand, recognize that other Member States, need to address more means for the desired changes because of their system and capabilities background. It would thus be interesting for future research to apply the theoretical framework on countries in the European Union that score low on the e-government maturity index, to compare the influence of the financial costs and resources.

The findings for the Belgian "posting staff abroad" case related to the content factor of change mainly comply with previous research findings on cross-border digital public services. It is however noteworthy that the respondents perceive a lot of divergence in the implementation of the content of the Single Digital Gateway Regulation within their own organisation as well as between the European Union Member States.

The **process factor** of change consists out of the nature of the change process, the (employee) resistance and the success and failure factors of change according to the framework provided by Kuipers et al. (2014). The respondents added the influence of cross-border knowledge sharing networks to this list, specifically in case of the Single Digital Gateway Regulation.

While Rusaw (2007) proposed four *approaches to change* in his research, it is difficult to fit the changes caused by the Single Digital Gateway Regulation into one, because of its complexity of institutions and powers. While the general implementation of the regulation can be mainly categorized as a planned, means-end, rational and top-down approach, from the perspective of the European Commission, the specific implementation in Member States does not fit entirely in this narrative. The implementation in the national context comprises of a large variety of institutions, procedures and services, meaning that a more incremental and pluralistic approach is applied, where small steps are taken and a lot of stakeholders are involved in the change process. It is, however, important to keep in mind that regulations on the European Union level outweigh the national law, the change process is thus obliged for national administrations and sanctions are possible if this is not followed.

Even though *resistance* was mentioned extensively by respondents, their viewpoint did not align with the one presented in the theoretical framework. Piderit et al. (2000) namely refer to resistance of change from employees in the organisation, rather than other actors in the government. The respondents mentioned that they do not perceive resistance from employees in the Social Security administrations, but rather resistance from the political field and external environment, mainly through lobbyists.

This resistance still fits in the three categories of reactions as presented by Piderit et al. (2000), namely cognitive, emotional and intentional. Respondents mentioned political will as one of the main points of resistance, fitting into both a cognitive and emotional resistance based on their feelings and believes towards the change. Additionally, the intentional resistance to change connects with the behaviour of lobbyists, who make plans and organise actions to counter the changes that are about to be made. There is thus a discrepancy between the viewpoint of resistance in the change process by the theoretical framework and the respondents. This might however be completely different in other Member States, because this is strictly dependent on organisational structures, employee behaviours and the political and lobbying field in a country. This makes the concept and especially the perception of resistance a very subjective aspect of change, that is only to be applied and understood in specific contexts, which can not be generalized to the entire EU or even Member State. Academic literature, however, also addresses weak political will, cultural resistance, cautious behaviour towards innovation and change and low awareness of benefits as hindering effects on the implementation of cross-border digital public services (Kalvet et al. 2018).

Although the theoretical framework does not take into account the importance of *networks* both literature about the implementation of the SDGR and cross-border digital public services as well as interview respondents, recognize its prevalence. Both resources consider participation in cross-organisational and cross-border knowledge networks as beneficial to the change process (Kalvet et al. 2018; Krimmer et al. 2021). Respondents from Belgium, nonetheless, still perceive that the networks and best practice sharing in the European Union and the Single Digital Gateway Regulation are not at all sufficient to reap all the possible benefits.

The theoretical framework provided by Kuipers et al. (2014) named the definition of *success and failure*, applied during the change as important to the process factor. The researchers in this Master Thesis considered that this definition and the perception of the interview respondents where more appropriate to be discussed in the outcome factor of change, since the perceived outcomes can directly be linked to the success or failure ratio.

The fourth factor of change is **leadership**, more specifically the people in charge of the change or the ones implementing it. Kuipers et al. (2014) recognize several *types of leadership*, namely administrative, bureaucratic and political. This division is highlighted in the interview findings, on the one hand there is the administration that is implementing the regulation in their institutions and procedures, on the other hand there is the political level with the decision-making power. Although Kuipers et al. (2014) address that it is mostly administrative leaders influencing the content of change, the respondents explain that the Belgian administrations are still influenced a lot by political steering.

This influence of political steering can be linked to the change agent typology as presented by Gatenby et al. (2014). The author distinguished between entrepreneurial leaders, government agents and diplomat administrators. It is hard to clearly place Belgian service managers of the "posting staff abroad" service and SDGR coordinators into one specific type. On the one hand, they have characteristics from entrepreneurial leaders, looking to deliver innovative services and fostering cultural change in the organisation. On the other hand, however, the reality of political steering, places them in the role of government agents, where middle managers are held accountable through performances linked to the central objectives and budget. This causes that the change agency is limited in this type of role, respondents agree with this to some extent, since they mention that ongoing discussions about the importance of change and the SDGR implementation are a big challenge for them. Gatenby et al. (2014) point out that this is still very common in todays society.

The subject of leadership in organisational change is still not researched properly in academic literature. Both Kuipers et al. (2014) and Kalvet et al. (2018) do however, observe that *strong leadership* can be an important driver for the successful implementation of change in an organisation. The respondents agree with this viewpoint, but do not consider this to be the reality in Belgium and the European Union. While the Federal Government Agency BOSA takes a crucial role in the coordination of the Single Digital Gateway, respondents believes that a stronger coordinative unit, solely focusing on the implementation of European Legislation and initiatives in departments and agencies, would be beneficial for the sustainability of change. This specifically applies to Belgium, where the complexity of the state structure causes larger challenges to strong and unified leadership. The respondents perceive that power is divided across multiple institutions on different governmental levels. These governing units are mostly only concerned with their own tasks and domains, without communicating and coordinating amongst another.

Although the respondents perceive that strong administrative leadership can have a lot of benefits for the implementation of cross-border digital public services in Belgium, the *political will* and leadership is seen as one of the biggest barriers. As has been mentioned in the process factor, political leadership often slows down and forms resistance to the implementation process. It is often the administrative leadership trying to convince the political leadership of the necessity and obligation of change, even though the hierarchical relationship is the other way around. While strong leadership can be perceived as an important driver, it can thus also be seen as a challenge when the leadership resists the change.

The Single Digital Gateway Regulation is a change that involves a lot of different actors, with a lot of different backgrounds and competences. Rusaw (2007) explains that these kind of, pluralistic and incremental changes require decentralized and shared forms of leadership. Respondents agree that the leadership should be decentralized to the Member States and affected institutions, but do perceive that coordination on a national and European Union level, together with continuous best-practice sharing is important for good leadership. Leadership that is too fragmented causes more governmental silos, making it harder to harmonize the implementation of the SDGR and cross-border digital public service across the Member States.

The last factor that was discussed is the **outcome of change**, the Single Digital Gateway Regulation describes its objective as reducing additional administrative burden on citizens and businesses that want to exercise their internal market rights. This should be done by enhancing the internal market dimension of online procedures, requiring the full digitalization of the user interface of key procedures for cross-border users. Furthermore, the establishment of a single digital gateway as a single entry point is an important outcome of the regulation that aims to facilitate access to and complete online procedures (European Parliament and European Council 2018).

The respondents mentioned some *positive outcomes* related to the objectives of the SDGR, that are present in the Belgian case. The regulation pushed the importance of digitalization of services in the national administrations, highlighting the narrative that user-efficiency and user-friendliness comes first. The obligatory aspect of the SDGR is perceived as a crucial lever for the successful implementation and harmonization across Member States and the continuous focus on the digital aspect of public service delivery.

Although some positive outcomes related to the objectives were mentioned by respondents, multiple *shortcomings* were addressed. The coordinative role of the European Union is lacking, according to the interviewees, leading to fragmentation of communication and diverging practices of implementation. This ties in with the issue of

access across national institutions. While a great deal of the Belgian procedures and services are online and automated, the cross-border digital public services are not on the same level as the national ones because of data exchange, authentication and access issues. Despite the implementation of the Your Europe Portal as a single digital gateway and single entry point for information about the completion of services, respondents do not perceive it as a necessarily successful outcome. It is observed that the accessibility gap remains high for citizens and businesses who are not familiar with cross-border procedures or services.

Essential to add is that the measurement of outcomes is a complex practice, since it involves different approaches. In this case the outcomes of the Single Digital Gateway Regulation are solely based on the perceptions of interview respondents involved in a specific Belgian case. These findings can consequently not be generalized to the overall outcomes of the SDGR throughout the European Union. Kuipers et al. (2014) add to this that outcomes can be measured upon behaviour of actors, stakeholder experiences, attitudes and outputs, all probably leading to different outcomes. Additionally, change is something that is always ongoing and does not know an end. Success of change is hard to define, since mostly the negative connotations of change stick. It can thus be concluded that the above named outcomes are relevant in case of the "posting staff abroad" service of Belgium but not for the implementation of the SDGR as a whole.

While the change factors, as discussed above, provided by Change Management Theory formulated by Kuipers et al. (2014) provide a broad and flexible framework to analyse change in the public sector, some shortcomings are recognized by the author of this research. First of all the wide possibility of interpretation of the change factors makes it difficult for the researcher to clearly categorize the findings in only one change factor. This was mainly the case for the context factor, the internal and external environment of change cover a very large scope and area, causing that almost all research findings might relate to it. Defining a clear and limited scope might contribute to the reusability of the theoretical framework in similar research settings.

Second, the author noticed during the analysis of the interviews that the change factors are related to each other. Kuipers et al. (2014) do not provide an overview of the possible relationships between the different change factors, although this might be necessary for the interpretation of the research findings. Since extensive research is crucial before drawing conclusions about the general relationships between change factors, this research focused on portraying the main relationships that were observed during the data analysis in the specific case of the "posting staff abroad" service in Belgium. **Figure 1** below illustrates the relationships that the author identified most frequently from the results of

the Belgian case study. Important to address is the fact that relationships can be identified between al change factors, these are however the ones observed the most for the Belgian case by the author, based on the two expert interviews.

Figure 1. Relationships between change factors in the Belgian case
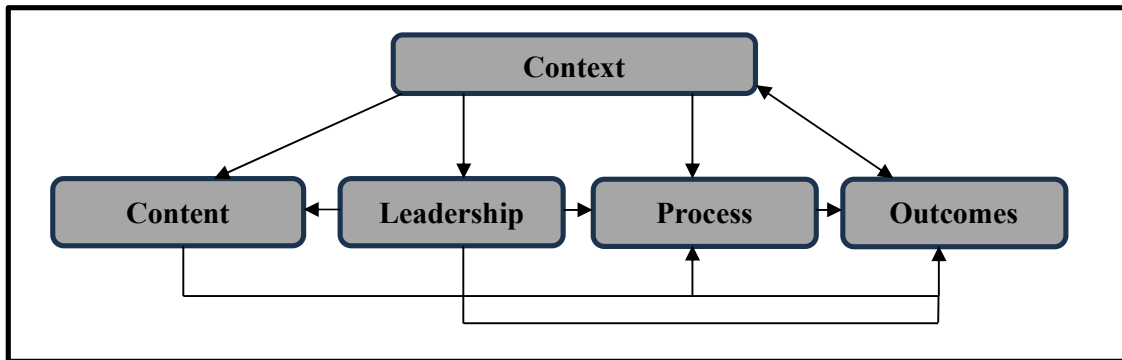
For the "posting staff abroad" case it became straightforward throughout the research that the context factor influences all other change factors. The internal and external environment shape the way the content is interpreted, the way leadership is structured, the way the process is conducted and eventually the outcomes that are identified. The relationship is mainly observed from the context to the other factors, although the outcomes of the change might eventually influence the context the organisation operates in. The relationship from the outcomes to the context hence illustrates the start of a new change cycle, where all factors will be influenced again by the changed context. The leadership factor of change influences the content that is implemented as well as the change process, more specifically the timing, resistance and depth of change. The outcomes are logically influenced by all change factors, since they portray the results of the change.

These findings are fully based on the interpretations of the author of this research, it is important to keep in mind that this should be solely considered as part of this case study and can not be replicated to other case studies without preceding research. Moreover, these findings are based solely on interviews conducted with 2 respondents, entailing that generalizability is not plausible.

7   Conclusion

This Master Thesis examined the perception of service managers and experts from Belgium on the implementation of the Single Digital Gateway Regulation on the cross-border digital public service "posting staff abroad", as explained in annex II of the regulation. The first research question looked into the perception of experts on the SDGR implementation by applying five change factors provided by the Change Management Theory of Kuipers at al. (2014). The second research question addresses the recommendations mentioned by the experts for the further implementation of the SDGR in the European Union.

To formulate an answer to the first research question, five change factors should be discussed. The first one concerns the context factor of change, more specifically the internal and external environment, the judicial context and the public demands. The respondents pointed out four main elements related to the context. Firstly, the national and local approaches where mentioned as influential to the change. Belgium has a complex organisational and state structure, causing that a lot of governmental silo's exist. Additionally, strict language laws are in place because of the multilingual division of the country. Furthermore, gaps in the national procedure were mentioned, such as the use of the eBox, access management for foreign employers and the gap between users that are familiar with the registration procedure and the ones that are not.

Secondly, the role of base registries was highlighted, while the Belgian Crossroads Bank for Enterprises is an important enabler for the provision of digital services, the NSSO aims to connect to more foreign data registries in the future if the current legal swamp in the European Union is overcome. Thirdly, the respondents name the eIDAS and EESSI as important building blocks that are used in their service delivery. Lastly, the respondents experience that external triggers like Covid-19 and the emergence of telework in the digital age have a crucial influence on the demand for cross-border digital public services in Belgium.

The second change factor refers to the content of the change. Respondents perceive that there is a big difference between the static content of the change plan as described in the SDGR and the reality of implementation in different Member States because of varying capabilities and resources. Many diverging national practices, procedures and concepts are applied in the delivery of the "posting staff abroad" service, challenging the semantic operability and fostering errors in the social security procedures. Besides that, there is no specific budget from the SDGR allocated for the implementation of the regulation in Member States. Belgium receives their funds from the Recovery and Resilience Facility.

The third factor, considering the process of change can be divided into the resistance to change and cross-border knowledge sharing networks. The respondents mainly perceive resistance from the political level, while the employees of the NSSO in Belgium show a real voluntary for implementation. The interviewees consider the general dialogue with the European Commission and the sector-specific information sharing within the EESSI and European Labour Authority as valuable, but add that this is still fragmented, an overarching coordinative institution for best-practice sharing would thus be beneficial.

The fourth, leadership factor of change refers to the complex state structure of Belgium causing that the decision-making power is fragmented and isolated throughout the country, negatively influencing the communication and coordination of the implementation. The respondents, however, perceive strong and coordinated leadership as essential, currently BOSA takes on this role. A central coordinative unit solely mandated with the implementation of EU regulations to oversee linkages is nonetheless wished by the interviewees. Although public administrations are supposed to be the stable factor in government, political steering of the administrations and agenda is still perceived as very common in Belgium.

The last factor, namely the outcome of the change is perceived as relatively positive by the Belgian respondents. The SDGR is described as a crucial lever for the better delivery of digital services and raised attention for the necessity of the digital narrative in all Member States. The respondents do however address some shortcomings, like the lack of coordination of the European Union, the difficulties of access to data across borders and the accessibility of information about procedures for users that are unfamiliar with it.

Overall can be concluded that the change fostered by the implementation of the Single Digital Gateway Regulation in the "posting staff abroad" service in Belgium is perceived as rather positive but not significant. The NSSO of Belgium already has a great deal of attention for the implementation of successful cross-border digital public services. Most challenges relate to the cross-border exchange and coordination and harmonization on an European level. Tying into this are the recommendations named by respondents to improve the further implementation of the SDGR, answering the second research question.

Respondents mention that the background of a country should be taken into account when formulating and implementing European regulations, through needs and capability assessments. Additionally, there should be an overview of the national laws, practices and procedures to establish harmonization and semantic interoperability throughout the European Union. Furthermore, access across borders should be enhanced through the full compliance of member states to the eIDAS regulation, common authentication levels and

a common framework for data registries and data exchange. Moreover, accessibility to information and user guidance should be strengthened, even though the Your Europe platform is already set up. Besides that, budget should be allocated according to the needs and requirements of Member States. Lastly, the overall coordination of the European Union institutions should be upgraded to overcome the fragmentation and political resistance and ensure the harmonized implementation of the SDGR.

Even though this research provides insightful findings for the implementation of the Single Digital Gateway Regulation in the Belgian "posting staff abroad" case, it is essential to consider the limitations of this research. First of all the theoretical framework and change factors that are applied are very broad, making them sensitive for interpretation and bias of the researcher. It is thus crucial to reconsider and if necessary adapt the allocation of findings in case of replication. Besides, the framework did not provide an overview of possible relationships between the change factors, while there is one added to the discussion part of this thesis for the Belgian case study, further research on this would be beneficial for change management theory.

Noteworthy is the fact that the findings of this research are based solely on the insights of two interview respondents. While the initial aim was a multiple case study of three European Union countries with multiple respondents, the feasibility seemed to be misjudged. The specificity of the case study makes it hard to contact and attain the right respondents for this research. Although the two respondents are mostly representable for the Belgian case study of the "posting staff abroad" service it is evident that this case study can not be considered as valid or can in any way be generalized to other European Member States or annex II services of the SDGR.

Further research on the topic is recommended, it would be beneficial if the findings from the Belgian case study could be compared to the implementation of the SDGR in the "posting staff abroad" service in other Member States. This way cross-case conclusions about the SDGR implementation and the role of change factors can be discovered and analysed. This would contribute to academic literature of cross-border digital public services and change management theory. Furthermore, more valid recommendations for the successful implementation of the SDGR in the future could be recognized through further research in other Member States or on other annex II procedures.

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Appendix

A   Interview Questions

<u>Interview Questions</u>

Civil servants in service delivery of the "posting staff abroad service"

- Could you tell me what the process is for foreign companies to post a worker in your country?

- Which other administrations are involved in the posting staff abroad process? Who are the main stakeholders?

- Which databases/national registries are used in the process?

    o Types of data?

    o Who manages the data?

    o How can it be managed more efficiently?

    o How is data exchanged across borders?

    o Main burdens for data sharing across borders?

- Which building blocks and frameworks provided by the European Union are reused in your service delivery? (eIDAS, eSignature,..)

- What is the perceived demand from businesses and citizens for your service?

- What is the burden for foreign businesses at the moment to post a worker abroad?

    o Recommendations for improvements?

    o Language barriers?

- What is the burden for national business to receive a worker from abroad?

    o Recommendations for improvements?

    o Difference from national process?

- What are differences to register construction workers abroad instead of other employees?

- What is the information infrastructure behind the service? Is there any involvement of digital means in this procedure?

- How beneficial is this service to be digitalized? What is your need/goal?

- Does the implementation of the SDGR change the design and steps of the current posting staff abroad process? Do you expect changes in the near future?

SDGR coordinators

- Do existing/legacy systems and structures within your organisation affect the changes from the SDGR/effect of current digital maturity?

- How does the national law influence the implementation of the SDGR?

- How does the financial cost of the changes caused by the SDGR influence the services?

- What is the impact of semantic interoperability between MS on the service provision?

- Which building blocks and frameworks provided by the European Union are reused in your service delivery? (eIDAS, eSignature,..)

- Does your organisation participate in cross-organisational or cross-border knowledge transfer? How does this influence the service provision?

- In your opinion, how important is it to have a strong leader in implementing the EU regulations? Who should do it?

- What is the influence of the political will in the implementation of the SDGR in your service delivery?

- Which role do you take in the changes in your organisation regarding the implementation of the SDG?

- In your opinion what changes are or will be happening with the introduction of the SDGR?

B   Interview Transcripts

Transcript respondent 1

I: First I will start with a very easy question; Can you shortly describe to me your job function?

R1: My job function, so I am an expert for the NSSO, the National Social Security Office in Brussels more specifically ███████████████████████████. Euhm, Now what that entails, that is quite a large broad spectrum of stuff that we do, ranging from the posting of workers declaration and labor law, to implementing SDG, which was a part for posting of workers more specifically and that ties into issuing of the PDA1 forms. Which is a huge responsibility for us. Determining the legislation, even if Belgium is not competent through the regulation 83 and 987. But also coordinating between regional governments and the federal level in Belgium, for example to euhm, realize the working in Belgium platform for single permit. Which has now combined euhm, labor law euhm labor permits and residents permits. So, I'm a bit all over the place euhm but for you I think that might be interesting so I have a bit of a view about everything. The most senior expert for SDG specifically for the entire project, I will give you her contact details also, I'll send them through e-mail. Euhm, she will be able to fill in the blanks where I am not that much euhm of an expert on like how is it going through budget and high-level coordination within Belgium and stuff like that so, I'll keep my part really to the implementing and the effects on posting of workers. But if you would have any question I'm sure she will be more than glad to answer any of them as well.

I: Okay that's great to hear because I definitely have a distinction between like more the higher level and the service managers so that's great to hear. Euhm so the first question is just, could you tell me shortly what the process is to post a foreign worker in Belgium?

R1: So if you have a Belgium employer, I'll use Belgium employer in a broad definition that has to say everybody that is an employer that has staff that is subject to Belgian legislation. So, what that means is that they are known to us those euhm employers because they have to register for a dimona declaration, which is in labor law the euhm the register of all employees and also the dmfa, which is all in the declaration for social security purposes the way that its being declared. Now if we have those items we know quite a lot about employer and employee. So what they have to do is they go to the website, and there they can see, I'm going to send one of my employees abroad, posting a business trip for example. They enter the website, they go to working in Belgium, where they, no it's not working in Belgium its the portal site for social security and there they go working abroad, click on the application, there they get the access to log in, so it's an authentication system through CESAM in Belgium. If it's a Belgian employer euhm, and a Belgian National, he can log in with his eID. If it is a foreign employee, he can use eIDAS as well. So we have already a link with SDG and eIDAS there so we can use authentication through eIDAS for our working abroad application. So he logs in that is fine and then he gets access to a number of data sets, so the dimona is automatically taken. So, what he has to do is which employee do I want to send abroad, for which period, where am I going to send them? It's a series of screens where we ask a bit of information. But then we add a lot of information as well, so you will see if you enter the social security number of the employee than you automatically see the dimona and everything is tied into that. So we ask a very minimum data set who is going to be send out? Where is he going to be send? What period? And some extra questions to check posting conditions. He clicks on submit and then the case is being handled automatically by our back end system who is going to perform some checks. So its going to check if posting conditions

are actually met, what do we know about that worker in different databases, is there something of an issue? Or is it perfectly fine? If all conditions are met than within twelve hours or maximum 24 hours, the employer will be presented with a PDA1, he will receive it electronically in pdf format in his ebox. So for employers, they also have an ebox that they can access from anywhere and its all governed by access managements and hierarchies so public access management. So he gets that PDA1 in his ebox and that he can send it or use it or whatever he wants to do or has to do with it euhm also with regards to the employee. That is one small gap that we still have is we don't issue a copy of the PDA1 to the employee himself, but we will do that with the next releases of our programme. Because the issue that we had is that euhm it's often that we have some foreign employees as well that are living in another Member State, and than it becomes a bit tricky to really send the PDA1 in paper format and so on, so it is easier to just issue it digitally. Ofcourse if an employee asks for it he will ofcourse receive it directly from us as well. But going forward it is euhm in the pipeline that we will be issuing it through the ebox of the citizen as well euhm and even going a bit further, but maybe that is going a little bit to far to also look at the possibility to put it into a wallet.

I: Okay, euhm, that sounds very good already, euhm in the line of what I expected so that is good. So euhm, my next question is which other administrations are involved in the posting staff abroad process?

R1: It's quite a few if you really look at all the databases that we are consulting. So, actively, no it's only the NSSO that will look at the euhm posting. But in the back end of our applications we are making connections with another.. a few other institutions their databases. Euhm and going forward we will add quite a lot of others as well. So mainly, we look at the BCS, so the crossroads bank for enterprises, so there we have a look do we know that enterprise, we look at euhm the our own databases demona they have a file we have the repository for employees, euhm but what we also now are going, are looking into is to look at the self-employment. Do we know this person as self-employed and what we don't have implemented but have also on the books is to look at unemployment benefits. So is that person really, also receiving unemployment benefits from Belgium for the same period yes or no. What we would like but is very difficult to attain is to have a connection with foreign databases as well, so especially with neighboring countries, so France and the Netherlands. The Netherlands is a bit tricky because of competences, because even the, our equivalent the SVB, the Sociale VerzekeringsBank, they don't have access to the personnel register. Euhm, so that makes it a bit trickier for us but in France, the ACOS is euhm, really quite similar to us, also their databases are quite similar. So we would like to put up some way to look into their database is there something known about the employee in question, yes or no. But that's a lot further into the future, the connection with the self-employed database and the unemployment database that is something that we will realize within two years I think.

I: Yeah that was also like my next question euhm, which databases are used and also if the data is already exchanged across borders but that is then something more for the future the connections I guess. 09:05

R1: It's a bit tricky that question because we are confronted with a lack of legal framework, euhm, for some Member States it is difficult to exchange data even within the Member State itself between institutions. There are some limits there, in Belgium it is very well regulated because we have the Crossroads bank for social security, which is regulating, so if we have a clear story and a clear purpose and it's proportionate and our finality is in order then we put a question or request to the BCS to look at can we do this? can we realize this? And then they will say yes or no, depending on if its justified. If they say yes, well then we have them to guide us through that connection as well and we can

access different data bases and add them into the mix. Euhm but it is not in all Member States and there we get to the issue that, we have a pilot project as well but that's more an inspection euhm to have an ad hoc consultation of the dimona and DFMA equivalent in France, but there we see that regulators are not always providing us with the tools to actually do this. And especially when it comes to structural exchange, because ad hoc exchange is always clear its always proportionate to the file because you have a case file. What we are doing now is really looking broadly into can we make a connection between the databases and that is a lot more difficult. It is not to say that its impossible, we have one clear example with Germany. Where we see that if we have a posted worker in construction for example, you have fidelity stamps that have to be payed and then the allocations that are due in Belgium and also in Germany and those systems are quite comparable. Euhm, so what we do now, we say this is an employer in the paritair comite 124 construction euhm and they have to pay these stamps in Belgium. But that means if he posts a worker to Germany, he is exempt from the same thing in Germany itself. So what we do now, is we issue the dates of all posted workers going to Germany in the construction sector that are exempt in Germany we know this but we can't put it on the PDA1. Because thats a structured document, so we issue it directly to the competent institution in Germany. We have a treaty for that, so its really written down, we have a legal basis and it is euhm consulted and approved bij Data Protection Officers and everything like that. But it is really a legal instrument and specifically created for that and its not easy. This was quite easy because its reciprocal also, so we send them our data and they send us their data and the upset was also very clear to avoid administrative burden for employers. But its its really tricky its not easy to really get it and euhm exchange of that data, access to data its regulated in the EESI system and in SDG, less in SDG more in EESI, but its its not easy. I know Austria and Slovenia are also working on some some things to exchange data but its its its really a proving ground at the moment, we don't know what is going to work and euh if its all going to be very legal what I said. So its a bit of a swamp its a legal swamp to get it.

I: Do you also think that its an issue of semantic interoperability, euhm right now? And if it should be regulated on a European level to foster the exchange of data? 13:14

R1: Yeah, that's what we are missing, especially for checking posting euhm, posting conditions, we see that there is a lot of error going into checking the posting conditions due to euhm, limitations and national law for social security institutions but also because information is not entirely shared so, we know something, Germany knows something, France knows something, if we put it all together it becomes a clear picture but its not always that easy to do. We are going in the right direction but I think we are missing some regulation at the EU level to facilitate this.

I: Yes, Okay. Thank you very much. We already mentioned this a bit but I was wondering which building blocks and frameworks provided by the EU are already used in your service delivery now?

R1: So what we are doing now, we already implemented quite a lot about SDG. Euhm the only thing that we didn't have is an English translation of the application itself. So if we look at SDG and what that really provided us, we already did quite a few things there. But what makes it easier for us is that we know that its a business need to provide information in English. Euhm, what is a hurdle for Belgium is language regulations and its not always to get this clear answer from the legal departments. Euhm, in the sense that when SDG was first implemented in Belgium, we had the question okay so we have to do it in the official language and then one other language, is that English or is that something else? Because in Belgium we already have three languages official languages, and it has to be understood by many or most off the European euhm users so but then we

have German and then we have already French so, do we need another language that was an entire discussion. Do we need English? But then we had Brexit and that made it a bit easier because English now is quite a neutral language, that was also some, that was nice to have, it was not a determining factor but it was nice to have, but then it becomes a lot more tricky when we are issuing decisions. Euhm, or clarify. If we, we can put our website in English that is not a problem, we have settling in Belgium which is the gateway for the Single Digital Gateway which connects true and then you can see all the requirements so thats the main focus of the implementation. But then the website for the applications is already translated into English euhm and then the question becomes do we just provide with euhm, a guidance for the application with translations and everything but on paper or pdf, or do we really go into translation of the application itself. For us it was never a question, we wanted to use it and we wanted to provide it in English because because what I said also in the beginning we have a lot of foreign employers that have to do something within our system and our system is quite easy to translate into English so we should do it, and we are going to do it. It's a bit different for the DMFA, because that is quite difficult to use and it is very prone to changes and that means we have to do it in English as well so there we will need more of a guidance book, but for the posting of workers its going to be in English. The issue that we have, we are obliged to issue or decisions in either, in one of the official languages of Belgium, so thats Dutch, French or German, we can't issue in English. Now that is a bit of an issue, because service provision, especially for foreign workers, we have some Polish workers, that don't speak a word of Dutch or French, so they could be benefited by a decision in English, but then the only thing we got out of the legal assessment was that, we have to issue in Dutch, French or German and then you can if you want to add a cover note in English. This makes it a bit more difficult because we have to make implementations, and of course with budget everything has to be justified. So this is always, and that is one of the biggest limitations of SDG, it doesn't really provide a return on investment. Euhm its more clear for employers that sure and it ties into service provision and clarity and public service and everything like that but its difficult to sell in a budget meeting to say we have to do this, we have to provide a cover note in English for comprehensibility when we have a whole list of other functionalities that we need to do as well, so. That is a bit of the limitation that we have with the SDG but then what we are going to do is use the ebox, so that is also provided digitally so the entire process from a to z, from entering to Your Europe to the exit where you have that PDA1 form, there is no need to do anything physically in Belgium. You can access it remotely, entirely online, you can do with that what you want. But the issue that we are facing there is use, the the use of the ebox for enterprises, thats the first one the big one, because if you have foreign companies they don't always know how to activate it, we try to guide them into that process euhm, its a bit of a pitfall because once you have activated it all government communication will be coming through that and foreign companies are not always aware of that as well. Not to say that that's just a bit of guidance, so far that's not the big issue, the bigger issue is when we are talking about foreign employees, because to active their ebox, just to give you an idea in Belgium itself the people that have activated their ebox is less than 30 percent. So, and that's for Belgians, even with the campaigns and now its a bit more because of covid and the use of the apps and then it was do you want to activate your ebox at the same time. That was easy he. But even then we are under 50 percent, so for foreign workers the threshold is a lot higher to actually activate it and to be aware of what is going on so that might post, still prove to be a bit of an issue and there we are thinking about wallets. So to have an open source code, that allows for different variety of wallets to be used that can store the PDA1, that can connect to the system to retrieve the PDA1 form and to keep it in a safe,

electronic environment that they can use to show euhm where, to whenever they would require it. 20:39

I: Very interesting, thank you very much. Euhm what is the perceived demand from citizens and businesses for your service now? Do you see that its also increasing in the past years or?

R1: Yeah, there is a bit, there is a huge evolution he because year after year we see numbers going up of people using the application, and euhm that has different reasons and I'm a bit hesitant to give you proper declarations because we, we don't have time to do proper research, that's a pity because I would like to have some time to do extra research especially for Limosa, but for the PDA1 what we see, year by year it increases. Posting of workers euhm increases, but also the simultaneous employment, so posting people that are doing a temporary mission abroad and then they are coming back but also people that are working on one or two or more member states structurally. So working two days from Belgium, three days from France or three days in Belgium, two days at home from France and that ties into the next fond, telework. The evolution in the labor market, where we now see that we are going to allow for two days of telework in social security before it switches to the social security competence in the other member states and that will provide for a lot of frontier workers also to apply for a PDA1. Now why do we see a lot of increase, we see shifts in interpretations as well. For Belgium it has always been clear and that's why its a normal trendline that is increasing. We've always said, as soon as you go abroad you need a PDA1, let us know and its easy its quick it takes about ten minutes to file in the entire thing if you have never done it, if you know what to do it takes about 5 minutes because you have all your accesses and you know what to fill out and what is coming next then you get your PDA1 after 12 hours when the badge is processed and then everything is in order, you are safe. We know it, the other member state knows it, thats perfect. But for Germany for example, they said at a certain point in time, for business trips less than three days you don't need a PDA1. It changed their minds, they said no you really need a PDA1, I think it was about 2019, I think and there you see if you look at the reports ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ as well, you see an enormous spike in PDA1s coming out of Germany, well thats part of it because all the business trips are now asking for PDA1s. We already had that, and so that is quite a normal trendline that we see, what we didn't have and that's a bit of a gap in what we have at the moment is, its only for Belgian employers and only for employees that are subject to Belgian legislation. So there is a bit of a gap still there, if we have a combination of a Belgian employer and a foreign employer, the foreign employer can not yet apply in the application itself if he doesn't have access to the authentication. So if he doesn't know how to use itsme or he doesn't have another way to authenticate that is a bit of an issue. We do have quite a few that use it through itsme, euhm through eIDAS, especially Dutch companies, so that works, but if we have a Slovenian company that has to declare its worker into Belgium that's a bit more tricky. So they usually use service providers for that, so that's a bit of a gap, but also we have to issue euhm or determine the applicable legislation for Belgian citizens that are not subject to Belgian legislation but, because they are resident in Belgian, and there we are not able to do that electronically. So that's for the question there it is provided in a word document and they can send it and we send everything electronically but its not automated yet. That's coming in the next two years, and then we will have all our cases where we have to make a decision will be possible to use within the application, but euhm, that is a bit annoying for us, for me personally it is a pity that we don't have we can't provide access, but that's again related to the high level of automation and re-use of data that we do. Because that's the downside of reuse of data, its not only the employer that is entering data because then its easy, we could just use like

we do for Limosa an easy account, you create an account, I'm that person, it's fine, but all data that you enter is your own data so you don't have to provide for a lot of security there, for third partie but not for the one that has access to the server. What we do have in the application euhm working abroad, you get access to the data about a worker that you are putting in, so you get a Demona, you get out of the DMFA, you get the previous declarations that are made for that employer and employee, so you get access to that data. So that means that we need to make a secure entry, and we need to make sure that we know, this is that person and he has access because the employer has given him access to the data and to the application. That is difficult for foreign employers because they have to appoint specific persons to fulfill a roles of management and access management and everything that ties into that so that's a really big challenge. That ties into SDG because SDG obliges us to provide access to the applications for foreign entities, that's a bit tricky. That's where we have an issue and if everybody, all member states would be eIDAS compliant, it would deliviate a lot of burden, euhm but still then we still have the issue about authentication level that we need to attain. Because if its the drivers license, its not at the highest of level so that also a bit of a challenge to see where do we put our line, because we have to do it for the foreigners but also for the Belgian users, so there is a bit of risk assessment there as well and that's always an ongoing challenge that we know, we know off. 27:19

I: Yeah that's also related to my next question, which was what is the burden for foreign business to post a worker abroad? And also are there like language barriers and recommendations, I think you already said a lot about it euhm but I don't know if you want to add something to that.

R1: Well I think as soon as your already if u used another definition of posting in social security, that won't be much of an issue because they are already familiar with the system they are already declaring their workers in the Belgian scheme, so it's just a matter of accessing the application and filing the application itself. We have the website it's rather clear on there, we also provide a lot of information, we try to through the newsletters that we have and also the contact email box so if something is not clear they can just contact us directly and then we sort things out. But indeed, we have the gap for the determination of the residence for foreign employers that do not have to declare the employee into the Belgium scheme, there it is a bit more tricky. What we see there is that normally they file a primary application with the local social security office, that then refers them through to Belgian for as the residence country, to make up a determination of applicable legislation for that posted worker. That is the posted worker in a broad sense so simultaneous employment, people that are working structurally in more then one country, euhm member state. So there we do have already some cooperation with the ESSI being implemented more and more the electronical exchange of social security information between member states. We will see those applications that are done in one of the member states of employment they will send them the application through to us. The issue is that we ask a lot more from euhm other member states, the application might not be complete so then we need to contact the employer to really say that look you really have to file it through this channel and then guide them a bit through. I think that's the main issues so the big divide with the employers that are already familiar with the system being Belgium or foreign that is not that much of a difference I think but it's the main issue is with the employers that need to contact us for their posted workers in the broad sense but are not familiar with the system itself and there you have the access issues also the issue with the ebox and how to really make sure that everything is set up. On the other hand once they have done it once, its not really an issue anymore, they know how to contact us and its just that first barrier and if you ask me if SDG is going to fix that, I'm not entirely sure

because the feedback that we get from the field, because in Belgium we really try to have a very active communication with the people that are using the applications so service providers but also employers and their representatives, we have that direct contact, not only through official contacts and things like that but also seminars and see what works and what hurdles they encounter and try to act on that. What they say to us is also, if you have a small business, they will not be able to find it through Your Europe it's also not that clear that they can use it to go through there euhm and they can find that information, it's available but finding the path to the available information is still a quite a big of a challenge. And even if I talk to colleagues from other institutions or foreign institutions, they are not aware that we have the website even so they know that we have to implement the SDG and they know what SDG is but then they don't know that we have the entire website put up, so the information is available but because it is a bit of a niche market, its still remains a bit of a niche market its really the challenge, how do we inform people that the information is there and its easy. Once they find its okay but really guide them through it, that's a bit of a challenge and a hurdle and something that we will try to address now also with telework. Because euhm, Belgium just signed it on Tuesday the agreement for telework, euhm which allows for two days of working at home before it switches, but we will get a lot more applications now. Because that was something that I would put my hand in the fire for that that maybe 90 percent of the teleworkers simply did not care to file for an A1, was also maybe discouraged to file for an A1. Honestly, there is good reason because what does that A1 serve, you are not going to use it, an inspector can not enter your private home to check so what's the big idea behind that PDA1. But now we will get that, if they want to work two days from home they have to ask for an exception through the framework agreement and they have to do that with a PDA1, we will do it automatically through our application, its going to be adjusted and its going to work perfectly fine. Euhm, but thats always an employer that is declaring someone, a Belgian employer that is using euhm foreign residents, so that is also quite easy to do, so that wont provide of to much of an issue. But we see other Member States are struggling with it, so the Netherlands has already said that they will need another year to implement it correctly and they need to hire twenty additional staff to deal with the initial requests, so that's two different ways of approaching it. We are really tied into the electronic automation and everything that has to do with that, so for us its an easy implementation and the Dutch they are focusing, well focusing on I can't say that but on the short term they have to use additional staff to fix their problem and that's ofcourse not really that interesting because it will lead to a lot of delay euhm and and slow case handling. They are not happy with it of course as well he, but its the reality that they have to work with so its difficult for certain Member States. The Swiss for example have said the same thing they need to have the initial year to deal with the applications because they have an enormous amount of frontier workers, euhm so that makes sense as well. So challenges are different for the different member states as well. You can't just say well this is the implementation for everyone and its the same because it's literally the same text but the reality for employers and employees is very different in the different member states. 34:42

I: Do you think that's mainly the case of the digital maturity that they are different across the member states now? Because I think that the Netherlands is, scores quite high if you see in general but then with regards still...

R1: Yeah it has to do with that euhm, and its not about, really about a lack of resources or the voluntary to make something but it has more to do with the way that the institutions are competent. Competence between institutions and the way that they are structured. The Netherlands is a prime example of that because they always say well we are a leader and we are very innovative and everything like that and that is true except for here what we

see is, the SVB, which is competent for social security of applicable legislation, but they need information from the UWV, the unemployment office because they have the data on the employment on the salaries, the SVB doesn't have that but they don't get access to that data. And even if they would the system don't talk amongst themselves and then they have to look at the the the tax authority, so the belastingsdienst to see if contributions have been payed by the employee, if he's been doing everything that he has to do and also the employment record is still with another institution because that is labor law and they don't have access to that. So for the Dutch the main issue about automatization is access to data, for us in Belgium its quite easy because we have that crossroads bank that is that is this center of our data hub that has to do with social security and then because we have that already in place we have a way to ask for data with the tax authorities with labor law authorities, its not easy, it takes about a year and a half to get something through if not longer. But still its possible, and we have a playbook. So if I want access to additional data it just takes me time. But its not an issue, for the Dutch what you really would need, and I'm not name dropping but you would need a bit of a ▮▮▮▮▮▮▮ there that says, well look at this digital landscape, its just a patchwork of different systems, of different ideas of concepts, lets make something uniform and lets work together and lets see if we can centralize the idea and the concept, how are we going to use data? How are we going to transfer data and exchange data? And more importantly access to that data. And its there something the Belgian does right, its that access to data, cross-platform access, cross-competence access, that's something that really works. Euhm, there has been a lot of criticism about how we organize the country and regionalization and everything like that but this still works, so that is something that is that is okay and the French are now taking a bit of that example, trying to centralize some data. Euhm because it used to be with the local CPAM, so the euhm, but now we have the ACOS that is competent for applicable legislation they are also centralizing that competence so they will be able to check a lot more and a lot faster. So, I don't think this has to do with European lack of regulation and it more has to do with the factor not only member states have access to their data and are organized to or are mature in a way that they provide their institutions with a framework to get access to data that they are not necessarily competent for in their respective fields but they do need to take it into account. And there you have the link with only once, because if another organisation than you have to have access, but that implementation on that only once, that's not straightforward, that is very difficult to realize.

I: Euhm, my next question is like what is the burden for national business to receive a worker from abroad? Because we mainly talk about the people posting it.

R1: That's a very good question, its something that is not often taken into consideration. But one of the main hurdles that we see in Belgium we have quite a lot of obligations put on the service recipient. On the Belgium client, on the one hand you have Limosa, the duty to clarify if the declaration has been made. Thats an easy one, that's really not that difficult you just ask the posted worker: do you have an L1? And its either yes or no. If its no, you can file a declaration yourself and that's okay. Straightforward, easy to understand, you have to ask this document, if not perfectly fine. You have a QR code, so you can scan it and you can be sure that the document is authentic and valid, that's okay. But then what is a bit more tricky is the declaration of works so they all have to, there you have to also play a part, because you have to declare all the subcontracting in the construction sector for liability purposes. We have the liability laws that are in place there, also European pathways, so that's not a big issue, but it is something you need to do, also for the national level but it can become tricky and difficult if you have a very long chain with foreign and service providers. But that can be an excuse as well, because what we

see right now most recently with fiber being rolled out in Belgium on a large scale that there is a bit of abuse of fraud, but there is a lot of issues there, you cant just simply well I'm going to bury my head in the sand and its because of the long chain, no. You can have, you can limit the chain, you can do some things there, but that's a challenge for Belgian service providers. Service recipients that they have to be aware of that liability checks and then you have one that is not really implemented perfectly yet but also a work in progress is that you have to have the A1. I'll use construction because that's the most easy one, so in construction we have the 30bis legislation that says, you have to withhold 35 percent of the invoice and pay it directly to the social security institution if your service provider has social security debts. For Belgium its easy you are going to the webiste, you enter the VAT number and then you get a green light or a red light and then you know I have to do the retention or I don't have to do the retention. For a foreign service provider its not yet active, so that means that you don't really know if you have to do something or not. The issue is that when you don't do it, you can be confronted with the fact that you have to pay 35 percent of the invoice, again if you get payed 100 percent and you didn't do the retention. Euhm, so what is the way to make sure that they don't have social security debts for the contract that you are doing, if all workers have an A1, that means at the moment that they're working there is a reasonable way to say that there is no social security debt for that worker. So for the contract that you have there is no need to do the retention. And then we get to the issue, because for Belgium its 24 hours and you have the A1 if all goes well and there is no issue with the checks. But we know for some other member states it can take up to 3 months to get an A1. So that is a huge problem, because how can you prove that you don't have to, that you are in order, and even if you have that A1 it's just a physical document, it doesn't have the QR code that we have on Limosa. So you can't check if it's an authentic one, we had the story a few years back for big events where the workers that were being posted from Poland had an A1 and an L1 but the A1 was forged. So all checks were done by the Belgian recipient, but they were forged documents and there was no way the checks and it was a real good forgery because we had, we get, we got a hold of some of the forgeries and it was even with a dry stamp and everything so they forged it really well. But thats also a big of an issue for the Belgian client because you know I want to do everything correctly but I'm lacking the tools to do this check to see if there is no social security debt. That is also that is been thought of in the framework of the ESPAS project, which is social security wallets and to issue it directly and use blockchain and eIDAS to euhm have a verification chain, euhm but also to put simply a QR-code on the PDA1 on the European level, that way we can make sure that whoever wants to check the PDA1 they can scan the QR-code and factor if its a real one or not. Slovenia has that already, and some other member states have implemented that already so that's a best practice that we have to do as well. The reason we don't have it is we want to look at that European solution, because you don't want to implement something now and then change it after two years. Because we are already in that process we want to wait for that European solution, if it takes to long we will probably just implement something in a light version to allow for the PDA1's to be checked as well. Euhm, and then you have the issue of third country nationals, that's a really important one because the service recipient is confronted with more and more third country nationals. So if you look at the Limosa data for example, because you have the A1 data but its not always that reliable especially for third country nationals but if you combine that with Limosa data there we see the usual suspect he so Ukrainians coming through Polish companies posted to Belgium. Brazilians coming from Portugal posted to Belgium. Euhm but now also Belarus workers through Poland, that's also increasing quite a lot so that's doubled in the last three years from 4000 approximately coming through Polish workers

to now 16000 already, so that's quite a bit of a, of an increase. But as a Belgian recipient, and thats really true, you don't get to check every single worker, so if you have an A1 then you can presume that they are actively working in Poland and they can work in Poland because they are posted and then they can use the Vanderelst exemption for a single permit in Belgium, but if they don't have that and its not properly delivered and the A1 is withdrawn and then they don't have a labor permit or a work permit in Poland that's an illegal immigrant that is being employed on your job site, so you have liability as a fictional employer for that worker and it opens up to criminal sanctions and so on, so that's really a challenge for Belgian recipients to comply with that because you can't just ask show me your labor permit, show me your single, show me your residence permit. And even if they could, if you could ask for it, an example a visum D is a visa that is used in Poland for Ukrainians because they have strong ties and they want to have an easy access to the Polish labor market. They can work with that in Poland, but they can't be posted with that because it does not open up the free movement of workers and it doesn't tie it to free movement of provision of services to use for the Van der Elst move, euhm. And then that is something that a Belgian recipient will not know, he will see this is a Polish residence permit, it's valid, period checks out should be fine. But in reality its not, because its an authentic document but their rights are not tied in to that, so the entirety of the reality of the necessity of clearances of documents that need to be checked that is something that should be dealt with on the European level. We should have something that a service recipient can say can I check this somewhere, doesn't matter where I just need to be aware is everything in order with my service provider and he doesn't have to know if Jan, Piet and Paul are all in order, he just needs to know is everything in order yes or no, green or red, without any details. He doesn't need a copy of that permit, he doesn't need a copy of the A1, just needs to know is there an A1, is it valid, is my job done, perfect. Same for the residence permit, there are some initiatives going there, private initiatives trying to establish something like that. Main issue there, again is access to data because we need to block someone that wants to know, an easy example I have a competitor, I am a Belgian enterprise, I want to know who's coming to work for my competitor because I might have a more appealing offer, then I log in to that platform to check are the workers all in order, oh look he is using foreign workers that are not competent so there is, you need to limit the access to that data, but find a way that we provide enough information to make sure that they know it, so there is a lot of ideas circling to see if we can maybe allow for the service recipient to log in to, euhm the service providers to log in to the platform do some verifications and then just let the service recipient know, this service provider has checked in with us, has registered, has provided all the checks and we confirm that everything is in order, than we have to automate that as well so that's a bit of challenge. And there's a lot of different pathways that are active at the moment, private initiatives to make something like that kind of a platform but also in Flanders there is some legal, euhm legislative initiatives that is being set forward. I'm not going to say if its a good or a bad thing but they're going to try to give more responsibility to the service recipient to check some documents and there can be some questions with that as well. But yeah life is not that easy for service recipients he. 49:58 The main question, why are they doing it? Because it is more liability, it's cheaper yes but not always. So its not only because it's cheaper it is not always social dumping, most of postings are okay and correct. It is simply a lack of work force, a lack of disponibility, also the voluntary of work, because I know I have interviewed one of the Belgian service recipients and he simply said if I asked Belgian work force can you come in because I have an urgent need for extra staff, they say well no, and I'm quitting at four and if the wall is still half build and there is another batch of mortar still needing to be

processed, well sorry my job is done I'm going home and if you don't like it I am going to take a job with someone else. If you have the foreign work staff well they are here to work, they don't, they are not interested in creating a lot of social life so if they have to work half an hour more, they get paid, its not a problem, they just do it. They don't have that main issue, it also ties into flexibility of labor force. So its really not a straightforward answer that is something, that we see, it is not always social dumping and something I always thought an explanation, fraud is always an exception. Mostly its done correctly, or they want to do it correctly fraud is the exception to that so we always have to be aware of that when implementing some stringent legislation.

I: Well I'll just go into the last question, do you think that the implementation of the SDGR had direct changes to the design and steps of the current process and do you expect still a lot of changes in the near future?

R1: The current process?

I: Yes, the current posting staff abroad process.

R1: Yeah, yeah, yeah. Well for Belgium, not really because most of the things that SDG asked of us, we wanted to do, but we didn't have any budget for. So now we have budget to do that, so that is a good thing, that is a direct positive effect of SDG that we get, that we can defend what we need to do, we must do it, so therefore, what we wanted to do always, now we can do. But, euhm Belgium in that sense is already very digitalized, we created now, there is something in Belgium that combines a bit the data but we already had something comparable, so hugely forward, not really. But I do see for a lot of other member states that didn't have the level of digitalization, that the SDG has really helped to push the narrative we need to do this, we must do this. It's no longer a choice and that has really helped I think, to get, to go that step forward and in that sense it's also been timely because it was pre-covid that we had the first obligation to implement and now we have covid and the digitalization and a lot of member states forcing to be more aware that we need to provide services at a distance and that has also I think facilitated the implementation and the digitalization. So, in that sense it is a bit of a perfect storm, where we see ESSI being implemented, SDG coming out, only once being also a bit more implemented and then the entirety of the pandemic, that has really enforced institutions and employers and employees to look at what are we doing physically can we do it electronically more efficiently, all those things tied in I think we are going into the good direction. Some European projects that are being pursued, also tie in nicely. The only critique that I would have there is that there is a lot being done and not the coordination is not always there in the different initiatives and some fizzle out, good initiative, other ideas that are very good don't get enough funding and some conglomerates that say look to combine some things like eIDAS together with the wallet and authentication at different member states and lets do that on an European level and tie that in nicely, also provide it for employees and so on. That is where we need to move a bit more forward but there is political reasons why that has not always succeeded. That is always the game, if we have a necessity then we can move quickly. But one thing that I would say and that ties it up nicely I think, there is a real voluntary in institutions to go to that digital age and to have that digitalization and to provide for more access, clear access, to information, to citizens and employers, it's just a limitation on access to data and I think that that is one of the main issues. Euhm, there you have ELA that plays a role as well, that plays a role access to information, I think they have done a good job to inform employers as well. And they are really pushing also that same issue so it's not only the SDGR but also the start of ELA that is also looking at okay are you doing this electronically, what is there available and coming with recommendations and studies and they have a, they have funding to do that and that really helps also institutions to say to hierarchy and to political

level, look we really need to do something here and we have recommendation and we know that's something that is also a big part, best practices. Because, we don't always know what is happening in the neighboring countries even with colleagues, direct colleagues, we meet and we talk and we exchange information but if we would have some more best practices, like the Commission putting out look this is good but that is a difficult role for the Commission, that is difficult because they are the guardian of the treaties so it is more the police rather than to say look this is a good way of doing things so it's a bit of a schizophrenic approach but the SDGR in my opinion has been very good euhm just to make sure that all noses are pointing into the right direction, to push that narrative and then I think we are going in the right way.

Transcript respondent 2 – Telephone interview

- Which building blocks and frameworks provided by the European Union are reused in your service delivery? (eIDAS, eSignature)

eIDAS is implemented and should also be implemented as part of SDGR. eSignature is something that does not really exist because the power of a signature disappears with the verification of the login with eID, so there is not really a need for it anymore. Another important building block is the Once Only Technical System but for the ksz/rsz there is another system in place. Namely the EESSI, this was discussed with the European Commission and should not be replaced by the OOTS because it is much broader and more focused on social security. The EESSI is also not part of the SDGR regulation but is spoken about in different regulations.

- How beneficial is this service to be digitalized? What is your need/goal?

There is a lot of benefit in the digitalization of services. The main thing that is different in the SDGR is the focus on user centricity, this is the first regulation where the focus is on the citizen and not from within administrations. Noteworthy is that for this regulation there will be no audits conducted by the European Commission on the implementation of the regulation in the organisation but there will be research on the user satisfaction. It should be easy for the user, simple, clear and they should be able to ask their questions and gather information easily. The SDGR is about way more than just the 21 procedures listed. I don't know if you noticed but there are some clauses in the regulation stating that all services should be digitalized. But even for the 21 procedures it is not realistic for the deadline and this is the case in all member states and the European Commission is aware of this.

- How does the financial cost of the changes caused by the SDGR influence the services?

So there is no real financial support from the European Commission as part of the SDGR, the services should be changed with own funding. But there is the European Recovery and Resilience Facility that was set up to minimize the effects of Covid-19 and Belgium filed for a project with the ambition to realize a digital Belgium and this was approved by the European Commission and we got a fund of 30 million. So we mainly use this for the implementation of SDGR and the Social Security also received funding from this for their services, but of course this is not without requirements that need to be fulfilled. One thing that is also part of this ambition, but is still far away is to set up a central portal for citizens where they can access all services and are guided through their citizen journey. We also want to make suggestions made on life events.

- What is the impact of semantic interoperability between MS on the service provision?

There was an initiative as part of SDGR for a semantic harmonization but this failed. So now what we do is look at existing standards and see who complies with what and take these as a minimum requirement. In this way we want to get an understanding of the requirements in every country because the impact for citizens can be big. For example, birth certificates are very different across countries and some don't even have certificates but solely databases. Some countries chose birth dates in different ways, and this can make a lot of difference for citizens. This is also something that is important for social security and for example in the EESSI.

- Does your organisation participate in cross-organisational or cross-border knowledge transfer. How does this influence the service provider?

For this question, there are two main levels, on the one hand there is BOSA and the European Commission, but here it is more about the general implementation and not so much about the sector itself. Things like the European Health Insurance Card are discussed here. On the other hand there is the knowledge transfer between the sectors self, within the existing structures. EESSI is also an example of this, so social security also discusses things in the existing structures of this. But the content of the procedures is thus not discussed in the SDG itself but in the existing structures. But Belgium definitely has contacts with different countries, like the Netherlands, Germany and also some things with Romania and Portugal.

- In your opinion, how important is it to have a strong leader in implementing the EU regulations? Who should do it?

Belgium is a very complex country where everybody works withing their own silo. An example of this is EESSI, only the Social Security working with the system knows about it. Everything coming from the European Union gets delegated to the mandated department and nobody else hears about it anymore. So politic and mandate wise a lot is in silo's and that is exactly one of the challenges for the SDGR, because nobody talks. So we also hope to change this with SDG. Every department thinks about their own budget and their own needs, but it is important that we change this attitude to putting the user central to change. So I think it is very important to have strong leadership, and that is a piece we are missing. Because we also try to follow other regulations of the EU to be able to form linkages to the SDG and we think it is also important to do this after the SDG. We should follow these changes and link them with other institutions to make sure that the investments we are making now are not going to be lost. One example of this is the Airbnb regulations that has just been launched and this is something that can not just be dumped into one department and silo because it concerns multiple institutions and governmental levels. These are things that do not work. So strong leadership is necessary, we try to do this with BOSA and we also are the right department for this but in my opinion there should be a central government instance that is mandated with the central coordination of these regulations with good contacts over the different departments.

- What is the influence of the political will in the implementation of the SDGR?

Politics is the biggest problem, they often have their own agenda and there is a lot of lobbying. The administration is expected to be the stable component in the government

but in reality we are still very dependent on political steering. One example of this is procedure 16 to start a company, which is also one of the ambitions of the SDGR to make countries more attractive for entrepreneurs and we want to make this procedure more accessible for these persons. But on the political level there have been discussions about this for 2 years, so now it is approved and we only have four months left to implement it. So we probably are going to do a minimum viable product because we do not have the time anymore, although we started 2 years ago. And this is all because of the political discussions but also because of the lobby groups that influence the political level and say that change is not needed. I also had a discussion about this with the management from social security, that it is really a drag and that the political level wanted to put the SDGR on the red list. This list means the projects that we do not invest in anymore and we stop doing. So we really have to explain to them that this is not a possibility, that it is a regulation and that we need to do this, that it is not an option. It is therefore also important to emphasize that the changes should be made for the citizens and not for the administrations.

- In your opinion what changes are or will be happening with the introduction of the SDGR?

The SDGR can mainly be seen as a lever, and we really hope that the SDGR will help to go even more digital. But important for this is to take into account all citizen groups and to keep providing a lot of assistance and information to citizens. Of course it is crucial that we have everything available digitally especially for foreign people that need to complete services in Belgium and that they don't have to travel five times to complete an administrative procedures. But on the other hand it is also important that these existing physical touchpoints do not just disappear. Because for some countries nationals these touchpoints are very valuable and this is not only for the elderly people but for everyone, people like you and me and even the new digitally mature generation. Because everyone in some point of time can be behind on the digital evolution due to illness or different problems and it is important that citizens can still go somewhere to ask for and receive the help they need. But other than that we have a lot of expectations from the influence of the SDGR and we really want to keep emphasizing the good practices to the administrations and keep doing this after the programme.

- Do existing/legacy systems and structures within your organisation affect the changes from the SDGR/effect of current digital maturity?

This is definitely something that is a problem in Belgium because we walk into silo's all the time, we are not used to look over these borders and to talk to other departments and silo's. So this is really a problem and we do see evolvement in this, also with SDGR, but the impact is noticeable everywhere. Also with the budget, everybody has their own budget related to their own ambitions, so if projects crossing different departments come along, they will just say no we don't have budget allocated for this so we will not do it because we have to reach our own goals based on the budget we got. One clear example of this is the Powers & mandates system, which is used to for example delegate a mandate to an employee. Because in most bigger companies it is not the employer who does all the administrative work they have employees for this, so these employees will need to get a mandate from the employer to do this. And this is also the case for foreign employers who want to post workers to Belgium so we get the question how can we do this. So we need a system to provide these mandates, and these exist but all separately, so the social security department has one, the economy department has another one. So these systems

do exist and they work but we should fix this for the SDGR because the systems are digitally mature but they are not central.

- How does the national law influence the implementation of the SDGR?

So important to explain is that European Union Regulations are always higher in power than national laws, so this is different then European Union Directives, which you can kind of ignore if you wanted to but for regulations it is different, these have to be implemented. But there are some national laws that still influence the implementation of the SDGR, and one of them is the Language Legislation in Belgium. So the European Commission decided that the language in which should be communicated for cross-border service provision is English. But the language legislation in Belgium says that firstly all national languages should be provided in services before a different language can be added. So for services in Flanders the main language is Dutch, but if they want to add something in English they need to add it in French and German as well. And for the federal government all communication is provided in Dutch and French but they will need to add the procedures in German too if they want to add English as well. And this is not just about some forms or websites that need to be translated, but it is about large procedures with a lot of documents and eforms, so this is a barriers that a lot of administration encounter. So it is a lot of translation work and it should also be juridically correct when translated because otherwise foreign citizens can encounter problems. There are also some other legislations like Economic ones that can have an impact on certain implementations. So the legislation works against the implementation sometimes. And we also really need to take into account when modifying services or procedures that we do not touch upon existing legislation. Because when something needs to be changed, the procedure will immediately take at least two years to be fulfilled. Because it has to go through political discussions, through parliament and then it has to be implemented. So we try to find loopholes for this to not slow down these processes.

C   Informed Consent

Informed consent

Title of the research: The Road to the Single Digital Gateway: implementing cross-border digital public services in Belgium   **Name + contact details** supervisor and researcher(s):   Joep Crompvoets, Institute for the Government, KU Leuven, joep.crompvoets@kuleuven.be   Stefan Dedovic, Johan Skytte Institute of Political Studies, Tartu University, stefan.dedovic@ut.ee   Jade Reyskens, Institute for the Government, KU Leuven, jade.reyskens@student.kuleuven.be   **Goal and methodology of the research:**   The Master thesis answers the research question: "How do Belgian service managers and experts perceive the ongoing changes caused by the Single Digital Gateway Regulation for the cross-border digital public service "posting staff abroad", following the change factors provided by Change Management Theory?"   **Duration of the interview:**   Approximately 60 minutes

➢   I understand what is expected of me during this research.

➢   I know that I will participate in the following trials or tests:
   Expert interview concerning the implementation of the Single Digital Gateway Regulation (in the 'posting staff abroad' service)

➢   I know that my participation may be associated to risks or discomforts.

➢   I or others can benefit from this research in the following ways:
   o   Insight in the AS-IS state of cross-border digital public services
   o   Enabling the Digital Single Market

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

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

➢   At any time I can also ask to end any further processing of my data and to delete the data that have already been collected.

➢   I know that audio recordings of me will be made in this study solely for the purpose of data analysis.

➢   The results of this study can be used for scientific goals and may be published. My name will not be published. The confidentiality of the data will be protected in all stages of the research. The researchers will take the following measures to protect my privacy:
   o   Anonymizing data in research

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

➢   I would like to be informed about the results of this research. The researchers may contact me for this purpose using the following e-mail address.

_____

➢   For questions and for the execution of my rights (access to my data, rectification of the data, …) after my participation I know that I can contact:
   joep.crompvoets@kuleuven.be, stefan.dedovic@ut.ee, jade.reyskens@student.kuleuven.be
   More information with regard to privacy in research can be found at https://kuleuven.be/privacy/en/. With further questions about privacy issues I can contact the data protection officer: dpo@kuleuven.be

➢   I know that I can contact the individuals/organisations below if I would experience any discomfort or difficulties as a result of some of the subjects that were the topic of this research:

dpo@kuleuven.be

I have read and understood the information in this document and I have received an answer to all my questions regarding this research. I give my consent to participate.

Date:
Name and signature of the participant   Name and signature of the researcher

D   Declaration of authorship

I hereby declare that, to the best of my knowledge and belief, this Master Thesis titled
"**The road to the Single Digital Gateway: Implementing cross-border digital public services in Belgium**" 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.
Münster, 18 July 2023

Jade Reyskens

E   Consent Form

for the use of plagiarism detection software to check my thesis

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Title of the thesis: The road to the Single Digital Gateway: Implementing cross-border digital public services in Belgium

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