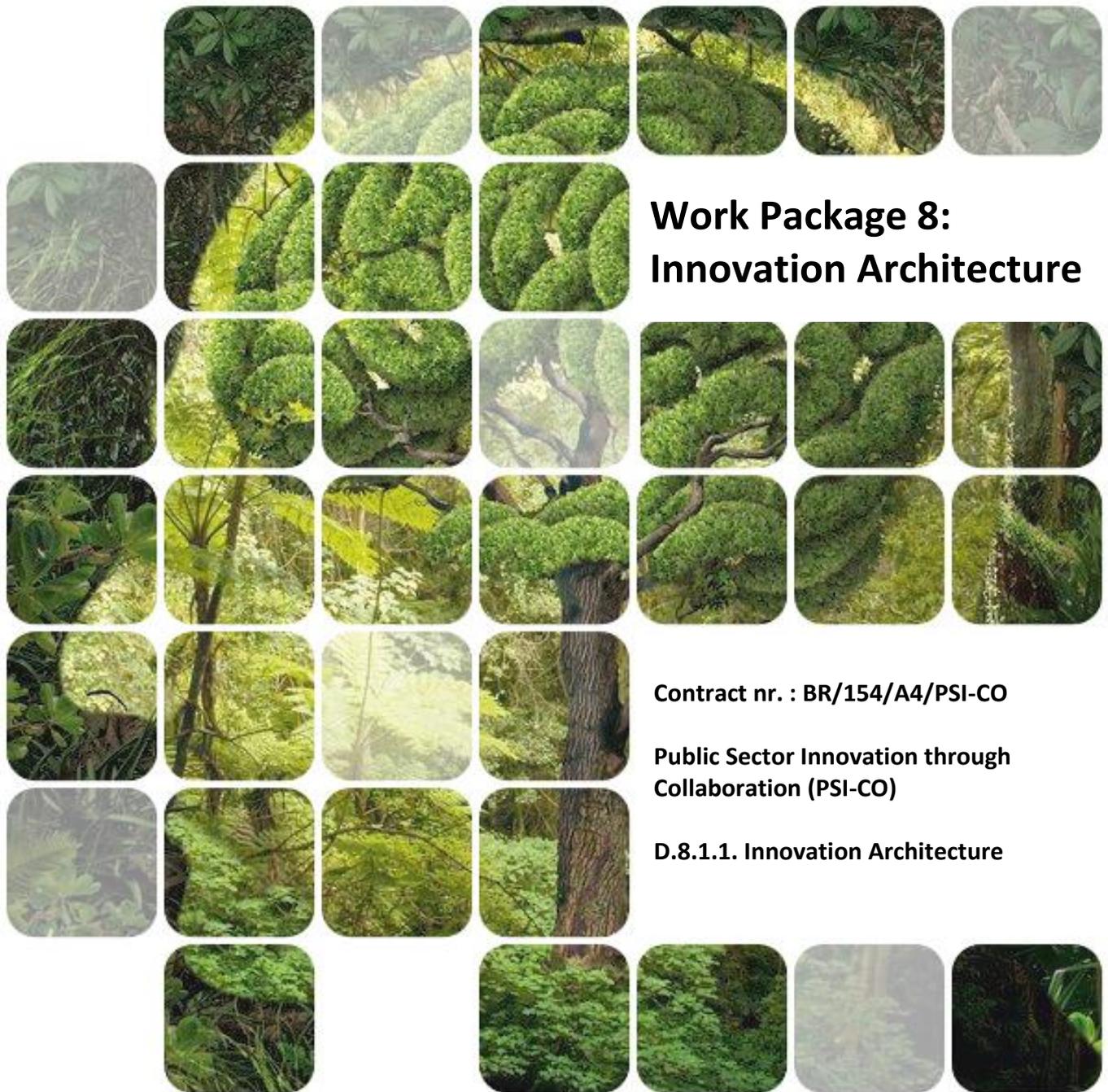


BRAIN-be

BELGIAN RESEARCH ACTION THROUGH INTERDISCIPLINARY NETWORKS



Work Package 8: Innovation Architecture

Contract nr. : BR/154/A4/PSI-CO

Public Sector Innovation through
Collaboration (PSI-CO)

D.8.1.1. Innovation Architecture

NETWORK

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Management Summary

Research goal work package 8

Work package 8 of the BRAIN.be funded research project (Public Sector Innovation through Collaboration – PSI-CO) examines the role of government-wide innovation architecture in creating and sustaining public sector innovation. The term ‘innovation architecture’ refers to the structures, processes and instruments set up by governments to stimulate the initiation, adoption and diffusion of innovations throughout government.

The main research question of this study examines ***to what extent the current innovation architecture within the Belgian federal government supports and enhances collaborative innovation and how this could be improved.*** More specifically, a multi-method approach has been chosen to:

- Identify the current innovation architecture of the Belgian federal government and determine its capacity to stimulate collaborative innovation;
- Provide a comparative analysis comparing the Belgian federal innovation architecture with the innovation architecture of the national public administration of Netherlands, Estonia and Finland;
- Suggest amendments to the innovation architecture of the Belgian federal government to enhance its capacity to stimulate collaborative innovation.

Methodological approach

First, a comprehensive literature review was conducted in order to develop a framework for a government-wide innovation architecture, and gain insight into the different elements that make up this architecture. The publications of the OECD Observatory of Public Sector Innovation (OPSI) have been particularly instrumental in establishing which aspects of public sector innovation should be taken into consideration when developing the concept of innovation architecture. Based on the literature review, the following elements have been identified as key elements of the innovation architecture of governments:

1. innovation strategy & policy
2. innovation networks
3. innovation labs & teams
4. innovation resources
5. innovation evaluation
6. data governance
7. risk governance
8. incentives

Given the exploratory nature of this research, a qualitative approach was adopted to gain insight into the current innovation architecture present within each of the researched countries. For the comparative analysis, Finland, Estonia and The Netherlands have been selected, since each of them can be considered frontrunners in the field of public sector innovation. Semi-structured interviews were administered with government officials as well as academic experts from the different countries. Prior to the interviews, document analysis and desk research were conducted to identify those government organizations that were already involved to some extent with innovation.

Based on the findings from the comparative country study, best practices from the different national governments were collected and used as a guideline to formulate recommendations for the improvement of the innovation architecture of the Belgian federal government.

Main findings and recommendations

Below, the key findings and recommendations are discussed for each of the eight innovation architecture elements described above. The extent to which each of these elements have been developed in government, will be a key indicator of a government's capacity to facilitate innovation throughout its organizations. Part 5 of the report can be consulted for a more detailed description of all findings and recommendations. It also provides a number of concrete examples of innovation initiatives encountered in the researched countries, which can inspire the development of similar initiatives in the Belgian federal government.

5.1 Innovation strategy & policy

The extent to which a government has included public sector innovation in its formal strategies or policies, is a useful indicator to assess to what extent governments are facilitating innovation by addressing it at the strategic level. Across the researched countries, existing policy and strategic documents have been examined to establish what efforts have already been undertaken in this domain.

Recommendation 1: Establish a government-wide strategy for public sector innovation, serving as a centralized source of guidelines for innovation, allowing organizations the freedom to select those approaches that best fit their organization.

So far, there is no formalized, government-wide strategy for public sector innovation present in the researched countries, meaning it is mostly up to individual government organizations to decide how they will spur innovation in their organization. Across the countries, there appears to be a consensus that this is the most suitable approach for now, arguing it would be detrimental to impose innovation onto organizations. This is supported by two main arguments: 1) Government organizations each operate in different contexts and face different domain-specific opportunities and limitations, making it difficult and even counter-productive too impose strict guidelines or targets for innovation; 2) In most countries a government-wide mindset in support of innovation still needs to be developed further. Such a mindset is a crucial prerequisite for the implementation of a government-wide innovation strategy.

It is therefore recommended to develop a government-wide strategy for innovation, however not with the aim of enforcing specific approaches or targets for innovation. Rather, the strategy can take the form of a centralized source of guidelines for innovation, that provide information on innovation methods that have proven to be useful in a public sector context, accompanied with actionable information and recommendations for implementing these within one's own organization. The OECD Declaration on Public Sector Innovation can serve as a useful starting point.¹

5.2 Innovation networks

Networks can play a key role in connecting government organizations with different stakeholders, each bringing different perspectives and expertise to the table. Networks also play a key role in

¹ Source: <https://oecd-opsi.org/projects/innovationdeclaration-2/>, OECD, Declaration on Public Sector Innovation, OECD/LEGAL/0450

facilitating knowledge exchange, both within and across organizational boundaries. Therefore, they can be considered a crucial component of the innovation architecture in governments.

Recommendation 2: Participate in international networks and programs to stimulate innovation.

In the researched countries, participation in the Open Government Partnership program (OGP) program has led those governments to start experimenting with certain innovations in services or policy. It is advisable that Belgium, which is the only researched country that is not a member of the OGP, reviews and enhances its participation in such international networks as they can provide extra impetus to innovate. (see examples p.122)

Recommendation 3. Clearly define the purpose of existing networks and scale these up where possible.

Each of the researched governments have developed their own networks in support of innovation, which are mainly focused on facilitating the exchange of ideas and knowledge. Some government organizations have developed networks within their own organization. However, most of the researched networks have a government-wide reach, with some also reaching across governmental layers. In the Belgian federal environment, a few networks have already been created with the specific aim to encourage knowledge exchange and spur a shift in mindset among civil servants.

It is recommended to re-asses the purpose and functioning of the networks that currently exist in order to ensure there is no substantial overlap. This exercise has already been done for the federal innovation network and the CoP (Community of Practice) Agile, which have been partially integrated. Information on these networks and their purposes should also be centralized to provide oversight of which networks can be joined for what purpose.

Recommendation 4: Both formal and informal networks can be instrumental in stimulating public sector innovation. The specific purpose and goals of a network should determine which approach is most suited to reach those goals.

Some respondents from the Belgian federal government expressed a clear preference for informal networks, as they are less hindered by red tape and are claimed to be more productive. Formal networks can however be more adequate when there is a clear need for accountability of the involved network members, and if they are also expected to implement a network's program or agenda in their own organization. (see examples p.123)

5.3 Innovation labs & teams

Innovation labs and teams can take on a number of roles to promote innovation across government. They can diffuse lessons from innovation projects, share insights on how different innovation tools and methods are best used, help with capacity building and support innovation networks. Depending on their purpose, they can also be involved with the development and implementation of innovations, or take on a supporting role by coordinating or funding projects. Innovation units have therefore been defined as a key component of a government's innovation architecture.

Recommendation 5: Both organization-specific innovation labs as well as those with a government-wide scope are valuable instruments for spurring innovation. Labs should be located directly under top-management.

Many researched labs or teams for innovation are decentralized and are located within specific ministries or agencies and have a scope that is limited to a specific organization or policy domain. They are part of the traditional organizational structure but are usually positioned high up in their organization. Having a high amount of autonomy in setting their own agenda, in recruiting staff and establishing their own work methods, is reported to be crucial to ensure the unit can work effectively.

Belgium and Estonia are the only studied countries that have an innovation unit with a government-wide scope. While domain-specific innovation units offer opportunities for a targeted approach to stimulate innovations in specific areas, governments can also benefit from the complementary presence of a central innovation unit. The latter can function as a central body that keeps oversight of the innovation activities taking place in government. They are well positioned to gather best practices for innovation from across government, and act as a 'knowledge broker' for public sector innovation. NIDO already takes on such a role to a considerable extent. It could be recommended they further develop their role as knowledge broker and how they can assist in centralizing information on innovation projects in federal government.

Recommendation 6: Communicate extensively and transparently about innovation labs' activities and associated spendings. This can help reduce any resistance they may experience from traditional structures within their organization or wider government.

Lack of clarity concerning the activities of innovation labs have been reported to cause a certain amount of 'resistance' from the wider organization they are part of. This can be attributed to other staff not being sure what budgets innovation labs receive and for what they are being used. Increasing transparency and communicating openly about the lab's activities and associated costs can help reduce such resistance. (see example p.125)

Recommendation 7: Innovation units operate ideally with small, agile teams and can benefit from bringing in (temporary) external expertise.

Most of the researched innovation labs and teams operate with a relatively small amount of staff (between 4 - 8), allowing them to function as an agile unit. It is also recommended labs bring in additional external expertise, either temporarily (project-based or seconded, for example as 'innovators in residence') or as part-time members of staff who combine this with another function in or outside government. They can complement the organizational and domain-specific knowledge of internally recruited civil servants when needed. (see examples p.126)

Recommendation 8: Ensure stable and adequate funding for innovation units. For innovation units with a government-wide scope, co-financing by different ministries/agencies can help to embed the unit in government.

Most of the labs are funded with budget from the organization they are part of, being either a single ministry or agency, or, in the case of Estonia and its Innovation Team, several ministries providing co-funding for the initiative since it has a transversal scope. In addition, the Estonian central Innovation Team also relies on funding from the European Structural Funds (providing 50% of their total budget). Since NIDO also functions as an innovation unit with a government-wide scope, situated within a transversal department, it could be recommended to establish a similar co-funding arrangement with different ministries or agencies (but with more stable funding arrangements). This can help ensure the lab receives adequate funding and can further embed NIDO within government. Having stable funding has been reported to be one of the key factors to ensure the survival of innovation units, throughout different cabinet periods.

Recommendation 9: Address procurement red tape that hinders innovation: In order for innovation units - and innovators in general - to successfully employ methods such as experimentation, co-creation and rapid testing, new approaches for procuring services are required.

Several respondents in the Belgian federal government perceive existing procurement regulations as a key obstacle for public sector innovation. It has, for example, been reported to seem a hindrance in initiatives like ‘gov buys innovation’, a portal that is being developed to allow federal organizations to procure innovative solutions to specified challenges. In particular, issues arise with the existing framework for public procurement, that, with its strict and lengthy procedures and need for detailed pre-defined requirements on the desired solution, is ill-suited for innovation projects. Innovation projects are usually launched because it is unclear what possible solutions exist, and what these should look like. Such projects therefore require more agile, simplified procurement processes in order to be able to source the required services. It is also reported that the way in which procurement officers navigate these procedures should be revised, and they need to be offered support to implement existing procurement regulation in such a way that is more supportive of innovation projects.

In order to work around this procurement red tape (i.e. excessive procurement regulations), innovation units and programs – both in Belgium and abroad – reported that they deliberately budget their projects under the critical expenditure level of 25.000 euros. This allows government organizations the freedom to arrange the procurement process in such a way that service providers have the necessary freedom to propose those solutions that best address the challenge at hand. This approach has proven to work when it is applied in a phased process, where it is clearly outlined what is expected in each stage, at which budget. Inspiration for developing such an approach can be drawn from the Dutch innovation program ‘Startup in Residence’. (see example p.128)

Additional factors for success mentioned by several innovation units include:

Recommendation 10: Not claim ownership of innovation projects, but instead empower and support others with the development of innovations. This is particularly relevant for innovation units with a government-wide scope.

Recommendation 11: Working across different governmental layers is important for innovation units. Since challenges often cut through these layers, cooperation between the central and local levels of governments is often required.

Recommendation 12: Ensure adequate political and administrative support for innovation units and provide them with a clear mandate. Mandates are necessary to have authority to act, to grant innovation teams the authority to access resources and data, and to allow them to make decisions in the pursuit of their objectives.² It is considered by several respondents to be a key factor in enabling innovation units to work effectively, and to ensure they have the required political support.

5.4 Innovation resources (budget & staff)

As stated by OPSI¹⁰¹, “one easy way of ensuring failure in innovation, is to not resource it properly”. An under-resourced innovation initiative risks failing, delivering no value at all due to a disconnect between the desired impact and the resources that are available. Therefore, the amount of resources that are available, both in terms of staff and budget, will be an important factor determining the potential for success of innovation projects and labs in government.

² Source: OECD (2017), *Fostering Innovation in the Public Sector*, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264270879-en>

Recommendation 13: Establish an innovation fund which provides dedicated funding for public sector innovation.

Among the researched countries, Finland is the only country that has established an innovation fund, called 'Sitra'. Although it is not entirely reserved for the public sector, its funds can be used to finance certain innovative projects from the Finnish public sector. None of the researched countries has a centralized budget which is entirely dedicated towards public sector innovation. It is usually up to individual government organizations to reserve part of their budget for innovation initiatives or look for other, external sources of funding. The creation of an innovation fund can encourage government organizations to innovate, by providing readily accessible funding. The approach of the Finnish innovation fund has interesting features that are worth considering for the development of a Belgian federal innovation fund, such as their emphasis on cross-sectoral approaches for innovation. (see example p.129)

Recommendation 14: Be careful when relying on external sources of funding to finance long-term innovation projects or units. They are reported to not always be a cost-efficient, long-term structural funding solution for public sector innovation.

A frequently used external source of funding are the European Structural Funds, which are granted to EU countries for a 7-year period. Even though funding for a period of seven years is longer than the annual budgeting practices of many government organizations allow for, there still remain some considerations to take into account. It is reported the European Structural Funds can only be used for projects that comply with very specific and strict funding requirements and that the use of these funds comes with a heavy administrative burden.

Recommendation 15: Revise budgetary practices that restrict organizations in the flexible use of budgets for innovation projects. In particular, more budgetary flexibility is needed for transferring budgets across fiscal years.

Across the studied countries, most government organizations develop budgets on an annual basis, implying their budgets for innovation projects are also allocated on a yearly basis, with no guarantees on the amount of budget that will be available the following years. This can be a particular hindrance to larger-scale innovation projects that run for multiple years and can deter organizations to launch such projects. All respondents report budgetary flexibility is very limited in their governments, both when it comes to transferring budget from one year to the next, or the pooling of budgets for joint innovation initiatives. In the Belgian context, particular attention can be paid to ensure budgets for innovation can be transferred more easily across fiscal years.

Recommendation 16: Further build the federal coaching network Lumen, as it is a valuable tool to stimulate knowledge exchange across the federal organizations, and it can be instrumental in spurring innovation throughout government.

By encouraging civil servants with experience in innovation projects to join the Lumen coaching network, their knowledge and experience can be shared throughout the federal government.

Recommendation 17: Further expand the e-learning offer with trainings on innovative work methods, so these skills can also be developed through time- and location-independent learning.

Most of the researched governments are already making use of the opportunities offered by e-learning, having developed central digital platforms to encourage online learning among civil servants. By making optimal use of the federal digital learning platform e-campus, civil servants can have greater

flexibility in building the skills needed for applying innovative work approaches. (see examples p.132)

Recommendation 18: Revise the current job mobility program for Belgian federal civil servants. By transforming it from a one-sided into a two-sided exchange program, a bilateral exchange of both staff and their expertise between organizations can be ensured.

Most of the researched countries have a mobility program in place that enables civil servants to temporarily take on another role, either in a different department in the same organization, or in another organization (or even another level of government). This cultivates a work force that is competent in working transversally, with different organizations. A revision of the Belgian federal mobility program in its current form is recommended. Concerns raised by certain organizations should be addressed, in particular the fear of permanently losing staff through the program. By focusing on two-sided exchange whereby an organization both sends and receives someone, this issue can be mitigated. (see example p.133)

5.5 Innovation evaluation

There is a growing awareness of the need to systematically evaluate innovation projects, even though such projects are often characterized by a high degree of uncertainty on what results can be expected. Attempts are being made by a variety of innovation teams and labs to measure their results, focussing not only on project outputs but also looking at the outcomes and impact. In order to optimize learning from past projects, and ensure similar mistakes can be avoided in the future, evaluation of innovation projects is essential.

Recommendation 19: Systematic evaluation of innovation projects should take place, not for the sake of applying sanctions or rewards, but to optimize learning opportunities from the experiences that have been gained.

It is also crucial that 'lessons learned' are shared between teams and organizations once innovation projects have been completed.

Recommendation 20: Establishing a culture that perceives failure as a learning opportunity, to counteract risk-averse behavior and encourage experimentation.

The researched innovation labs and teams all state to have adopted a learning culture, considering failure a learning opportunity. However, in most countries, such a learning culture is reported not to be widespread yet throughout government. Especially experimentation with tax payers' money induces some resistance from traditional government structures. This is also the case in the Belgian federal government, where respondents indicate a large shift in mindset is still required.

Recommendation 21: Evaluations carried out by external actors (who are not part of the project team), can be a useful addition to internal evaluations.

External evaluations can assist in developing objective, valuable insights on the outcomes and impact of innovation projects that involve multiple stakeholders. In practice, these evaluations often take the form of impact assessments that focus not only on (quantitative) project output but also on its outcomes (= results achieved at the end of project) and to what extent it has been able to realize systemic change (=impact). It is important to note that impact only becomes visible after a certain period of time and that it can take a couple of years before this can truly be assessed. External evaluations can be performed by different types of actors, ranging from private consultancies to academia as well as government organizations. (see examples p.134)

5.6 Data governance

In order to enable and stimulate innovation, opening up government data to the public and allowing data reuse by a wide range of actors is necessary. In addition, internal data sharing among different government organizations can help them to address collective problems and achieve shared goals. Effectively implementing such data sharing strategies will therefore be a crucial factor in enabling public sector innovation.

Recommendation 22: Ensure federal organizations comply with the Belgian federal open data strategy, by addressing key barriers (cultural, financial). Increase their awareness of the benefits of opening up data to the public in order to stimulate the development of innovations within government.

For open data to work, government organizations need to be convinced of the benefits sharing data with the public brings. Belgian respondents indicated several federal organizations do not fully support such a mindset yet and are fearful of opening up their data. Besides cultural barriers, other barriers should be addressed as well. Particularly concerning the financial aspects – some organizations rely on the sale of their data to fund their own working – and the lack of insight into who uses the data and for what purposes (in order to open up data the correct way).

Recommendation 23: Ensure the legal framework for (mandatory) data-exchange between federal organizations is implemented.

The digital agendas from the researched countries all focus on enhancing data-sharing among government organizations in support of the once only principle. This objective is also outlined in the Belgian federal action plan for digitalization 'Digital Belgium'. Most respondents indicate government-wide data-sharing is not yet common practice in their government. For Estonia however, it is reported government-wide data-sharing and the deployment of the once-only principle are already well advanced. Crucial for achieving this was the creation of a dedicated platform/application 'X-road', which organizes data-exchange between government organizations, and makes this mandatory by law (within the confinements of what is legally allowed) (see example p.136). In Belgium, besides ensuring the legal framework gets implemented, the lack of interoperability of data also poses a barrier to effective data exchange between federal organizations.

5.7 Risk governance

Innovation projects are often accompanied with a higher degree of risk. On the other hand, the public sector is characterized by a risk-averse culture, where even the slightest mistake or perception of risk can be met with great resistance. It is therefore crucial governments do not seek to avoid risk at all cost, but rather 'govern' risks in such a way that it does not stifle innovation.

Recommendation 24: In innovative projects, applying too strict rules in an attempt to minimize risks will hinder flexibility and experimentation and will be counterproductive for innovation. By experimenting with new solutions in a safe environment, it can be ensured the daily operations of an organization are not at risk.

The research reveals there is widespread consensus on the belief there is no need for a separate risk management approach for innovation projects. Innovation projects are usually accompanied with a higher degree of risk, however, through experimentation in secure (lab-like) environments, these risks can be mitigated. NIDO also adheres to these principles and sees safe experimentation and testing as

key approaches for managing risks associated with innovation. It is recommended these insights are collected to create a set of guidelines concerning safe experimentation, so they can be distributed throughout government.

5.8 Incentives for innovation

Government organizations are typically characterized by a high degree of risk aversion, which is counterproductive for innovation. In order to encourage civil servants to leave their comfort zone, share their ideas, and take risks, incentives need to be created to develop a culture that supports such behaviors among civil servants.

Recommendation 25: Make use of innovation competitions and challenge prizes to spur public sector innovation.

Across the researched countries the use of innovation competitions, often in the form of hackathons and challenge prizes, is the most common found incentive for stimulating innovation in the public sector. Winners are often granted money prizes to further develop their solution or have the opportunity to obtain a public contract. Such competitions help demonstrate that innovation is happening in government and it can motivate civil servants to participate in these new types of collaborative innovation projects. They can also serve as a platform where motivated innovators from across government can come together to exchange ideas and experiences. (see examples p.137)

Recommendation 26: Grant recognition and visibility to civil servants who are involved in innovative projects.

Government awards, such as those that can be found in the Netherlands, can serve as a tool to reward federal organizations and civil servants who are launching innovative projects and are cultivating an innovation mindset in their organization. (see example p.138)

5.9 Concluding Summary

It can be concluded a number of elements of the Belgian federal innovation architecture are already considerably developed:

Several federal organizations have already included innovation in their policy and strategy documents. The development of a central strategy for innovation can encourage all federal organizations to start innovating and provide them with guidelines on suitable, innovative approaches.

A few innovation-oriented networks have already been developed in federal government, both within as well as across organizations (with a transversal reach). By optimizing these networks' capacity for knowledge exchange, they can function as an effective instrument for spurring innovation across federal government.

Furthermore, Belgium is one of few researched countries to have established a centralized innovation lab with a government-wide scope (NIDO). Given their role as knowledge-broker and the guidance they provide to organizations wishing to undertake innovative projects, they form an essential part of the federal innovation architecture. However, in order to ensure the optimal functioning of NIDO, further alignment is needed regarding the role they should take on, either being that of a 'facilitator', or that of an 'owner' of innovation projects. In addition, the development of organization-specific innovation labs can help spur innovation in specific policy domains.

Innovation projects currently not seem to be hindered by overly strict rules for reducing risk. In line with risk management approaches used in the other researched countries, testing of concepts in secure environments and piloting are the main approaches used in federal government.

In other areas however, considerable improvements can be made to strengthen the federal innovation architecture:

When looking at the capacity to resource innovation appropriately, it appears current budgeting practices are often an obstacle for the effective financing of innovation projects. By allowing more budgetary flexibility, the planning and execution of innovation projects can be encouraged and facilitated. In terms of staff, many 'hidden innovators' are reported to exist within government. Since these are a valuable resource to drive innovation forward, people should be given sufficient flexibility so they can engage with innovation projects while combining this with another day-to-day role in government.

Currently, evaluation largely remains limited to progress updates and (quantitative) outputs of projects. More attention should be given to the evaluation of outcomes and impact, as it will provide more concrete insight into what has been realized at the end of a project (outcomes), and what systemic change (in services, policies) the innovation project has been able to realize (impact).

In terms of data governance, a number of strategies have already been established to spur data exchange between federal organizations, as well as with external actors (citizens, companies). By addressing (cultural, financial) barriers that exist in certain organizations, it can be ensured the existing data strategies and infrastructure optimally contribute to innovation.

Finally, few incentives currently exist within federal government that motivate civil servants or government organizations to innovate. By organizing incentives such as idea competitions and innovation awards, recognition and visibility is granted to those who are involved with innovation. Such incentives can be instrumental in demonstrating innovation is valued and can motivate others to start adopting innovative approaches.

Introduction

Positioning of the report in the PSI-CO ‘public sector innovation through collaboration’ project.

Public Sector Innovation (PSI) is high on government agendas across OECD countries. Wicked problems, such as climate change, an aging population and the refugee crisis, have governments realizing that traditional approaches are insufficient in dealing with these issues. An answer to this could be collaboration (CO) with citizens, interest groups, private partners or other government organizations. Despite the growing awareness of the need for collaboration, there is a lack of knowledge about how such collaborative governance arrangements result in meaningful innovations regarding policies and services, and how different forms of collaborative governance interact and reinforce each other.

The PSI-CO project aims to add to the existing scientific knowledge and wants to formulate validated and tested recommendations and guidelines for policy and practice in this matter. Multiple methods are used to address the research questions. Following an extensive study of the literature, nine in-depth case studies were conducted, providing qualitative (interviews) and quantitative (survey) insights into nine cases of collaborative innovation within the Belgian federal government (WP3). By conducting more than 100 interviews with public actors, citizens, private actors and other stakeholders, first findings could be developed in terms of which variables were most relevant to stimulate collaborative innovation at the individual, organizational and network level. In work package 4 (WP4) these initial findings were validated by conducting a Delphi study among the case study respondents and other civil servants, and validated with the findings of recent international research (WP4). In addition, two living labs are ongoing (WP5), in which interventions in processes of collaborative innovation are actively tried, studied, and adjusted at the same time. Subsequently, work package 6 (WP6) consists of a gap analysis, performed by means of a survey in the Federal government organizations. It provides insight into the question to what extent the meta-governance, individual and organizational conditions for collaborative innovation present in the federal ministries and agencies of Belgium lead to more innovation and how these can be strengthened. Work package 7 (WP7) makes use of case studies and interviews to examine how ‘New Ways of Working’ - or time-and-space independent work (tele-working, ICT, satellite offices...) - affect collaborative innovation. Finally, work package 8 – the subject of this report - looks into the so-called ‘innovation architecture’ of governments, which refers to the whole of structures, processes and instruments that are used by governments to stimulate innovation throughout their organizations. Based on a comparative country study and interviews, recommendations for strengthening the Belgian federal innovation architecture have been developed and are presented in this report.

Goal and approach of work package 8

Work package 8 examines the role of government-wide innovation architecture in creating and sustaining collaborative governance arrangements for innovation. The term ‘innovation architecture’ refers to the structures, processes and instruments set up by (central) governments to stimulate the initiation, adoption and diffusion of innovations throughout government.

A comprehensive literature review has been conducted in order to develop a framework for a government-wide innovation architecture, and gain insight into the different elements that make up this architecture. The publications of the OECD Observatory of Public Sector Innovation (OPSI) have been particularly instrumental in establishing which facets of public sector innovation should be taken into consideration when developing the concept of innovation architecture. Based on the literature review, the following elements have been identified as being key to the innovation architecture of

governments:

- Innovation networks & partnerships
- Innovation labs
- Innovation resources (budget & staff)
- Innovation evaluation
- Data governance
- Risk governance
- Incentives & accountability

Each of these elements can play an important role in enabling and stimulating innovation in the public sector.

The main research question of this study examines ***to what extent the current innovation architecture within the Belgian Federal Government supports and enhances collaborative innovation and how this could be improved***. More specifically, a multi-method approach has been chosen to:

- Identify the current innovation architecture of the Belgian federal government and determine its capacity to stimulate collaborative innovation;
- Provide a comparative analysis comparing the Belgian federal innovation architecture with those in the Netherlands, Estonia and Finland;
- Suggest amendments to the innovation architecture of the Belgian federal government to enhance its capacity to stimulate collaborative innovation.

Data will be gathered through document analyses, desk research and interviews with the various actors involved in the architecture.

Structure of the report

Part 1 of this report comprises the theoretical framework and elaborates on the theories and concepts underpinning the developed framework of an innovation architecture. Insights from the literature review were used for the development of a framework to conceptualize the term 'innovation architecture', and to establish what elements this architecture should contain.

Part 2 outlines the research approach that was used for this work package (WP8). In this section, information on the methods that were used for the comparative country study and data collection can be found.

Part 3 provides a detailed account of the findings of the international comparative study that was carried out in Finland, Estonia and the Netherlands. For each of the countries, the main findings on the different elements of their innovation architecture have been summarized in a conclusion box at the end of each section.

Part 4 outlines the findings of the study that was performed in the Belgian federal government, to provide insight into the innovation architecture that is currently present. Here, the key findings have also been summarized in conclusion boxes at the end of each section.

Finally, part 5 summarizes the key findings from across the researched countries and proposes a set of recommendations for the further development of the Belgian federal innovation architecture.

Part 1. Theoretical framework: elements of an innovation-architecture

1.1 Innovation networks & partnerships

Several studies confirm that networks and partnerships, in which ideas are exchanged, are crucial for enabling and stimulating public sector innovation (Bland, Bruk, Kim, & Lee, 2010; Considine, Lewis, & Alexander, 2009; Dente, Bobbio, & Spada, 2005; Gloor, 2006; J. M. Lewis, Considine, & Alexander, 2011). Newman, Raine, Skelcher (2001) and Considine et al. (2009) have found that the innovative capacity of governments is linked to the presence of strong internal as well as external networks. To determine what innovative capacity entails, it is necessary to define the concept of innovation. A study by De Vries et al. (2015) reviewed 181 articles about innovation in the public sector and found that the vast majority of these articles did not provide a definition of innovation. In the articles that did provide a definition, however, two recurring elements were identified: first, definitions focus on a perceived novelty, and second, definitions include the first adoption of an idea by a given organization. Therefore, in this study innovation or innovative capacity will be defined as the capacity to develop and implement any new process, service, technology or policy within a given context. The novelty might already exist somewhere else, but it must be new in the context of the respondent's organization and should demonstrate some discontinuity with how things were done before. Innovation is therefore something different than optimization: innovation represents a break with the past and concerns the implementation of truly new policies, services, technologies or processes. Optimization is, on the other hand, an improvement of existing policies in line with the past (Damanpour et al., 2009; Osborne & Brown, 2011).

When faced with a problem large enough that it is not feasible for one organization to tackle it on its own, organizations can particularly benefit from entering into a partnership or network where there is a shared problem and a preparedness to collectively act or share resources to come up with a solution (Observatory of Public Sector Innovation [OPSI], 2017). Applied to the context of the public sector, governments can enter into partnerships and form networks to help them deal with complex societal issues, the so-called 'wicked problems', that require innovative solutions which governments cannot produce on their own (Sørensen & Torfing, 2011). By forging strategic and ongoing partnerships with civil society organizations, businesses, experts and the public, each with their unique strengths and competencies, innovation in government accomplishes its biggest successes. These collaborations can be formal, such as Public-Private Partnerships (PPPs), or can be based on more informal agreements (OPSI, 2018). When talking about partnerships, it is important to note that intra-government partnerships, where multiple offices or agencies come together, can also result in innovation outcomes that one group working alone could not achieve (OPSI, 2018).

A recent study by OPSI on fostering innovation in the public sector (2017) shows that a number of OECD countries have already established innovation networks, which are defined as those networks that have the intention of enabling communication and collaboration across organizational boundaries in both structured and free/informal ways. These are aimed at stimulating learning, which is central to innovation, and strengthening cross-departmental working to better identify public challenges, optimal solutions and effective implementation (OPSI, 2017).

The OPSI report provides a number of examples of innovation networks, each with a varying degree of formality³. In Germany, a 'Junior Staff Orientation Programme' (from The German Ministry of Labour and Social Affairs) was set up for the training and mentoring of young employees. This is a

³ Additional examples of formal and informal innovation networks in OECD countries can be found in the report '*Fostering Innovation in the Public Sector*' (2017) from the Observatory of Public Sector Innovation (<https://doi.org/10.1787/9789264270879-en>)

formal network whereby focus is put on building their interpersonal skills and networking abilities in order to encourage them to build diverse social networks. These can then be utilized for stimulating innovation within government. In Finland, we can find an example of a more informal network, the so-called 'Government Change Agent Network'. This network consists of self-governing teams of experts of different ministries, each with different backgrounds, education and expertise. They focus on experimentation, cross-silo working, culture change and introducing innovative work methods.

This illustrates that both formal and informal networks should be considered, since each can contribute to innovation in specific ways. Nooteboom (2006), Considine et al. (2009) and Lewis et al. (2011) add that innovation often occurs in the spaces between formal structures, where individuals can meet each other without the burden of formal responsibilities, positions and rules. Informal, social networks therefore also play a key role in shaping the innovative capacity of governments, as they are a prime means to facilitate information exchange and to diffuse innovative ideas and practices (J. M. Lewis et al., 2014).

1.1.1. Characteristics of innovation networks

Networks with a strong innovation capacity are usually **diverse**, can count on high levels of **trust and openness** and have a range of **external contacts** providing outsider input (Bekkers, Tummers, & Voorberg, 2013; Foldy, 2004; J. M. Lewis, 2010; J. M. Lewis et al., 2014). This allows for a greater variety of perspectives and the free flow of ideas, which stimulates innovation (J. M. Lewis et al., 2014). Research indicates that bringing together different actors with relevant knowledge, experiences and resources can create new ways of understanding a policy problem and enhance performance in each phase of the innovation process (Eggers & Singh, 2009; Sørensen & Torfing, 2011). In line with this, Gieske, van Meerkerk, & van Buuren (2018) found that engaging new, unusual actors in learning networks is particularly beneficial for innovation, which underlines the potential of collaborative innovation (Hartley, Sørensen, & Torfing, 2013) and the value of participating in external networks (J. M. Lewis et al., 2011).

Furthermore, the existing literature on innovation emphasizes that new ideas, knowledge, and actors that share their resources and risks, need to become **connected** in order to generate innovation (Bekkers, Edelenbos, & Steijn, 2011; Hartley et al., 2013). Networks thus require connective capacity which, in the context of innovation, can be described as the capability to "counter fragmentation by crossing boundaries and establishing linkages between different actors at various levels, scales, and domains" (Edelenbos, Bressers, & Scholten, 2013, p.7). Densely connected organizations are known to efficiently exchange knowledge and skills (Uzzi, 1997), but too strong relationships may also support similarity, limited search, and a focus on optimization instead of innovation (Considine & Lewis, 2007; Jacob & Duysters, 2017). This is in line with findings that too close ties reduce the flow of new ideas and deviant views, which hampers innovation (Granovetter, 1985; Burt, 2004).

Thus, in a public sector context, getting the right mix of diversity and cohesion is crucial for the innovative capacity and efficiency of networks (J. M. Lewis et al., 2014). So-called ambidexterity — connecting with new parties with new ideas and perspectives as well as with usual, similar partners— is therefore important for stimulating innovation in networks (Gilsing & Duysters, 2008).

1.1.2. (Meta)Governance of innovative networks

Theories of collaborative innovation view governance networks as promising innovation arenas (Bland et al., 2010; Considine et al., 2009; Dente et al., 2005; Gloor, 2006). A governance network can be defined as a temporal institutionalization of a forum of interdependent but operationally autonomous and self-governing actors who collaborate in a shared effort to realize shared objectives that

contribute to public purpose (Sorensen, 2014). The strength of governance networks, compared to other forms of governance such as hierarchies and markets, is that their form and composition can be adjusted to fit a specific purpose and occasion (Sorensen, 2014).

It is important to note that governance networks are, as a defining factor, autonomous and self-governing. This does not mean, however, that governance networks cannot be governed (Sorensen, 2014). Mechanisms for governing self-governing actors are often referred to as 'meta-governance' (Kickert, Klijn, & Koppenjan, 1997; Kooiman, 2003; Sorensen & Torfing, 2007; Sørensen & Torfing, 2009). Sørensen (2014, 2017) argues that the innovative capacity of governance networks depends on how they are metagoverned and that a particular metagovernance strategy for innovation is required. The purpose of metagoverning networks is to increase the participants' ability to develop, realize and diffuse new creative ideas, by promoting collaborative innovation in every phase of the innovation process. This involves including actors with different backgrounds and perspectives who together possess the necessary innovation assets (Sørensen & Torfing, 2017). Sorensen (2014) describes the metagovernance of governance networks as a complex matter, consisting of carefully balancing two opposites: being able to control a governance network, and granting it the autonomy needed to function well. Too much control undermines the self-governing capacity of governance networks, and too little intervention results in fragmentation and lack of direction and coordination (Sorensen, 2014). She concludes that, "if governance networks are to contribute to public innovation, metagovernors must fulfil three tasks: 1) Inspire governance networks to include actors who possess key innovation assets and capacities such as fantasy, creativity, craftsmanship and entrepreneurial spirit; 2) Urge the network actors to collaborate in ways that stimulate the creative destruction of existing beliefs and practices, and increase their willingness to take the risks that are involved in carrying out experiments and testing prototypes; and 3) Encourage the governance network to diffuse its innovations beyond the boundaries of the network to benefit other governance actors" (Sorensen, 2014, p.9).

Koppenjan & Klijn (2010) have developed a categorisation of metagovernance strategies, distinguishing four different strategies: 'introducing process rules', 'arranging structure', 'exploring content' and 'connecting' strategies.

1. Introducing process rules:

Rules for entrance into or exit from the process, conflict regulating rules, rules that specify the interests of actors or veto possibilities, rules that inform actors about the availability of information about decision-making moments, etc.

2. Arranging structures for interaction, consultation and deliberation:

Creating new ad hoc organizational arrangements (boards, project organizations, etc.).

3. Exploring content:

Searching for goal congruency, creating variation in solutions, influencing (and explicating) perceptions, managing and collecting information and research, creating variation through creative competition

4. Connecting strategies:

Selective (de)activation of actors, resource mobilizing, initiating new series of interactions, coalition building, mediation, appointment of process managers, removing obstacles to co-operation, creating incentives for co-operation. Actors in the network need to be connected in order to prevent 'structural holes' (Sørensen & Torfing, 2012). These emerge when actors are not connected with each other or if there is a lack of homophily in the network resulting in people perceiving other actors to be too different from themselves.

Furthermore, Ansell & Gash (2008, 2012) describe three different roles network managers can take on in order to facilitate the collaborative innovation process and help the involved actors make things happen. These three roles are those of a 'steward', 'mediator' or 'catalyst' and form the pillars of

Ansell and Gash's Facilitative Leadership Model. A steward is a manager who facilitates the collaborative network by establishing and protecting the integrity of the innovation process (Ansell & Gash, 2012). The task of the **steward** is to give direction and develop the basis context in which the collaboration can unfold. The second role of managers is to serve as **mediator** or broker between different involved stakeholders (Ansell & Gash, 2012). Since stakeholders hold diverse perspectives and interests, they often do not see eye-to-eye (Stevens, 2018). A mediator is a leader who facilitates collaboration by helping to arbitrate between different positions, nurture relationships and promote trust-building between stakeholders (Ansell & Gash, 2012; Stevens, 2018). The third role for managers of collaborative innovation processes in networks, is to serve as **catalysts** (Ansell & Gash, 2012). The catalytic role goes beyond a mediating role; the manager has to 'see' the possibilities and take the risk to push the group of actors into a certain direction to realize something new that is better than the status-quo (Stevens, 2018). Through empirical research, Stevens (2018) identified a fourth management role for the model of Ansell and Gash (2012): the role of ambassador. The ambassador role should be understood "as a person who represents the (members of the) collaborative policy innovation network in encounters with external stakeholders" (Stevens, 2018, p.154).

1.2 Innovation labs (i-labs)

Innovation labs (i-labs) are becoming increasingly popular in the public sector (OPSI, 2017; Tönurist, Kattel, & Lember, 2017). This can be seen as a response to the increased complexity of public policy issues, requiring new approaches and new ways of working (OPSI, 2017). Tönurist et al. (2017) found that i-labs are most often created for the facilitation of cross-disciplinary and citizen-driven approaches, inspired by factors such as external complexity (rise in user-led expectations, austerity, etc.), technological challenges, competition (both in the public and private sector) and the need for legitimization of change through expertise. Labs provide a place to help the public sector frame issues in new ways and redesign services by focusing on outcomes and drawing on a broad range of perspectives from across the public, private and civil society sectors (OPSI, 2017). The involvement of users (through networking, co-creation, user-feedback, etc.) is therefore often considered a key characteristic of i-labs (European Commission, 2013; OPSI, 2017).

Tönurist et al. (2017) describe i-labs as organizations established to explore new opportunities (i.e. innovations) in existing services or to create entirely new ones. They provide environments where the public sector can test and scale out public-service innovations (Tönurist et al., 2017). By experimenting through trial and error, governments can better understand what works in public service design and delivery and what doesn't, which can help them prevent investing resources in large-scale policies and programmes that fail to achieve the desired results (OPSI, 2017). This type of experimentation logically assumes some level of autonomy from the existing structures and institutions (Coriat & Weinstein, 2002). Therefore, i-labs can be seen as an attempt to create independent change champions (experimental organizations) within the public sector (Tönurist et al., 2017).

1.2.1. Characteristics of i-labs

I-labs, both in the private and public sectors, vary greatly in nature and are very heterogeneous – in terms of their activities, scale and organizational structures (Observatory of Public Sector Innovation, 2017; Tönurist et al., 2017). Based on the i-labs that participated in their study, Tönurist et al. (2017) describe some key characteristics of innovation labs in the public sector:

High autonomy

Most i-labs enjoy high levels of autonomy in setting their goals, work methods and salaries, as well as in appointing and evaluating most of their staff. The key source of this autonomy turns out to be high-

level support from a civil-service executive or politician (minister, mayor, etc.). Because of their mandate and special status given by leadership, i-labs may have an enhanced ability to overcome resistance and bureaucratic inertia (OPSI, 2018).

Low budget

The primary source of income for most labs was self-generated, closely followed by internal funding from specific projects or programme partners within the public sector. They usually have to work on relatively low budgets, particularly if their primary task is focussed on empowering citizens and enterprises to bring forth change (rather than experimenting and prototyping themselves).

Lacking performance measures/evaluation

Due to their reliance on self-generated income and their low operating budgets, most i-labs do not have strict performance evaluations, nor the need to measure their output by collecting quantitative data. Performance is usually evaluated inside the organization itself with no direct performance rewards for obtained results. Targets are usually not tied to budget allocation and are set for internal use only. Tiesinga & Berkhout (2014) state that the impact of labs can be measured on different levels – the lab itself, the innovations and innovators it supports, the spin-offs it creates and the innovation discourse it establishes. According to the i-labs examined by Tönurist et al. (2017), soft outcomes such as networks and discourse change are the easiest to achieve.

Relational focus

In most i-labs there is a strong focus on cooperation, empathy and building trust and relationships, internally as well as externally.

Small & agile

Being small in size and operating with a lean, agile structure appears to be key to the functioning of i-labs. This allows for faster communication and experimentation, since there is not enough staff nor the budget to draw out the processes. When projects become too big, involving large budgets and staff, then i-labs come into conflict with existing structures and procurement rules. This can cause loss of momentum and limits the effective autonomy of i-labs, which is needed to challenge the old norms and institutionalize innovations on a large scale.

Heterogenous

I-labs usually consist of a dedicated core team of researchers, designers and stakeholders, facilitating a project-based approach to innovation (OPSI, 2017). Labs often use a range of disciplines and tools which enables the discovery and analysis of problems from different angles. Usually some form of design thinking or human centred design is key (OPSI, 2017). The i-labs studied by Tönurist et al. (2017) employed people from various backgrounds, both new to the public sector (design, anthropology, ethnography, etc.) as well as people with more traditional skill sets (political science, sociology, communication, etc.). Surprisingly, not many people with IT capabilities were found in the labs as these skills were mostly acquired from outside partners.

Furthermore, Burstein & Black (2014) differentiate between internally and externally focused innovation offices within the US government. They found the latter are foremost established to engage the public in crowdsourcing projects, community data collection and experimentation. The internally focused offices on the other hand, work on increasing administrative efficiency, producing organizational culture change (employee innovation competitions and resident talent programmes) and implementing innovation processes and protocols inside organizations (Burstein & Black, 2014).

1.2.2. Roles of i-labs

The primary tasks of the i-labs featured in the Tönurist et al. (2017) study, were the design of service-centred solutions and building capacity and networks outside of the public service. The role of i-labs can thus differ in the extent to which they are focussed on experimenting and redesigning existing services and processes, or whether they are primarily focussed on empowering citizens and enterprises to bring forth innovation through the public sector (Tönurist et al., 2017).

Generally, i-labs consider their tasks, output and role in the public sector to be unique and usually their goals refer to complex social and technological challenges that require systems change (Tönurist et al., 2017). However, in their study Tönurist et al. (2017) found that in reality their activities were usually directed at a singular project or service. In cases where an i-lab was supposed to work on higher-level policy change, it was not successful. Furthermore, they discovered that only a few labs engaged in implementing tasks and most focussed on rapid prototyping and were less interested in long-term engagement and scalability.

A recent study from OPSI (2018) stated that I-labs can overcome some of the barriers to public sector innovation, providing “room” to develop new ways of doing things. Key is their ability to integrate well with other parts of the organization to gain their support and make innovations sustainable (OPSI, 2018). Tönurist et al. (2017) however, conclude that the risk of diminishing autonomy and the lack of supportive culture and authority to institutionalize new solutions, limit the potential of i-labs to truly act as change-agents. They state i-labs currently have insufficient resources to outcompete or challenge the existing structures and that organizational autonomy alone is insufficient to challenge existing practices in the public sector.

1.3. Innovation resources

As mentioned in the OPSI report on fostering public sector innovation, one easy way of ensuring failure in innovation is to not resource it properly (OPSI, 2017). In this section, both budget and staff resources are discussed, as each of these will be crucial for the appropriate resourcing of innovation projects.

1.3.1.

Budget

In their review on public sector innovation, De Vries, Bekkers, & Tummers (2016) found that the availability of organizational resources such as money and personnel is an important antecedent of public innovation. It is therefore useful to examine how governments can create and manage budgets for innovation and how this affects their innovative capacity.

In a recent report on ‘fostering innovation in the public sector’, OPSI (2017) examined a number of key central budget practices, rules and institutions, and their role in either promoting or inhibiting innovation in government⁴:

First, the role of **financial incentives** was examined. Under the assumption that public servants are risk averse and not naturally inclined to take the necessary steps to achieve innovation, some countries have developed special incentives to identify and reward innovation. These programs involve both special innovation funds set aside in the budget as well as routine efficiency dividends

⁴ For further explanation of budget-related terms used in this section, please consult the 2017 OPSI report ‘Fostering innovation in the public sector’ (<https://oecd-opsi.org/wp-content/uploads/2018/07/Fostering-Innovation-in-the-Public-Sector-254-pages.pdf>)

that can spur innovation. The latter can be seen as mandated cuts in agency operating funds, with the underlying premise being that productivity grows in agencies every year and should be recaptured by the government either to reduce overall spending or to be reallocated within the agency or by the finance ministry. Innovation funds are often granted on a competitive basis to promote the scaling up of innovation pilots for broader implementation, or for seeking novel ideas and approaches for particular problem areas (OPSI, 2018). These funds can be drawn on whenever there is a relevant innovation opportunity. They are considered most useful when there is a known issue, but the solution or needs are not yet clearly articulated or understood. In this way, funds can encourage and enable the identification of problems, the generating of ideas, and the development of proposals in the innovation process. Especially if run on a competitive basis, innovation funds can provide new insight into what is possible and help challenge assumptions about what the solution should be (OPSI, 2018).

In the OPSI report, Denmark is presented as an example of a country making use of innovation funds. Its Ministry of Finance created a public sector efficiency fund that was awarded on a competitive basis to promote the scaling up of innovation pilots. Projects that were supported focused on digitisation and information technology investments in regional and local government. Another example is provided within France, where the General Secretariat for the Modernisation of Public Action has established a Future Investment Program aimed at innovators within the public sector. Its goal is to stimulate innovative projects to act as prototypes that can be scaled up for broader implementation. Formal calls for proposals are issued and reviewed by experts in the fields covered. Supported projects concern digitisation of public services, development of open data exchanges, streamlining the interface between agencies and their clientele, and strengthening capacity for experimentation. (see OPSI, 2017, p.114-115)

Although both innovation funds and efficiency dividends have served as effective incentives for agencies to innovate, officials have indicated that there are several intervening factors that determine their efficacy: Having sufficient power over spending, having predictable budgets for several years and minimal fragmentation between agencies are important factors for agencies' capacity to innovate (OPSI, 2017).

Second, the **fiscal framework and targets** are discussed. The OECD Principles on Budgetary Governance advise countries to set fiscal goals and expenditure ceilings for three- or four-year time periods. Guaranteed funding over multiple years is said to encourage agencies to consider new innovation programs, providing them with certainty and the ability to achieve outcomes over the multi-year window. A special mention is made of spending reviews as a driver for public sector innovation. It is stated that innovation is not only about developing new programs, but also about terminating fewer effective initiatives. Spending reviews can incentivize and drive innovation across government by focusing on cross-cutting goals and priorities and achieving goals with fewer resources. This encourages governments to think about new program management strategies, such as public-private partnerships, and to rethink established management systems and routines.

In Denmark for example, the use of spending reviews resulted in shared services initiatives that have increased efficiency for back office management functions. The involvement of key stakeholders in the review process helped promote support across the affected interest groups (see OPSI, 2017, p.118).

Third, the importance of **budgetary flexibility** is discussed. It is argued that, while some budgetary restrictions exist to ensure accountability, they can also severely limit agencies' capabilities to execute innovative programs. Constraints on reallocating funds from original appropriations, restrictions on inputs of personnel and contracts to achieve goals, and limitations on carrying over balances across fiscal years are all examples of budgetary restrictions that can hinder innovation.

Finally, an enhanced focus on **performance and evidence** is considered to be critical to the planning and monitoring of innovation projects and their effectiveness. It can also spur the diffusion and scaling of effective innovations once they have been tested and evaluated. Performance management and evidence-based frameworks are therefore seen as essential for the capacity of line agencies and ministries to design effective innovation.

In New Zealand for example, the Treasury have developed a set of tools to improve the quality of the evidence to support more effective decision making. These include a cost benefit analysis tool which helps agencies monetise impacts and analyse returns on investment, and the Investor Confidence Rating, an assessment tool that indicates the level of confidence that ministers and the cabinet have in an agency's ability to realise a promised investment result if funding is committed (see OPSI, 2017, p.125)

1.3.2 Staff

As mentioned in Work Package 3 of the PSI-CO project, for collaborative innovation to succeed, the capacity to innovate also needs to be present on an individual level. Having the right staff on board can therefore be considered crucial for the innovative capacity of governments. By taking a closer look at what characterizes innovative individuals, we can gain valuable information on what it takes to build a staff that supports and enhances collaborative innovation.

The individual capacity to innovate (through collaboration) relies heavily on the individual **ability to learn**. It is through the continuous process of absorbing new knowledge that people generate new solutions and undertake joint action (Gieske, Van Buuren, & Bekkers, 2016). Therefore, understanding which skills and attitudes facilitate learning is crucial. Tolerance of ambiguity and change, openness to experience and unconventionality are all considered important characteristics of individual learning capacity (Gieske et al., 2016). Self-reflectiveness, self-awareness, and the willingness to experiment and learn from mistakes have also been found to be crucial for learning in collaborative processes (Innes & Booher, 2003). This supports findings that innovation requires transformative second order learning, for which a reflective attitude towards one's own norms, values and practices and those of the organization is necessary (Duijn, 2009; Merckx, 2012). The main individual attributes needed for innovation (through transformative learning) thus can be summarized as:

1. **Reflective** attitude towards own norms and values;
2. **Tolerance** to ambiguity and change;
3. **Openness** to experience, a diversity of ideas, new knowledge and expertise. (Gieske et al., 2016)

Furthermore, various authors describe the importance of having **creative, entrepreneurial** individuals present among staff, who are able to break through a risk-averse administrative culture (Borins, 2000). Employees who feel empowered and who have valuable job-related skills are also frequently mentioned as an important source of successful innovation (De Vries et al., 2016).

Roberts & King (1996) built a model of the public entrepreneur or 'hero-innovator'. This 'hero-innovator' is tenacious, works long hours, is goal driven, **willing to take risks**, confident and skilled in using political connections (K. Brown & Osborne, 2005). They argue that not everyone can be a hero-innovator but, at the same time, people can be taught and stimulated to be more entrepreneurial.

Much of the innovation literature focuses on individual persons at executive positions in the organization, which is generally referred to as entrepreneurial leadership (Doig & Hargrove, 1987). While entrepreneurial leadership is important in all phases of the innovation process, different roles exist for realizing innovations, not all of which are at the executive level (Meijer, 2014). There is a need

for so-called ‘creators’ who generate the new idea and develop new ways of thinking and manage to break through perceptual barriers (Meijer, 2014). Then, there is a need for ‘innovation entrepreneurs’ who manage to connect the idea to an existing problem (Roberts & King, 1996). Furthermore, people are needed to successfully test the idea (Meijer, 2014). Finally, it is important to have individuals who embed the innovation into organizational structures and routines (‘innovation packagers’) (Lee & Luykx, 2005) as well as people who diffuse the innovation and coordinate the large-scale roll-out by creating incentives and support for other organizations that will adopt the innovation (Meijer, 2014).

Meijer (2014) argues that the idea of an individual ‘hero-innovator’ has therefore been replaced by a collection of heroes who play a role at different (hierarchical) levels of the organization and in different phases of the innovation process. He refers to this new perspective as the perspective of ‘distributed leadership’ (Spillane, 2005) and states distributed heroism is needed for successful innovation (Meijer, 2014). The role of leadership in the realization of public sector innovation will be discussed in more depth, further on in this report.

The above-mentioned individual characteristics can serve as a useful guideline to be implemented in the recruitment and selection process. Besides these generic individual traits, it is also useful to investigate which particular characteristics governments look for when recruiting for specific innovation roles and when composing innovation teams.

Leadership

From single-hero innovator to distributed leadership

Leaders steer organizations by setting goals and play a significant role in developing the organizational culture and climate (OPSI, 2017). Leadership can include not only senior management, but any individual or group that exerts influence, whether it be a manager, project leader or union (OPSI, 2017). The OPSI report on fostering public sector innovation (2017) argues that every employee in an organization could (and should) play a leadership role in one form or another. Based on discussions with leaders in OECD countries they found there was a particular need for collaborative forms of leadership, dispersed throughout an organization. In order to allow for innovation, “top leaders” no longer consider they have a monopoly on leadership and instead see their role as one of delegation and facilitation. This is in line with findings from Meijer (2014) mentioned earlier in this report, who claims leadership in public sector innovation evolved from a single hero-innovator to distributed leadership (‘distributed heroism’). This entails a variety of individuals from different (hierarchical) levels of the organization, each playing a leading role in different phases of the innovation process (Meijer, 2014). In their report on public sector innovation, The European Commission’s expert group (2013) adds that public managers should proactively pursue collaborative problem-solving and co-design solutions with end-users, which aligns with the notion of distributed (or collaborative) leadership and further extends it to include external actors as well.

Leadership for innovation - styles & characteristics

It is important to consider the impact of leadership styles on innovation capacity, since they can have an influence on any individual’s scope to put forward new, innovative ideas within an organization (J. M. Lewis et al., 2014). Lewis et al. (2014) found that there is one particular leadership style that appears to facilitate public sector innovation, which combines skills in motivating people, managing collaboration between people and the willingness to take risks and tolerate mistakes. This was labelled as the ‘motivator risk-taker’ type of leader (J. M. Lewis et al., 2014). Furthermore, Beinecke (2009) also emphasizes the importance of leadership skills such as, communicating, teamwork, coaching, negotiating and conflict resolution in supporting innovation.

The 'motivator risk-taker' type also shows some similarities with the concept of 'entrepreneurial leadership', which is often linked to innovation (both in the private and public sector). The entrepreneur is considered to be adept at seeing and seizing opportunities, is a risk taker, and attracts followers with his/her charisma (J. M. Lewis et al., 2014). The entrepreneur however, is often also described as a lone-rider, which contradicts the importance placed on relational skills by both Lewis et al. (2014) and Beinecke (2009). Overall, given the rising importance and prevalence of collaborative innovation in the public sector, it can be assumed motivational, relational, collaborative skills as well as a tolerance for risk and experimentation are crucial qualities for innovation-enhancing leadership (J. M. Lewis et al., 2014).

In line with this, the concept of transformational leadership sees managers leading change with skills such as: creating a vision, managing complex change, and goal setting (Beinicke 2009). It is generally considered to be the most effective in stimulating innovation (Jansen, Vera, & Crossan, 2009; Rosing, Frese, & Bausch, 2011). This type of leadership emphasizes experimentation, risk taking and change, whereas transactional leadership is most often associated with optimization, incremental change, efficiency and continuity (Vera & Crossan, 2004). Vera & Crossan (2004) claim transformative leadership is particularly supportive during the idea generation phase of innovation, while transactional leadership can be more suitable for implementation and institutionalization of innovation. Gieske et al. (2018) argue that an ambidextrous management style can be particularly useful for innovation, whereby a transformational and transactional style are combined. This supports the generation of new ideas as well as the adoption and linkage to existing knowledge and routines, allowing for the embedding of innovation in regular processes.

Furthermore, Lewis et al. (2014) state that, while organizational structure and informal networks are crucial to innovation, leadership adds a necessary focus on how individuals are motivated, which is equally important in supporting innovation.

Leadership roles in innovation

In their study on innovation capacity and leadership, Bekkers, Edelenbos, & Steijn, (2011) mention three roles public managers should adopt in order to facilitate the development and implementation of innovations: (1) boundary spanning, (2) protection (political protection, money, safe haven), and (3) balancing of values and interests. These roles highlight the linking nature of leadership, that is required for innovation (V. J. J. M. Bekkers et al., 2011):

1) Boundary-spanning

Boundary-spanning is considered key to leadership, as it is required to link people, ideas and resources. This requires managers to have adequate connective capacity as the focus lies on managing relations between different types of actors. Boundary-spanners are linked internally to their home organizations, and externally to temporary informal network arenas, whereby they channel information, experience and knowledge between these structures (V. J. J. M. Bekkers et al., 2011). Thus, boundary-spanning leads to variation and to interconnections among different actors with different views, values, knowledge and information, which is beneficial for creating innovation in the public sector (V. J. J. M. Bekkers et al., 2011). Finally, these actors should also be linked together to build innovation networks and to stimulate the development and exploitation of social capital in these networks (V. J. J. M. Bekkers et al., 2011).

2) Protection

Bekkers et al. (2011) argue it is important to link an innovation project to the political realm in order to enhance the project's legitimacy, to obtain and maintain political support, to stabilize the flow of necessary (financial and other) resources and to mobilize the necessary contacts. This allows for the creation of intellectual and creative 'safe havens', which are crucial for fostering innovation and should therefore be protected by leaders against possible disturbing external influences.

It is claimed leadership goes beyond the promotion and diffusion of innovation and also refers to protection, creating support and ensuring resources for innovation (V. J. J. M. Bekkers et al., 2011; K. Brown & Osborne, 2005).

3) Balancing of values and interests

Lastly, Bekkers et al. (2011) draw attention to the importance of the linking and balancing between values that are important in the logic of consequence (such as efficiency, effectiveness and compliance) and the logic of appropriateness (such as trust, support and legitimacy).

Furthermore, The OPSI report on fostering public sector innovation (2017, p.78-79) concludes leaders can help build the innovation abilities of their organization in a number of ways: They can play a key role in developing and reinforcing an innovation-oriented learning culture; They can make sure recruitment and selection criteria are aligned with innovation priorities; They can stimulate innovation by modeling and rewarding innovation-oriented behavior, and can create opportunities for innovation by opening doors and removing barriers for people and projects that support innovation. Finally, leaders who trust in their staff's abilities can provide them the autonomy they need to innovate and allow for learning through trial and error (OPSI, 2017).

Training & Development

Research shows that staff at all levels of an organization can generate innovative ideas and that their commitment and determination drives every stage of the innovation process (OPSI, 2017). Human resources (HR) policies therefore play a crucial role in supporting innovation (OPSI, 2017). The OPSI report on Fostering innovation in the public sector (2017) states training and development programs are an example of an HR tool that can support innovation by developing creative thinking as a professional competency. In addition, the report remarks the importance of the overall organizational culture as it may encourage or hinder individual employees in their innovation activities. Factors such as leadership practices, diversity (cultural, age, gender, etc.) in the workplace and alignment of organizational and individual values, can all play a mediating role in enabling innovation capabilities in government employees (OPSI, 2017).

Furthermore, the OPSI report (2017) argues learning is increasingly essential for public sector employees as they are expected to take on new projects and challenges and keep up with fast-changing technologies. Learning can happen in structured, formal ways, through courses, seminars, trainee programs and online learning platforms, but it can also happen on the job (OPSI, 2017). In the latter, employees' tasks and responsibilities are gradually stretched into new areas which requires the development of additional knowledge and skills (e.g. when a high performer becomes a team manager). Research confirms learning is at the heart of innovation (Gieske et al., 2016, 2018) and an innovative organization should incorporate this into its workings by offering their employees a wide range of learning opportunities within and beyond the organization (OPSI, 2017).

To build relevant skills and knowledge for innovation, offering courses related to innovation and creative problem solving can be useful, but they are probably not enough (OPSI, 2017). The OPSI report on fostering public sector innovation (2017) states the Incorporation of learning should go

further than that, for example by rotating staff through various roles to build their competencies; exchanging ideas with others through (external) partnerships and networks; and discussing learning needs in the assessment process.

When looking at existing innovation-related training programs in the public sector, the OPSI report (2017) mentions some public service schools are designing innovation programs for senior management. These are aimed at expanding their skills beyond their day-to-day managerial tasks, building their networks and giving them the opportunity to implement new perspectives when analyzing problems (OPSI, 2017). The report argues there is no ideal formula for designing innovation trainings, however, good programs should go beyond the traditional classroom methods and take people outside of their comfort zone so they can look at traditional problems from new perspectives and approach them with new tools and partners (OPSI, 2017). During training special attention can be paid to 1) tools for problem solving rather than focusing on rules and procedures; 2) the creation of lab-like environments where tools and skills can be tested in a safe environment; 3) addressing organization and personal values; 4) linking innovation to the development of solutions for societal problems (OPSI, 2017).

Mobility programs are another example of an HR practice that can support innovation (OPSI, 2017). The OPSI report (2017) explains these programs can involve sending public sector employees on secondment outside their organization for a limited time. This allows them to return with new ideas, experiences and a more horizontal understanding of policy issues which all benefit the home organization. On the other hand, these programs can be used to bring employees into public sector organizations from other organizations or other sectors, who possess interesting competencies and perspectives that were developed elsewhere (OPSI, 2017). The report (2017) hypothesizes this increased diversity of experiences, perspectives and problem-solving approaches will support innovation.

Finally, it is concluded that innovation-related learning happens most often in networks, by interacting with people from different backgrounds and organizations, with different perspectives and expertise (OPSI, 2017).

1.4. Innovation evaluation

A recent OPSi report was dedicated to the issue of evaluating public sector innovation (OPSI, 2019). It states that evaluating innovation requires flexible evaluation methods, which can accommodate the complexity and changeability that often characterizes innovations. Many existing evaluation methods can still be of use for innovative projects, however, changes in focus or perspective may be needed, for example concerning the assessment of when an innovation project has failed. The report argues it is key to select the right mix of methods for the type of innovation at hand and collect and analyse data systematically. Within the public sector, multiple methods and practices for evaluation have already been developed. Tools range from qualitative methods such as interviews and observation, to quantitative methods based on numbers, statistics and economic modelling. It is argued both approaches are important in evaluating innovation and that the choice should be focused on which approach is most useful. (OPSI, 2019)

1.4.1 Evaluating innovation: a good idea?

The complexity, changeability and uncertain outcomes associated with innovation, make evaluation very difficult. Since the unknown and untried cannot be described beforehand, ex post evaluations of implemented innovations often occur. These are however not necessarily predictors of innovations to

come. If they are used in such a manner, organizations risk locking themselves in and limit their potential for radical change (OPSI, 2019). Soren Kierkegaard's famous quote: "innovations can only be understood backwards; but they have to be developed forward" provides an adequate view on this issue. It raises questions about the evaluability of innovation and the extent to which it can be evaluated in a reliable and credible manner. It also leads to one of the most fundamental questions when talking about evaluation and innovation: How can evaluation of innovation evolve from just taking account of the past, to also include learning for the future? (OPSI, 2019)

Furthermore, not all innovation projects become the source of transformative change and some fail. In the public sector, which is characterised by high accountability - failure is often not reported and innovation projects either become 'too big to fail' or are killed off early due to the fear of failure (OPSI, 2019). Risk aversion and the fear of failure are one of the most often cited barriers to innovation in the public sector (Bloch & Bugge, 2013; De Vries et al., 2016). The OPSI report on evaluating public sector innovation (2019) states that measurement influences human behaviour and governance structures, and that excessive control can stifle innovation. It is often very difficult for government officials to communicate to the public that it is acceptable to spend public money on things that turn out to be failures (Pollitt, 2011). Policymakers and politicians are often harshly penalized both by accountability mechanisms and the media (Pollitt, 2011). On the one hand, evaluation can thus add pressure by enforcing accountability, on the other hand it can also facilitate learning from failure that otherwise does not seem to happen often (OPSI, 2019).

Finally, it is important practitioners understand why innovation evaluation is undertaken in the first place. Evaluation can have a variety of aims; it can help develop and improve innovations as it facilitates learning processes, it can create room for innovation by showing the inadequacy of the current situation, but it can also inform people of the worth and significance of innovation itself. (OPSI, 2019)

1.4.2 Evaluating innovation: methods & tools

As stated previously, a large variety of evaluation tools and methods exist to evaluate performance and outcomes within the public sector. The recent OPSI report on evaluating public sector innovation (2019) provides an overview of different methods and their applicability within the domain of public innovation. A selection of these will be discussed in the below section⁵.

Impact assessment

Impact assessment is a means to measure the effectiveness of organizational activities and the changes produced by these activities. It intends to establish the cause of observed changes (impacts). Impact assessment methodologies are not universally applicable, but depend on the objective of the assessment, its timing (prior to a project - ex ante and/or after completion of a project - ex post); and the scope and nature of the problem. They can be used ex ante as part of needs analysis and planning; or ex post to assess the effects of an innovation project. Various types of impact assessment methods exist; outcome mapping, case studies, qualitative comparative analysis, benchmarking, etc. It should be noted however that these are difficult to apply in the field of (public) innovation as impacts of innovation are often uncertain and difficult to measure. (OPSI, 2019)

Outcome mapping is a methodology - originating from the field of international development - for planning and assessing projects that aim to bring about tangible change. It helps a project team or

⁵ For a full overview and more detailed explanation of evaluation methods, see the report from OPSI 'Evaluating Public Sector Innovation - Support or Hindrance to Innovation?' (2019), p. 45-71. (<https://oecd-opsi.org/wp-content/uploads/2019/05/Evaluating-Public-Sector-Innovation-Part-5a-of-Lifecycle-Report.pdf>)

program be specific about the actors it intends to target, the changes it hopes to see and the strategies appropriate to achieve these. In ongoing monitoring, outcome monitoring helps to measure the most significant changes of actor behaviour towards specific outcomes (Smutylo, 2005).

Case studies usually focus on a particular innovation project and often combine both qualitative and quantitative data. It can be used for different types of evaluation purposes including the establishment of causal relationships and impact. Case studies can help to understand the relationships between different elements within a broader innovation eco-system. They are very good to explore the effects of innovations when they haven't been widely diffused yet and can also help to understand the possible reasons behind an innovation failure. (OPSI, 2019)

The qualitative comparative analysis (QCA) is a hybrid method combining the advantages of both qualitative analysis (case-oriented research) and quantitative analysis (variable-oriented research) (Ragin, 2000). The approach is based on choosing multiple case studies for analysis, merging insights from different cases and, on the other hand, producing some level of generalisation (Rihoux, 2006). The method relies on finding comparable cases, which can be an issue when dealing with innovation. However, it can be an interesting method for sector specific innovation projects. (OPSI, 2019)

Benchmarking provides a reference point or standard against which performance or achievements can be assessed (OECD, 2011). Benchmarking models can be classified either according to their content (either process, functional, performance or strategic) or their purpose (either competitive or collaborative) (Anand & Kodali, 2008). Usually benchmarking tries to identify best practices and compare against them. However, users of this method should be cautious not to compare apples to oranges as different countries and organizations have different legacy systems and pursue different reform trajectories. (OPSI, 2019)

Economic evaluation

Many economic impact evaluation methods are difficult to use in the public sector because they require that effects - also intangible ones such as improved health and quality of life - should be monetized (Kattel et al., 2013). Examples of economic evaluation methods include cost-benefit analysis (CBA), break-even analysis and social return on investment (SROI). (OPSI, 2019)

Cost-benefit analysis (CBA) is a methodology from welfare economics that estimates the strengths and weaknesses of alternatives (for example in transactions, activities, functional business requirements). It evaluates (ex-ante or ex-post) the socio-economic benefits and costs of a project, usually expressed in monetary value. (OPSI, 2019)

Break even analysis is usually applied to determine the point at which revenue received equals the costs associated with receiving the revenue. Since revenues are largely missing in the public sector, it is difficult to apply. However, it has been used in some cases for evaluating technology development. (OPSI, 2019)

Social return on investment (SROI) is a performance measurement tool that tries to capture the social and economic value of projects. SROI can be evaluative, conducted retrospectively and based on actual outcomes that have already taken place; or a forecast, which predicts how much social value will be created if the activities meet their intended outcomes (Millar & Hall, 2013).

Experimentation

Many authors concur experimentation is a key factor in enabling public sector innovation (Sorensen, 2014; Tönurist et al., 2017). It allows for newly developed ideas to be tested to see what works, before diffusing and rolling them out on a large scale. However, practitioners need a better understanding

when experiments are useful and what happens after an experiment is run (OPSI, 2019). Furthermore, as important as conducting actual experiments, is the presence of an experimental mindset. This ties in with the importance of establishing a learning culture at the organizational level, which promotes learning and stimulates innovation through trial and error, calculated risk-taking and learning from mistakes and feedback (Pärna & von Tunzelmann, 2007; van Acker & Bouckaert, 2018).

Collaborative and user-centric evaluation

Collaborative innovation is on the rise and relies on interdependencies across actors and organizational borders (OPSI, 2019). Involving citizens in co-production – a collaborative process of service development – and in co-evaluation – an open innovation assessment method – is far from easy (Paskaleva & Cooper, 2018). There are not many tested methods or tools for effective co-evaluation, yet the field is emerging (OPSI, 2019). To successfully apply participatory evaluation a user-centric approach (with the help of design thinking, ethnographies etc.) is necessary. It ensures user needs are met, and that evaluation focuses on meaningful questions to users (Gripper, Kazimirski, Kenley, Mcleod, & Weston, 2017). At the same time, it requires deep culture change to properly implement (OPSI, 2019).

In-project reflection

Incorporating regular reflection sessions builds trust and understanding between actors and provides a ‘safe place’ for critical thinking, both of which are crucial in collaborative innovation projects (OPSI, 2019). This is in line with findings mentioned earlier in this report, confirming the need for a reflective attitude among individuals towards their own values and norms and to those of the organization (Duijn, 2009; Merckx, 2012). In-project reflection for evaluation purposes can be facilitated in many ways, for example through active self-evaluation (OPSI, 2019).

Finally, some additional concluding remarks can be drawn from the OPSI report on evaluating public sector innovation (2019). It is important to note there is an overall lack of longitudinal studies, so the long-term effects of public sector innovation are yet to be robustly evaluated. Additionally, it is important an objective account of implemented innovation projects is given. The report argues that published results often concentrate on success stories, whereby evaluation essentially functions as a communication tool to justify and legitimise public sector innovation. It is stressed the agenda has moved beyond that and more robust and generalizable (if possible) evaluations are required in order not to impede learning in the public sector. (OPSI, 2019).

1.5. Data governance

The OPSI report on fostering innovation in the public sector (2017) argues that, how data, information and knowledge are managed and shared within and across governments and with society can support or inhibit innovation. An increasing number of global actors work in the information arena, forming a rapidly and constantly evolving ecosystem. It is stated the public sector’s role in this ecosystem is twofold: 1) They are a key producer of data and information which can be (re)used for new or enhanced products, processes and services; and 2) They are also a key consumer of information and data (OECD, 2015a). Governments can therefore be labelled as “prosumers” of data and information: producing, publishing, evaluating, correcting and mashing-up data (OECD, 2016). Furthermore, governments can enhance transparency through proactive disclosure of data, and improve policy design and service delivery by generating data analyses and recommendations. The public sector is, in fact, one of the most information- and data-intensive sectors. (OPSI, 2017)

Research from the OECD and its Observatory of Public Sector Innovation (OPSI) indicates that data, information and knowledge are building blocks for innovation, and their free flow within and across

public sector organizations is an important condition for building individual and organizational capacity to innovate (OECD, 2015b). In addition, OECD has issued a number of formal recommendations related to this topic (see OPSI, 2017, p.200). These include:

- Fostering a data-driven public sector centered on the access to and strategic use and reuse of public sector data, evidence and statistics;
- Implementing information policies in accordance with the principles that include awareness of information assets, enhanced access, openness and public-private partnership;
- Promoting a culture of openness and sharing of research data.

1.5.1. Data governance throughout the innovation process

Furthermore, the OPSI report (2017) provides further insight into how appropriate data governance can support innovation projects through their entire lifecycle⁶, from identifying problems to diffusing lessons (see OPSI, 2017, p.201-203): Data can be used to identify policy and service gaps that call for innovative approaches, as well as policies that are ineffective and hinder innovation. For the generation of innovative ideas the sharing of knowledge (and data) and creation of a common knowledge base is an important part of information management (OECD, 2005) that empowers individuals within organizations to detect opportunities for innovative improvements. Furthermore, sound management of data and information enables civil servants to develop evidence-based proposals for innovation projects that reduce uncertainty and help manage risk. Using data to strategically implement innovation pilots can significantly increase their chances of success. Data can also be used to evaluate whether an innovation project should be iterated, scaled more broadly or cancelled. Additionally, data from external parties may be brought in and leveraged to further advance the innovation. Finally, the data can be shared to diffuse lessons that have been learned from an innovation project, enabling civil servants and the public to draw their own conclusions and providing a means of replicating the innovations to one's own unique environment.

The report (OPSI, 2017) concludes that by ensuring data, information and knowledge are open, useful and reusable, governments enable new actors to contribute to each phase of innovation projects. By empowering various actors (industry organizations, civil society, non-governmental organizations, citizens) the innovative capacity of governments can grow beyond the public sector to encompass the entire ecosystem of actors. This transforms the dynamic of government: from government as a service provider to government as a platform, itself being an important component of innovation. (OPSI, 2017)

1.5.2 Driving innovation with data

Building further on the framework laid out in 'The Innovation Imperative in the Public Sector: Setting an Agenda for Action' (OECD, 2015b), OPSI (2017) provides an enhanced framework for understanding how data and information affect the innovative capacity of the public sector (see OPSI, 2017, p. 204 fig.7.2). The framework distinguishes four interconnected phases, which are not linear but optimally happen simultaneously:

1. Sourcing

This concerns the identification of different types and sources of data, information and knowledge that represent a source of innovation.

⁶ See OPSI report 'Fostering innovation in the public sector' (2017), p.201 fig. 7.1: How managing data, information and knowledge supports the innovation lifecycle.

In order to help them tackle complex ‘wicked problems’, governments should employ resources from a broad range of people and organizations from the public, private and social sectors as well as academia. Identifying different sources of data and information and enabling connections among them means rethinking how they flow and how organizations are structured, how work is managed and how people are connected and networked. Governments need to have strong data and information management strategies in place to achieve this and should ensure that data are accessible inside and outside of the public sector, in a timely way to support decision making (OECD, 2015b).

2. Exploiting:

This entails channeling information, including data, into a usable form both in terms of technical format and applicability to organizational challenges, so that it can be fully contextualized, analyzed and exploited to generate knowledge to support evidence-based decision-making. Here governments should move beyond the identification and gathering stages, and release the value of data by exploiting it to make decisions. It is important they first consider the best way to systematically incorporate data analysis into the decision-making process, so that usable knowledge is generated.

3. Sharing:

Sharing information, including data, more widely can support decision-making, accountability and co-innovation and can facilitate value creation in and outside the public sector. Sharing data and information, both within and outside government, increases their innovative potential. It fuels innovative thinking and knowledge creation by spreading ideas and promising practices across government, scaling up successful innovations and leveraging the power of other organizations and the public to generate new value (OECD, 2014). The OPSI report (2017) argues that a key goal (but not the only) for public sector information is to release it to the public, after due consideration of privacy and security (“open by default”). An example of this is the release of open government data⁷ (OGD) which, by increasing transparency and accountability of government activities, can boost public trust in governments. At the same time, it can enable an unlimited range of commercial and social services across society. For instance, apps that facilitate access to existing public services (OECD, 2015a). Open access can therefore be the optimal strategy to maximize the benefits of public sector information for both the public and private sector (OECD, 2015a).

4. Advancing:

Advancing data and information entails systematical learning and generating of knowledge from an organization’s own experiences and those of others through continuous coordination and communication across and beyond the public sector, to obtain and act on feedback and new information. The OPSI report (2017) states that innovation based on data should be systematically embedded within governments. This allows organizations to grow, mature and continuously develop as they draw on and learn from data and information. It is argued the advancing phase enables public sector organizations to identify areas where innovation is needed and to act on an ongoing basis to better meet their goals and provide transparency, value and service to their public.

⁷ A definition of open government data (OGD) is provided in the OPSI report ‘Fostering innovation in the public sector’ (2017), p.237, note 3.

1.6. Risk governance

Innovation is an intrinsically risky business full of unknowns, both in terms of process and outcomes (Flemig et al., 2015; Hartley, 2013). It is a common notion the public sector is characterized by a risk averse culture, yet they increasingly rely on (risky) innovation in order to deal with complex societal issues (Flemig et al., 2015; OPSI, 2017). Bhatta (2003) suggests that creating more capacity for innovation in public services will require a change in the sector's risk aversion and the introduction of new forms of accountability.

1.6.1. Conceptualizing risk & risk governance

Firstly, it is important to make a clear distinction between the concepts of risk and uncertainty. "Risks are those outcomes that have been identified but whose likelihood cannot be precisely determined; uncertainty denotes unforeseen outcomes that need to be addressed as they arise" (Flemig et al., 2015, p.4). These two types of risk should be differentiated as they may have different and potentially even conflicting influences on innovation (Flemig et al., 2015). Therefore, Flemig et al. (2015) propose that they require different risk management approaches for spurring innovation. They argue known risks can drive innovation as they can provide the opportunity to find new ways of harnessing these known risks (e.g. new waste management techniques in environmental sustainability). At the same time, they may also be barriers to innovation since they are often addressed through extensive regulation and other attempts to increase control and minimise risk (Flemig et al., 2015). Uncertainty, on the other hand, can spur more sudden, spontaneous innovation, since uncertainty is unquantifiable and cannot be known beforehand. It will likely concern total innovation, with new needs to be addressed and new skills to be acquired (Flemig et al., 2015). In a context of improving known solutions the term 'risk' can be applied, but when defining completely new solutions we should talk about uncertainty (OPSI, 2017). The OPSi report on fostering innovation in the public sector (2017) adds that public sector innovation today is more a question of uncertainty than of risk.

Brown and Osborne (2013) suggest that risk can be conceptualized on three different levels: consequential risk at the level of the individual, organizational risk on the level of the organization and its staff, and behavioral risk at the level of the wider community and environment. This matches Renn's (2008) description of three approaches to risk: technocratic risk management, decisionistic risk management, and transparent risk governance. Technocratic risk management involves the minimization of risk through expert decision-making. Here, risk is perceived as something that can be defined objectively and minimized through scientific evidence (L. Brown & Osborne, 2013, p.197). Decisionistic risk management builds further on this by including the possibility of both positive and negative risk discourse on the evaluation of identifiable risks (Flemig et al., 2015). However, as with technocratic risk management, the decision authority is still limited to politicians and excludes other stakeholders, which leads to a limited point of view from which risk is being analysed (L. Brown & Osborne, 2013, p.195).

Finally, Renn's third approach of transparent risk governance is inclusive of all key stakeholders and transparent in its decision-making, facilitated through new Information and Communication Technologies that help to connect stakeholders in public services (Flemig et al., 2015). Brown and Osborne suggest this best fits the risk environment of modern public policy and propose that "risk governance, rather than risk minimization or management, is the appropriate framework for understanding and negotiating risk in innovation in public services" (L. Brown & Osborne, 2013, p.198).

The current risk discourse in public sector innovation predominantly focuses on financial risks (in line with technocratic risk management), since most funders and governments focus on financial data to

indicate success or failure of an innovation project (L. Brown & Osborne, 2013; Flemig et al., 2015). This results in a negative connotation of risk; rather than seeing it as a necessary part of social innovation and a learning opportunity, risk is still perceived as something that should be minimised or even avoided. This attitude comes at the cost of social innovation initiatives. (Flemig et al., 2015) Flemig et al. (2015) and Bhatta (2003) therefore recommend to move away from using financial data to evidence success in public sector innovation. According to Flemig et al. (2015) the wider community (service users and non-service users, as well as the media) needs to be included to create a risk governance structure that allows organizations to treat risk as a factor that should be balanced against the expected benefits of innovation, instead of a factor that should be avoided. This is in line with the above mentioned proposition from Brown and Osborne, who argued that a risk governance framework is more appropriate than risk minimization or management in the context of public sector innovation (L. Brown & Osborne, 2013). However, a change in overall risk culture is necessary for such risk governance to develop (Flemig et al., 2015).

Furthermore, Flemig et al (2015) found that the realization of identified and unidentified risks in social innovation projects seemed to result in them being labelled a “failure” rather than an important learning opportunity. They also found that the avoidance of risk was seen as a strategy to protect the organization (or individual employees) from reputational risks resulting from potential failure, which impedes engagement in social innovation (Flemig et al., 2015).

The OPSI report on fostering public sector innovation (2017) provides some examples of types of risks governments can be confronted with when trying to innovate: The risk of bias: Innovation challenges are frequently skewed by cultural bias, rather than knowledge: this is exemplified by a case where Swedes have allowed the use of wood in large scale constructions for over 25 years, whereas Finns up until recently saw this as major fire hazard risk and prohibited it. The risk of hubris: The promise of a proposed innovation can create excessive confidence which can lead to the risk of backlash to perceived arrogance or proponents being blinded to the realities in the field (being overly confident and underestimating risks). The risk of unmet expectations: There is a risk of not meeting expectations, which can cause loss of support for an innovation initiative. But there is also a risk of exceeding expectations so that the expectations of future innovations become unrealistic. The risk of insufficient resources: The innovation challenges in government are vast, but the resources deployed to solve them are often not enough. Resources in proportion to the scale of the challenge at hand should be provided to thwart the risk of failure.

Additionally, (Arundel, Bloch, & Ferguson, 2019) also mention the need for mechanisms to manage the risk of innovation failure, which can occur due to technological risks, rejection by potential users, or a lack of resources and capabilities for implementing an innovation.

1.6.2 Risk governance: methods, tools & strategies

Generally, risk management and governance methods consist of a classical system of project teams reporting to project steering groups and boards, operating according to a detailed project plan (Flemig et al., 2015). In the case studies analysed by Flemig et al. (2015) it appeared these risk management methods are largely informal and communication-based. They found organizations did have a desire for more formalised structures, but no ideal system was in place yet and set-up costs were considered too high. “Therefore, ad-hoc and need based communication within loosely defined risk management structures (such as project management and board oversight) were considered to be the most workable and effective means” (Flemig et al., 2015, p.58). Flemig et al. (2015) therefore conclude that organizations for the most part seem to be stuck at the level of decisionistic risk governance: trying to involve more stakeholders and deliberate the risk management process, although it still does not

encompass the entire organization.

Based on the literature, high-level (top-down) regulation stands out as the main risk management tool used in public policy (Hood, 2002). Flemig et al. (2015) suggest that tools such as regulation and rules can be summarized as “hard” risk management,” which encompasses technocratic and rule/regulation-driven risk management set at a higher policy-level” (Flemig et al., 2015, p.23). They also state standards of behaviour are set to guide actions of implementing organizations, which provides a higher level of standardized risk management, but leaves little room for personal decisions and risk evaluation at the implementation level. In contrast, “soft” risk management tools are linked to Renn’s (2008) risk governance approach which is based on communication and the adaptation of organizational culture (Hood, 2002; Flemig et al., 2015). Risk management decisions are hereby delegated to the lowest possible level, involving regular communication on an individual and team basis (Flemig et al., 2015). Flemig et al. (2015, p.23) state that soft risk management tools are used “to create a pervasive culture of risk governance, in which individuals have a joint responsibility for finding the appropriate measure to address any particular risk”. They argue this creates the opportunity to formulate and adopt social innovation, although the dilution of direct responsibility might mean that individuals will be tempted to play the “blame game” at a lower level.

Furthermore, two different risk management strategies seem to emerge from the literature: proactive vs reactive risk management (Flemig et al., 2015). Flemig et al. (2015) explain that proactive risk management is aimed at preventing a risk from happening, or at least minimising its occurrence and magnitude. They argue this is part of the organizational culture needed to manage uncertainty and sudden, unanticipated innovation. Reactive risk management, on the other hand, deals with risks that have already materialised and for which the effects need to be mitigated (Flemig et al., 2015). It applies to risk rather than uncertainty because the risks are known in advance (Flemig et al., 2015). Sharing of best practices across public sector organizations can be considered an example of a reactive risk management approach (Flemig et al., 2015).

Flemig et al. (2015) conclude by stating that the potential for social innovation is likely constrained by the limited range of risk management methods and approaches used in practice.

1.6.3 Allocating risk in collaborative innovation

When taking into account the rise of collaborative innovation in the public sector (for example in the form of Public-Private Partnerships), questions arise who is actually accountable for which risks as accountability is then spread across different actors that go beyond the public sector (Flemig et al., 2015). M. K. Lewis (2001) also described PPPs as essentially risk-sharing relationships between the public and the private sector and links the optimal allocation of risk to the efficiency and innovative capacity of these partnerships. He however does not describe what the optimal risk allocation would look like. Although further research is needed, efficient risk governance on both the public and private side will likely be crucial for innovative capacity of collaborative innovation projects.

1.7 Incentives & accountability

1.7.1 Accountability

Accountability mechanisms and the possibility of sanctions can incentivize public sector employees to look for ways to improve their performance and that of their organization (Bovens, Schillemans, & 't Hart, 2008; van Acker & Bouckaert, 2018). However, too strong of a focus on mistakes and sanctions may discourage change (Van Looke & Put, 2011). Lindberg (2013) states the key idea to the concept

of accountability is that there must be a mechanism in place for holding the agent accountable when decision-making power is transferred from a principal to an agent. Bovens et al. (2008) define accountability as a relationship between an actor and a forum, in which the actor has an obligation to explain and justify its conduct to the forum. This forum can pass judgment and the actor subsequently may face consequences (Bovens et al., 2008). It is argued that appropriate accountability mechanisms confront public managers with regular feedback information about their performance and, additionally, it can stimulate them to find feedback information themselves to prevent critical accountability reports and sanctions (Bovens et al., 2008). It should also be noted that, in collaborative innovation arrangements, multiple types of accountability exist: horizontal accountability towards the members involved in the collaborative arrangement, vertical (upward) accountability towards the senior management in a member's own organization as well as political (downward) accountability towards the citizens (Christensen & Laegreid, 2016). Furthermore, findings from van Acker & Bouckaert (2018) confirm that a culture of accountability has a significant impact on the sustainability and long-term survival of innovations.

In order to evaluate performance in innovation and create a culture of accountability, it needs to be clear what it means to perform well in an innovation context. The OPSI report on fostering innovation in the public sector (2017) argues it should be carefully considered which positions are made more accountable for innovation and how (OPSI, 2017). Furthermore, it is important to consider the various incentives that can be used in an organizational context to improve innovation-related performance and strengthen the sense of accountability.

One method of creating or reinforcing accountability for innovation, is through the use of mechanisms such as establishing a written innovation strategy, and the inclusion of innovation targets in annual reports (Torfing & Ansell, 2017).

1.7.2 Incentives

Financial incentives

Using financial compensation to motivate and/or reward innovation has had little evidence of success (OPSI, 2017). There is a growing amount of research that challenges the effectiveness of performance-related pay in the public sector, particularly for tasks that involve creativity and teamwork (Weibel, Rost, & Osterloh, 2010). This may be partly due to the balance between individual and team incentives, and the detrimental effects of internal competition on knowledge sharing and co-operation (OPSI, 2017). If innovation is considered a team effort that requires open knowledge and data, it is difficult to set up a pay for performance system that doesn't spur internal competition, thereby limiting information exchange (OPSI, 2017).

It is also difficult to translate certain pay systems that work in the private sector (such as profit sharing allowing everyone to benefit if the organization performs well) to systems that can work in the public sector. The OPSI report on fostering public sector innovation (2017) even states that financial compensation can disincentivize innovation, when pay adjustments (especially when perceived as unfair) result in loss of trust and commitment within the civil service creating a working environment not conducive to innovation (OPSI, 2017).

Non-financial incentives

Incentives for spurring innovation should be considered in broad terms: it doesn't involve just pay but can also include benefits, work-life balance and recognition. As discussed next in this section, innovation awards are such an example of an incentive that is mainly based on the recognition people receive, rather than any financial compensation that may be linked to the award (which is usually

small). Overall, compensation of any type should seek to directly impact motivation as it is the most fundamental external motivator for work (OPSI, 2017).

Awards and recognition

The OPSI report on fostering public sector innovation (2017) states Innovation awards have already been used by some governments around 30 years ago to motivate public sector innovation. In an OECD conference on public sector innovation (2015) Sandford Borins argued that the granting of awards for successfully implemented innovations has five objectives: 1) to reward and recognise successful innovators; 2) to stimulate more innovation in public sector organizations; 3) to make innovators aware of one another and thereby help to develop a sense of community among them; 4) to provide information for use in case studies and statistics for those studying innovation; and 5) to improve the public's perception of the public sector. (OPSI, 2017, p.69)

An example of an innovation award can be found in Australia, which grants 'Awards for Excellence in Public Sector Management'. All submissions are assessed against the design and delivery of products, the services and processes, stakeholder service and satisfaction, transparent leadership, planning and governance, people management and change management. The shortlisted nominations are then reviewed against additional criteria for a separate innovation award. To receive the award, the nomination must 1) meet the defined threshold for innovation; 2) be linked to an organizational strategy or a response to a significant organization issue or risk; 3) involve co-design with key stakeholders (internal or external); and 4) result in a demonstrable difference to the relevant product, process or service and its delivery. (see OPSI, 2017, p.69)

Award schemes such as these are based on the assumption that recognising and awarding successful innovation can motivate and inspire public sector employees to undertake similar activities within their own organizations (OPSI, 2017). The high level of importance attributed to the awards and the presence of senior officials at award ceremonies sends a convincing message that innovation is a priority for Government. This award also communicates that excellence in management and innovation are linked to each other and that innovation should be central in all public management. (see OPSI, 2017, p.69-70)

Furthermore, The OPSI report (2017) also describes so-called 'ideas awards', which are a specific type of innovation award that are often used to source ideas for innovation within organizations. They are aimed at motivating staff to suggest concrete improvements to the effectiveness or efficiency of their organization and can be a useful way of engaging employees from all levels (OPSI, 2017). Winners usually receive support to implement their idea, as well as public recognition from senior management and occasionally financial incentives (OPSI, 2017).

Part 2. Research strategy: data collection and analysis

The main research question of this study examines to what extent the current innovation architecture within the Belgian Federal Government supports and enhances collaborative innovation and how this could be improved. A multi-method approach has been chosen to:

- Identify the current innovation architecture of the Belgian federal government and determine its role in stimulating collaborative innovation;
- Provide a comparative analysis comparing the Belgian federal innovation architecture with those in three different OECD countries: the Netherlands, Estonia and Finland;

- Formulate a set of recommendations to strengthen the innovation architecture in the Belgian federal government and enhance its capacity to stimulate collaborative innovation.

Given the exploratory nature of this research, a qualitative approach was adopted. In order to gain insight into the current innovation architecture present within each of the researched countries, semi-structured interviews were administered with respondents from Finland, Estonia, the Netherlands and the Belgian federal government. Based on the developed framework for innovation architecture, a comprehensive set of interview questions was developed covering eight main themes:

1. innovation strategy & policy`
2. innovation networks
3. innovation labs & teams
4. innovation resources
5. innovation evaluation
6. data governance
7. risk governance
8. incentives.

These have been selected based on the preceding literature review and together make up the framework that has been developed to conceptualize the term ‘innovation architecture’. Although not explicitly covered in the literature review, it was decided to also include ‘innovation strategy and policy’ as an additional element of the framework for innovation architecture. The extent to which a government has included public sector innovation in its formal strategies or policies, will be a useful indicator to assess to what extent governments are facilitating innovation by addressing it at the strategic level.

Prior to the interviews, document analyses and desk research have been conducted in order to determine to which extent innovation was already incorporated in official policy or strategy documents. For each of the researched countries, management agreements, governance plans, and online sources (government websites) were examined to identify those central government organizations that were already involved to some extent with innovation or innovative projects. An overview of all consulted documents and their sources can be found in the annex.

In order to assess the state of the current innovation architecture within the Belgian federal government, seven in-depth semi-structured interviews were administered with key profiles from different federal organizations. These were organized over a period from December 2019 to February 2020. [Table 1](#) provides an overview of participants, which all hold positions at the managerial level, both in the innovation field as well as other areas such as digitalization, transformation, HR, project management, etc. Through the strategic selection of these profiles it was possible to obtain specific information from each field and thus cover the different facets of the innovation architecture.

Table 1
Overview of Belgian interviewees’ profiles.

Organization	Function
NIDO federal innovation lab (FPS Policy & Support)	Head of innovation lab
FPS Home Affairs	Innovation Manager
National Social Security Office (NSSO)	Project Advisor & Innovation lead
FPS Social Security	(Innovation) Program Manager
DG Digital Transformation (FPS Policy & Support)	Innovation Manager
Department ‘Transformation’ (FPS Policy & Support)	Business Unit Manager
DG Recruitment & Development (FPS Policy & Support)	Director-General

* Respondents have been randomized for further reference in the results section.

For the comparative country study, interviews were organized with government officials as well as academic and general experts in the following OECD countries: The Netherlands, Estonia and Finland. These interviews were organized in a period covering January to May 2020.

These particular countries have been selected since each of them can be considered frontrunners in the field of public sector innovation, and are therefore particularly valuable for this study. By performing an international comparative study, best practices from the different national governments could be collected and used as a guideline to formulate recommendations for the improvement of the innovation architecture within the Belgian federal government. Below, an overview can be found of the different profiles that were interviewed for each of the selected countries.

Table 2

Overview of Finnish interviewees' profiles.

Organization	Function
Ministry of Finance	Program Manager AI
Ministry of Finance	Support Innovation Network, OPSI national contact
Ministry of Finance	Support Innovation Network
Ministry of Finance	Head of Unit Governance Policy
Prime Minister's Office	Head of Government Strategy
Sitra Innovation Fund	Leading Specialist

* Respondents have been randomized for further reference in the results section.

Table 3

Overview of Estonian interviewees' profiles.

Organization	Function
Government Office	Advisor Strategy Unit
Innovation Team	Founder, Service Designer
Government Office	National Digital Advisor
Praxis	Head of Innovation Program

* Respondents have been randomized for further reference in the results section.

Table 4

Overview of Dutch interviewees' profiles.

Organization	Function
Ministry of Justice and Security	Innovation manager
Ministry of the Interior and Kingdom Relations	'Start-up in residence' Project Manager
NOVUM innovation lab	Innovation Designer
ADBTopConsult	Consultant

* Respondents have been randomized for further reference in the results section.

Table 5

Overview of academic & general expert profiles.

Organization	Function
Ragnar Nurkse Department of Innovation and Governance, Tallinn University of Technology	Senior Research Fellow
Ragnar Nurkse Department of Innovation and Governance, Tallinn University of Technology	Monitoring Researcher OGP
Institute for Innovation and Public Purpose, University College London	Professor of Innovation and Public Governance

*These have been assigned randomized respondent numbers for further reference in the results section.

Part 3. Results: international comparative study

In the below section, the findings of the comparative study on the innovation architectures present in the central governments of Finland, Estonia and the Netherlands will be outlined. For each of these countries, the different elements that make up the innovation architecture will be discussed. At the end of each section, the textboxes can be consulted for a brief summary of the key findings.

3.1 Finland

Finland has been selected for this comparative study based on their specific attention for public sector innovation and innovative approaches (such as experimentation) at the strategic level. They are frontrunners in actively promoting an experimental culture throughout their government and have included dedicated projects such as ‘Experimental Finland’ in their government programs. They have also developed a large variety of supporting networks and structures to support public sector innovation, including a national innovation fund that spurs innovation across Finnish society, which can also be used for public sector innovation projects.

3.1.1 Innovation strategy & policy

Respondents report that Finland has moved from a hierarchical innovation strategy to an approach that is centered around innovation networks, implementation and daily practices. They have no formal innovation policy in place for the public sector, but it is reported that in practice, innovation projects are being developed and implemented in all policy areas. The Research and Innovation Council (RIC) is an advisory body chaired by the Prime Minister, that discusses key issues relating to the development of an innovation policy focused on the stimulation of economic innovation (within companies). However, in certain strategic documents they have also formulated a number of action points for stimulating innovation in the public sector. In particular, the ‘Vision and Roadmap for 2030’ and ‘Research and Innovation Policy Review 2015-2020’, which have been developed by the RIC, mention three strategies for public sector innovation:

3.1.1.1 Public-private collaboration

The first strategy used for spurring public sector innovation entails a focus on public-private collaboration. The below excerpts emphasizes the importance that is placed on collaboration between the public sector and various external partners, including citizens. Interestingly, the need for incentives is also explicitly mentioned as being crucial for stimulating public sector innovation.

The ‘Research and Innovation Policy Review 2015–2020’ states that

“Public resources must be used more efficiently, more often relying on partnerships with private resources (p.24)”

“It is vital to also provide incentives for public actors to improve their innovation ability and the efficiency of their operations. The public sector must utilize service innovations and deploy the latest technologies more effectively (p.24).”

“The public sector will be assigned a new, more active role. This requires a reform of operating methods, legislation and competence, broad-based cooperation and incentives. The need to reform public services is obvious [...] the public sector will need an active approach to creating new solutions that improve service provision. In this reform, the expertise and resources of various

sectors of society and citizens must be widely exploited (p.24)."

In line with this, the 'Vision and Roadmap for 2030', developed by the RIC, states that

"Cooperation between the public sector, third sector and businesses is appreciated and should be reciprocal (p.6)."

3.1.1.2 Regulation in support of innovation

The second strategy focusses on the development of a supporting regulatory environment. The below excerpts indicate Finland is also looking to develop more innovation-friendly regulation, by developing experimental law and zones with less strict regulations that facilitate experimentation. Furthermore, encouraging the public procurement of innovative solutions is also part of their strategy to stimulate innovation within government. One respondent clarifies that, since the government is a large buyer of services, it does have a significant effect when they purchase from innovative companies, allowing innovations from the private sector to seep through to the public sector.

The Research and Innovation Policy Review 2015–2020 states that

"Regulation has a considerable guiding influence on the creation of and demand for innovations. The regulatory environment must encourage companies and public actors to seek innovative solutions and remove factors that hinder innovation (p.25)."

In order to achieve this, the following actions are outlined:

- *"The normative and regulatory environment will be lightened. Large-scale experimentation will be enabled by a legislative reform."*
- *"In order to use public procurements to create innovations, stronger incentives are needed. The target is that public actors will spend at minimum 3% of their procurement budgets on procurements that represent new solutions in the market."*
- *"Open innovation competitions will be used to bring actors and resources together to resolve specific social challenges."*
- *"The opening of public data reserves will be continued in a determined manner in all branches of administration. Data protection, copyright and other legislative issues related to access to the data reserves will be solved." (Research and Innovation Policy Review 2015–2020, p.25)*

The Vision and Roadmap of the RIC furthermore mentions that

"Cross-sectoral cooperation, a permissive legal framework and innovative public procurements enable the emergence and development of lead markets (p.7)."

3.1.1.3. Cross-administrative cooperation

A final, third strategy focuses on cross-administrative cooperation to stimulate public sector innovation. The below excerpts demonstrate the emphasis that is put on the need for cooperation across different administrative branches and government organizations. It is acknowledged that this will be challenging and will require a new approach with new operating methods, new policy tools, platforms for large-scale cooperation as well as a cultural shift within government. Particular attention is also paid to monitoring and evaluation of implemented measures as well as the use of experimentation as a key method for policy improvement and implementation.

The Research and Innovation Policy Review 2015–2020 states that

“Promoting innovation is up to all ministries and branches of administration. The implementation of social development projects across the boundaries of administrative branches will challenge the current management models, structures and expertise. Both at Government level and in individual administrative branches, steering that sees the links between various issues and phenomena is needed (p.27).”

“Mastering and managing large cross-administrative development projects will challenge the current functions, structures and skills. Innovations and new sources of growth, as well as solutions to social challenges, are often found on the interfaces between various sectors and actors, fields of education and knowledge and technologies. The problem lies in a lack of suitable policy tools and cooperation platforms for the interfaces (p.27).”

“Public sector management, its operating methods and culture must be transformed to support cross-administrative implementation of extensive, horizontal development projects (p.27).”

“Supported by the Government, the ministries will work together to select clearly defined, goal-oriented development projects that will be implemented using experimentation and through shared responsibilities, implementation, steering and evaluation. Doing things together, developing operating methods and wide exploitation of good practices will be speeded up by means of test projects (p.28).”

3.1.1.4 Open Government Partnership

In addition, Finland also formulated a number of action plans in support of the Open Government Partnership (OGP). The OGP initiative was launched in 2011 to promote good governance in the world and to promote the exercise of power in an honest, transparent manner, in dialogue with citizens. 78 Countries have joined the partnership so far. The OGP aims to secure concrete commitments from governments to promote transparency, to empower citizens, to fight corruption, and to harness new technologies to strengthen governance.⁸ Each of the member states outlines their commitments in national action plans, for a 2-year period. Finland however has opted to formulate action plans for a 4-year period, so they can better align it with the goals of their Government Program throughout the government term. In their latest OGP action plan it is stated that “the government will continue the improvement and development of its existing practices and add to its contributions to ensure openness, inclusion and trust.” This will also mean that new innovations must be introduced within the government and new opportunities offered by technological innovations will be utilized (Open Government National Action Plan for 2019-2023, p.6).” However, no specifics are mentioned concerning the innovations they are looking to introduce. Additionally, the action plan also focusses on the implementation of open data, which is a recurring theme in many national OGP action plans.

It is important to remark that the primary aim of OGP action plans does not concern public sector innovation. Often, the proposed actions concern incremental improvements of existing public services and policies, which is the case for Finland. In line with this, the action plan mentions that the OECD and OGP agree that “in the best-case scenario, open government reforms can help to promote innovation” (Open Government National Action Plan for 2019-2023 Finland, p.3). Thus, the OGP initiative can also function as a potential driver of public sector innovation, even though that is not its primary goal. Further on in the report, OGP action plans for respectively Estonia and the Netherlands

⁸ Source: <https://www.opengovpartnership.org/>

will be discussed, which feature some action points that relate more to innovations in public services and policy-making processes.

To support the implementation of the OGP action plan, a working group is established of representatives of the various partners involved in the program (ministries, agencies, municipalities, organizations, researchers, corporations). Additionally, the principles of the Open Government Partnership (OGP) entail that the work is steered by a body with representatives from non-governmental organizations and the government. In Finland, The Advisory Board on Civil Society Policy (KANE), appointed by the Ministry of Justice, is appointed as the coordinating body for steering open government work (Open Government National Action Plan for 2019-2023 Finland, p. 15).

Conclusion:

*Finland does not have a central policy that is dedicated to public sector innovation. They have however incorporated it in general strategy documents. They see **public sector innovation as part of their general strategy for stimulating innovation within Finnish society** and think of Finnish **government as a key enabler** for this.*

*Their approach to public sector innovation is centered around 1) **extensive public-private cooperation** encouraged by the necessary incentives, 2) **innovation-friendly regulation** with a legal framework that allows for **large-scale experimentation**, and 3) **cross-administrative cooperation** between different government organizations and different governmental levels that enable the public sector to work on complex and cross-cutting societal issues.*

Even though they do not have a formal public sector innovation policy, Finland does have a clear strategy and vision for stimulating innovation within the public sector. This is implemented through various projects and initiatives the Finnish government has undertaken so far, which are discussed in the next sections of the report.

3.1.2. Innovation networks

The Finnish (central) government has an extensive innovation network, that in turn consist of several sub-networks and organizations. The network is managed by a team of two people from the Public Governance Department of the Ministry of Finance. It is however a loosely organized network and described as ‘semi-formalized’. A few meetings are organized annually with the entire network, additionally the individual organizations organize their own events to which they can also invite others from the network to join. The respondents remark the innovation initiatives are very dispersed within government, which is not considered a problem in itself, but they do think there should be more coordination. For this study, a selection of network organizations has been made based on the input of the respondents. These networks are discussed below:

3.1.2.1 Work 2.0 - Changemakers Network

The Change Makers Network is an informal, loosely organized and self-directing team of experts from different ministries, with different backgrounds, education and expertise. What is shared among the participants is the need and will to build up a working culture based on a “whole of government”-mindset and “crossing the silos”- ways of working. The network is also willing to test and adopt modern, explorative and digital ways of working. Participants are all volunteers, and not nominated to represent any particular point of view or ministry in the network. There is no working group or steering committee and there are no nominated participants. It is considered a new kind of a bottom-up community or “movement,” which crosses the boundaries of all kinds: administrative, professional,

attitudinal etc. It also strongly challenges traditional, hierarchical management practices as well as old-fashioned human resource management practices. The biggest value of the Change Makers Network is reported to lie in its unofficial character. At the same time, this is considered the biggest challenge to keeping the network alive. However, the future of the network seems positive. It is already widely recognized and its informal and unofficial nature is accepted. Little by little it has been able to reach the decision-making arena; either as a network or through its members representing new, open- and broad-minded approaches.⁹

3.1.2.2 Innovillage

Innovillage is an innovation-oriented community in the health and welfare sector that is open to everyone. Innovillage offers development tools and methods, both online and based on face-to-face meetings, as well as partners for all stages of development. The initiative brings together the development efforts in the sector and offers a channel for sharing models, information and examples of implemented innovations. The purpose of Innovillage is to support sustainable renewal in the health and welfare sector. Open co-development is the fundamental principle underlying Innovillage, and hence it is free of charge for everyone. Openness and interaction enable collaboration, free use of results and efficient use of resources. Innovillage is a joint effort by SOSTE Finnish Federation for Social and Health, the Association of Finnish Local and Regional Authorities and the National Institute for Health and Welfare (THL). Funding is also provided by the Ministry of Social Affairs and Health. The users of Innovillage include public service providers and developers, non-governmental organizations and private service providers.¹⁰

3.1.2.3 Experimental Finland

Experimental Finland is a project created for the promotion of piloting and experimenting within government. It was one of the key projects of Prime Minister Juha Sipilä's Government (2015 – 2019) and will now be moved from the Prime Minister's Office to Motiva, a Finnish state company which promotes the sustainable use of energy and materials. Finland has been front-runner in highlighting an experimental culture as part of the Government Program. Their model combines measures to facilitate experimenting based on the Government agenda with grassroots innovations.

More precisely, they distinguish between three levels for public sector innovations: the strategic level, pooled pilots and partnerships, and the grassroots level. Strategic experiments and pilot studies are ones that the Government itself executes, monitors and evaluates. Pooled pilots and partnerships promote the objectives of the Government program, but are executed by the regions, NGOs and business environment. Grass-roots experiments are those that are initiated and executed by civil society. A call for proposals for experiments was organized around the topics of circular economy, employment and artificial intelligence, in line with the Government's policy review. Funding for the experiments was provided by the Prime Minister's Office. In addition, Experimental Finland works to establish and strengthen networks, remove barriers to experimenting and support the Government in implementing its strategic experiments. They also arrange training sessions, workshops and other events related to innovation and experimentation. The project has produced reports on various topics, including establishing a funding platform for small-scale experiments, evaluating experiments and the ethics of social experiments. Together with the Association of Finnish Local and Regional Authorities, Experimental Finland has also produced a guide for experiment mentors.

⁹ Source: https://oecd-opsi.org/wp-content/uploads/2019/07/Change-Makers-Network_Finland_2013-1.pdf, <https://vm.fi/tyo-2.0>

¹⁰ Source: <https://innokyla.fi/en>, <https://www.innokyla.fi/en/tietoa-innokylasta>

Furthermore, the Experimental Finland team established an infrastructure for enhancing experimentation, called a 'Place to Experiment'. It is a digital platform that helps people transform their ideas into concrete experiments and find the right partners. It facilitates the co-creation of ideas, flexible financing of experiments and sharing of results and lessons. This way, the best lessons can be replicated and spread to a wider audience.¹¹ With the creation of such a platform, it addresses a number of key obstacles to spreading innovation that were defined by the Finnish government, including a lack of flexible financing and connections among innovators, insufficient information about viable solutions and innovative approaches, and a lack of a central overview of the experiments being conducted.¹²

The digital platform will continue to run under the supervision of Motiva. Through Experimental Finland, a wide-ranging culture change has been initiated, experimenting networks and expertise have been strengthened, and the launching and implementation of experiments has been accelerated in the public sector.

3.1.2.4. Open Government Network

Furthermore, Finland intends to establish an open government network of public officials, in support of their OGP Action Plan. The state organizations will appoint their representatives, who will report on the measures taken by their agencies and departments and share these with the network. Several network events will also be organized annually.¹³

The remark is made that more networks could be identified as innovation networks if it would be more clearly defined what public sector innovation encompasses. For example, the foresight network is not officially referred to as an innovation network, but it is linked to it. Many networks or government organizations do things related to innovation, but not under the official title of innovation. Specifically, a number of niche networks exist that are centered around a specific theme, such as AI, blockchain, data analytics, foresight and performance management.

Some of the discussed networks may be loose and informal, others maybe more formalized networks with nominated representatives from different organizations. The latter usually organize regular meetings and often have a formal committee or board. The respondents state that

"the general point of view has been that the need of a particular network is the most important factor in determining what type of network it will be, formal or informal."

They focus on what is practical and which approach supports the goal of the network in the best way possible. For the performance management network, for example, it has been important that there are representatives from all the different ministries, and that the network is open for other people to join as well so that it is not restricted to the ministries. This ensures they have the most important contact points there to make sure the work is implemented, as well as being open to other interested parties that want to learn.

The open government network is another example of a formal network with official representatives. Here, different state agencies were recently asked to renew their official nominations for this network. They have established it is crucial that in each agency there is a designated person, who is accountable and who looks after the implementation of the open government principles and the action plan. Finally, one respondent remarks that

¹¹ Source: <https://kokeilevasuomi.fi/en/frontpage>

¹² Source: <https://www.oecd.org/gov/innovative-government/embracing-innovation-in-government-finland.pdf>

¹³ Source: https://www.opengovpartnership.org/wp-content/uploads/2019/09/Finland_Action-Plan_2019-2023_EN.pdf

“50% of the purpose of all networks is the sharing of best practices.”

Therefore, both formal and informal networks exist and have their place in the system.

Conclusion:

*Finland has a vast **landscape of different government networks** that intend to spur innovation. These are all united in an overarching ‘**central innovation network**’, which is overseen by a small team from the Public Governance Department of the Ministry of Finance. This overarching network is however not strictly managed and is reported to be loosely organized and semi-formalized. Besides a few annual meetings that are organized with the entire network, most of the initiative lies with the individual network organizations. They have their own agendas and organize their own events which are often open for other network members to join. Respondents did remark **more coordination between the various network members would be beneficial**. This would allow for a clearer and more **centralized overview** of what each of the networks are currently working on, as well as provide insight into what has already been done with regards to innovation.*

*Both **formal and informal networks exist**, and respondents state that the need or goal of a particular network will determine what type of network best supports this. **Formal networks**, are usually preferred when the specific goals of the network require a **stronger form of accountability and careful implementation**. In this case, it is reported that having a formal network with official representatives from each of the involved organizations, can help ensure specific people are held accountable and solutions are implemented. Finally, it is stated that for each of the networks the **sharing of best practices** is a key purpose. Overall, both formal and informal innovation networks are encouraged and considered to be valuable for the Finnish innovation ecosystem.*

3.1.3 Innovation labs & teams

The vast Finnish public sector innovation network also counts a number of organizations that can be described as innovation labs, or that have a lab as part of their organizational structure. Based on the input of the respondents and complementary desk research, a selection of innovation labs will be discussed below.

3.1.3.1 Sitra lab

The Finnish Innovation Fund Sitra has its own lab, made up of four dedicated staff members. They have diverse backgrounds (mainly in political sciences) with none of them having a formal educational background related to innovation. The criteria used for hiring mainly focus on having experience working with diverse teams, having an understanding of innovation processes and understanding the requirements for societal change. Most importantly, staff should be able to take on the role of facilitators in innovation projects that run across different societal sectors. The Sitra lab is described as “a place for everyone who wants to solve wicked problems and participate in building societal change”, regardless of their job title or sector. Sitra Lab aims to bring a large variety of stakeholders together to collaborate on projects addressing major societal issues, focusing on one societal problem at a time. The frame of reference for these problems is the UN’s Sustainable Development Goals and Sitra’s own vision for sustainable well-being. They see extensive cross-sectoral co-operation, in-depth expertise in societal issues and solid methodological knowledge as crucial for tackling such ambitious goals. The lab brings different societal actors – both from within and outside the public sector - together to form a shared understanding of these problems, to implement operating models aimed at solving them and to launch development programs. The Lab does not try to find a single solution to a particular societal problem but rather creates opportunities for an increasing number of people to participate in building societal change.

The activities of the Sitra Lab are focused on three pillars:

- Learning: The Sitra Lab is setup as a training trajectory, that runs once a year and to which everyone can apply. The people that are selected to participate in the program are then divided into teams, with the intent to make these as multidisciplinary as possible, connecting people with different backgrounds. In this way, Sitra lab not only brings together innovators but also teaches them the skills they need to take part in collaborative innovative projects. Focus is put on collaborative learning and developing solutions together. This also contributes to the development of formal and informal structures to support the implementation of societal change. Currently, participants predominantly come from the public and third sector but specific efforts are made to increase the number of participants from the private sector, as this is considered crucial for the creation of successful teams.
- A community-led approach: Sitra lab has also created a community (or network) that connects experts from different fields and enables them to learn from each other, familiarize themselves with the best international examples and build practical solutions together. Regular meetings, including workshops and speaker sessions, are organized to support and further build the community.
- A practical approach: The topics addressed by the Sitra Lab are timely and urgent societal problems that are expected to have far-reaching consequences if left unsolved. These topics are identified mainly through Sitra's own research activities.¹⁴

One of the main success factors of the Sitra lab is reported to be its independence from government and their autonomy in setting their own agenda and determining their own work methods. On the other hand, it is mentioned that it is best there exists a minimal level of congruence between the lab's focus areas and those of government in order to work effectively. It is also considered crucial to focus on a selected number of topics at a time, to ensure efforts can be focused on those issues that are most pressing. Finally, an important feature of the lab is its focus on training. This stated to be a crucial part of their task, as reported by one respondent:

“Or task not only consists of bringing innovators together and providing them with project funding, but we also aim to teach them the skills they need to be able to work successfully in cross-sectoral, multidisciplinary partnerships.”

3.1.3.2 Work 2.0 lab

The innovation network 'Work 2.0' also consists of a lab, called the Work 2.0 lab, which has been setup as a 2-year experiment in 2019. It was designed by collaboration between the Ministry of Finance, Senate Properties, State Treasury and the Government ICT Center Valtori. Additional financing is provided by four different ministries, the City of Helsinki, the Sustainable City Program and the Evangelical Lutheran Church of Finland. The Work 2.0 Lab is a new, collaborative working and learning environment and is available to all agencies and civil servants in government as well as other organizations involved in the experiment. The purpose of the lab is to promote better, higher quality ideas, solutions and decisions on cross-cutting matters outlined in the government program. Their agenda is thus largely determined by the targets and programs set out in the Government Program. However, Work 2.0 Lab provides the opportunity to test different, innovative ways of working. It provides the structures and platforms (environments, spaces, networks, methods) that are needed for transversal collaborative working and learning. In particular, it is responding to the commonly identified needs in Finnish government, such as 1) the need for phenomenon-based¹⁶

¹⁴ Source: <https://www.sitra.fi/en/topics/sitra-lab/#latest>

¹⁶ Here reference is made to phenomenon based public administration. Focus is put on the resolution of societal issues or 'phenomena' with complex cause-and-effect relationships. Broad-ranging expertise, a well-

preparation 2) the increase of location-independent and mobile work 3) working in collaborative spaces 4) smart & digital work 5) collaborative learning and 6) networking across sectors and silos. Furthermore, the lab is open to a variety of networks, many of which have been formed during the last ten years accompanying the growing movement towards agile, cross-functional, open minded and future oriented professional networks. These networks usually operate in ecosystems and therefore often involve actors from outside government, such as private sector companies, associations etc., making the lab an ideal meeting ground where government can also connect with society. The principles guiding the work at Work 2.0 Lab are:

- Cross-border working, curiosity
- Explore, try, learn, fix
- Invite others to join
- Let things emerge
- Forget prejudices, surprise and be surprised
- Prototype, try, and quickly implement

New roles have also been built to support the Lab-concept: Hosts welcomes visitors to the Lab and explain the concept and idea of the Lab. Facilitators supports users in planning and implementing events and workshops. However, it is up to the users to bring up their own themes and projects to be worked on, the lab offers no particular content or topical expertise. Users also have to take responsibility for the proceeding of their own work. Work 2.0 Lab has no fulltime staff members. The staff all combine their role in the lab with another role within government. But since they are all a type of developer, It is argued that this kind of work can be considered as part of their job description. The staff of the lab report to the Work 2.0 Executive Team, which is composed of managers from the founding organizations (the Ministry of Finance, Senate Properties, State Treasury and the Government ICT Centre Valtori). Each Friday the lab also hosts different events on various themes, such as intelligent teams, design by gaming, customer orientation in service design and place-independent working.¹⁷ (Internal notes Work 2.0 Lab, 2020, p.1-3)

3.1.3.3 Innovation Centre

The Innovation centre, situated at the Finnish National Agency for Education (FNAE), is an experimentation, development and innovation unit that supports municipalities as they develop their systems of schools and early education to better meet the needs of all learners. Through experiments, trials and pilots, their aim is to understand how education governance could better support schools across Finland and to identify, test and co-create new tools and approaches to build that capacity. The team facilitates collaboration between various actors (such as education providers and schools, educator networks and other stakeholders) to co-create tools and develop better human-centred education services on the local level. They also engage experts from education governance in these experiments to learn from them and to enhance information flow and feedback loops from the local to national level. As the first agency-level innovation unit in Finland, the Innovation Centre is described as an experiment in and of itself. It consists of five full-time team members and is planned to run until 2020.¹⁸ Some of the team's staff have been recruited from the FNAE itself, the others came from the cultural sector, a startup and from academia.

They are a self-driven team and have been given freedom to choose what they would be working on and how. They do continuously communicate about their work with higher management and also have a steering committee that oversees their activities and whom they share their ideas and findings

structured understanding of the overall situation and cross-administrative cooperation are required to solve such problems. See Discussion paper 'Phenomenon-based public administration', Sitra, 2018.

¹⁷ Source: <https://vm.fi/tyo-2.0>,

¹⁸ Source: <https://kokeilukeskus.fi/%EF%BB%BFinnovation-centre/>

with. The steering committee is made up of top-level executives from the FNAE and the municipality of Nurmijärvi, as well as a researcher from the University of Tampere. The Innovation Centre is funded by the FNAE, which in turn receives its yearly funding from the Ministry of Education and Culture. They do not offer project funding for the schools or municipalities. However, these parties can apply for government funding directly with the FNAE. Evaluation of the Innovation Centre initiative happens systematically, four times a year, in the form of self-evaluation which has been instrumental in learning what does and doesn't work. Since they are now in the final year of the experiment, a final evaluation will follow which will also investigate possible scenarios for how this initiative could be continued in the future.

3.1.3.4 D9 team

Finally, the 'D9 team' provides another example of an innovation unit, which gives advice on the digitalization of government services and supports central government organizations with user-centered digital transformation. It was originally situated in the State Treasury of Finland, an agency of the Ministry of Finance. It functioned as a separate unit and was established as one of the key projects of the previous government program, for which a dedicated budget was reserved. Currently, the activities of the D9 Team are being continued but have been transferred to the Digital and Population Data Services Agency once the government program ended. The D9 team has a government-wide reach and is called in by public servants from different central government organizations. The team can be seen as the consulting and support unit for the development and implementation of digitalization projects, in line with the D9 principles. "D9" represents the government's nine principles for digitalization, which include:

- Service provision based on customers' needs
- Cutting unnecessary red tape
- Building easy-to-use and secure services
- Producing benefits for customers quickly
- Continuing to serve in case of disruptions
- Asking for new information only once
- Making full use of the existing public and private online services
- Providing open data, open access to information and open interfaces for businesses and citizens
- Designating an owner of every service and its implementation

The original team was made up of seven full-time staff members, including an enterprise architect, service designers and program directors. It also included an "experimentalist", who helps public sector organizations to experiment and test different ways to achieve user-centered digitalization. Other methodologies the team frequently uses are 5-day service-design sprints, and so-called 'design jams', aimed at increasing civil servants' knowledge on service-design and service innovation. Importantly, the team itself does not own or finance any projects. They focus on providing advice and guidance to organizations wishing to execute a particular project, but the organizations maintain ownership over their project and the developed innovation. It is stressed by a respondent this was a deliberate choice, to ensure they can empower organizations and make them owners of innovation, rather than making it the property of the team. The team has facilitated many projects focused on designing innovative cross-government platforms as well as building capacity and capabilities in government to support user-centered digital transformation. One of their projects included the development of a digital learning platform for civil servants, called eOppiva¹⁹. It offers a wide variety of e-learning courses for civil servants and also offers access to networks focused on e-learning and idea exchange. The team also assisted with the implementation of a digital-first citizen inbox at several government agencies,

¹⁹ See: <https://www.eoppiva.fi/>

helping to adopt the concept, the technology and making the service user-centered. One of the ultimate goals of D9 is to demonstrate and explain how design can help develop better (digital) services and a more human centered-public sector.²⁰

3.1.3.5 Success and fail factors

For the above-mentioned labs, some success factors and 'lessons learned' have already been established. 'Lessons learned' from the Work 2.0 Lab show that a lab needs a critical mass of enthusiastic pioneers, dedicated preparation, and a maintenance and development team to succeed. On the other hand, the organizational culture also needs to be ready to adopt a lab-like approach. There is a need for a broadly shared understanding that cross-border cooperation and phenomenon-based preparation are worthwhile. Giving people the chance to experience first-hand that collaboration produces better results than doing things alone, is crucial. At the individual level, traits such as courage and vision are required for those engaging in innovative, experimental projects. Furthermore, it is stressed that partners and stakeholders should be kept involved and informed constantly and there should be active communication across multiple channels. It is also essential to have the flexibility and the willingness to change original plans if needed. Having support and sponsorship from leaders as well as a clear mandate from higher management is also considered crucial by most respondents. In the case of the Work 2.0 Lab, it is argued that it has been beneficial to connect the experiment to the values and content of the government program, in order to receive the necessary support (Internal notes Work 2.0 Lab, 2020, p. 3-4). Furthermore, encouraging government organizations to take ownership of innovative projects and ensuring innovation is not considered the sole domain of a dedicated innovation team, such as the D9 Team, is also mentioned as a key factor for success. Finally, a respondent clarifies that according to Sitra lab's vision,

"innovators should not only be supported by means of connecting them and providing funding. Support should also cover the development of their skills so they are able to work successfully in multidisciplinary, cross-sectoral teams."

Conclusion:

*The Finnish government has a number of innovation units, that each focus on stimulating innovation in their own particular way. What several of these units have in common is a strong focus on **connecting different stakeholders from both the public and private sector to let them co-create solutions** to societal issues.*

*In terms of autonomy, most labs have a **high degree of autonomy** to set their own agenda and can count on the necessary political support. **Experimentation, rapid testing, prototyping, piloting and user-centered design**, are common methods used by nearly all units. **Foresight** is another key method that is reported to be frequently used for ideation in public sector innovation processes. The researched labs are **relatively small in size**, ranging on average from four to eight team members. This seems to support existing literature that indicates small, agile teams are usually preferred in the context of innovation labs. Most labs consist of a varied team of people with **different backgrounds and expertise**. Roles range from traditional program managers and digital officers to more unconventional ones such as facilitators, service designers and experimentalists. Most units can count on **full-time staff**, with the exception of the Work 2.0 lab, where staff combine their role in the lab with another role in government. Both the Innovation Centre and the (original) D9 team recruited **part of their staff from outside government**, from the private sector and academia.*

²⁰ Source: <https://medium.com/@leeseungho/interview-with-anni-lepp%C3%A4nen-of-d9-team-b648608bbbeb>

*A number of key factors for innovation labs to be successful have also been established by respondents. First of all, it appears crucial to have a **sufficient amount of enthusiastic pioneers**, that drive innovation forward and ensure that innovations are maintained and further developed. On the other hand, the **organizational culture** is stated to play a key role in the success of these types of initiatives. The organization needs to be ready to adopt a lab-like approach and have a shared **understanding that cross-border cooperation and experimentation is essential**. For individuals to thrive in such a setting, they need to have the right skills. **Extensive communication** towards the different stakeholders and partners involved, is also considered of vital importance. Furthermore, there should be a **large amount of flexibility and the willingness to change plans** if needed, both on the individual and organizational level. Finally, **support and sponsorship from leaders** as well as a **clear mandate** from higher management are argued to be essential for the development and survival of innovation labs and their projects.*

3.1.4 Innovation resources

3.1.4.1 Budget

The Finnish government does not have one central budget that is reserved for innovation projects. Individual government organizations have to set aside part of their budget themselves, or look for other (external) sources of funding. They can for example participate in innovation projects funded by the Sitra Innovation Fund, or rely on other innovation initiatives such as Experimental Finland, that also provides budget for innovative government experiments.

The Sitra Innovation Fund, is an independent public foundation which operates under the supervision of the Finnish Parliament. Its duties are stated in legislation: the objective of the foundation is "to promote stable and balanced development in Finland, qualitative and quantitative economic growth and international competitiveness and cooperation", by means of supporting "projects that increase the efficiency of the economy, improve the level of education or research, or study future development scenarios".²¹ Sitra was founded in 1967 as a part of the Bank of Finland. Most of the value of its current endowment comes from a donation of Nokia stock from the Finnish Parliament in 1992. Sitra enjoys full operational independence and does not depend on the state budget; instead, its operations are funded with the profits of its endowment and the profits of its operations. So, Sitra has its own program and independently decides in which projects it will invest.²² It is reported both Sitra's financial and content-related independence should be maintained as it has shown to be a critical factor for its success.²³

Sitra functions both as a think tank and do-thank. They perform their own research to determine what are the most pressing societal issues (based on foresight methodologies) which in turn determines their agenda and main areas of focus. Additionally, they fund and implement projects together with the private, public and third sector, which are aimed at increasing sustainable well-being in Finland. The range of projects is broad and includes long-term projects that run for several years, as well as short-term trials that are used to find and test new approaches. The major themes Sitra currently focuses on are 1) capacity for renewal, 2) carbon-neutral circular economy and 3) new working life and the sustainable economy. Both public and private organizations can apply for project funding. The most important criteria Sitra applies to allocate funding entail that 1) the topic of the project should align with Sitra's agenda and 2) that applications for funding should come from cross-sectoral teams. In general, they do not fund projects that are run by one single organization (public or private).

²¹ See: <https://www.finlex.fi/fi/laki/ajantasa/1990/19900717>

²² Source: <https://www.sitra.fi/en/themes/about-sitra/#about-us>

²³ Source: <https://www.sitra.fi/en/news/evaluation-sitras-impact-is-in-co-operation-and-more-is-needed/>

In 2018, the Ministry of Finance also organized a funding round for a large number of experiments, involving the use of new technologies in government. All ministries and agencies could apply for funds through project proposals. 30 Different experiments were selected and started. It is remarked there was an unexpectedly high amount of interest in this funding, even though the granted funds were rather small (approx.; 10.000 euros per experiment) and the administrative burden was significant. Still, many government organizations applied since many of them do not have any leftover budget for these types of projects. They do have ICT budgets, but these are usually tied to specific contracts for specific services and products that are already in place.

There already seems to be a practice in place of co-funding, whereby different government organizations jointly finance an innovation initiative. This is for example the case for the Work 2.0 Lab, which is funded by several organizations, including four different ministries and the City of Helsinki. Innovillage is another example where funding is provided by a variety of government organizations such as the Association of Finnish Local and Regional Authorities, the National Institute for Health and Welfare (THL) and the Ministry of Social Affairs and Health.

3.1.4.2 Staff

Overall, most staff that are involved with innovation in government have other day jobs to fulfill as well. A few are occupied full-time with innovation but this is a minority and mostly applies to the staff of innovation labs/units such as the Sitra lab, Innovation Centre, etc. One respondent argues that it is rather difficult to separate innovation duties from general development tasks in an organization:

“If you are developing new solutions for your organization you are working on innovation, and vice versa, it is difficult to work on innovation if you are not working on new solutions for the day-to-day operations of your organization.”

The opinion is thus held that it is difficult to exclusively hold an innovation role without being involved to some extent with the day-to-day operations of the organization. It is also pointed out that the discourse on public sector innovation is still being developed in Finland, as the term innovation is often still linked primarily to the private sector and not to public organizations.

In the standard recruitment criteria there are no formal requirements concerning innovation. ‘Innovation’ as a capability is not described as compulsory to have. It is included in some other softer tools such as guidelines and handbooks, but it is not truly formalized anywhere. Respondents report that the skills that are officially required for civil servants are more general and focus on things such as language skills, education requirements, communication skills, etc. However, one respondent did indicate that

“there is a significant number of innovation initiatives on the agency-level and it is clear they are systematically and specifically recruiting people with an innovation background and mindset. They appear to have decided on an organizational level that they want to focus on innovation and this is now being implemented through their recruitment strategies.”

Furthermore, the Finnish government has a joined value base consisting of ten values. Innovation is not included in there as such. The previous government did already suggest that innovation should be added to these values. Currently, this is still being decided on as making amendments to the value base is not a simple process. It is possible however that in the future innovation will be added to the value base. In preparation, the Finnish government has performed some studies on the understanding of the innovation value among civil servant as well as citizens.

Leadership

The respondents remark that often, there is one person who is the driver of innovation in a particular organization. But, when that person then moves to another organization, all existing innovation initiatives start to fall to the background and stop existing because there are no other people or team supporting innovation in the organization. That one person would take the innovations with him/her, without it being imbedded into the organization so that it could continue on without that particular leader. The respondents refer to this as the “people-centricity of innovation”, which they think is often problematic in government and causes projects - even if they are successful - to be discontinued.

As mentioned previously, innovation is not formally included in any set of values. However, for leadership, it is a highly valued capability to have. The Finnish public sector training institute Haus offers a program targeted specifically towards senior public managers, aimed at boosting their competencies in cross-administrative cooperation, people leadership and new approaches for solving complex societal issues.²⁶

Training and development

There are a number of organizations within Finnish government that provide innovation-related trainings and workshops. Innovillage and the Sitra lab both offer trainings to civil servants as well as external actors on a variety of innovative topics and working methods, such as ideation techniques, experimentation guidelines, funding information, etc.

Haus functions as the official training provider for the Finnish state. It is 100% state-owned and reports to the Ministry of Finance. They offer online as well as tailor made training programs for civil servants. One of the courses they offer concerns a training program in ‘Innovation Management in Public Administration’. Its creation has been inspired by the new government program, that strongly emphasizes the need for cross-border coordination of innovation and research policies and the strengthening of governance. The program provides an opportunity to develop new operating models in public administration and provides access to tools and guidance models to help civil servants implement their organization’s strategic goals through innovation management. Participants can work on an innovation challenge of their own organization under the guidance of experienced trainers. The program also consists of coaching specifically aimed at strengthening a civil servant’s ability to justify the importance of innovation for their own job. It is encouraged the program is followed by teams, either composed of different profiles from one particular organization, or in cross-cutting teams composed of different organizations. At the end of the training, participants should have a better understanding of the possibilities and requirements of innovation activities in networks.²⁷

Online trainings are made available through the digital learning platform eOppiva, which offers online courses for civil servants on a variety of topics. These include themes such as networking and workplace learning, detailing how civil servants can make better use of both internal and external networks, and how they can work and learn in a network setting. Other themes that are covered include improving digital skills and improving interaction in diverse teams that include different stakeholders (including citizens, networks, etc.).²⁸

Finally, Finland has no government-wide mobility program in place for civil servants. This is in line with findings from previous OECD reviews, highlighting the fact that Finland faces low-workforce mobility. This can be largely explained by the legislative framework that appoints strict mandates and

²⁶ Source: <https://haus.fi/koulutusohjelmat/uudistuja-ohjelma/>

²⁷ Source: <https://haus.fi/>

²⁸ Source: <https://www.eoppiva.fi/>

responsibilities to each line ministry. Even though mobility of civil servants is legally possible, this legislative framework has led to each of the ministries having a different work culture and differing traditions, which is said to act as a mental barrier to cross-ministry mobility of civil servants.²⁹

Conclusion:

*The Finnish government does not have a centralized budget that is fully dedicated towards innovation projects. It is usually up to individual government organizations to reserve a part of their budget for innovation initiatives or look for other sources of funding. There are a number of alternative sources government organizations can rely on if they require additional financing for innovation projects, such as the **National Innovation Fund Sitra** that provides funding for projects addressing key societal issues. Finland is the only researched country to have established a national innovation fund, **accessible for both public and private organizations**. Additionally, funds can also be obtained through programs such as ‘Experimental Finland’ which launches regular calls for project proposals and provides funding for experiments (provided by the Prime Minister’s Office). Occasional funding rounds for experiments have also been organized by specific government organizations.*

*Most government staff that are involved with innovation, have other day jobs they fulfill besides their innovation role. Those that hold fulltime innovation roles are mainly limited to the staff of specific innovation units such as the Sitra lab and the Innovation Centre. ‘Innovation’ as a capability is not yet included in the standard recruitment criteria. It is mentioned in ‘softer’ tools such as guidelines and handbooks but is not formalized anywhere. However, respondents point out that some organizations are **systematically recruiting people with an innovation background**, indicating they have decided to focus on innovation at the strategic level of their organization.*

***Adequate leadership** is seen as key for the development as well as the survival of innovations. One frequently mentioned issue is the “**people-centricity of innovation**”, referring to the phenomenon that innovation projects are often started and driven forward by a single leader. When this person leaves the organization, the innovation project quickly ceases to exist. This is considered to be a structural problem in government and respondents point out that **leadership should structurally embed their innovation initiatives in their organizations**, in order to ensure their survival when they move on.*

*Innovation-related trainings and workshops are provided by niche organizations within Finnish government (such as innovation labs). Additionally, the Finnish government also has a **central training institution**, that provides both online courses via the digital learning platform ‘eOppiva’ as well as tailor made **training programs on innovation in public administration**.*

3.1.5 Innovation evaluation

In Finnish government, different approaches for evaluating innovation projects exist, however most are more informal in nature. In the case of Experimental Finland, evaluation of the experiments happens on the platform. No formal final report exists and the platform/website serves as a synthesis and analysis of the results of the initiative. The reporting is deliberately kept quite light and can be done in whatever form is preferred by the people who perform the experiment (e.g. a powerpoint presentation, in video format, etc.). One respondent clarifies that

“the primary aim of evaluation is to inform people of any conclusions or lessons that can be drawn,

²⁹ OECD (2015), *OECD Public Governance Reviews: Estonia and Finland: Fostering Strategic Capacity across Governments and Digital Services across Borders*, OECD Public Governance reviews, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264229334-en>

rather than use it as a basis for rewards or sanctioning.”

Currently, the state company Motiva is also working on the development of a measurement system. They are developing an approach on how to analyze data that has been produced by experiments and how to create an analysis system for evaluating these types of projects.

For the experiments that were funded by the Ministry of Finance, more strict evaluation tools were used. In order for an experiment to be selected and approved for funding, a thorough cost-benefit analysis had to be provided. Sitra also employs stricter, formal evaluation methods. An external evaluation of Sitra was carried out for its Supervisory Board. Sitra's work, operations and effectiveness were evaluated at regular intervals, by means of seven separate impact assessments carried out in the period 2017-2019. The final evaluation report summarizes the findings of these impact assessments and analyzes whether Sitra is doing the right things, at the right time, in an impactful way, and concludes with ten recommendations for further development. This series of assessments and evaluations on Sitra forms one of the most extensive and comprehensive organisational evaluations ever carried out in Finland and included nearly 500 interviews.³⁰ This external assessment was carried out by a number of independent consultancies. In some instances, Sitra has also relied on academic researchers to provide insights on some of the initiatives they have launched. An example of this is the study on the use of challenge prizes as a tool to spark social innovation. In this study, three researchers (coming from different universities) evaluated the Ratkaisu 100 challenge prize competition throughout its duration and carried out approximately 100 in-depth interviews with the Ratkaisu 100 teams as well as online questionnaires.

Additionally, the Sitra lab itself and its projects are evaluated internally by the lab team itself, once every half year. For this internal evaluation formal reporting to the Supervisory Board is also required. In its evaluation practices, Sitra clearly distinguishes between outputs, outcomes and impact. Outputs and outcomes are reported on immediately after the completion of a project. Impact assessments on the other hand are only done after a sufficient amount of time has passed (on average 1-2 years), in order to be able to accurately assess the actual impact and societal change that has been achieved.

Conclusion:

*For most innovation projects in Finnish government, the **primary aim of evaluation is to inform people of any conclusions or lessons** that can be drawn, rather than use it as a basis for rewards or sanctions. Reporting is usually more **informal** in nature, with **no specific requirements** concerning the use of particular evaluation methods. However, **in some instances more formal** and structured evaluation was preferred, which was the case for Sitra. To evaluate Sitra's operations and impact, a large-scale **evaluation was carried out by external evaluators** (comprised of different consultancies). This evaluation consisted of **regular impact assessments** spread out over a two-year period. Once every half year the Sitra lab was also evaluated internally, by the team itself, for which formal reporting to Sitra's Supervisory Board is also required.*

3.1.6 Data governance

The Ministry of Finance is the core policy provider for ICT and digitization in Finland. The Ministry steers the development of information management in both central and local government, in accordance with the Act on Information Management Governance in the Public Sector. In 2013, The Ministry of Finance, in collaboration with other central government and local authorities, published the first Finnish public sector ICT strategy for central and local government administrations. The strategy states that the authorities must ensure the digital channel presents as an attractive option to

³⁰ Source: <https://www.sitra.fi/en/news/evaluation-sitras-impact-is-in-co-operation-and-more-is-needed/>

the client. The key issues for building digital services are: ensuring interoperability of services, user-oriented design, renewal of service processes, information security and data protection. Open data and information is one of the main strategic axes of the strategy. In line with this, the Ministry of Finance launched the Open Data Program in 2013.

Ministries, government agencies, municipalities, enterprises, NGO's, various organizations, and citizen bodies are all involved in the implementation of the Open Data Program. The program mainly aims to eliminate obstacles to the reuse of Finnish public data and focusses on the creation of the necessary preconditions for open data within public administration. The program has created practices and structures for standardizing and supporting the systematic opening of information resources. The final objective is to achieve data re-use as extensively and quickly as possible.

In Finland, diverse information resources are already provided as open data, from geodata to weather, climate, sea, soil related, transport, financial, statistical and cultural data. Data are however not always interoperable in terms of their content or technical aspects, and need to be standardized in order to address the issue of interoperability.³¹ In line with this, respondents remark that there is indeed an abundance of data, but opening up that data and streamlining it is still considered to be a work-in-progress. Additionally, for some government agencies selling their data has also been a source of income. Therefore, the opening up of information resources also needed to be aligned with the general government fiscal plan.

The only-once principle has also been included in legislation, imploring different agencies and ministries to share data. However, it is argued the implementation of both the Open Data Program as well as the only-once principle is still lagging somewhat behind and needs to be revised. This is one of the main government projects for this term.

Furthermore, the platform 'Opendata.fi' collects all available open datasets from all layers of government and offers access to these free of charge. It is developed by the Digital and Population Data Services Agency, which promotes the digitalization of society and secures the availability of data.³² All invoices from government are also accessible to the public and are published on an open-access platform called Tutkihankinnat.fi. The online platform provides citizens and companies with information on state and municipal procurement. Citizens receive information about what the state and municipalities procure and what public funds are used for.³³

Conclusion:

*Finland has a **formal Open Data Program** in place since 2013, which was launched by The Ministry of Finance in collaboration with other central government and local authorities. The program aims to increase the reuse of Finnish public data and focusses on the creation of the necessary preconditions for open data within public administration. Finland already has a considerable amount of open data available, which are freely accessible by the public on their **national open data platform**. However, these data are not always interoperable and there is still a **need for further standardization to increase interoperability**.*

*Respondents claim there is indeed no lack of data but perceive the actual **data-sharing between different government organizations as well as with the public as a complex process** that could benefit from more stimulation and closer monitoring. They indicate the implementation of the open data*

³¹ Sources: <https://vm.fi/en/open-data-programme>, <https://joinup.ec.europa.eu/collection/nifo-national-interoperability-framework-observatory/document/finnish-open-data-programme-eliminates-obstacles-data-reuse-api-julkictlab-odip-ckan-juhta>

³² See: Opendata.fi

³³ Source: <https://tutkihankintoja.fi/>

program and the once-only principle is still lagging behind somewhat, and a revision of this will be one of the main government projects for this term.

3.1.7 Risk governance

Similar to the other researched countries, no particular risk management strategies or methods are used for innovation projects. It is required that a risk assessment is made in advance for all types of projects, including those that revolve around innovation. All respondents confirm they see no need for applying different risk management strategies for innovation and believe this would bring little added-value.

For the Work 2.0 Lab, a number of risks have been identified proactively, which revolve around the following issues:

- 1) The fact that the lab is designed as an experiment and therefore has not been allocated any permanent resources, meaning there might be a risk that its effects will be small or one-off;
- 2) Established policies, leadership structures, or performance management practices are not based on cross-border cooperation in principle, so there is a risk that the experiment will not trigger sufficient systemic change;
- 3) The Lab is an experiment where not everything is ready or certain from the start, instead they rely on collaboration to find the best working models and learn new things as the experiment progresses;
- 4) There is the risk that the lab will remain a place that only draws in pioneers and it is not found by a larger group of diverse users. (Internal notes Work 2.0 Lab, 2020, p.3)

Conclusion:

*For most innovation projects no particular risk management strategies or methods are used. It is reported to be standard practice to develop a risk assessment preceding any type of project, the same applies to innovation projects. Respondents state they see **no need for applying separate risk management strategies for innovation** and believe this would bring little added value. Some **particular risks** that have been associated with innovation initiatives, include 1) **a lack of stable, long-term funding**, 2) **existing policies, structures and management models that do not align with new forms of cross-administrative collaboration**, 3) **the experimental setup** of innovation projects imply there are no certainties on the results that will be achieved, and 4) **only pioneers might find their way to innovation initiatives while the wider user group is not reached sufficiently.***

3.1.8 Incentives

The Finnish innovation fund Sitra organized the ‘Solution 100’ (Ratkaisu 100) challenge prize competition from 2016. This was an open competition organized by Sitra’s innovation lab and was aimed at solving one of Finland’s key future challenges. The competition consisted of three stages:

- 1) An open call was raised to define a key social challenge affecting the whole of Finland. Challenges could be formulated by anyone, including people working in government.
- 2) Teams comprising problem-solvers from all walks of life were tasked with solving the selected challenge. Here again, teams could be composed of a variety of people, including civil servants. Diversity of teams was strongly encouraged and rewarded.
- 3) The selected teams competed against each other to develop the best solution. A one million-euro prize was eventually awarded and split between two competing solutions: Headai, which harnesses capabilities for identifying expertise using artificial intelligence, and Positive CV (Positiivinen CV),

which identifies hidden strengths in young people.³⁴ Since this type of open innovation competition was open and accessible to all citizens, including civil servants, it can be considered to also incentivize the public sector to partake in both the challenge definition and the development phase. Innovation competitions can also help raise awareness of innovation across government and demonstrate that innovation is occurring as well as motivate staff to innovate. Such events also create a context for motivated innovators across government to come together to share experiences.³⁵

Finally, the presence of an innovation fund has also been identified by OPSI³⁶ as a valuable (financial) incentive for public sector innovation, as it provides funding and guidance to public organizations that wish to execute innovative projects that address societal challenges. Project proposals do have to align with Sitra's agenda – which it sets independently from government – so funds acquired through Sitra cannot be used for all types of innovation projects governments may wish to undertake.

Conclusion:

*The open **innovation competition** organized by Sitra can be considered an incentive, as it encouraged not only citizens but also the public sector to **partake in both the challenge definition and the development phase of innovation**. The **Sitra Innovation Fund itself** can also be considered a financial incentive as it can provide government organizations with stable, dedicated funding for certain innovation projects. Overall, the use of non-financial incentives, such as government awards or idea competitions, appears not to be common yet. When applying a broader view, including all incentives that motivate staff to adopt certain behaviours that facilitate innovation, the Work 2.0 lab should also be recognized for the facilitating role it plays. Since it invests in **work spaces that encourage new ways of working**, focused on cross-sectoral collaboration and co-creation, it can also be considered to incentivize civil servants to adopt these new approaches.*

3.2 Estonia

Estonia was selected for this international comparative study, particularly based on its successful efforts in developing digital innovations for government. Estonia is considered one of the world's most advanced digital societies and pioneer in e-democracy and e-governance. The Estonian success story is the perfect demonstration of the potential digitalization can have for public administration, benefiting service provision towards citizens.

3.2.1 Innovation strategy & policy

Respondents, coming from various ministries in Finnish government, confirm Estonia does not have a central strategy or policy for public sector innovation. It is however reported that innovation is mentioned in its top-level strategies as something that is valued within the government organizations. One respondent remarks this is a deliberate choice:

“We see innovation as a tool for policy making, not as a subject of policy itself, and we find it important that all ministries can make innovation their own, developing their own vision and strategy.”

They don't want it to be enforced top-down as this is believed to be counterproductive. Therefore, the initiative for setting up an innovation strategy lies with the ministries, there are no overarching rules or guidelines. This is also in line with the generally decentralized setup of the Estonian government. Furthermore, it is argued that most ministries today already have a habit of thinking

³⁴ Source: <https://www.sitra.fi/en/topics/ratkaisu100/>

³⁵ Source: OECD (2017), *Fostering Innovation in the Public Sector*, OECD Publishing, Paris. p.147

³⁶ Source: OECD (2017), *Fostering Innovation in the Public Sector*, OECD Publishing, Paris. p.182

about innovative solutions themselves, because they have to deal with more limited budgets every year and thus have to come up with clever solutions to keep up their performance standards.

Estonia has developed an elaborate 'Research and Development and Innovation Strategy' for 2014-2020, focusing on a "knowledge-based Estonia". Here however, the main focus lies on improving Estonia's research capabilities and making it an attractive place for researchers to come, as well as stimulating economic innovation by providing a range of support measures for enterprises that develop innovative solutions. It is stated that research institutions should participate in "productive cooperation with enterprises and government authorities". (Research and Development and Innovation Strategy 2014-2020, p.3). This indicates that investments made in the area of R&D are expected to deliver benefits and innovative solutions to government organizations as well. However, throughout the strategy document emphasis is mainly put on the need for collaboration between enterprises and research institutions to bring forth innovations. No specific mention is made of the Estonian public sector's role, other than supporting and spurring innovation in the research and private sector. No explicit formal strategies or policies are formulated for stimulating innovation in the public sector itself (related to its operations, works methods, service delivery, etc.).

However, we can find a number of targets and action points related to the development of innovative public services and policy-making processes in Estonia's latest Open Government Partnership Action Plans. More specifically, the Estonian OGP action plan for 2016-2018 focused on two priority axes:

3.2.1.1 Increasing the participation of users in designing and developing public services

The below excerpts indicate a clear intention to involve citizens in the actual design of services, in the beginning of the development process.

"Within the OGP framework attention is drawn to the process in which the citizen can participate in the shaping and development of the service so that it may be offered in a smarter and more citizen-friendly way, while further improving the quality of the service, and reducing unnecessary burden for the citizen (be they private individuals or members of the business community)." (Estonia's Open Government Partnership Action Plan for 2016-2018, Government Office, p.4-5)

"Citizen-centeredness also involves the design process of the service – involving citizens in designing and developing the services so that the services correspond to the needs and expectations of citizens in the best possible way." (Estonia's Open Government Partnership Action Plan for 2016-2018, Government Office, p.10)

The Action Plan incorporates two large-scale initiatives to fulfill this commitment: the e-Tax and Customs Board development (electronic services of the Tax and Customs Board) ; and the Zero Bureaucracy initiative (the analysis of the rationality of the burden being created by different norms and regulations, and their streamlining). (Estonia's Open Government Partnership Action Plan for 2016-2018, Government Office, p.4) Both initiatives rely on partnerships between various ministries as well as non-governmental organizations.

3.2.1.2. Increasing engagement and transparency in policy-making

The below excerpts demonstrate emphasis is put on making policy processes more inclusive, and to develop ways in which the public can participate in policy-making early on, starting in the drafting stage.

“The objective is to create inclusivity in policy making at an earlier stage. The objectives of the current developments in the Information System of Draft Acts (EIS) are to expand the opportunities for stakeholders and the public to participate in the early-stage of the policy-making process, making information publicly available when a government agency begins the compilation of a draft act. At the same time, it is necessary to strengthen practices of inclusion. To do this, it is necessary to root the use of the initiation phase in EIS, create participation sections on ministries’ websites and their practice, and strengthen the capacities for inclusion as well as participation.” (Estonia’s Open Government Partnership Action Plan for 2016-2018, Government Office, p.5)

The Action Plan outlines a number of planned test projects that focus on developing more engaging policy-making at the central and local government level, as well as more open and transparent law-making. Here again, initiatives involve partnerships between various ministries, local governments and non-governmental organizations. This priority has also been transferred to the subsequent OGP action plan for 2018-2020. The development of information technology that supports transparent and inclusive policy-making is one of the key projects outlined in the latest action plan. In particular, an update is planned of the e-Consultation Information System (EIS), developing it into a shared environment for policymakers and a variety of stakeholders (including citizens). The aim is to make the e-Consultation system more accessible to stakeholders allowing them to track as well as participate in the earlier stages of the policy-making process and not just in the final stage of coordinating or commenting documents. *(Estonia’s Open Government Partnership Action Plan for 2018-2020, Government Office, p.8)*

In Estonia, the Coordinating Council functions as the coordinating body for the OGP and is in charge of the development of the action plan and the monitoring of its implementation. In line with the OGP principle, the Coordinating Council consists of both government representatives – including representatives from parliament and local governments – as well as non-governmental partners. It is important to remark that strategies outlined in the OGP action plans cannot be enforced top-down. It is up to the individual government organizations to decide if they launch or participate in any projects that support these action plans. Respondents indicate that the only area for which a more centralized strategy has been developed, concerns digital innovations and the development of digital services. This will be further discussed in the section on digital governance.

Conclusion

*In line with its overall decentralized setup, the Estonian government does **not have a central policy** for public sector innovation. It is stated this is a deliberate choice: **innovation is seen as a tool for policy making, not as a subject of policy itself**. Respondents do indicate that innovation is **incorporated in general, top-level strategies** and that it is valued within the different government organizations. There exists a common belief that innovation should **not be enforced top-down**, as this would be counter-productive. Instead, all **ministries should develop their own vision and strategy** for innovation. It is also reported most ministries today have the automatic habit to think about innovative solutions themselves, because they have to deal with austerity every year and thus need to develop clever solutions to maintain their performance standards.*

*Like Finland, Estonia has also joined the global Open Government Partnership program. In their former OGP action plan, Estonia incorporated some action points related to public sector innovation. In particular, focus was put on the **development of user-centered services through co-creation with citizens and more open, inclusive policy-making** (which is continued in their current action plan). It is however argued the **OGP action plan should not be seen as a centralized strategy for public sector innovation**. It cannot be enforced top-down and its implementation depends on the willingness of individual government organizations to participate in projects in support of the OGP goals.*

3.2.2 Innovation networks

A number of networks aimed at supporting the development of innovations in policy and services, are present in Estonia. The approach and goals of these networks are discussed in the below section.

3.2.2.1 I-Club

Estonia has a federal innovation network called the 'I-Club'. The network meetings are organized every quarter by Estonia's 'Innovation Team' (which will be further discussed in the next section) and also include trainings and workshops on innovative methods and topics such as service-design, ideation techniques, prototyping, etc. Focus is put on knowledge sharing and the introduction of innovative program projects. The network also functions as a sandbox for unfinished ideas, allowing for collaboration across organizational boundaries and facilitating problem solving and opportunity identification. Currently, staff from various ministries participate in the network as well as external actors from the private sector, the third sector, etc. The network is considered to be rather informal and is open for everyone to join. Interestingly, Facebook is mentioned as a key channel that is used to help grow the network and attract external parties.

3.2.2.2 Connected Health network

Furthermore, the Estonian government is part of the Connected Health network. Connected Health, founded by the Science Park Tehnopol, is a country-wide partnership between health-related stakeholders in Estonia, who are committed to accelerating the adoption of innovative health solutions. The partnership brings together over 80 different partners, including 43 companies (start-ups, health IT, medtech, biotech, and pharma), R&D partners (universities and technology competence centres), health and wellness service providers, patient organizations and user communities, as well as the public sector. In particular, the ministries responsible for healthcare and entrepreneurship, national health insurance, and the national health development agency are involved. The Ministry of Social Affairs also has one official representative in the partnership's Advisory Board, who represents the viewpoints of the public sector. The aim of the network is to bring together several parties in healthcare to let them team up and collaborate to create new services and products that help solve problems related to healthcare. The network is funded by the European Regional Development Fund, which provides a grant of 600,000 euros.³⁷

3.2.2.3. Open Government Partnership

Furthermore, Estonia has created its own national network in support of The Open Government Partnership (OGP) (similar to the planned national OGP network of Finland). The OGP network in Estonia was founded with the aim to inform the public about its activities as well as about the national and international developments of the OGP initiative. Network meetings are held to discuss the latest developments concerning open government and related topics. The aim of the network is to actively take part in the public debate concerning the renewal of democracy in Estonia.³⁸

In addition, Estonia is also part of the international OPSI network and considers this a valuable resource for all types of information and best practices concerning public sector innovation.

3.2.2.4. Government task forces

³⁷ Source: <http://connectedhealth.ee/>

³⁸ Source: <https://ega.ee/project/open-government-partnership-network-coordination/>,

At the proposal of the OECD³⁹, Estonian government introduced temporary task forces to solve strategic challenges that cut across different policy domains and therefore require the cooperation of several ministries, government levels and/or sectors. The introduction of Task Forces was coordinated by the Government Office's Strategy Unit. Since 2012, eight such Task Forces have been established on a variety of topics. These have emerged from a number of sources, including the key issues foreseen in Estonia's long-term development, themes signaled by interest groups or other coordinating bodies, or from the agreed priorities of the governing coalition.

The task forces are financed by the European Structural Funds (ESF), although, this often does not cover all expenses related to the task forces. One respondent emphasizes that the funding is only meant for the management of the task force, the further costs associated with the implementation of proposals made by the taskforces, is not covered by the ESF. Which means that for the implementation of solutions, the ministries have to free up the necessary staff and budget themselves. Furthermore, The ESF funds does finance the commissioning of relevant analyses, impact assessments, etc. It also finances the employment of a dedicated leader for the taskforce, who can focus entirely on managing the taskforce and driving its activities forward.

A recent review of the Estonian Task forces looks into the key characteristics and success factors of the task forces⁴⁰. The below paragraph will outline the most important findings of this review.

In the report it is stated that

'the aim of the Task Forces has been to increase the effectiveness of cross-sectoral cooperation in solving horizontal policy problems, without getting tangled in established, rigid areas of responsibility and funding arrangements (p.11)'.

Compared to the other coordination tools that exist within the Estonian government, it is stated the Task Forces possess a unique combination of five critical traits:

- 1) Task Forces address policy problems that are multi-faceted, cross-sectoral and strategically important to the Government.
- 2) Task Forces are formally established with the mandate of the Estonian Government. This mandate is essential in giving weight to the task, as well as ensuring political commitment and boosting the motivation of participants to contribute.
- 3) Task Forces aim to bring together all relevant stakeholders to secure a comprehensive view of the issue that incorporates the perspectives of various parties engaged with the problem.
- 4) The Task Forces have a dedicated budget at their disposal, to fulfil their tasks. This availability of resources allows for a policy problem to be tackled systematically and in depth. The dedicated funding of the Task Forces also allows for leaders to be hired – and financially compensated - to manage the work, steer activities and take charge of achieving the expected outputs. This ensures and strengthens their commitment. Strong leadership is also needed to address potential frictions that might exist between the competing interests of stakeholders.

³⁹ OECD (2011), Estonia: Towards a Single Government Approach. Assessment and Recommendations. Paris: OECD.

⁴⁰ Sarapuu, K., & Trei, M. (2019). *Government Task Forces for more holistic, inclusive and knowledge-based policies*. Luxembourg: Publications Office of the European Union.

5) Task Forces are temporary in nature. This temporariness provides a clear timeline for the activities of the Task Forces and fosters a feeling of urgency that ensures timely results. The maximum duration of a Task Force is limited to 36 months, but as of 2019, all have so far operated for a shorter period.

It is stated the results of every Task Force are meant to be integrated into the daily work of the ministries and agencies and, where necessary, result in relevant changes to legislation, strategic government development plans, and procedures. In order to ensure the Task Forces can achieve their goals and impact policies and services, a number of key factors for success have been identified:

1) A **capable leader** who is committed to the Task Force and remunerated for the work is absolutely critical. The leader must have personal influence, at least some expertise in the relevant area, and a standing from which to communicate with politicians and top civil servants. Selection is not always straightforward, but entails a balancing act between professional knowledge, perceived neutrality, previous experience in high office, and leadership abilities.

2) A **clearly defined task** should be assigned to the Task Force: it must be specific enough to allow for focus, but general enough to permit creativity. The assignment of the task cannot prescribe solutions, and room must be allowed for deliberation and for innovative approaches to emerge.

3) **Results:** concrete agreements on the responsibilities and further division of labour in the policy field must be reached before the end of the Task Force. If the Task Force ends without agreements being fixed, no transformative change can occur.

4) **Ownership:** although the Task Forces are usually given the mission of determining responsibility within the specific policy field, the question of where the policy issue will be located after the end of the Task Force must be discussed before it is established. Ownership is crucial. Properly allocating the responsibilities is one of the factors in the success of the Task Forces.

5) **Political interest** is vital. There must be Cabinet members who feel responsible for the Task Force and will push for the implementation of its results. To maintain political interest and commitment, regular contact must be ensured with the work of the Task Force.

6) **Continuity:** people and links between the temporary Task Force and permanent institutions matter. The knowledge and learning made possible by a Task Force is manifested in individuals who will carry it out in practice.

The report concludes that, by creating the task forces, the Estonian government has developed a functional coordination instrument that is well suited to address complex horizontal policy issues, if the above prerequisites for success are taken into account. In the future, it is argued it will be important to maintain the Task Forces as an exceptional format reserved for substantial cross-sectional policy problems that require transformative change and the determination of accountability. The value offered by Task Forces will only be maintained if the format is not degraded by being used as just another working group or project type. The insights gained from the Task Forces can provide valuable inspiration and guidelines on how innovative, collaborative approaches involving different government organization and external actors, can be implemented in the public sector.

Conclusion:

*The Estonian government already makes use of networks that are aimed at sharing knowledge and expertise, and encourage innovation both within and outside the public sector. The '1-Club' network is a **government-wide innovation network** that focusses on **knowledge sharing and the introduction of innovative program projects**. They hold quarterly network meetings and also provide **trainings and***

workshops on innovative methods and topics such as service-design, ideation techniques and prototyping. The network also stimulates **collaboration across organizational boundaries**, with staff from both government ministries as well as external actors participating in the network activities. While this network is reported to be more informal, the Connected Health and the Open Government Partnership (OPG) network are examples of networks that are more formal in nature, with formal supporting structures and representatives.

What each of these networks have in common is a shared **focus on extensive collaboration between partners from different sectors**, which is seen as crucial for the development of innovative solutions. Finally, Estonian government also introduced **temporary task forces to solve strategic challenges** that cut across different policy domains and therefore **require the cooperation of several ministries, government levels and/or sectors**. The task forces are funded by the European structural funds. So far, eight task forces have been established, which have each have a **dedicated budget** at their disposal and have an **official mandate** from the government. This is considered crucial as this mandate ensures political commitment and boosts the motivation of participants.

3.2.3 Innovation labs & teams

Estonia has one central innovation unit called the 'Innovation Team', which was formed in June 2018 on the proposal of the Task Force on Public Sector and Social Innovation as a joint initiative of six ministries. By now, the team is supported by the State Chancellery, the Ministry of the Interior, the Ministry of Finance, the Ministry of Economic Affairs and Communications, the Ministry of Social Affairs, the Ministry of Justice, the Ministry of Education and Research and the Ministry of the Environment. The team however remains open for other ministries whenever they wish to join. The Secretary-generals of the involved ministries make up the steering committee and decide what projects will be worked on by the team.⁴¹

3.2.3.1 Characteristics

Structurally, the team is located under the State Chancellery or Government Office, which has a transversal supporting role towards the Estonian government. The task of the Innovation Team is to make the Estonian public services more user-friendly and human-centered in cooperation with ministries and agencies. They also adhere to the principles of open innovation, involving end-users and partners from all sectors in their development processes. This illustrates collaboration, both across government organizations as well as with external actors is a key aspect of the initiative. The Innovation Team tries to involve citizens as much as possible in different stages of projects. However, a respondent adds that

“citizen involvement usually remains limited to the testing and evaluation phase of innovations or the consulting stage at the very beginning of projects. Involving citizens in the ideation phase of innovations is challenging and we are still looking at ways to improve this.”

The level of co-creation therefore heavily depends on the type of projects and experiments that are undertaken.

As mentioned previously, the Innovation Team also manages the I-Club innovation network and organizes workshops and trainings focused on service-design. Besides spreading knowledge on design-thinking, focus is also put on rooting design-thinking in organizations by developing and piloting user-centered solutions in a service design program. An example of such a program was the re-design of the cancer-patient journey in the healthcare system. Furthermore, they also focus on knowledge sharing, co-learning, mentorship and international networking. They have developed a supporting

⁴¹ Source: <https://www.riigikantselei.ee/et/innovatsioonitiim>

toolbox containing materials on innovative work methods, worksheets and best practice examples from elsewhere, which are freely available and can be used by everyone who has an interest in these topics.

Originally, the Innovation Team has been created as an experiment for three years (June 2018 - June 2021). 50% Of the team is funded by the European Social Funds and the budget they received for administrative capacity building. The other 50% is funded by the different participating ministries, all contributing equally. It is reported by a respondent that

“by now it has become clear that the venture [Innovation Team] justifies itself and has delivered clear added-value, therefore Estonia would like to continue the project. However, once the funding from the European Social Funds stops, new funding will need to be found in order to guarantee the Innovation Team’s survival.”

For the staffing of the Innovation Team, the Government Office announced a public competition to find suitable team members.⁴² The team now consists of three full-time staff members, with one person coming from government and two other people coming from the private sector. They found it was necessary to have at least one person in the team that is familiar with how government works. The other team members have backgrounds in respectively anthropology and design. Soon, a fourth member will be added to the team who will take care of administrative tasks. When looking at initial selection criteria for the three positions, a respondent reports that

“there was a preference for people with demonstrable experience in innovation and service design, and therefore it was clear from the beginning that external recruitment would also be necessary, as this competence was not yet present internally within government.”

It is important to note that the physical space and proximity is also mentioned as a key factor for stimulating innovation: A few years ago the Innovation Team moved into the ‘Superministry’ building, together with four other ministries. It is reported this really helped improve communication and facilitated the breaking of silo’s:

“Now that the Innovation team works from there and is in close (physical) proximity of different ministries and people, they can more easily join the day-to-day (informal) networking that takes place over there.”

3.2.3.2 Success and fail factors

The Innovation Team has already been able to compile some ‘lessons learned’ and establish an overview of factors that are important for success. These include: a stronger focus on experimenting and an agile and iterative approach, including local governments in innovation projects, and measuring the results and impact that has been achieved. Having the continuous involvement, input and support of the different Secretary-generals through the Steering Committee, is also considered a strong advantage. Furthermore, they believe it is crucial to convey that innovation can happen anywhere within government and that it should not be constricted to the Innovation Team(s).

Finally, it is important to note that a majority of innovation projects and experiments successfully make it to the implementation stage and do not get stuck in the testing phase and lab environment. To achieve this, it is crucial to have highly motivated project teams made up by staff from the various involved ministries and agencies. They can then make sure the innovations get implemented once testing has been completed.

Conclusion:

The Estonian government has a dedicated ‘Innovation Team’ which was formed in June 2018 as a

⁴² Source: <https://www.riigikantselei.ee/en/news/innovation-unit-be-created-joint-ministry>

joint initiative of six ministries. The team has a **formal supporting structure** in the form of a steering committee composed of the Secretary-generals of the involved ministries. They decide on the agenda of the team and what type of projects will be worked on. Structurally, the team sits under the Government Office, which is considered to be the most suited due to its transversal supporting role towards the Estonian government. The main task of the Innovation Team is to **make public services more user-friendly and human-centered.** Cooperation across government organizations, as well as the **involvement of end-users and actors from different sectors,** is considered essential for their innovation processes. Even though efforts are made to involve citizens as much as possible, it is reported that involving citizens in the ideation phase of innovations is particularly challenging, and suitable approaches are still being explored. The team also focuses on **knowledge sharing and mentorship,** and offers **tools and training on innovative work methods.**

The Innovation Team itself has been created as a 3-year **experiment** and is funded by the European Social Funds (50%) as well as by the different participating ministries which all contribute equally (50%). The team is staffed with three **full-time staff** members, who each have different backgrounds and come **from government as well as the private sector.** Some key lessons learned that have been reported include: 1) the need for a strong focus on an **iterative, experimenting approach,** including different governmental levels in innovation projects and **measuring the results and impact** that has been achieved, 2) having the support and input from a **formal structure** (Steering Committee) and top management to ensure experiments make it to the implementation stage, and 3) clearly conveying **innovation can happen anywhere** in government and is not constricted to the innovation team(s).

3.2.4 Innovation resources

4.2.4.1 Budget

There is no overarching government-wide innovation budget available for innovative projects. Some individual ministries do set aside a certain budget for innovation, by funding the Innovation Team for example. However, the majority of innovation projects are funded with the budget received from the European Structural Funds. These funds are granted to government for a seven-year period and need to be further allocated to the different government organizations. The different government organizations then compete to receive part of this funding. In Estonia, the Ministry of Economic Affairs and Communication determines which projects receive funding. There are however strict guidelines that determine for which purposes these funds can be used. One respondent indicates that many think these requirements are too restrictive, limiting the type of projects that can be funded. Another respondent adds that

“the administrative burden accompanying the European Structural Funds is very high. This is feeding an emerging consensus that transaction costs for using European structural funding for innovative projects are too high. More and more stakeholders (from both public sector and academia) agree that spending on innovation through European structural funding is so complicated, it has actually become one of the barriers to innovation.”

Additionally, since these European Structural Funds are tied to the economic development of the country, it is expected that in the next cycle (from 2023 to 2030) the availability of these European Structural Funds will be dramatically reduced. A respondent confirms that

“there is already wide-spread debate on how this can be compensated for and consensus is starting to grow that it is not ideal to be so heavily dependent on these European funds.”

The Estonian government is reportedly looking into alternative sources of funding, such as the creation of an innovation fund that would consist of state budget. This is considered to provide more

stable, structural funding that is more easily accessible to the different government organizations and respondents expect this would further spur innovation within the public sector.

When looking at budgeting practices, public budget is revised every year in Estonia. They follow a '1+3 system', meaning that government will set the budget for a particular year with the next 3 years in mind. This does not mean there is any guarantee that the same funding will be available next year however. It is argued that in theory, it should be possible to transfer budget from one year to the next, or to pool it between different government organizations. It is argued however this is not so evident in practice. It depends on the ministries involved as they each have their own systems and practices. At the moment, most ministries follow the 3% rule, which implies they cannot transfer more than 3% of their entire budget to the next year. But, if it concerns a priority project for a certain ministry and they didn't manage to spend their entire planned budget that year, they usually get the approval to transfer their remaining budget without any problems.

4.2.4.2 Staff

In the Estonian government there are a number of innovation roles that are specifically recruited for, internally as well as externally. Besides the full-time staff present in the Innovation Team, certain ministries also have Innovation Advisors. These can have a full-time role focused on innovation, or they can combine this with another role.

Leadership

Leadership is mentioned by several respondents as one of the most crucial factors for stimulating innovation. It is argued the degree of innovative mindset varies greatly among leaders, with some being less open-minded while others are really fond of the out-of-the box thinking methods. The last time the Innovation Team received criticism internally, coming from the Steering Committee, the key comment was 'we can't actually implement this'. The Innovation Team often sometimes has to remind leadership that the whole exercise is meant to be boundary-breaking, and that they (the innovation team) have a mandate to go out of the comfort zone.

Within the Government Office, the Top Civil Service Excellence Center is responsible for the recruitment, selection and development of top executives in civil service. They have developed a competency model for top executives which includes 6 different competencies. One of these competencies is that of an 'Innovation Booster'. This entails the following:

"The Innovation Booster is a pioneer; he or she promotes thinking outside the box, encourages taking risks and directs the development and implementation of valuable innovations. An efficient leader actively looks for innovation opportunities, shapes an organization culture that supports creativity, learning and experimentation; encourages the team to develop technical competencies and adopt new technologies. An inefficient leader sticks only with tried solutions, gets tangled in restrictions, is afraid to be wrong and acts within safe limits, ignores the need for technical competencies as well as the opportunities to adopt innovative technologies."⁴³

This demonstrates innovation is considered a key value for leadership, with emphasis being put on traits such as outside-of-the-box-thinking, risk-taking, creativity, learning and experimenting attitude, etc. Furthermore, the competency model states that, in order to successfully manage innovations, strong project management skills and the power to engage people are crucial as innovation is mostly project-based, often involving a variety of stakeholders with varying interests. Finally, the desire and

⁴³ Source: <https://www.riigikantselei.ee/en/top-civil-service-excellence-centre>
<https://www.riigikantselei.ee/en/supporting-government/top-executives-civil-service/competency-framework>

willingness to change, experiment and try new things are mentioned as crucial for innovation leadership.

[Training & development](#)

The Innovation Team is reported by respondents to be the go-to party for trainings & workshops on innovation-related topics. They regularly organize comprehensive trainings on for example service-design. In the standard training offering of the government, a number of innovation-related trainings can also be found. These are usually procured from a variety of external service providers and cover a wide array of innovation techniques and topics, including service-design.

Conclusion:

*Estonia has **no government-wide innovation budget** that is reserved specifically for innovative projects. A number of individual ministries do set aside a separate budget for innovation, however, the majority of innovation projects are financed through the **European Structural Funds**. It argued these funds come with **strict limitations**, restricting the type of projects that can be financed, as well as cause a heavy **administrative burden**. Therefore, consensus is growing on the idea that the transaction costs for using this funding for innovation projects is too high. Therefore, Estonia is also thinking about the creation of a public sector innovation fund – consisting of state budget - to provide more stable, readily accessible funding.*

*The government follows a **'1+3 system'** for budgeting, meaning they set the budget for a particular year with the next 3 years in mind. This implies there are no guarantees that the same funding will be available the next year, which might be a barrier for government organizations to launch any innovation projects.*

*Estonian government has a **number of innovation roles that have been specifically recruited for**, internally as well as externally. Besides the full-time staff present in the Innovation Team, certain ministries also have (either full- or part-time) Innovation Advisors. For the staffing of the Innovation Team, there was a preference for people with demonstrable experience in innovation and service design. It is argued it was therefore clear from the beginning that **external recruitment would also be necessary, as this competence was not yet present internally within government**.*

***Leadership is seen as one of the most crucial enablers for innovation**. Estonia has developed a specific competency model for the recruitment and development of top-executives in civil service. One of the key competencies is that of **'innovation booster'**, which emphasizes traits such as outside-of-the-box-thinking, risk-taking, creativity, learning and an experimenting attitude.*

*The **Innovation Team is the go-to party for trainings & workshops on innovation-related topics**. Additionally, the standard training offer of the government also offers a number of innovation-related trainings, which are usually procured from a variety of external service providers.*

3.2.5 Innovation evaluation

For evaluation, in general as well as for innovation projects in particular, a respondents states that

“they would like to focus more on actions that have been undertaken and concrete results that have been achieved.”

The aim is to implement a more evidence-based approach to evaluation within government. Furthermore, performance management is reported to be implemented (in the form of yearly performance reviews etc.), but this is still a work-in-progress.

The steering committee of the Innovation Team is tasked with deciding if an innovation project is successful and should continue to the next stage, or if it should be ended. The team is responsible for the evaluation of innovation projects and has been working on the development of a set of measurements. It is believed both quantitative and qualitative evaluation is needed. Currently, they analyze projects by making use of interviews and some quantitative parameters. However, evaluation of innovation projects remains very case-specific, on an ad hoc basis, rather than through a fixed evaluation process with predetermined parameters of success.

It is argued many innovation projects are still being implemented, and it might be a bit too soon to conclude if these have been successful or not. It is agreed however that, at some point, they will have to start measuring the performance of innovations in a systematic way. The need for measurement of results and impact has also been identified as an important success factor by the Innovation Team. No innovation projects have been labelled as a failure so far. Some projects have been more successful than others, but there haven't been any projects that failed completely. Overall, the aim is to create an encouraging culture towards experimental, innovative projects and therefore it is considered not productive to think in terms of failure vs success. Sometimes projects were not as successful as planned, because the project team was too complicated or because no solution was found, or because no budget was found, etc. But this is still considered a learning opportunity and it is not communicated about in terms of success or failure. This indicates a learning culture is present within the Estonian government, implying it is ok to fail. It is stated one of the most positive impacts of innovation projects is the actual going through the process; training the methods, developing a network with contacts. This encourages people to keep on trying with different project.

Furthermore, the Government Office also encourages all ministries to engage in innovative projects, seeing to it that all ministries are engaging with innovation to some extent. By (informally) monitoring this they can give extra encouragement to those who need it. They also find it crucial that know-how is shared between ministries. They have noticed that experiences and knowledge gathered through innovation projects is not always shared afterwards, resulting in missed learning opportunity.

Conclusion:

*Estonia aims to implement a more evidence-based approach to evaluation within government, focusing on the actions that have been undertaken and the results that have been achieved. For projects that are run by the Innovation Team, the steering committee is responsible for the final evaluation and decides if projects continue to the next stage of development or not. The Innovation Team has been working on the **development of a set of measurements to evaluate innovation projects** and have identified a strong need to start measuring the performance of innovations in a more systematic way.*

*There is **no practice of labelling innovation projects as either a success or a failure**. Even projects that were not as successful as planned, are still considered learning opportunities. This indicates a **learning culture** is present within the Estonian government. Finally, the Government Office also sees to it that all ministries are engaging with innovation to some extent. By (informally) monitoring this, they want to give extra encouragement to those organizations who need it. They also find it crucial that know-how is shared between ministries but have noticed that experiences and knowledge gained from innovation projects are not always shared afterwards, resulting in missed learning opportunities.*

3.2.6 Data governance

Estonia has a strong digital identity and has clear data policies in place. Examples of these include Their open data strategy, which has been formalized into policy since 2012, and internal data sharing through the X-Road platform, which has been mandatory by law since 2000. It is important to note

that the need to share data has been formalized, but it is not specified through which technology, as this should remain open to change.

One of the key principles of the Estonian IT ecosystem is the so-called 'once-only principle', which is facilitated through the use of the data exchange layer called X-Road. This data exchange layer enables Government databases to automatically communicate with each other. X-Road allows Government officials to search and access data from national databases within the limits of their authority. In addition, the system has been further developed to enable eServices that make use of data that are held in different databases. As such X-Road enables – and obligates- all government organizations to share data internally, as well as with a few select external parties who need to communicate with government. The once-only principle is considered crucial for service provision and currently Estonia is front-runner in Europe in this area.⁴⁴ A respondents adds the following:

"I estimate we have deployed this principle for about 80 tot 85% across our whole services ecosystem."

They also focus on open data, making their data and codes (used by the government) publicly available so external parties can re-use these, make adjustments, fix bugs, etc. For data sharing with external entities the open data portal has been created. It is important to mention that responsibility lies with each of the individual government organizations to make their data available on this platform. The notion of shared responsibility is a reoccurring theme. One respondent explains Estonia is a distributed architecture, both technologically and administratively. This implies that their strength is that every organization is responsible for their own activities. There are a few guiding principles when it comes to data management - such as open data, use of a secure digital ID, use of X-Road for internal data exchange - these principles build up the whole ecosystem. It is up to all government entities to take responsibility and ownership over their own data management practices.

Finally, in order to stimulate the development of digital services, a centralized strategy has been developed called 'Digital Agenda 2020 for Estonia'. The development of this Agenda has been the result of a coordinated effort between different stakeholders from the private, third and public sectors⁴⁶. The general responsibility for monitoring the implementation lies with the Ministry of Economic Affairs and Communications. However, one respondent indicates it is important to remark that

"they have a mere monitoring role and try to keep a general overview and push forward new ideas. Still, every organization is expected to carry their own weight and make sure they comply with the existing data policies. if certain organizations are struggling with data management, they will be assisted to resolve the issues. But if they continue not complying with the data policies in place, then can be (indirectly) sanctioned by being denied funding for future new projects."

To receive funding for new projects, organizations need to comply with the general data principles: they need to have open data and they need to follow important technological requirements so data can be shared internally via the X-Road platform.

Conclusion:

*Estonian government has an official **open data strategy** since 2012. Internal **data sharing between different government organizations** has also been made **mandatory by law** since 2000. Data-sharing is facilitated through the use of the **data exchange application 'X-Road'**, which enables – and obligates- all government organizations to share data internally, as well as with a few select external parties who need to exchange data with government. This has been crucial for the implementation of*

⁴⁴ Source: <https://e-estonia.com/>

⁴⁶ Source: https://www.mkm.ee/sites/default/files/digital_agenda_2020_web_eng_04.06.19.pdf

the **'once-only principle'**. So far, it is estimated they have deployed this principle for about 80 to 85% across their whole services ecosystem, making them a front-runner in Europe.

Estonia also focuses on the use and development of open data, **making government data and codes publicly available so external parties can re-use these** for the development of innovative solutions. In order to enable data sharing with external entities, the **open data portal** has been created. Each government organization is responsible for making sure its data is available on this platform. The notion of shared responsibility is a reoccurring theme in Estonian government. It is argued Estonia is a 'distributed architecture', both technologically and administratively, which implies **each government entity has to take responsibility and ownership over its own data management practices**. This is considered a strength since **every organization is aware of the shared responsibility they have to implement a government-wide strategy such as open data**.

The Ministry of Economic Affairs is the department responsible for monitoring the implementation of the digitalization strategy within government. Which is unique to Estonian data governance is the fact that **government organizations can be – indirectly - sanctioned if they do not comply with data policies**, by being denied funding for future new projects. To receive funding for new projects, organizations need to comply with the general data principles. This is reported to help ensure data management strategies are executed government-wide, without any organizations lagging behind.

3.2.7 Risk governance

No separate risk management strategies are used for innovation projects. Respondents all report to use general risk management methods, which are used for all types of project.

At the moment, several respondents report that the biggest risk related to innovation initiatives is the unstable funding. Since funding is not structurally guaranteed for an extended period of time, and largely depends on external funding from temporary European funds (e.g. 3-year funding for the Innovation Team), it is argued by a respondent

"the sustainability of the innovation system is quite fragile".

It is stated by respondents that is considered a good thing that there is a central approach to innovation (through the Innovation team) and that, when the time comes, an alternative will be found to continue with this set up. Additionally, it is pointed out that the setup of the Steering Committee (which oversees the activities of the Innovation Team) also contributes to mitigating certain risks. Since the Steering Committee is composed of the different Secretary-Generals that belong to the participating ministries (who jointly fund the I-Team), it is ensured innovation projects are relevant to the wider government environment. Having the continuous involvement and support from high-level executives coming from different government departments is also considered a method to ensure innovation projects make it past the testing phase or lab environment and get implemented across government.

Conclusion:

*None of the respondents reported using any separate risk management strategies specifically for innovation projects. **General risk management methods** are used for all types of projects. Currently, the innovation-related **risk that is perceived to be the biggest is the unstable funding for innovation initiatives such as the Innovation Team**. Since funding is not structurally guaranteed for an extended period of time, and largely depends on external funding from the European Structural Funds, the sustainability of the innovation system is perceived to be quite fragile.*

3.2.8 Incentives

Currently, financing coming from the European Structural Funds is reported to function as the main financial incentive used for stimulating innovation within the public sector. This access to investment budgets is also reported by several respondents to be the main instrument used to incentivize government organizations to launch innovative projects. As discussed previously, the financing received through the European Structural Funds is crucial for the funding of most innovation projects within Estonian government. However, there is a growing consensus that this strong dependency on the European Structural Funds for funding innovation is not ideal, due to the restrictions and heavy administrative burden that is associated with it.

Therefore, ministries are looking into other funding resources, such as the creation of an Estonian innovation fund, which would be composed of state budget. This is expected to stimulate innovation as currently, ministries that want to launch innovative projects need to look for appropriate funding sources themselves, which is not always evident. It is also considered a useful alternative or complement to the European Structural Funds, providing more stable and readily accessible funding, which should further incentivize government organizations to set up innovative projects.

Furthermore, the Accelerate Estonia project, initiated by the Ministry of Economic Affairs, can also be considered to incentivize collaborative innovation in Estonian government. Accelerate Estonia is a platform for both the public and the private sector and enables them to join forces and develop new innovative solutions to wicked problems. The aim is to develop ideas into solutions that better serve the citizens as well as create economic value. By collaboratively developing the business and regulatory environment, new business models, products and services can be developed more efficiently.⁴⁷ The themes for projects launched by Accelerate Estonia are sourced through idea competitions. One of the main methods used for the collaborative development phase include hackathons, after which the solution is piloted and evaluated.

At the moment, there are no other types of incentives – in the form of awards or prize competitions – present for innovation within the Estonian government. Some ministries are currently looking into this however, by looking for best practices and experiences from abroad that can inspire the creation of similar incentives in the Estonian government.

Conclusion:

*Funds received through the European Structural Funds are reported to function as the main vehicle for public sector innovation in Estonia. **Access to the project financing** that is provided by these funds, is considered to be the **main financial incentive** for government organizations to set up innovative projects. There is however a growing sense of unease with the strong dependency on these European funds to finance innovation projects. Therefore, Estonia is also looking into the development of alternative funding sources, such as the creation of an Estonian innovation fund to support public sector innovation. Furthermore, the platform **Accelerate Estonia incentivizes both government organizations and private actors to partake in collaborative innovation projects** and jointly develop solutions to wicked problems. Currently, few non-financial incentives - such as innovation awards or prize competitions – appear to be present.*

⁴⁷ Source: <https://accelerateestonia.ee/en/>

3.3 The Netherlands

The Netherlands have been selected as a case for the comparative study, based on their experience with the development of innovative programs and projects that reach across different governmental levels, and focus on collaboration with different stakeholders to address societal issues. They can also provide inspiration for the creation of supporting structures that unite the experience and knowledge from different sectors (private, public and academia) to develop innovations in public service.

3.3.1 Innovation strategy & policy

Currently, there exists no government-wide overarching innovation strategy or policy in the Netherlands. However, a growing number of government organizations have started with the development of their own innovation policies.

A recent study from ABDTOPConsult⁴⁸ on the theme of innovation within the different government organizations indicated that innovation features on the agenda of nearly every organization. The study indicates there is a trend among departments and administrative agencies to establish central units for 'Strategy, Knowledge and Innovation', tasked with developing a strategy in support of innovation as well as ensuring its implementation through innovative programs and projects. Overall, departments and administrative agencies have organized themselves differently when it comes to stimulating innovation, either:

1. in a solid and structural manner, through cooperation with institutes;
2. firmly anchored in covenants (pacts) with sectors;
3. or within their own organizations, focused on internal efforts (Presentation ABDTOPConsult: Innovation, p.9).

3.3.1.1. Innovation through cooperation with institutes

The cooperation between the Ministry of Defense and TNO (the Netherlands Organisation for applied scientific research,) is an example of structural cooperation with institutes. TNO collaborates with governments, enterprises and knowledge institutes and provides advice on the successful implementation of innovations. In particular, they advise and guide the Ministry of Defense on the efficient application of innovations in the area of defense. Additionally, TNO also performs assignments for the Ministry of Economic Affairs and Climate Policy and the Ministry of Social Affairs and Employment. For research commissioned by government, TNO receives government funding.⁴⁹

3.3.1.2 Innovation through covenants

The Ministry of Health, Welfare and Sport and the Ministry of Education, Culture and Science are examples of government organizations that aim to generate innovative solutions for societal challenges by relying on covenants with different sectors. An example of such a pact includes the 'Covenant Healthy Weight', which aims to address the growing societal issue of obesity. The covenant was signed by both ministries and different public and private actors, including cities, institutes and various associations in the food and health industry.⁵⁰

⁴⁸ ABDTOPConsult is een kleine adviesgroep van ervaren topambtenaren binnen de Rijksoverheid, die snel inzetbaar is bij complexe of urgente vraagstukken, van onderzoek en advies tot interim-functie vervulling. (<https://www.algemenebestuursdienst.nl/organisatie/abdttopconsult>)

⁴⁹ Source: <https://www.tno.nl/en/>

⁵⁰ Source: Covenant on Healthy Weight 2010-2014 (31899, nr. 14), consulted on <https://extranet.who.int/nutrition/gina/en/node/23560>

3.3.1.3 Innovation through internal efforts

Organizations that primarily focus on internal efforts for encouraging innovation in their organization, include the Ministry of Justice and Security (J&S) and the Ministry of Infrastructure and Water Management (I&W). Their vision and strategies for innovation will be discussed below:

Ministry of Justice and Security

Within the Ministry of J&S, the Central Unit Strategy (CES) provides support in outlining the organization's general strategic course and is tasked with encouraging strategic thinking and action within the ministry. The Innovation Team is a separate unit that focusses specifically on the development of programs, projects and networks that stimulate innovation and change within the areas of justice and security. This happens in collaboration with corporate life and the research sector, nationally as well as abroad.⁵¹

The very first document on innovation that was published within the ministry, and that started the internal movement towards innovation, was the creation of a so-called innovation agenda. This agenda was developed in a record time and in order to achieve this, a type of "guerilla movement" was created, as stated by one respondent. This means there was no search for structures or authorizations within the ministry, rather there was a focus on finding the people who had the energy and will to work on this. These people were brought together and were tasked with creating the innovation agenda, which included the following key points:

- 1) A small team needed to be created to spur innovations within the Ministry. This has taken the form of the current 'Innovation Team' that is a supporting staff department at the top of the Ministry.
- 2) The team will never become the owner of any innovations. The developed innovations are always in the service of the entire Ministry. It is remarked that many departments usually have the tendency to profile themselves and claim the materials they produce as their property. This is the opposite of what the Innovation team does. They only work with very subtle branding on their publications – in the form of a light bulb – without ever mentioning the name of the Innovation Team. The underlying idea is that they want to create a movement instead of promoting themselves.
- 3) The team will stimulate innovations by financing certain innovation projects, for which they have a budget set aside. Good projects are selected and then receive funding and advice from the team.

Furthermore, the ministry also published a number of documents in support of innovation. The magazine "The state of innovation in the field of justice and security" (Min. of Justice and Security, 2018) provides an overview of innovation projects that have been undertaken in this field. The aim of the publication is to inspire people and show that innovation can happen everywhere, by anyone. The magazine also states that

"inspiration happens at the workplace, among colleagues and when working together with knowledge institutes and companies [...] and it doesn't matter if it fails."

This demonstrates the clear intention to spread a learning culture within the ministry, encouraging people to experiment and be less risk-averse.

51 Source: <https://www.rijksoverheid.nl/ministeries/ministerie-van-justitie-en-veiligheid/organisatie/organogram/sg-cluster>

“Innovation Toolbox – get started with your idea” (Min. of Justice and Security, 2017) offers an overview of different methods and tools that can be used by government organizations to further develop innovative ideas and how to get from an idea to an innovation that can be implemented. Tools that are mentioned include project rounds, where staff can submit proposals for innovative projects, internal and external innovation and idea competitions as well as subsidized programs such as Horizon 2020. It also clarifies which tools are suitable depending on the development stage the idea is in.

“Innovating & innovation-oriented purchasing” (Min. of Justice and Security, 2018) is a guide on how to procure innovative solutions and explains the various ways through which this can be done. It features a step-by-step plan, which recommends starting with a clear definition of the demand, determining how companies will be challenged to create innovative solutions and working with prototypes if needed. It also emphasizes methods such as cooperation with knowledge institutions and startups and the use of innovation partnerships with companies.

Ministry of Infrastructure and Water Management

At the Ministry of I&W, the Knowledge, Innovation and Strategy Department is responsible for improving the societal performance of the organization by stimulating innovation and developing a joint strategy. In 2017, the Ministry of I&W took part in a learning trajectory facilitated by Dialogic⁵², on the potential role of the ministry as launching customer for innovations. The reported findings provide insight into the ministry’s vision on innovation and outlines a number of strategic action points:⁵³

1. For the Ministry of I&W, innovation is not a goal in itself, but a means to achieve policy goals. The implementation of innovations is seen as crucial for achieving the established policy goals concerning major societal issues.
2. Spurring innovation within the organization require close(r) cooperation between the policy and executive branches of the ministry, as well as between the ministry and knowledge institutes and companies. It is argued that at the moment, innovation efforts are scattered and there is a lack coordination and efficient cooperation. This has resulted in the fact that even successful pilots within Rijkswaterstaat (the executive agency of the ministry) often not make it past the experimental phase, preventing wide-scale implementation of innovations.
3. The Ministry of I&W can make use of a number of instruments to stimulate innovation, including legislation, regulations, subsidies, etc. The developmental stage of the innovation will often determine which instrument is most suited. Pilots and testing grounds (or ‘living labs’) are considered particularly interesting to allow for practical experimenting with new products and services.
4. The ministry can also make use of its own purchasing power to stimulate innovation, acting as a launching customer. This can be done by proactively requesting innovative products or services, by actively participating in innovation project (co-creation), and/or by being the first major buyer of innovations.
5. There are a number of obstacles that currently prevent or hinder the successful implementation of innovative solutions, these include:
 - Poor interplay between the policy and executive branches of the ministry;

⁵² Dialogic is an independent research and consultancy organization which works on the theme of innovation within the public sector. See <https://www.dialogic.nl/en/>

⁵³ The full Dialogic report ‘Innoveren in de keten: IenW als launching customer’ (2017) can be consulted on <https://www.dialogic.nl/wp-content/uploads/2018/05/Dialogic-2017.-Innoveren-in-de-keten-IenW-als-launching-customer.pdf>

- The existing organizational structure and culture do not fit well with nature of innovations (heavy focus on completing projects within strict time and budget limits and standardized approaches that leave little room for innovation);
- A lack of coherence and connection between different innovation initiatives, as well as insufficient knowledge sharing within the different departments of the ministry;
- The options for public-private cooperation and idea development with the market is seen as limited by the ministry's staff, due to strict criteria and guidelines concerning state aid.
- Challenges in scaling innovations after the (successful) piloting stage.

The report on the learning trajectory concludes with the recommendation that the ministry should stimulate the development of an innovation culture with matching organizational processes. Important factors that are considered crucial for success include:

- Jointly setting an ambitious policy vision and concrete targets;
- Rewarding innovation;
- Facilitating experimentation;
- Ensuring support for innovation through policy frameworks and leadership;
- Strengthening communication and cooperation between the policy and executive branches.

It is also stated more efforts should go towards developing ideas in cooperation with the market. Additional support should also be given to the scaling of innovations after a successful piloting stage. The ministry can only act as launching customer if something is effectively being launched. Pilots only do not suffice to instigate change.

Importantly, the ABDTOPConsult study revealed that organizations have differing opinions on the need for a more centralized, government-wide innovation approach and strategy for innovation. ABDTOPConsult does recommend a more centralized approach, while still ensuring that individual organizations have sufficient freedom to adapt the approach to the specific context they operate in. It is argued this will provide a clearer direction and more streamlined approach for future innovation projects within government (Presentation ABDTOPConsult: Innovation, p.12).

3.3.1.4 Open Government Partnership

Finally, Just like Finland and Estonia, The Netherlands are also part of the Open Government Partnership, which they joined in 2012. In their latest action plan for 2018-2020, one of the priority areas concerns more open and transparent decision-making, particularly on local levels. However, there are also some projects planned on the central level. One of these is the 'Open by Design' pilot: a pilot about information being automatically publicly available immediately at the start of a policy process. In an experimental setup, the Ministry of the Interior and Kingdom Relations together with municipalities will also trial the use of digital tools to support democratic processes and achieve more direct involvement of people in policy-making and decision-making. The trial should enable the development of a set of criteria that are necessary for successful digital participation and raise awareness among authorities of the risks and opportunities of digital democracy. (Action Plan for Open Government 2018-2020 "It must be open", p.4). In the Netherlands, similar to Estonia and Finland, the action plan has also been the result of a multi-stakeholder consultation process including actors from civil society, local and central government organizations as well as citizens.

Conclusion

*Currently, there exists **no government-wide strategy or policy** for public sector innovation in the Netherlands. However, a growing number of departments and administrative agencies have established central units for 'Strategy, Knowledge and Innovation', which are tasked with developing*

*a strategy in support of innovation and ensuring its implementation through innovative programs and projects. A recent study by ADBTOPConsult indicated that **government organizations have organized themselves differently when it comes to stimulating innovation**, either: 1) in a solid and structural manner, through **cooperation with institutes**; 2) firmly anchored in **convenants** (pacts) with sectors; or 3) through a focus on **internal efforts within their own organization**. The Ministry of Justice and Security (J&S) and the Ministry of Infrastructure and Water Management (I&W) belong to the latter category. The Ministry of J&S has published several documents on public sector innovation. These range from strategic documents such as an innovation agenda and purchasing strategies, to educational resources such as an innovation toolbox. The overall aim of these publications is to inspire civil servants and show that **innovation can happen everywhere, by anyone** and should not be restricted to specific innovation teams. The Ministry of I&W considers innovation as a **means to achieve policy goals, not as a goal in itself**. This is similar to the vision held by Estonia. In the strategies of both ministries, **collaboration with knowledge institutes and companies** is also frequently mentioned as a crucial strategy for the development of innovative solutions.*

*The study by ADBTOPConsult revealed that there exist **differing opinions among government organizations on whether or not a more centralized approach and strategy for innovation is needed**. ADBTOPConsult itself does recommend a more centralized approach, however ensuring that individual organizations have sufficient freedom to adapt the approach to their specific environment. Finally, just like Finland and Estonia, The Netherlands are part of the Open Government Partnership program and have developed a national OGP action plan through a multi-stakeholder consultation process with civil society, local and central government organizations as well as citizens.*

3.3.2 Innovation networks

In Dutch government, a number of networks can be found that aim to spur innovation by connecting civil servants across government, and by stimulating knowledge exchange across organizational boundaries. These networks will be discussed in the below section.

3.3.2.1 Rijks Innovatie Community

The Rijks Innovatie Community (RIC) is a government-wide innovation network that is open for everyone who is interested in innovation and works in a central government organization. The network had some predecessors before it was recently reorganized. In its current form it has nearly 1000 members. The RIC is focused on spurring innovation by connecting people and facilitating knowledge exchange throughout the government. They form an interesting network of innovators within government. They learn by sharing knowledge and experiences and facilitate innovation by providing tools and organizing knowledge events. It is their ambition to grow into a network that represents all ministries and that can offer a wide variety of knowledge, ideas, innovation projects, events, tools, experiences and social contacts.⁵⁴ This network aims to stimulate innovation as a mindset, as a movement. In order to achieve this the organization itself remains on the background, instead focus is put on the ministries and the innovations they are working on. The network does not own or run any innovation projects but does provide advice and guidance to its members. It is remarked that there should first be a feeling of collectivity, before any collective structures can be setup. Strengthening this feeling of collectivity is the main focus for now. Participation is entirely voluntary. Currently, six different ministries are involved. One respondent remarks it is not a big issue if not all ministries join from the start. Once the network proves its value it is believed the others will join as well.

⁵⁴ Source: <https://www.rijksinnovatiecommunity.nl/>

This year the network will organize its first government-wide innovation congress, called 'Rijks Innovatie Congres'. There has been some hassle in determining who would join, who would finance the congress, etc. In the meantime, six ministries have reached an agreement. The voluntary basis for this is crucial, as enforcing this top-down would not have worked according to one respondent. Furthermore, the network has a Program Council with representatives from various organizations. They guard the vision and strategy of the RIC and are responsible for the network program. They also have a Community Office that supports the RIC and facilitates the sharing of knowledge between members by organizing regular network meetings and events. The budget for the RIC is provided by both the Ministry of The Interior and Kingdom Relations and the Ministry of Justice and Security. However, in the future they intend to find more structural funding for this initiative.

3.3.2.2 FUTUR network

The FUTUR network is another example of a government-wide network that can support innovation. FUTUR – which is an independent foundation - brings together young civil servants from across government and provides them with opportunities to develop personal networks and exchange knowledge and ideas among each other. The network is open to civil servants from both central and decentral governments, as well as those from research institutes, education, police and political parties. The board of FUTUR consists of young civil servants who - on a voluntary basis – organize network meetings and activities. Because of the emphasis on idea exchange and its government-wide reach, it can be considered a valuable network for facilitating innovation throughout government.⁵⁵

3.3.2.3 Association for Government Management

Furthermore, there is also the Association for Government Management (VOM), an inter-governmental network of professionals in the public sector. The VOM provides a platform through which managers and professionals from various government organizations meet, to work together on innovation within the government. Emphasis is also placed on encouraging the exchange of knowledge and experience, across administrative levels and across organizations. The network's starting point is the organization of informal meetings between civil servants, however, the network itself does have a formal board. This board consists of involved government managers from all layers of public administration. The board members are networkers within their organizations and are committed to making the government future-proof. Throughout the year, VOM also organizes activities such as Reuring! Cafés (debates between top executives), discussion tables and lunch meetings. VOM is also responsible for the organization of the elections for the 'Best Government Organization of the Year' and 'Government Manager of the Year' awards. Additionally, they are responsible for the 'Platform Overheid', an online platform for knowledge exchange between government and academia, and 'OMOOC.nl', a portal with Massive Online Open Courses targeted specifically towards civil servants. The members of VOM carry out their work on a voluntary basis without remuneration. For the funding of network events however, they can count on various government organizations and a number of commercial partners acting as sponsors.⁵⁶

Furthermore, there are a variety of projects that lean on inter-administrative networks and cooperation with external actors. A few examples of such government projects are outlined below.

⁵⁵ Source: <https://www.futur.nl/over-ons>

⁵⁶ Source: <https://www.vom-online.nl/>

3.3.2.4 City Deals

In the City Deals project, cooperation agreements are developed and formalized between the central government, local governments, companies and societal organizations. The cities, together with the involved departments, decide which challenges will be addressed in each City Deal.⁵⁷ The primary aim is to strengthen the growth, innovation and quality of life in Dutch cities. The City Deals are meant to bring forth innovative solutions for societal challenges and/or contain measures to strengthen the economic ecosystem of the urban regions. Through this form of multi-level governance, issues should be addressed more efficiently. One of the key features of the City Deals entail the use of experiments by the local governments that are involved. In particular, the City Deals can stimulate experimentation and innovation by creating a secure testing environment where (temporary) exceptions to regulations are made possible. An evaluation made by the PBL Netherlands Environmental Assessment Agency concluded that the added-value of the City Deals lies in the multilevel-governance approach as well as the room it creates for experimentation and innovation. It is however argued local governments could make more use of the opportunity for experimentation, and central government could be more flexible in addressing obstacles created by regulation.⁵⁸

3.3.2.4 Startup in Residence

The 'Startup in Residence' program connects cities, ministries and provinces with startups and scale-ups to solve key challenges and come up with innovative solutions. Startup in Residence is an initiative of Startup Amsterdam and the Chief Technology Office of the City of Amsterdam, modelled on a similar program in San Francisco. The program consists of a six-month development trajectory in which startups collaborate with government organizations towards a solution for a specified challenge. During this trajectory, startups can benefit from training and mentoring, as well as an extensive network of partner organizations. For the latest edition of the Startup in Residence program, five government organizations decided to join forces and develop joint challenges. By collaborating and formulating challenges based on shared problems, a much larger impact can be made. It is argued that the problems that arise are usually very complex and don't limit themselves to just one specific administrative level. It is for example possible that a province faces a problem for which a pilot has to be run in municipalities. By working together, the number and complexity of challenges can significantly be increased. Additionally, it provides the participating startups with better opportunities for scaling up their operations.⁵⁹ In the next section 'innovation labs & teams', the process and methodologies used in the development stage of the Startup in Residence program will be discussed.

Finally, a large number of thematic networks exist, particularly concerning new technologies such as AI, blockchain, etc. Most of these exist of both government and industry actors, as this is considered key for the success of such initiatives.

Conclusion

*In Dutch government a number of networks exist that facilitate innovation throughout its organizations. The 'Rijks Innovatie Community' (RIC) is a **government-wide network** that is specifically focused on spurring innovation across government. The RIC aims to achieve this primarily by **stimulating knowledge and idea exchange among its members**. It facilitates this by providing specific **tools and organizing knowledge events**. The network has a **formal Program Council with***

⁵⁷ Source: <https://agendastad.nl/city-deals/>

⁵⁸ Source: <https://www.pbl.nl/nieuws/2017/steden-en-rijk-kunnen-nog-meer-leren-van-experimenten-in-city-deals>

⁵⁹ Source: <https://intergov.startupinresidence.com/news/Overheden-bundelen-kracht-voor-een-nieuwe-Startup-in-Residence-editie>

representatives from the involved organizations, who guard the vision and strategy of the RIC and are responsible for the network program. It is emphasized this network aims to stimulate innovation as a mindset. The RIC itself does not own any innovation projects but does provide advice and guidance for projects run by its members. In addition, both the **FUTUR network** and the **VOM network are government-wide networks** that bring together civil servants from different government organizations. Emphasis is placed on **the exchange of knowledge and the development of personal networks, across administrative levels and across organizations**.

Initiatives such as **'City Deals'**, in which cooperation agreements are developed and formalized between cities, the central government, other-level governments, companies and societal organizations, demonstrate **inter-administrative cooperation** is high on the government's agenda. The **'Startup in Residence'** program is another initiative based on **cooperation between governments and external actors**. The program connects government organizations with startups and scale-ups to co-create innovative solutions that address key challenges. In addition, it also spurs collaboration between government organizations, enabling them to develop joint challenges based on shared problems.

3.3.3 Innovation labs & teams

Within the Dutch central government, a number of innovation units and labs can be found: The Innovation team at the Ministry of Justice and Security, the NOVUM Innovation lab of the Sociale Verzekeringsbank, the Innovation lab of the Central Judicial Collection Agency (CJIB) and Digicampus. Each of these will be discussed in more detail below.

3.3.3.1 Innovation Team, Ministry of Justice and Security

Characteristics

The Ministry of Justice and Security has a dedicated Innovation Team, which is a supporting staff department and sits directly under the Secretary-general. They are part of the traditional structure of the Ministry, however, since they are not a line organization they have no hierarchical position or influence within the Ministry. This is said to make the organization somewhat vulnerable as they do not have the position to spur innovation top-down. It is remarked things could progress faster if this were possible, on the other hand, this would also cause more resistance from the traditional structure.

The Ministry of Justice and Security is very decentralized, making it extra difficult to steer things top-down. Therefore, it was decided to invest in a bottom-up approach, letting ideas and experiments originate from within the organization and seeing what it brings. The Innovation Team manages a separate budget which is used to finance innovation projects and experiments. Of those experiments, a considerable number fail, which is not considered a problem but instead seen as a learning opportunity. A respondent adds that

"It is crucial that people realize experiments can fail and that this is ok."

This learning culture is reported to already be present within the Innovation Team, but still needs to be spread further into the organization and wider government. One respondent remarks that

"policy officers are taught to formulate everything in a positive way and to not talk in terms of problems or failures. However, this is precisely what is considered crucial for innovation. Therefore, one of the main tasks of the Innovation Team is changing this mindset."

As mentioned previously, the Innovation Team is part of the traditional structure of the Ministry. One respondent argues this is the best approach, and clarifies:

“since it is only possible to drive change within an organization if you are part of the system of that organization. It would still be possible to produce interesting innovations but there would probably be a lack of influence to really impact the organization.”

However, it is argued that in a later phase, once the organization is more receptive to innovation, having an external innovation unit can also work. The respondent also adds that

“it is to be expected that the Innovation Team experiences resistance from the system, since innovation means change and change always meets some level of resistance. Since 80% of people usually resist change, we have decided to focus on the other 20% and to count on them to gradually convince the others by sharing their experiences.”

The Innovation Team uses a variety of methods to let innovations grow, in line with their bottom-up approach. An example is the internal innovation competition, an idea which was inspired by Google. The competition allowed everyone within the Ministry to submit an innovative idea on a topic of their choosing. The best ideas were then selected and staff could vote on the best ideas. The most important point they wanted to make by organizing this competition is that it doesn't matter where an innovative idea comes from. Good ideas can come from directors as well as secretaries. Currently, the traditional hierarchical structure still stands in the way of capturing ideas from everyone, regardless of their position. This initiative was seen as a good method to challenge this situation and make people think differently. Recently, the topic of public sector innovation has also been addressed at the periodic Consultation of the College of Secretaries-General ('SG-beraad'). This indicates that a top-down innovation movement is also slowly starting to form. It is argued that bottom-up innovation should continue to be stimulated and that, in addition, a facilitating structure for innovation should be developed top-down.

It is reported that by now, they have developed a solid expertise in the exploration phase of innovation, e.g. the making of concepts, prototyping, experimentation, etc. But when it comes to implementation of innovations – also referred to as 'exploitation' – the Innovation Team still experiences struggles. Therefore, more attention will be spent on developing the necessary capabilities for the implementation of innovations. Focus will be put on topics such as purchasing budgets and procedures, authorizations, etc. One experiment that is meant to improve the implementation capabilities of the Innovation Team, is the creation of a so-called 'Innovation Board'. This board was created at the initiative of the Innovation Manager that heads the Innovation Team and is composed of directors of different organizations within the Ministry of Justice and Security. They gather once every two months to learn from each other and exchange ideas and experiences. In the future, the aim is to let the board manage the innovation budget from the Innovation Team and let them become a type of Advisory Board for the Innovation Team. A respondent clarifies:

“Through this initiative, the Innovation Team can mitigate the fact that they do not have any hierarchical power to implement innovations and gain direct access to those that do have a mandate and executive power. Once the experimental phase is over, the goal is to make the Innovation Board a permanent structure, by the end of this year.”

Here, participation in the board is again voluntary. Currently, 12 directors are involved and it is expected more will follow.

[Success and fail factors](#)

It is reported that the success of the Innovation Team lies in the fact that they place others at the center of innovation and that they themselves remain a small, invisible team that supports others with their innovation processes. A respondent clarifies that

“this allows for innovation to become a movement and mindset within the organization, rather than the property or domain of one specific team. In order to achieve this, the (innovation) team should remain small and operate on the background as much possible.”

On the other hand, they have identified 3 key issues that currently hinder their efforts to innovate:

1. Their experience in the exploration phase is solid, however, too many good initiatives are lost once the implementation phase starts. This is attributed to the fact that the existing systems and processes perpetuate what people are already used to doing and or not designed to accommodate change.
2. Focus is put mainly on the now (or ‘horizon 1’ cfm. the Horizon Model of McKinsey). Too little attention is paid to developing solutions for tomorrow (‘horizon 2’) and there is too little anticipation for the challenges of the day-after-tomorrow (‘horizon 3’).
3. There is too little collective power within the Ministry of Justice and Security. Because the Ministry is made up of many independent units, initiatives for the collective are overlooked. (Two-pager: Innovation & Technology on the 3rd Horizon, Innovation Team, 2019)

3.3.3.2. Innovation lab, Central Judicial Collection Agency (CJIB)

Characteristics

The CJIB is an executive agency of the Ministry of Justice and Security and is responsible for the collection of a range of different fines. They have an innovation lab consisting of a multidisciplinary team of staff members from the CJIB. Besides their role in the i-lab, all of them hold different positions within the organization. There are for example data scientists, process specialists and change management specialists. The lab is therefore not a separate unit within the CJIB, but rather a transversal team that comes together to develop innovative solutions to help reach the goals of the organization. It is considered crucial that the team members maintain a strong connection with everyday business through their day-to-day roles, instead of fulfilling a full-time innovation role. This ‘feeling’ with the organization is believed to be essential for developing relevant solutions that can be implemented. They intend to incorporate the knowledge and expertise of various departments in their innovations.

In the lab frequent experimentation is encouraged. They have a dedicated budget for experiments and facilitate these. It is stated that ideas can end up in failures and that failure can even be necessary to eventually end up with brilliant innovative solutions. This indicates there is strong learning culture present within the lab. The lab focusses on finding solutions for problems that the organization faces on a daily basis, such as debt problems.⁶⁰

Success and fail factors

“Thinking big, starting small”, by working with small-scale experiments that allow for fast testing and validation is reported as being crucial for success. So is having a multidisciplinary team that is not just composed of tech savy data scientists but includes a variety of experts such as a strategist and a communications specialist. It is also stated that ideally, an innovation lab should be placed as high up in the organization as possible, and that it should have administrative backup. This should lead to lower levels of resistance within the organization. Finally, it is argued that bureaucracy should be avoided, meaning there is no need to develop a formal ‘innovation department’. Focus should be put

⁶⁰ Source: <https://www.digitaleoverheid.nl/achtergrondartikelen/innoveren-binnen-het-cjib-denk-groot-begin-klein/>

on facilitating rather than controlling or directing innovation.⁶¹ Interestingly, visions on innovation seem to align, the execution however can differ significantly among different government organizations, with one opting for a dedicated innovation team (Min. of J&S), and another opting not to have a dedicated team or unit but rather rely on a transversal team consisting of people holding different positions within the organization (CJIB).

3.3.3.3 NOVUM innovation lab, Sociale Verzekeringsbank

Characteristics

The Sociale Verzekeringsbank has an innovation lab called NOVUM, which was started three years ago. The lab works on innovative projects in the domain of social security. They use proven methodologies and tools that are focused on small-scale testing and quick validation.

They also have a dedicated physical working space, that is specifically designed to facilitate innovative working methods. The lab consists of 11 staff members of which three to four are external experts, called 'innovators in residence' who have experience leading innovation projects. Additionally, there is also an 'entrepreneur-in-residence' who is meant to stimulate the entrepreneurial mindset within the lab. These external experts are hired for a short-term period, between 3-6 months. A respondent states this is done

"to ensure these external experts can bring fresh and new insights to the lab, which would be compromised if they remained in the lab for a longer period of time."

External expertise was also hired to guide the startup phase of the lab. All staff consider themselves 'innovation designers' and deliberately do not refer to themselves as 'innovation managers', since they believe innovation should not be managed but instead should be facilitated and designed. Most of the internally recruited staff did not have any prior knowledge of innovation-related topics. Focus is instead put on on-the-job learning to gain knowledge.

The lab has three goals:

- 1) Come up with new, innovative solutions for citizens and implement these. The importance of the latter is stressed.
- 2) Execute innovative projects more quickly.
- 3) Gather people with an entrepreneurial mindset to develop new solutions to improve service provision in the domain of social security.

They are structurally part of the Sociale Verzekeringsbank, but they function as an independent unit within the organization with a high level of autonomy in setting their own agenda and composing their own project portfolio. They are positioned almost directly under the Board of Directors, with a Chief of Change Officer as link between them and the Board. A respondent explains that

"This allows them to gain approval for strategic decisions quickly, as they do not need to pass their proposals through a variety of hierarchical levels."

Furthermore, it is argued that the lab sometimes does notice resistance from the organization. This is said to be due to the fact that many are unaware of what exactly the lab does. In order to address this, NOVUM has the habit of communicating extensively and transparently about the projects they are working on and the associated costs. This high level of transparency is believed to reduce the amount of resistance they experience. Additionally, one respondent emphasizes the importance of having an extensive personal network, through which perceptions of the lab can be influenced as well.

⁶¹ Source: <https://www.digitaleoverheid.nl/achtergrondartikelen/innoveren-binnen-het-cjib-denk-groot-begin-klein/>

Furthermore, they have a dedicated budget at their disposal, which they receive from the Sociale Verzekeringsbank and the Ministry of Social Affairs and Employment. Approximately 50% of their budget is spent on the hiring of external expertise, the other 50% goes towards personnel costs.

NOVUM looks into a variety of societal issues and challenges, gains insight through research and consultations with users, and then aims to develop suitable solutions. Nearly all of their projects are designed as experiments. Experimentation, prototyping and rapid testing are therefore key methods used in the lab. Furthermore, they also rely on design-thinking and lean-startup principles, and actively involve end-users in the development of solutions. They also consider it crucial to spend a sufficient amount of time on the initial problem analysis and definition, for which they have developed a 'challenge canvas' tool which is available on their website. When the developed prototypes are positively received by end-users, these are then further developed into permanent products and services and integrated into the existing system.

Besides societal challenges such as the aging population, NOVUM also looks into the use of technological innovations for improving public service provision. They are exploring innovations such as voice technology, blockchain technology, AI, and focus on the implementation of the once-only principle in order to decrease the administrative burden both for citizens and civil servants. Additionally, they also use the long-term strategy of the Sociale Verzekeringsbank to identify topics for which innovative solutions are needed. On occasion, they have also been approached by people with a specific question or problem to be resolved.⁶²

Recently, they launched a podcast called 'The Innovation Officer'. In the first episode they provide information about the aim of the lab, their working methods and the projects they are working on. This is meant to inform other civil servants (from various organizations), citizens, as well as other interested parties. In subsequent episodes different innovative topics (such as new technologies) will be discussed.⁶³

[Success and fail factors](#)

A number of factors are considered crucial for the success of the NOVUM innovation lab. Firstly, engaging external experts with experience in running (large-scale) innovation projects is reported to be essential. A respondent states that

"these external experts are often instrumental in driving projects forward, since they are used to having to deliver concrete results in shorter time frames. They can also introduce new ways of thinking and often have different perspectives on issues which adds to the development of innovative solutions."

Secondly, having a multidisciplinary team with diverse backgrounds and expertise is also considered to be important. It is also argued not all staff need to possess pre-existing knowledge on innovation-related topics and methods. Having a learning attitude and being able to continuously learn on-the-job is considered to be more important. Additionally, the diversity of the team (in terms of gender, age, ethnicity) is mentioned as an important factor that facilitates the development of user-centered innovations. Finally, co-creation is also argued to be essential for ensuring developed innovations meet user needs. Here, co-creation concerns both collaboration with citizens, as well as with other staff members from the Sociale Verzekeringsbank who regularly come into contact with citizens and can provide valuable feedback. It is reported that, by involving other staff, more commitment and engagement for the project is also created within the organization.

⁶² Source: <https://novum.nu/>

⁶³ Source: <https://novum.nu/podcast/>

3.3.3.4 Digicampus

Characteristics

Digicampus is a joint initiative of the Dutch government, academia and companies. It was founded by the TU Delft, Nederland ICT, Logius (digital government service of the Ministry of the Interior and Kingdom Relations) and ICTU (an independent ICT consultancy and project organization within Dutch government). The initiative is cofinanced by the Ministry of the Interior and Kingdom Relations and these founding partners. Digicampus brings different sectors of society together to explore, design and test innovative services for citizens and entrepreneurs. Emphasis is placed on digital innovations, which can be implemented in the public sector to improve service provision to better meet the needs of society.

The aim of Digicampus is threefold:

1) They connect organizations with the necessary tools and people to start developing and testing their digital innovation. They look at which existing labs can be used for testing a certain innovation (such as UX, VR, gaming, data labs), who else is working on a similar challenge and which solutions have already been developed.

2) If organizations wish to deepen their understanding of an innovation challenge or are struggling with development, Digicampus brings together different experts from industry, academia and government to further explore this innovation challenge and specific hurdles that need to be overcome. By organizing activities such as knowledge sessions, roundtable discussions, market assessments and hackathons, the understanding of a challenge can be sharpened. Digicampus also collaborates with international organizations to gather best practices and build further on their expertise (from countries such as Finland, Estonia, etc.).

3) Digicampus also developed a testing environment where government organizations can test new applications for authentication, digital identity and data-exchange, free from strict rules. This enables Digicampus to provide a safe place to experiment with public sector innovations, in a lab-like environment that is modelled after government and can be considered a 'digital twin' or copy of government. This enables organizations to experiment in a realistic setting, without danger of affecting their day-to-day operations.⁶⁴

The Digicampus team is staffed with twelve employees from the founding organizations. The majority of staff work part-time at Digicampus and combine this role with another role in either academia or government bodies working on government digitalization, including ICTU and Logius.

Success and fail factors

One of the key strengths of Digicampus is the strong operational collaboration it stimulates between teams from different organizations. Furthermore, in line with the quadruple-helix model – they try to actively involve citizens in the development of new services. They also believe it is better to test an innovation early on with citizens, and fail early on, instead of postponing the testing and failing at the end of the development process when the product is nearly finished. Finally, Digicampus receives a lot of project proposals but they also apply strict selection criteria that focus on the accuracy of the challenge definition and the extent to which results can be measured, as these are considered crucial for success.

⁶⁴ Source: <https://www.dedigicampus.nl/index.php>

3.3.3.5 Startup in Residence

Characteristics

Startup in Residence – introduced in the previous section on networks (3.3.2 *Innovation networks*) - is considered a valuable resource for spurring innovation within Dutch governments, both on the local and central level. Its value lies in its connective power, bringing government organizations and startups together to co-create innovative solutions, thereby creating a valuable network for innovation. At the same time, they also provide a platform on which governments can formulate joint challenges and tackle shared issues together. Additionally, through its focus on co-creation, the program provides valuable insight into innovative work methods and new types of collaborative partnerships. Currently, 14 different governments, ranging from ministries and provinces to cities, have already joined the program. During a six-month development trajectory startups and government organizations co-create solutions for specified challenges. Before the program is started, the challenge that has been defined by the government organization is validated, to check if it is formulated adequately and if what is asked matches the capabilities of startups. Experience has shown the validation stage is essential, since there is often a lack of mutual understanding of the problem to be solved, and communication methods significantly differ. This is why, in the first month focus is placed on ‘alignment’, to ensure there is a solid and shared understanding of the problem and to align communication methods and style.

After the validation, the 6-month development phase can begin: The government organization pays up to 25.000 euros to finance the co-creation phase in which government and startup work together on a proof of concept. During the program the startups can rely on the guidance of mentors and can access a large pool of knowledge and expertise. The government also provides the necessary work space and allows the startups to experiment and test new solutions. The aim is that, if the prototype has proven to be successful at the end of the program, the government organization becomes the first ‘launching customer’ of the startup. While it is the government’s intention to act as a launching customer, successful collaboration can take various forms in practice, ranging from a formal contract (cooperation, license, framework or purchase agreement) to a more supportive or strategic partnership.⁶⁵ If the government organization decides to go ahead and buy the solution from the startup, this can be done under the same procurement contract as the one that was setup for the development of a proof of concept. One respondent states:

“this is considered one of the key benefits of the program, as it allows government organizations to implement the developed solutions faster, since they do not need to start a new and lengthy procurement procedure.”

This is also a key purpose of the program: introducing a different way of procuring products and services by the government, making the procedure more accessible for small parties such as startups, SME’s and social entrepreneurs. It is furthermore argued by a respondent that

“standard purchasing documents can range from 50 up to 200 pages and are very complex. Often, a legal department is needed to adequately respond to these. For the Startup in Residence Program, this was narrowed down to 3 pages. This was possible since in our call to the market we only ask for a solution to a specific problem, without prescribing what that solution should look like. This gives companies the creative freedom they need to propose their innovative solution.”

In line with this, the Haagse Inkoop Samenwerking (HIS), which is a central procurement organization that handles procurement contracts for six different Ministries, launched an experiment on simplified

⁶⁵ Source: <https://startupinresidence.com/>, <https://www.zuid-holland.nl/onderwerpen/economie/startup-residence/>

procuring called 'Procuring on 3x4'. This is also based on shorter procedures with simplified documents (and simplified language) and a minimal amount of predefined requirements.⁶⁷

Success and fail factors

Through innovation programs like 'Startup in Residence', experience has learned that a number of factors are key for the success of collaborative innovation projects:

- 1) There needs to be a clear project owner;
- 2) There needs to be a clear definition of the problem to be resolved, which can be done by turning the problem into a challenge;
- 3) The problem or challenge needs to be validated. This is reported to be the most crucial step.

A respondent explains:

"Often, it seems the challenges do not ask the right questions and do not adequately address the specific problem. It is claimed this could be attributed to the fact that civil servants who have been working on an issue for several years might have developed an understanding of the problem that is too narrow."

Furthermore, it is reported to be important there are enough stakeholders involved with the problem, ensuring there is sufficient support for the development of a solution. Finally, it is considered important the challenge is measurable, meaning they should be able to deliver measurable results. One respondent argues that

"if the challenge is not optimally conceptualized and defined, a project is setup to fail. This is particularly the case for the Startup in Residence program, where the correct definition of a challenge is crucial for selecting the right partner startup."

When looking at the methodologies that are used by different innovation teams, collaboration across organizational boundaries is a recurring crucial element. This collaboration has demonstrated to have clear added-value, both for the development process of innovations as well as for community-building and knowledge exchange. Overall, co-creation with citizens is not yet widespread among government organizations. Several respondents report that, if it does happen it is usually still in the experimental phase. It is also argued this is often difficult to organize, even when it concerns relatively small decisions (such as where to build a play yard in a municipality).

Furthermore, hackathons are another frequently used method of generating new ideas and developing solutions for larger-scale societal issues. Odyssey is an example of an annual hackathon, organized in Groningen, in which government participates. The challenges that are tackled are complex problems that involve multiple stakeholders and are tied to the United Nations Sustainable Development Goals. It consists of a ten-month program during which different stakeholders, including corporates, governments, and non-profits, are brought together. They articulate the challenges and exchange knowledge in preparation for the 48-hour hackathon, where selected teams develop prototypes, supported by all program partners and specialized experts, such as legal advisors and financial regulators. The areas that are covered range from energy transition, logistics, urban infrastructure, healthcare, public safety to nature conservation and digital identity. All teams get access to the ecosystems related to their challenge for further prototype development and pilot launch after the hackathon. They also receive part of the €200,000 in total cash rewards. In this year's edition both the Ministry of the Interior and Kingdom Relations and the City of The Hague are lead partners.⁶⁸

⁶⁷ Source: <https://www.ubriek.nl/documenten/verslagen/2019/03/27/index>

⁶⁸ Source: <https://www.odyssey.org/>

Different government organizations also organize hackathons themselves. Examples are the hackathons that are part of the program 'Regie op Gegevens', initiated by the Ministry of the Interior and Kingdom Relations. The program and supporting hackathons explore and develop solutions that enable citizens to manage their own personal data, such as medical and employment data, and share this efficiently with different government organizations.⁶⁹ The 'Accountability Hack' is another recurring hackathon format jointly organized by the Ministry of the Interior and Kingdom Relations, the Ministry of Finance, Statistics Netherlands (CBS) and the Netherlands Court of Audit. In the hackathon two challenges are put forward for which teams are invited to come up with innovative data-driven solutions. A jury awards the winning team for each challenge with a budget of €20.000 for the further development of their prototype into a functional tool.⁷⁰

Conclusion:

*Across Dutch government a **variety of innovation units** can be found. These can be temporary or permanent, and are either part of a single ministry or agency or function as an independent organization.*

*The **Innovation Team** is a unit at the Ministry of Justice and Security, dedicated towards stimulating innovation in the Ministry. It is a supporting staff department and thus is **part of the traditional structure** of the Ministry. Since they do not have the position or authority to spur innovation top-down they invest in a **bottom-up approach**, letting ideas and projects originate from within the organization through idea competitions, experimentation, piloting, etc. The team has a **dedicated budget** which they use to finance innovation projects and experiments. Currently, they are exploring solutions to improve their capacity to implement successful innovations. Therefore, they are experimenting with the development of an 'Innovation Board' (composed of directors of different organizations within the Ministry) that would function as an Advisory Board to the Innovation Team. This would allow the team to gain direct access to those that do have a mandate and executive power to implement innovations.*

*Both the Sociale Verzekeringsbank and the Central Judicial Collection Agency (CJIB) have their own **innovation labs**, which are both **part of the traditional structure** of their respective organizations. However, some important differences can be observed. The **lab of the CJIB** is – **deliberately - not setup as a separate unit** within the CJIB, but rather functions a transversal team that regularly meets to work on innovations. It exists solely of internal staff, which combine their innovation role with their day-to-day roles within the organization. The **NOVUM innovation lab** (from the Sociale Verzekeringsbank) on the other hand, **is a separate unit**, located nearly directly under the Board of Directors, consisting of both internally recruited staff as well as externally recruited experts. This grants them a **high level of autonomy** in setting their own agenda and composing their own project portfolio. Both labs have a **dedicated budget** at their disposal to finance projects and hire external experts when needed (and in the case of NOVUM, for covering personnel costs). Both labs do share the view that innovation labs should be located as high up in the organization as possible, to ensure they receive the necessary administrative support. They also have a shared belief that teams should be multidisciplinary, consisting of **a variety of profiles with different backgrounds and expertise**. Finally, both believe **that experimentation, rapid testing and validation** is crucial for the development of successful innovations that meet user needs.*

***Digicampus** is an innovation unit that does not operate within a specific ministry or agency. It was created as a **joint initiative of the Dutch government, academia and companies** and brings together different sectors of society to design and test innovative (digital) services. They have also developed a **specific testing environment** – a 'digital twin' of government - where government organizations can*

⁶⁹ Source: <https://www.digitaleoverheid.nl/overzicht-van-alle-onderwerpen/gegevens/regie-op-gegevens/>

⁷⁰ Source: <https://accountabilityhack.nl/wat/>

*safely experiment with new digital applications, free from strict regulations. They also focus on active **co-creation with users**, involving them early on in the development stage and applying **rapid testing** to ensure potential failure happens early on in the development process.*

Startup in Residence (which functions as both a network and development program for innovation) organizes development trajectories in which **government organizations and startups co-create innovative solutions for specific challenges**. It has also **introduced new ways of procuring**, ensuring procurement procedures are better suited for sourcing innovations.

3.3.4 Innovation resources

3.3.4.1 Budget

There is no central, government-wide innovation budget yet. Although plans are made to develop this in the future. Ever more ministries are setting their own budget aside for innovations. Often, innovation clubs have started to form within ministries, who then are granted a certain budget which they can spend on innovative projects. Besides internal budgets, external (EU) subsidies and funds are also used for the financing of innovation projects.

The Direction Digital Government (part of the ministry of the Interior and Kingdom Relations) manages an innovation budget of 6 million euros which they use to finance innovation projects focused on new technologies. All lower-level government organizations (such as provinces, cities, etc.) can apply for this project financing in order to develop and test digital innovations. A jury, composed of people from the Ministry and the corporate world, select which project proposals are granted part of the budget.

In the Startup in Residence program, organizations wishing to develop an innovative solution in cooperation with startups, have to finance this themselves. No project funding is provided for this.

There is some level of budgetary flexibility present within the Dutch government. The pooling of budgets between different organizations is possible, however, this can be quite complex and there might be a lack in understanding of how this works exactly. Transferring budget from one year to the next is not yet possible. A proposition has been made to change this, particularly for innovation projects due to the higher degree of uncertainty that accompanies these projects. One respondent confirms

“it is clearly noticeable in practice that these annual budgetary boundaries slow down innovation.”

The Digicampus initiative, which is co-financed by government, academia and industry, is a good example of budgetary flexibility and how it can help drive forward public sector innovation. In the Startup in Residence Program, budgets are also pooled between different government organizations when they develop joint challenges and pay a start-up for the development of a solution. It is however remarked by a respondent that

“this [pooling of budgets] is complex, especially when organizations from different administrative layers want to co-finance projects.”

The Rijks Innovatie Community network is another example of an initiative that is financed by different government organizations. Currently, the Ministry of the Interior and Kingdom Relations and the Ministry of Justice and Security finance the network, although in the future the aim is to setup structural funding that involves all participating organizations.

3.3.4.2 Staff

Most ministries already have a type of innovation team in place, consisting of Innovation Advisors. They work on the implementation of innovations and usually combine this with more general strategy development. In some of the innovation labs and teams, staff combine their innovation role with another day-to-day job within government. This is for example the case in the Startup in Residence Program, the Innovation Lab of the Central Judicial Collection Agency and Digicampus, which also employs people who hold roles in academia. Other innovation labs and teams however work with fulltime staff, such as the NOVUM Innovation Lab and the Innovation Team of the Ministry of Justice and Security. Opinions on what approach is best differ, but most agree that it is crucial to have at least some staff that are rooted in the organization and have the necessary insight into the day-to-day workings of the organization as well as an extensive personal network. The latter is argued to be instrumental for creating buy-in for the work of innovation units.

Innovation units like NOVUM also indicate that people who are recruited internally for innovation roles, do not necessarily need to own any pre-existing innovation-related knowledge; they can transfer from a traditional role so long as they have a learning attitude. A respondent states that

“In practice, we do see that most civil servants that are involved in innovation teams or units have no specific background or education related to innovation.”

In the Competence Guide of the Dutch government innovation is not explicitly mentioned as one of the key competences. However, some innovation-related competences that are linked to innovation can be found in the guide. These include skills such as creativity, courage, sharing responsibilities, networking, learning and self-development. Creativity is defined as suggesting new ideas and solutions, new ways of looking at things. Courage refers to daring to take risks, trying new and untested approaches and deviating from standard procedures and habits when necessary. Sharing responsibilities and networking requires staff to be able to connect with other parties both within and outside of government, maintaining close networks and actively looking for opportunities to collaborate and co-create. Finally, people are expected to take on a learning attitude and invest in their own continuous development (Competentiegids Rijk, Min. van Binnenlandse Zaken en Koninkrijksrelaties, 2018). Despite not carrying the label of innovation, the described competences and skills can all be considered crucial for innovating within the public sector.

Leadership

Innovation is not specifically defined as a value for leadership. However, various leaders in the public sector are involved to some extent with innovation. Several respondents indicate that the mindset and attitude of leadership is a key factor for establishing an innovative, experimental culture within government organizations.

The Dutch government also unites the skills and expertise of its leadership in an organization called ‘Algemene Bestuursdienst’. This is made up of all 1400 high-level managers from government, ranging from program and project managers, heads of department, directors to secretary-generals and director-generals. Additionally, there exists a small advisory group of highly experienced top civil servants, who can be deployed quickly across government, in complex or urgent projects. These roles can range from research, advise to interim management. This enables them to share their knowledge and expertise across different government organizations. Their experience is considered to be particularly valuable in innovation projects.⁷¹

⁷¹ Source: <https://www.algemenebestuursdienst.nl/organisatie>

Training and Development

Most ministries source their own trainings and workshops related to innovation, from specialist external service providers. Furthermore, the RIC also organizes brainstorm sessions and workshops on innovative methods and tools. The Startup in Residence Program also provides training to involved civil servants and startups on a variety of innovation-related topics and technical applications.

The Ministry of Infrastructure and Water Management has developed its own training program called ‘Accelerate Yourself’. It is aimed at creating the right skills and behavior among their staff so they can contribute to the development of an innovation culture within the ministry. More specifically, the program teaches skills related to intrapreneurship, experimenting and problem-solving. The aim is to let participants use their experiences in their current role and then teach them how they could do things differently and what mindset and skills are needed for developing innovative solutions. Participants receive access to an online work environment with inspiration, tips and innovation tools. They are also expected to have a learning mindset, meaning they should be not afraid to experiment, fail, and learn from their mistakes. At the end of the program an event called ‘Innovember’ is organized, bringing participants together to share their experiences and insights gained through the program. Interestingly, it is also explicitly mentioned that the program does not bring about any additional workload for participants, indicating this is seen as a barrier that might keep staff from being involved with any innovation projects. This is also in line with the general finding that most people involved with innovation (in governments from each of the researched countries) do have to combine this role with another role, leading to an increase in workload.⁷²

A government-wide mobility program called ‘Functieruil’ exists, that allows civil servants to temporarily (or indefinitely) swap roles with an employee of another department or organization, across governmental layers. Staff can therefore not only transfer to another department within their organization, but also from central government to provinces, cities, or municipalities, and vice versa. It is stated that the program benefits both the participating employees as well as the organizations. It is meant to stimulate the exchange of knowledge and experiences and to enhance the participants’ network. Furthermore, it is expected to increase the sustainable employability and flexibility of employees. To support the program, an app was developed that makes it easier for civil servants to come into contact with other people that are considering participating in the job swap.⁷³

Furthermore, networks like FUTUR offer several activities and events that focus on the professional and personal development of young civil servants. The online platform OMOOC.nl, an initiative of the VOM, collects a wide variety of online training courses with the aim to centralize new as well as existing knowledge concerning good practices in public administration, making it easily accessible to civil servants across government. Training courses and insights are shared from different layers of government, politics, corporate life, as well as science. In particular, the OMOOC platform also offers training on agile ways of working, including courses on lean principles and design thinking. Here, civil servants learn about user-centered development of services, agile working methods and the use of experimentation and co-creation for the development of solutions.⁷⁴

Conclusion:

*The Dutch government has **no central, government-wide innovation budget** yet. There is however a growing trend among ministries to set aside part of their own budget for innovation. This is often granted to internal innovation teams – formal or informal – who can spend these funds on innovative projects within their organization, or use it to participate in innovation programs like Startup in*

⁷² Source: <https://www.grit-academy.nu/Modules/accelerate-yourself-iw/>

⁷³ Source: <https://www.ubrijk.nl/service/loopbaan-en-talentontwikkeling/loopbaanbegeleiding/functieruil>

⁷⁴ Source: <https://omoc.nl/over/>, <https://omoc.nl/moocs/wendbaar-werken/>

Residence, which also require financing from the participating organizations themselves. Besides internal budgets, **external (EU) subsidies and funds** are also used for the financing of innovation projects.

There is reported to be **some level of budgetary flexibility** present within the Dutch government. The pooling of budgets between different organizations is possible but quite complex, especially when organizations from different administrative layers want to co-finance projects. This might discourage government organizations to make use of this flexibility. Transferring budget from one year to the next is reported not to be possible yet, and that it is **clearly noticeable that annual budgetary boundaries slow down innovation**.

Part of the researched innovation labs and teams have dedicated fulltime personnel, others however have staff that combine their innovation role with another day-to-day job within government. Opinions on what approach is best differ, but most agree that it is **crucial for the team to have at least some staff that are internally recruited and have insight into the day-to-day workings of the organization and are well-connected**. In practice, most civil servants that are involved in innovation units have no specific background or education related to innovation. It is argued having the right mindset and attitude is most important. Several respondents also reported that the **mindset and attitude of leadership** is a key factor for establishing an innovative, experimental culture within government.

Most ministries source their **trainings and workshops related to innovation from specialist (external) service providers**. Additionally, networks like the RIC and VOM also provide trainings on innovative methods and tools, in the form of **brainstorm sessions and workshops** and through an **online learning platform** offering MOOCs. Finally, a **government-wide mobility program** called 'Functieruil' allows civil servants to **temporarily (or indefinitely) swap roles** with an employee of another department or organization, across governmental layers. It is meant to stimulate the exchange of knowledge and experiences and to enhance the participants' professional network. Therefore, it can also contribute to innovation within Dutch government.

3.3.5 Innovation evaluation

For several of the previously discussed innovation initiatives and projects, evaluations have been carried out and evaluation reports have been published online.

For the 'Startup in Residence' program an official impact report⁷⁵ was made last year, when the initiative had been running for four years. The assessment was carried out by the Startup-in-Residence team of Amsterdam. It is important to remark that the report starts with a definition of what is understood by the term 'impact' and how they measured this. Regarding the definition of impact, the following statements are made:

"For any organization – public or private – knowing your impact means knowing what your activities result in for the stakeholders involved. Not just in economic terms, but also socially and/or environmentally."

"Impact for us is not about the question 'does it work?' but rather, 'how does it work?'. It is about identifying the 'active elements' of our activities and knowing what these will lead to in the long run."

The parameters that are used to indicate the impact or level of success of the initiative include quantitative measures, such as the number of startups that participated and the number of startups

⁷⁵ Source:

https://startupinresidence.com/amsterdam/media/sites/2/2019/06/Startup_In_Residence_Report_Engels.pdf

that delivered successful results at the end of the program and entered into public-private partnerships with the government. Furthermore, the report also includes a qualitative appraisal of the civil servants' experiences with this form of co-creation and the skills and capabilities that were gained. Based on the ambitions of the Startup in Residence program, an impact roadmap was made for each individual project, including four different elements: stakeholders, activities, outputs and (direct and indirect) results. The Impact Roadmaps that are featured in the report mainly contain quantitative measures. Participating government organizations mentioned that it is unusual how the Startup in Residence program focuses on measurable results for continuing the partnership with the startup. In some cases, having practiced with measuring results in this experimental setting has changed their outlook on how to design other procurement processes as well.

Besides the formal impact report, day-to-day reporting happens more informally and focuses mainly on the monitoring of quantitative parameters, such as the number of startups that receive a contract at the end of the program. They also intend to measure the success of the actual implementation of the developed innovations, however, it is not clear yet how they will approach this.

For the City Deals that have been completed, evaluation reports have been created that can be consulted online, via the City Deals website itself⁷⁷. These are evaluations carried out internally, by the City Deals teams themselves. However, not all completed City Deals have published evaluation reports and the applied evaluation approach also varies greatly among the various City Deals. Some evaluations consist of extensive reports (qualitatively) reviewing all aspects of the project and including recommendations for future innovation projects. Others remain limited to a short qualitative appraisal of overall experiences. Here, there appears to be no agreed upon standard for evaluation. A larger-scale, external evaluation report has also been made by the PBL Netherlands Environmental Assessment Agency, commissioned by the Ministry of the Interior and Kingdom Relations. At the time of evaluation, most city deals were still running, so it concerns an ex-durante evaluation. For this report a qualitative approach was used, consisting of both desk research as well as interviews with a number of leaders from different City Deals, coming from all involved stakeholder parties. By gathering their insights and experiences related to the workings and impact of the City Deals, the aim was to gain an overall view of the quality of the City Deals as an instrument for new, innovative ways of collaborating and how it can help solve societal challenges.⁷⁸

Furthermore, the extent to which a learning culture is present within government, is said to vary greatly among organizations. In one of the innovation-related publications of the Ministry of Justice and Security, it is stated that "it doesn't matter if it [innovation projects] fails", which demonstrates a clear intent to spread a learning culture within the ministry, encouraging staff to experiment and be less risk-averse.⁷⁹ Some government organizations have already embraced failure as part of the innovation process, and consider it to be a learning opportunity, others have not. It is argued that in this respect, a substantial culture change is still needed, not only for the development of new services but also in the field of policy-making. It is argued by one respondent that

"in policy-making, people often spend two years developing a policy (without evaluation), which can then turn out not to work once it is being implemented."

Therefore, rapid testing – and failure- early on in the development process is considered to be more efficient since feedback is received faster and the final result can still be altered.

Overall, experimenting for innovation is reported to have wide political support in the Ministry of the Interior and Kingdom Relations. However, in practice this appears much more difficult. One respondent refers to a recent article in the Dutch newspaper 'NRC Handelsblad', for which a variety

⁷⁷ See: <https://agendastad.nl/city-deals/>

⁷⁸ Source: Hamers, D., M. Dignum & D. Evers (2017), Evaluatie City Deals, Den Haag: PBL.

⁷⁹ Source: "The state of innovation in the field of justice and security" (2018), Min. of Justice and Security, p.4

of civil servants from different organizations were interviewed. The article indicates there is a shared sentiment that innovation and change in the field of policy is best avoided, since civil servants are immediately punished for any failures or mistakes. The respondent remarks that experimentation is considered ‘fun’ when it revolves around smaller-scale projects concerning the development of innovative services or the implementation of new technologies. However, once the intention shifts to innovations in policy, there is said to be a strong risk-averse reaction. It is argued that the Startup in Residence program would often be described as a ‘charming’ initiative, however, once the program would shift its attention to the innovation of policy – for example the use of AI in policy-making – it is stated this would be met with more resistance due to the risks involved.

Conclusion:

*For several of the previously discussed innovation initiatives and projects, **evaluation reports have been created and can be consulted online.** In the case of City Deals, evaluations for each of the projects can be found on the City Deals website itself. This is similar to the approach of Experimental Finland, that also uses its website as a platform for the collection and publication of evaluation reports. Additionally, an **external evaluation** (commissioned by the Ministry of the Interior and Kingdom Relations) was carried out, with the **aim of providing a more holistic assessment** of the City Deals as an instrument. Overall, most evaluations are qualitative in nature, focusing on participants’ experiences and perceived effects of the projects. For the Startup in Residence program however, an **impact report** was created that also focusses on quantitative parameters. Participating government organizations pointed out that the program’s **focus on measurable results was unusual for projects in an experimental setting.** This was however considered a valuable learning experience.*

*Some government organizations have already **embraced failure as part of the innovation process**, perceiving it as a learning opportunity, others have not. It is argued that in this respect, a substantial culture change is still needed, not only for the development of new services but also in the field of policy-making.*

3.3.6. Data governance

In 2018, the Cabinet has published the “Dutch Digitalization Strategy”: an overarching strategy that covers everything that has to do with digitalization of public administration. This is the first time ambitions and targets were formulated concerning digitalization on a government-wide level. The main assumption is that the digital transition can only succeed through collaboration. This is illustrated by the following excerpt:

*“We deal with societal challenges by using an approach that transcends sectors and departments. This type of collaboration and connection is essential. The possibilities and effects of digitalization are not restricted by classic boundaries, but cut through countries, sectors and organizations.”
(Dutch Digitalization Strategy 2.0, Min. of Economic Affairs and Climate, 2019, p.7)*

The Dutch Digitalization strategy is based on three key ambitions:

- 1) The Netherlands wish to become digital front-runners in Europe, whereby the Netherlands take on the role of a pioneer and form a testing ground for responsible digital innovation.
- 2) Everyone should be able to join in the digitalization process. This requires efforts in several domains, such as life-long learning and re-skilling for jobs of the future, ensuring digital inclusion, etc.
- 3) A solid trust base is crucial for digital economy, government and society. Protection of privacy, guarding digital safety, careful application of new technologies and clear agreements on the sharing of data are essential. (Dutch Digitalization Strategy, Min. of Economic Affairs and Climate, 2018, p.12)

Additionally, an ambitious agenda on digital government was developed, called ‘NL DIGIbeter: Agenda Digital Government’. The agenda elaborates on the digitalization strategy and describes how

government intends to deal more efficiently with personal data, open data and big data. Focus is put on examining how the analysis and combination of different government data can benefit policy-making and how it can help solve societal challenges. The central government and decentral governments jointly execute the agenda and the Ministry of the Interior and Kingdom Relations has a coordinating role.⁸⁰

In July 2019, an update of the digitalization strategy was published. It provides an overview of the results that were obtained in the last year and looks ahead at future developments. Many actions have been undertaken by government in the field of digitalization, such as the development of a Dutch Cyber Security Agenda (NCSA); the Action Plan on Digital Connectivity; Data Agenda Government; the Action Plan on Digital Inclusion, etc. The Data Agenda Government focusses on the enhancement of data-sharing between governments, as well as between government and industry. Other initiatives include the launch of Digicampus, Blockchain for Good (projects investigating the use of blockchain in public services), and the launch of over 40 field labs that allow entrepreneurs to experiment with new technologies and participate in innovation projects. Looking at the future, the following priorities have been set: the use of artificial intelligence and its implications, using data for stimulating economic growth and addressing societal challenges, digital inclusion and the development of digital skills, digital government, digital connectivity (deployment of 5G) and increasing digital resilience. (*Dutch Digitalization Strategy 2.0, Min. of Economic Affairs and Climate, 2019*)

Furthermore, there is a 'bill on digital government' which is in the process of being approved by the Dutch government. It regulates the further digitalization of government and addresses how citizens and enterprises can safely and reliably log in to (semi-) government services. It also contains rules on information security and privacy and the application of open standards.⁸¹

When discussing the domain of open data, one respondent states that

"In the Netherlands there is a government-wide open data movement present. More and more data are being opened up and shared. However, this is not yet the case for all government organizations. Especially those that have a lot of sensitive data, such as the Ministry of Justice and Security, are reluctant to share any of their data and often cannot due to privacy regulations. This makes data sharing between government organizations as well as with external parties difficult."

The respondent also indicate there does already exist some form of data exchange between the different government organizations, albeit on a small scale. A number of organizations also have their own 'data labs', such as Rijkswaterstaat, the executive agency of the Ministry of Infrastructure and Water Management. Their data lab combines business intelligence, data-analysis and cocreation, both with public and private actors, to develop innovative solutions for service improvements.⁸²

Even though an overarching data strategy exists, it is reported every government organization is individually responsible for managing their own data. There is no dedicated organization that is occupied with the data management of the entire central government. This might be linked to the issue of interoperability of data, which is reported to be largely missing at the moment. There is however a central national data platform that gathers all open data from each organization. This is voluntary and each organization is expected to take the initiative to share their data on this platform.

⁸⁰ Source: <https://www.digitaleoverheid.nl/nl-digibeter2019/>

⁸¹ Source: <https://www.digitaleoverheid.nl/document/wetsvoorstel-digitale-overheid/>

⁸² Source: <https://www.rijkswaterstaat.nl/nieuws/2018/04/de-overheid-wordt-steeds-meer-een-datagedreven-organisatie.aspx>

Conclusion:

The “Dutch Digitalization Strategy” is an **overarching strategy covering all aspects of digitalization** of public administration. The main assumption underpinning the strategy is that the digital transition can **only succeed through extensive collaboration**. The updated ‘Dutch Digitalization Strategy 2.0’ (2019) shows many actions have already been undertaken by government in the field of digitalization, including the development of the ‘Data Agenda Government’, which focusses on the **enhancement of data-sharing between governments, as well as between government and industry**. Additionally, the ‘NL DIGibeter’ agenda further elaborates on the digitalization strategy and describes how government intends to deal more efficiently with personal data, open data and big data. Focus is put on the combination of different government data and how this can benefit policy-making and help solve societal challenges. The **execution of the agenda is also done collaboratively, by both the central government as well as decentral governments**.

It is reported there is already a movement towards more open data present within government. However, not all government organizations are on board yet. Especially those that manage a lot of sensitive data are said to be **reluctant to share their data** due to privacy concerns. This makes data sharing between government organizations difficult and so far, this is reported to **only happen on a smaller scale**. There does exist a central **open data platform** that gathers all open data from government organization. This is however based on the voluntary contributions of each organization. Finally, even though an overarching data strategy exists, **every government organization maintains responsibility for their own data management**.

3.3.7 Risk governance

For innovation projects, government organizations use the same risk management approaches as those that are used for standard projects. Formal risks assessment is usually only done for larger-scale projects with major impact, such as the introduction of a digital passport. Exceptionally, in the case of the Startup in Residence program, the startups are required to submit a detailed risk analysis as part of the selection process.

Furthermore, several respondents indicate that it is often very difficult to perform a risk assessment prior to an innovation project, since these types of projects usually entail a lot of uncertainties concerning the outcome that can be expected. It is also believed it is best for innovation projects not to be subjected to strict limitations that are meant to reduce risk, as this might hinder creativity and experimentation.

Conclusion:

None of the researched innovation teams or units appear to make use of a dedicated risk management approach for innovation. If any risk assessments are carried out, these follow the **traditional approaches for risk management** within government. Several respondents also remark that **imposing too strict rules, aimed at decreasing risks in innovation projects, might have a negative effect on the outcome by reducing the room for creativity and experimentation**.

3.3.8 Incentives

As mentioned earlier, VOM (the Association for Government Management) organizes annual ‘government awards’ in cooperation with government organizations and commercial partners. These awards, consisting of ‘Government Organization of the Year’ and ‘Government Manager of the Year’, have the aim to promote transparency and knowledge sharing within public administration by highlighting and rewarding the work of outstanding government managers and organizations. For the

Government Manager of the Year election, they are looking for progressive managers that develop an open culture of learning and reflection, thus creating a work environment where learning from mistakes takes place. It is also expected that they can inspire and motivate employees and are able - in spite of friction and resistance - to guide them through changes and gain their buy-in. Finally, focusing on network development and the capacity to connect and co-create with various stakeholders is also an important criterion to qualify for the award.

For the Best Government Organization of the Year election, the aim is to award a powerful organization that makes a difference by having the constant will to improve. The organization must also demonstrate that it protects and stimulates a learning culture (whereby failure is accepted as part of improvement processes). The organization must also show it has a clear picture of the main challenges in its environment and that it is able to respond to these by connecting various stakeholders and allowing them to collaborate and co-create. All government organizations can apply for this election (including ministries, provinces, water boards, municipalities, independent administrative bodies and agencies). It is important that the organization has a public function and is mainly financed by public money. In order to judge the organizations as fairly as possible, specific teams and/or organizational units cannot be nominated separately. Only an organization as a whole may compete.⁸³ Both awards utilize selection criteria that focus on connective capacity through collaboration and co-creation, as well as the development of a learning culture that tolerates mistakes. Since these are both key enablers for public sector innovation, the awards can be seen as (indirect) incentives that encourage government organizations as well as individual public managers to prioritize the development of innovative, collaborative approaches and to cultivate a supporting innovative mindset.

In line with this, the FUTUR network (previously discussed in the 'networks' section) organizes annual elections of 'Young Civil Servant of the Year'. This award is aimed at boosting the government's image and rewards young civil servants who demonstrate to have the capability to instigate change and innovation within their organization and are not afraid to experiment.⁸⁴ Furthermore, the various hackathons that have been organized by government can also be considered to incentivize civil servants to partake in new, collaborative partnerships to co-create innovative solutions to societal challenges.⁸⁵ Additionally, the Accountability Hack, has also provided a context for different government organizations to join forces and jointly organize this recurring hackathon format.

Finally, the Innovation Team at the Ministry of Justice and Security has also experimented with an idea competition, an internal innovation competition that allowed everyone within the Ministry to submit an innovative idea on a chosen topic. The best ideas were then selected and staff could vote on their favourite idea. This competition had the primary aim to demonstrate that innovative ideas can come from anywhere within the organization, from directors as well as secretaries. A respondent concludes that

"most importantly, the idea competition encouraged staff throughout the organization to think about innovative solutions."

Conclusion:

*In Dutch government there are a **number of non-financial incentives** for innovation, mainly in the form of **government awards**. The VOM organizes annual awards for 'Government Organization of the Year' and 'Government Manager of the Year'. For both awards, **selection criteria** are applied that focus on **connective capacity through collaboration and co-creation**, as well as the development of a **learning culture that tolerates mistakes**. Since these are considered key enablers for public sector innovation,*

⁸³ Source: <https://www.overheidsawards.nl/>

⁸⁴ Source: <https://www.futur.nl/artikelen/yasmin-brewster-is-javhj20>

⁸⁵ More detailed information on the hackathons can be found in the section 'innovation labs and teams'.

the awards can be seen as incentives that encourage government organizations as well as individual public managers to prioritize the development of innovative, collaborative approaches and to cultivate a supporting innovative mindset.

*Finally, the FUTUR network organizes a similar award targeted towards young professionals within government. The **'Young Civil Servant of the Year' award** is granted to young civil servants who demonstrate to have **the capability to instigate change and innovation within their organization and are not afraid to experiment**. In addition, specific innovation teams such as the team at the Ministry of Justice and Security have also experimented with **idea competitions to harvest innovative ideas from all levels of staff**. Finally, Dutch government also makes extensive use of competitions in the form of **hackathons**, to raise awareness of innovation across government.*

Part 4. Results: Belgian federal innovation architecture

In the following section, key findings from the interviews, document analysis and desk research are outlined, to develop an overview of the innovation architecture that is currently already present in the Belgian federal government.

4.1 Innovation strategy & policy

Similar to previously researched countries, it was investigated whether the Belgian federal government has an organization-wide overarching innovation strategy or policy. All of the respondents confirmed that – to their knowledge – no such federal innovation strategy or policy exists. It is reported the different federal organizations are not obligated to include 'innovation' in their official policy documents. A respondent adds that

"If they do, it is because it is part of their own strategic vision, not because it is imposed or stimulated from above."

Several respondents confirm that innovation currently relies heavily on bottom-up initiatives, and that the initiative has to come from the individual federal organizations themselves. At the same time, with many organizations forming their own innovation networks, aiming to include people from across government, a complex innovation landscape is created. This is exemplified by a remark made by one respondent:

"We started the federal innovation network roughly at the same time when the CoP Agile was created, but we didn't know this from each other until we heard of their existence later on."

Another respondent adds that it is often unclear what differentiates one innovation network or initiative from the other and what their respective added value is. The development of this complex landscape of different innovation networks and initiatives may be caused by the lack of an overarching federal innovation strategy. One respondent reports that it would be beneficial if a uniform vision would exist, providing a general framework or direction for innovation initiatives. On the other hand, several other respondents expressed their preference for not having an overarching innovation strategy, as they believe this would be counterproductive. They hold a shared belief that imposing guidelines and rules concerning innovation could cause more opposition, achieving the opposite of what is intended with such a strategy. Many respondents therefore report they prefer the current situation, where individual organizations have the freedom to start experimenting with new, innovative approaches, giving them the opportunity to see for themselves what works and what does not work in their organization.

Nevertheless, some respondents mention there could be some pressures from the European level to move forward with a (federal) innovation strategy, as every EU member state is obligated to start an 'innovation hub'. One respondent adds that many organizations look to the FPS Policy & Support to lead this project. The respondent claims however that regional governments believe innovation is not a domain that belongs to the federal government level and that instead, this should be taken up more locally.

Document analysis revealed that a considerable number of federal organizations have started developing their own innovation strategy or policy and have already include innovation in policy documents. However, this often remains high-level and is seldom formalized into concrete targets and actions.

4.1.1 FPS Policy & Support

In the case of the FPS Policy and Support, innovation is mentioned as one of eight strategic goals in their latest Management Agreement for 2018-2020. More specifically the sixth strategic goal defines 'Innovation as an imperative for the FPS Policy and Support'. In this document, they explicitly articulate the intention to implement co-creation methods and to collaborate with both internal and external stakeholders to create new approaches.

"The FPS Policy & Support develops new approaches and new work methods in its different areas of competence. The FPS implements co-creation methods. Innovation-meetings with internal or external actors are a tool to create new approaches (Management Agreement 2018-2020, FPS Policy and Support, p.19)."

Furthermore, the Management Agreement also states that

"by leaving room for experience and exchange, and the right to make mistakes, the organization stimulates innovation (p.19)."

This indicates that, within the FPS Policy Support, there already exists an awareness of the need to develop a learning culture through the exchange of ideas and experiences, with the opportunity to learn through trial-and-error. Concrete actions for achieving such a culture and stimulating the use of knowledge exchange are however not outlined.

Additionally, it is mentioned that exchange of information and ideas with clients will be instrumental to gain insight into their needs, and to explore new approaches for collaboration and co-creation.

"Exchanges with our customers enable us to identify their expectations and provide permanent feedback. This enables us to discover areas for co-creation and new forms of collaboration (p.19)."

Besides the innovation lab NIDO (which will be discussed in more detail in section 4.3), the DG Digital Transformation (also located within the FPS Policy & Support) plays an important role in stimulating innovation across the federal organizations, although their focus is more technology- and ICT-oriented. It is clarified by a respondent that their focus goes beyond a mere 'technology watch' towards a 'society watch', exploring how new technologies can be used to improve service-delivery, how they can build a network of innovators and how they can stimulate an innovation culture among the federal organizations.

4.1.2 FPS Home Affairs

In their management agreement for 2016-2018, The FPS Home Affairs mentioned innovation as one of five strategic axes they're focusing one, which entails they:

“lift innovation and administrative simplification to the strategic level of the organization (Management Agreement 2016-2018, FPS Home Affairs, p.16).”

More specifically, innovation is seen as a means to improve efficiency and service quality.

“Innovation is one of the primary means for the development of our department. Innovation can also be key to solving the problems that our FPS and its employees are facing. In this case, it concerns the opportunity to carry out our missions with fewer resources, but also to improve the quality of our performance from a service-oriented point of view, our social responsibility and sustainable development (p.17).”

Furthermore, it is stated that they want to encourage their employees to take initiative and experiment, and that this will require strong leaders who are capable of inspiring their staff.

“We count on our most important asset, namely our employees. They are the ones who are able to identify problems and formulate ideas and proposals for solutions. To be able to work creatively, our employees need space and freedom to take initiatives and experiment. We must dare to bring down the walls in our organization, break the rules, create free spaces, free ourselves from one single thought. To do this, we need strong leaders who are able to inspire, motivate and coach our employees and to frame those new ideas (p.18).”

When asked about how this translates into concrete actions, It is reported that the appointment of a dedicated innovation manager can be seen as one of the most concrete measures taken so far, together with the creation of an internal innovation network within the FPS Home Affairs. A respondent explains that

“At this point, the main focus lies on spreading an innovation culture within the organization.”

In light of this, the current innovation manager has taken the initiative to formulate an ‘innovation roadmap’. This roadmap consists of a set of concrete goals grouped around six axes: leadership, creative mindset, breaking silo’s, continuous education, creation of an experimenting culture and rewarding innovation.

4.1.3 National Social Security Office

The National Social Security Office (NSSO) reports they focus mainly on technological innovation, such as AI, blockchain and other new technologies. Respondents state they closely follow new trends in technology and continuously assess if and how these can be implemented within the organization. This approach is also specified in the update and extension of their latest Management Agreement, for 2019-2020:

“The public social security institutions (OISZ) organize a joint technology watch with Smals⁸⁶ concerning new ICT technologies, of which the use can optimize effectiveness and efficiency, and they will deploy relevant technologies whenever possible.”(p.62)

“The NSSO will explore the possibilities offered by artificial intelligence and will investigate if a robot can support the activities of the reception team.” (p.27)

Furthermore, they also work on incorporating New Ways of Working. Respondents remark that the entire office space of the organization has been adjusted to facilitate these new ways of working, such as teleworking. In their Management Agreement, a concrete target in this respect has also been formulated:

⁸⁶ Smals is a non-profit organization that provides IT services to the public social security institutions (OISZ).

“Each public social security institution commits to offering at least 30% of its employees the opportunity to work remotely, at home or in a satellite office.” (p.58)

They also report to make continued efforts to break existing silo’s, by creating a collaborative platform that gets people out of there silo’s and hierarchies and allows them to work together on different transversal projects within the organization.

4.1.3 FPS Social Security

The FPS Social Security has launched the program FARO, consisting of 6 strategic pillars. One of these pillars focusses on innovation with plans concerning the creation of an innovation lab and the introduction of ‘strategic trendsetting’ practices. Through this innovation initiative they aim to improve service delivery towards citizens as well as explore disruptive innovations that can have a drastic impact on service delivery, such as new technologies like AI. On the other hand, they are very aware to avoid creating a ‘digital gap’, ensuring no user groups are excluded. In their Management Agreement for 2016-2018, the following can be read concerning innovation:

“The FPS functions as a driver of innovation and development of social security and social protection in Belgium by proactively anticipating potential improvements and future challenges the sector will face, both on Belgian and international level, and by renewing its internal workings and set an example for the rest of sector.”(p.19)

Emphasis is put on innovation as a solution for existing and future challenges, as well as the intent to renew or innovate their own working methods.

“(The FPS Social Security wants to be) a participatory FPS: an FPS which workings and innovations in the domain of social security and social protection are based mainly on the interests, motivation and personal or joint initiatives of its staff and the feedback of its partners.”(p.21)

Here, clear reference is made to collaborative innovation, among employees and the organization’s partners. No mention is made however of collaboration with citizens.

Even though most statements concerning innovation remain high-level, it is important to mention that, in practice, innovation initiatives are undertaken (i.e. the creation of networks, organization of a hackathon), these are however not formalized or outlined in any policy documents.

Conclusions

*Currently, **no overarching federal strategy or policy for public sector innovation** exists. The initiative towards the formulation of an innovation strategy or vision rests on the individual organizations, no guidelines or direction is provided. Nonetheless, several organizations have already incorporated innovation in certain policy documents, such as their **Management Agreements**. For some, **innovation is defined as one of the main strategic axes**, however, in most cases **no concrete action plans or innovation targets are defined**. Some respondents stated they prefer to have no federal innovation strategy imposed on them, but instead have the **freedom to develop their own strategy and vision**, taking into consideration the specific context their organization operates in. They believe imposing guidelines and targets concerning innovation would have adverse, counterproductive effects, especially among organizations that have not yet cultivated a mindset in support of innovation. On the other hand, a complex landscape of different innovation initiatives and networks has arisen, possibly because of the lack of a federal strategy. Having a uniform vision and general framework for innovation initiatives – with (broad) guidelines rather than rules – could streamline and coordinate existing initiatives as well as future ones, while still allowing organizations the necessary level of individual freedom.*

4.2 Innovation networks

In the Belgian federal government, a number of networks can be found that are aimed at spurring innovation by connecting people and encouraging knowledge exchange, either within a particular organization (i.e. internal network), or across the federal organizational boundaries (i.e. transversal networks). For the creation of such innovation networks, two main approaches can be distinguished:

1. **Bottom-up:** Several respondents stated that the 'Federal Innovation Network' was born out of a need to connect innovation-minded people from various organizations, to exchange knowledge and experiences. This transversal network is described as an informal network, with no formal structure or rules applying to it. It is still in its early stages but this is an example of a network that was formed bottom-up, through informal contacts between employees from different organizations, driven by shared needs.
2. **Top-down:** The Community of Practice (CoP) Agile from FPS Policy & Support, and the internal innovation networks from FPS Home Affairs and NSSO can be described as networks that were formed top-down. In these cases, the initiative for the network came from higher management, that appoints certain employees to organize / be part of the network.

It is important to note the setup of network can change over time. The internal network of the FPS Home Affairs for instance, has evolved from a formal network to a more informal network. Vice versa, the federal innovation network started out as an informal network but is now gradually becoming more formalized. This will be further discussed in the below section.

4.2.1 Internal innovation network FPS Home Affairs

The internal innovation network from FPS Home Affairs started out as a formal network with 'appointed' network members, selected for this role by management. However, it is reported these appointed members did not last long in their positions and were eventually replaced with voluntary members, who were intrinsically motivated to take on this role. A respondent states this intrinsic motivation of members is essential for the effectiveness and survival of such a network. In addition, the respondent explains that

"it was considered important that the network now remains informal, imposing a minimal amount of burden (i.e. extra work load) onto its members."

Network meetings are regularly organized, but it is emphasized that members are only expected to come when they can fit it in with the rest of their work duties.

4.2.2 Internal innovation network NSSO

On the other hand, the internal innovation network within the NSSO is a formal network, with a formalized structure consisting of a board ('innovation board' that consists of appointed top-managers) and regular network meetings, called 'innovathons'. In these meetings, which take place 3 – 4 times a year, both internal and external speakers are invited to talk about innovative cases they have worked on, so others can be inspired. The methods and innovation process that they follow (ideation via innovathons, prototyping, testing and implementing) are also formally described. Besides the board, members are not appointed and participation is voluntary.

Both the internal innovation networks from the NSSO and the FPS Home Affairs are also described as an important tool to source new ideas from staff. When they started their network the NSSO opted to let their members follow a trajectory with Deloitte, for two specific purposes: 1) learning methods

to spot innovations as well as for implementation of these innovations within the organization; 2) applying these learned innovation methods to an AI case, exploring how AI can be implemented within the NSSO. Even though focus so far has been on technological innovation, they intend to expand their focus to include innovation in other fields as well (such as HR practices, new forms of collaboration, etc.) and encourage members to introduce new ideas related to these fields at the network meetings.

One respondent does mention that the internal network from FPS Home Affairs often seems to be more one-way in terms of interaction, with the innovation manager introducing new ideas and new approaches while the other members take on a more passive, listener role. The respondent explains that

“The intent is to make this interaction in the network more two-way, and encourage members to bring up new ideas by asking them to think about concrete questions.”

Within the FPS Home Affairs, a dedicated brainstorming room has also been setup. This was a collaborative project that involved a smaller group of members. This activity was reportedly more interactive and members did provide more input themselves. Interestingly, the FPS Home Affairs and the NSSO were the only organizations that mentioned they have a separate space, dedicated towards innovation activities. In the case of the NSSO, they created a dedicated space to organize their ‘innovathons’ (network meetings). A respondent further emphasizes the importance of having appropriate spaces to enable innovation:

“Many meeting rooms are completely packed with chairs and tables making it difficult to move around and communicate with everyone. This is however crucial for supporting innovative processes.”

4.2.2 CoP Agile & federal innovation network

As for the CoP Agile, participation is also voluntary, it is reported to be (slightly) more informal than formal, however, a degree of commitment is expected from members. The CoP Agile is an innovation network created by the Team Transformation, which is part of the DG Recruitment & Development from the FPS Policy & Support. It was created to connect changemakers across government and to share expertise, best practices, challenges and solutions.⁸⁷ A respondent clarifies that:

“The intent is to make organizations more agile, but in first instance the focus lies on creating an innovative mindset and raising awareness among staff that collaboration is essential; this implies cooperation across the entire federal government as well as with organizations from other government levels.”

It should be remarked that a number of respondents indicated it was not entirely clear what the main area of focus of the CoP Agile was, with some thinking it revolves more around agile methods that are typically reserved for IT projects. This is an important remark to take into consideration as it might deter people from joining the network due to misperceptions of its purpose.

The CoP Agile holds regular network meetings and it has been decided recently that the CoP will work around a number of specific themes, whereby each thematic work group will be led by different members. During one of the recent meetings it was also decided that the federal innovation network could be (partially) integrated with the CoP Agile, becoming one of the thematic work groups. More concrete agreements were made concerning the integration of the federal innovation network, entailing the following: a set number of six annual meetings should be organized, every member should host a meeting, sessions should be as interactive as possible, focus should not be put on change management but more on early adaptors and ‘real innovation’. All information that is discussed during

⁸⁷ Source: <https://www.ofoifa.belgium.be/nl/fiche/cop-agile>

these federal innovation network meetings should be shared with the CoP Agile. Despite this partial integration, the federal innovation network can still function independently and sail its own course. One respondent does remark the following:

“The integration with the CoP Agile did seem to have the effect that the federal innovation network has become a bit more formalized in certain aspects, with a set number of meetings, reporting duties, etc.”

Furthermore, general consensus exists about the importance of both formal and informal networks and contacts. The Observatory for Public Sector Innovation (OPSI) from the OECD, is an example of a formal network that nearly all researched federal organizations rely on. Various respondents also mention how they came in touch with innovation professionals from other countries/governments through word-of-mouth and informal contacts. These also appear to be crucial for gaining insights and exchanging experiences related to public sector innovation projects. Some respondents clearly had a preference for informal networks and consider these to be more productive since they allow for more freedom and action, compared to formal networks that are limited by red tape. One respondent also remarks:

“It is noticeable more and more people are inspired and motivated to be part of such informal, smaller-scale networks, detaching from silo’s and hierarchies they’ve been used to working in. Many share the desire to simply get together and work on innovative things.”

The respondent explains that, only when the need arises to further develop and implement innovative solutions, a formal network is needed to formalize projects so they can be presented to management for approval.

Most innovation networks described above can be classified as government networks, either operating within one specific organization or functioning as transversal networks, covering different federal organizations. One respondent states that the current focus within the FPS Home Affairs lies on building internal networks within the organization:

“Promoting an innovation culture internally is the main priority at this moment.”

On the other hand, federal organizations such as the NSSO, FPS Social Security and DG Digital Transformation, mentioned external networks – involving external actors such as companies, and knowledge institutes - as an important tool for innovation, describing them as a means to stay connected with society and as an important source of new innovative ideas. In line with this, the FPS Social Security plans to cooperate mainly with external partners for the creation of its future innovation lab, and will be relying heavily on external networks and expertise for this.

In practice, initiatives such as the hackathon jointly organized by the FPS Home Affairs and FPS Justice, did reveal that mixed teams consisting of internal and external experts clearly delivered the best results. For this hackathon they invited civil servants as well as external parties (such as students, start-ups, entrepreneurs) and asked them to come up with innovative solutions for a specific set of challenges. This type of initiative can also be considered to contribute to the development of external networks.

Finally, it is important to remark many innovation initiatives are still to some extent anchored in silos. This is illustrated by the fact that the federal innovation network was started around the same time the CoP Agile was created. However, neither of these were aware of the existence of one another, until later on. Eventually these networks did encounter one another and, in the case of the CoP Agile and the federal innovation network, have become partially integrated.

Conclusions

*Different types of innovation networks currently exist within the federal government, with the majority being **internal networks, comprised solely of government actors**. Some organizations have created their own **organization-specific innovation networks**, to stimulate innovation within their organization and introduce innovative working methods among their staff. These can be **formal or informal**, examples of both exist and this is largely determined by the vision of the leadership in place. Additionally, internal innovation networks exist with a **transversal reach**, gathering members from different federal organizations. These internal networks are used mainly to **exchange knowledge and ideas** on certain topics, and are primarily focused on **achieving the right mindset** within government. In the future however, concrete projects are also expected to be undertaken by these networks. These transversal networks are reported to currently still be rather **informal, but this might evolve over time** as the networks mature. Although, some respondents prefer these networks to stay informal, which allows for faster action and more productivity since they are less hindered by red tape.*

*Networks involving external partners have also proven to be valuable, allowing the public organizations to stay up to date with the latest trends and to acquire expertise for public innovation projects. Overall, it can be concluded there is a **growing awareness among organizations of the value of networks for stimulating innovation**. This is illustrated by the fact that several network initiatives were launched or further developed over the past year, with all respondents participating in one or even multiple innovation networks.*

4.3 Innovation labs & teams

Only the FSP Policy & Support had an innovation unit described as an innovation lab, under the name of NIDO (meaning 'nest'). The biggest difference with other entities that are also involved with innovation (e.g. innovation teams of NSSO, DG Digital Transformation, etc.) is that it consists of employees that are committed fulltime to their innovation roles within the lab. In all other innovation units, members do not fulfill a fulltime role but take on this responsibility on top of their usual day jobs. Furthermore, NIDO acts as a federal innovation lab, offering its services to all federal organizations, as well as organizations from other governmental levels. So far, NIDO has already cooperated with a large number of government organizations from different levels (e.g. FPS Finance, FPS Home Affairs, FPS Justice, Brussels Capital region, Flemish Government, Scienscano, NSSO, etc.).

Additionally, in the DG Digital Transformation, the term 'lab' is used to describe separate innovation projects, for example a lab on chatbots. Here, it concerns temporary structures that are formed around a specific project, and dissolve once the project has been completed. All respondents confirmed no other terms were being used to indicate innovation labs. None of them were aware of the existence of a policy lab, change lab, etc. The FPS Social Security currently has no active innovation lab but, as mentioned previously, does have concrete plans for the setup of an innovation lab in the near future. The launch of the lab is planned for end of 2020 and an external organization will be hired to guide the FPS Social Security through the setup process of the i-lab.

One of the main reasons the federal innovation lab NIDO was created, was to stimulate innovation and make it possible for solutions to be tested faster and for new technologies to be introduced faster and more easily within government. Initially emphasis was put on technology, but NIDO now uses a much wider concept of innovation, which includes a focus on transversal cooperation, design-thinking approaches, experimenting and challenge-oriented innovation. NIDO tries to stimulate innovation by introducing certain platforms and tools they think will achieve the most impact while using the least

amount of resources possible, and by focusing on cooperation between government organizations to stimulate knowledge exchange.⁸⁸

4.3.1 Characteristics

Structurally, the lab is positioned within the FPS Policy & Support, within the department (DG) of Recruitment & Development. The FPS offers strategic and supporting services across all federal organizations, therefore it was decided to place the lab there as NIDO also operates transversally. It is remarked by a respondent that it could be considered a disadvantage that the lab formally is positioned within DG Recruitment & Development, as many people perceived the lab to be an 'HR' service. It is added that

"Even internally within the FPS Policy & Support, we (NIDO) are seen as 'the odd man out' with not many people knowing what it is we do exactly, even though we communicate extensively."

The respondent indicates it would therefore be beneficial for the lab if it were positioned under general management. Interestingly, a very similar comment has been made by a respondent from the Dutch innovation lab NOVUM (the innovation lab of the Sociale Verzekeringsbank). They reported using extensive and transparent communication about their activities and associated spendings, as a key tool to lower resistance (or skepticism) within their wider organization. This shows that the matter of re-locating NIDO, as well as the continuous development of adequate communication strategies for NIDO, should be given sufficient attention. These will be crucial to stimulate its acceptance within the wider organization (FPS Policy & Support) and government.

Interestingly, even though NIDO is embedded in the traditional hierarchical structure of a public service, this does not seem to compromise the lab's autonomy in setting its own goals and determining its own working methods. A respondent further emphasizes the amount of freedom and support they are given by the management of DG Recruitment & Development. This high amount of autonomy is a recurring characteristic of nearly all researched innovation units.

NIDO is funded with budget coming from the DG Recruitment & Development. The assigned budget is not dependent on obtained results or evaluations. NIDO is not subjected to strict evaluation processes and targets and goals are flexible and can change frequently. It is stated by a respondent that only occasional (informal) reporting is required.

When it comes to political support, a respondent reports NIDO currently receives enough support. In this respect, the respondent emphasizes the following:

"It is important we demonstrate the reasons why the lab (NIDO) exists and that we continuously prove we can offer added value in order to ensure the survival of the lab."

It also remarked that, when a new management committee is formed and they do not believe in NIDO, there is always the risk the lab could be terminated quickly. Therefore, the respondent would not describe NIDO as a permanent organization, as it will likely end at some point. It is however hoped that by that time, innovation will be effectively imbedded in the federal government, and there is no more need for an innovation lab like NIDO.

Furthermore, it is reported not much importance is attached to formal job titles within the lab. All people that work at NIDO hold fulltime positions, most of them with a temporary contract through the mobility exchange program from the federal government. Through this mobility program, civil servants can go on secondment and gain experience in a different government organization. The innovation lab NIDO make intensive use of this program for its staffing needs. Additionally, NIDO also

⁸⁸ Source: <https://nidolab.be/>

relies on staff from other departments from time to time, on a project basis. When staff is hired for NIDO, a respondent explains:

“we look for people who are not risk-averse, but who can correctly assess risks and their consequences.”

It is emphasized that, despite the uncertainty that accompanies innovation, staff cannot do whatever without proper risk assessment. A respondent adds that potential candidates for roles at NIDO are usually spotted by NIDO itself, as they report to have developed a good understanding of who would fit in the lab.

Currently, NIDO still has to act proactively and reach out to potential ‘clients’ themselves. They are aware some managers are keen to innovate, but don’t know how. It is stated it is up to NIDO to identify where demand lies (where innovation-minded managers are), and what this demand entails (what issues, challenges managers are dealing with). NIDO then assists managers in the definition and description of their challenges and the search for innovative solutions.

Thus far, NIDO has been instrumental in bringing various government actors together in creating new solutions. However, they report much of their focus still has to go to change management practices, creating awareness and open mindsets among civil servants through workshops and trainings. They feel this should not be their focus and would rather work with those who already have the right mindset and have innovation challenges they wish to work on.

Furthermore, NIDO adheres to the principles of design-thinking, intending to place users at the center of service design, involving citizens, focusing on prototyping and experimenting, etc.

However, true ‘co-creation’, whereby citizens are also actively involved in the design / development of solutions is not widely practiced yet in the federal government. It is remarked by a respondent that

“the federal government might not be at the right maturity level yet to implement these (co-creation) practices.”

A similar remark on co-creation has also been made by a number of respondents in the other researched countries. There, it appears co-creation with citizens is usually still limited to experiments and is not yet being implemented on a wider scale. The NSSO does report to regularly involve users in their projects, but this is limited to consultation rather than active involvement in the development of new services. Examples include needs analyses and focus groups, which are used to gather input before and after a new service (prototype) has been developed.

From the interviews with different government organizations it becomes clear NIDO, at this point, is particularly valued for its insights on when to use which innovation tools & methods, and their assistance in defining concrete challenges to help generate innovative solutions.

Finally, with their planned innovation lab the FPS Social Security plans to focus on the application of prospective analysis and foresight methods⁸⁹, both within and outside their organization. A respondent states

“it is key the FPS Social Security develops timely insight into important trends and how to respond to these efficiently.”

The lab is perceived as a key instrument to enable this. Additionally, they intend to break silos within their organization and to develop a user-centred approach, for example through the creation of

⁸⁹ Foresight permits governments and public administrations to construct contingency plans for undesirable but possible and probable scenarios, while creating policies that capitalize the transformational possibilities of preferred futures, moving from foresight and insight to strategy and action. Applying foresight methods to traditional planning processes represents an opportunity for governments to address the two key issues - responsiveness to change and citizen-centred service design - shaping modern discourse about governance and functions of the State. Bron: GCPSE_ForesightManual_online.pdf (undp.org)

customer journeys. They also link this user-centred approach to co-creation and the active involvement of citizens in the development of new solutions. However, since they are still in the planning phase, concrete goals still need to be defined. They also plan to invest in extensive experimentation and prototyping, allowing room for failure and learning. A respondent further explains that

"the lab should become a type of incubator and offer a safe environment for people with innovative ideas, as these are often dismissed immediately in the risk-averse culture that exists within government."

No final decisions have been made yet concerning the positioning of the lab within the existing structure of the organization. A respondent indicates one suitable option would be to locate it centrally within the 'Diensten van de Voorzitter', similarly to what was suggested for the i-lab NIDO. This respondent also indicated that they had no issues receiving the necessary approval and support from top management for the setup of the i-lab, but also emphasizes it will be just as crucial to gain political support.

Finally, it is important to remark that besides the i-lab NIDO, the other teams that are involved with innovation in the researched federal organizations, also place a lot of importance on working with small, iterative experiments and proofs of concept for innovation projects.

4.3.2 Development of innovations into services & policies

NIDO is also involved in the development of new services, but it is reported this is to a much larger extent than they originally intended. The name NIDO, meaning nest, implies that they would like to function as an incubator where new ideas can be developed and tested, and that these can then be handed over to government organizations so they can implement and develop them into services. In practice, NIDO is often also intensely involved during the implementation and development of innovations into services. A respondent states

"this involvement of NIDO appears to be necessary, otherwise innovations wouldn't leave the lab."

An example of such service is the 'gov buys innovation' platform⁹⁰, which makes it possible for government organizations to publish challenges online, to which market players can respond. These challenges are based on issues that require an innovative solution. By publishing them on the platform, the entire public can be reached and respond to the challenges, ranging from large corporations to entrepreneurs and start-ups. It has many similarities with other programs, such as Startup in residence in the Netherlands, which also publishes challenges on an online platform. So far, this initiative is still in its testing phase and has not been picked up yet by the procurement department. It is indicated by a respondent however that interest in the initiative is growing since it has been receiving more attention and support from top management. This indicates that support from high-level executives is an important factor in driving public sector innovation. Nevertheless, several respondents argue many issues exist with the legal framework for initiatives like 'gov buys innovation', particularly concerning procurement regulations. They argue this will likely hinder the actual launch and operationalization of the 'gov buys innovation' initiative. One respondent adds that

"if there is one matter that could stimulate innovation government-wide, it would be the modification of the procurement legislation".

Currently, too much red tape (i.e. excessive procurement regulations) exists to effectively launch smaller-scale innovation projects and source services from start-ups and entrepreneurs. The same respondent illustrates this by referring to some innovation projects that were deliberately budgeted under the critical expenditure level (25.000 euros) in order not to have to deal with standard, lengthy

⁹⁰ See <https://govbuysinnovation.belgium.be/over/>

procurement procedures. The respondent reports that, even though this allows for faster action and execution on these projects, having such limited budget proved not be productive either as service providers could produce few concrete solutions within such limited budgets. When looking at innovation projects in the researched countries, it becomes clear they also frequently adhere to the maximum expenditure level of 25.000 euros, allowing for simplified procurement procedures that are more suited for innovation projects. Examples, such as the Startup in residence program, do show that such a limited budget can suffice for the development of viable concepts, if it is applied in a phased process where additional budget is only reserved for those concepts that have been tested and have shown to be successful.

Furthermore, NIDO is also working on an 'ideation platform', based on the same principle as the gov buys innovation platform, but aimed at government officials. The ideation platform would be oriented internally and allows government officials to post ideas or challenges, to which other employees can respond. Ideas can then be evaluated by their peers and through the platform people can connect and develop ideas together. Other respondents are aware of the plans concerning these initiatives, but indicate to rely on NIDO for the actual launch of these projects. This is in line with the comments from NIDO stating they often cannot limit their role to merely introducing ideas and handing these over to the organizations. They have to be involved with the development as well for projects to take off.

Thus far, NIDO hasn't been involved in the creation of new, innovative policies. It is reported this is however something they would like to focus on in the future. In particular, they would like to research how innovation can best be incorporated into management agreements, so they can advise on government organizations on this matter. Respondent7 remarks that many government organizations do not know how to imbed innovation into their organization and policy documents.

4.3.3 Success and fail factors

Autonomy and working transversally across policy domains are considered key factors for NIDO's success. It is argued by a respondent that

"many services within the FPS Policy & Support could benefit from working transversally on policy themes."

For innovation projects NIDO often works with an array of departments, ranging from HR and Finance to Procurement. When it comes to failure factors, insight into the suitability of staff profiles is considered crucial. Not everyone is suited to work in the environment of an innovation lab. In NIDO, they have noticed that certain profiles such as perfectionists or overly critical 'devil's advocates', do not function well within the context of the lab. Some staff manage to make the needed switch in terms of mindset, but others do not and become 'stuck' in their roles.

The fact that NIDO works mainly with temporary contracts (through the mobility exchange program) is reported to be an advantage on the one hand, as it offers more flexibility, while at the same time it can also be a disadvantage as the one-year time frame of the contract is very short. This limited time frame for learning and achieving goals can result in stress among staff. A respondent adds that many people are already preoccupied with their next professional step when they join the lab, as they enjoy the autonomy the lab offers and are not always keen to go back to their original roles when their 1-year assignment at NIDO ends.

Furthermore, when looking at general success and failure factors related to innovation projects (both within and outside i-labs), several respondents mention the importance of having a learning culture or experimenting culture within the organization. Without the appropriate culture it is very difficult to cultivate the right mindset for innovation.

Conclusions

*Belgium is one of few researched countries to have established a **federal innovation lab – ‘NIDO’** – which is situated within the FPS Policy & Support, but **offers its services to all federal organizations**, as well as organizations from other government levels. Even though NIDO is embedded in the traditional hierarchical structure of a public service, it is reported this does not compromise the lab’s **autonomy in setting its own goals and determining its own working methods**. Other organizations also have teams or certain employees that occupy themselves with innovation, but usually not in a full-time capacity like NIDO. NIDO has a **small core of permanent employees**, each coming from different federal organizations, supplemented with temporary workforces through the government’s mobility program.*

*NIDO focusses on **challenge-oriented innovation** and employs various innovation methods, such as **design-thinking, prototyping and experimenting**. They are particularly valued for their insights on the correct use of innovation tools & methods, and their assistance in defining concrete challenges to help generate innovative solutions.*

*NIDO is also actively **involved in the development of new services**, but to a much larger extent than they originally intended. This is particularly the case for the development of innovations into transversal services, which can be used by multiple organizations, such as the ‘gov buys innovation’ platform. NIDO would like to explore how they can contribute not only to service development, but also to policy development, advising organizations on the incorporation of innovation in their policy documents. Having a **learning culture, working transversally across policy domains and having a high amount of autonomy are considered key factors for the success of Nido’s innovation projects**.*

4.4 Innovation resources

4.4.1 Budget

Currently, no federal innovation budget exists. It is up to the individual organizations to budget for innovation projects. Among the interviewed organizations, different budgeting practices exist for innovation.

Within the FPS Policy & Support, budget for the NIDO innovation lab is sourced from the DG Recruitment & Development. Within the SPF Home Affairs there is no reserved budget for innovation, each year a new budget proposal has to be made detailing the projects that are planned. Respondent6 mentions that, so far, the projected budget has always been granted. Most of the federal organizations work with similar short-term innovation budgets, that are forecasted and approved year by year. The NSSO has specific budgeting practices, as they do not receive funding from the federal government, instead they are financed by social security contributions. They put aside a part of their IT budget for research and innovation projects.

The FPS Social Security is the only organization that mentions looking for external funds to supplement their own, internal budget. For the setup of their future innovation lab and accompanying team, they will be able to rely on a (minimal) internal budget – but they expect to need and gather external funds as well. For this they count on European funds that are granted by the European Commission. In this respect, it is useful to refer to the Estonian Innovation Team, which is partially funded by the European Structural Funds. Even though this funding has been instrumental in financing the first few years the team has been running, they have reported they are looking for alternative sources of funding. In

Estonian government, there is a growing consensus that such external sources of (EU) funding are not always a cost-efficient, long-term funding solution, as it brings along a very heavy administrative burden and often employs strict criteria that might limit the type of initiatives that are eligible for funding.

In all cases, budget does not seem to depend on obtained results or evaluations. All interviewed organizations indicate that solid argumentation for budget proposals is the most important for securing the required innovation budget.

In terms of budgetary flexibility, respondents agree that this is limited, both within as well as between federal organizations. One respondent indicates it is not possible to transfer excess budget from a department / organization that has a surplus, to another one that needs extra resources, or to transfer budget from one year to the next. It is stated

“This causes a certain pressure to spend the entire budget that is received, otherwise this might lead to a cut in budget for the next fiscal year.”

The respondent remarks this is sometimes difficult since the actual spending of the budget is often delayed due to the bureaucratic and lengthy process of receiving final approval for the expenditure. The fact that most organizations work with short-term budgets (for a 1-year time period) might also limit the possibilities for planning more extensive, multi-year innovation projects. Furthermore, one respondent remarks that

“letting different federal organizations co-finance projects might cause difficulties concerning who has the ultimate decision power on budget expenditure.”

This indicates that, besides operational barriers, there also exists a cultural barrier in federal organizations with organizational cultures that are not supportive yet of collaborative approaches that involve shared responsibilities over pooled budgets.

The recent hackathon ‘hack4Gov’⁹¹, jointly organized by the FPS Home Affairs and FPS Finance, is an example of an initiative that was co-financed by both organizations, but each organization had to draft a separate budget plan. Agreements between the two parties were made regarding the amount that each should budget for and regarding the allocation of costs, but each organization was responsible for managing their own budget. Staff on the other hand was shared for this project, with 6-7 people from FPS Finance and only 1 person from FPS Home Affairs assigned to the project. Furthermore, NIDO also relies on staff from other departments from time to time, to assist with specific parts of a project. This indicates that there is more flexibility in the pooling of staff. Most respondents can think of no specific reasons why it wouldn’t be possible to increase budgetary flexibility and agree that this would be beneficial for stimulating innovation initiatives.

Furthermore, none of the respondents are aware of the existence of any financial incentives to stimulate innovation. A few respondents did mention that there are plans in the making for the launch of a federal innovation fund, but this is put on-hold since a caretaker government was put in place. NIDO reports it also supports the creation of an innovation fund and adds:

“An innovation fund can be used to fund innovative projects from different federal organizations, provided the projects also involve external actors (such as citizens, companies, etc.).”

According to NIDO, this approach could make the fund an efficient tool to stimulate open innovation among the federal organizations. Such an approach can already be found at the Finnish innovation fund Sitra. One of the main requirements they use for granting funding (to either public or private sector applicants) is based on the diversity of the teams that are involved. Applications ideally need to be made by a consortium or team comprised of actors from different sectors to be eligible for

⁹¹ See <https://www.hack4gov.be/>

funding. By utilizing this approach, the Sitra fund is instrumental in the funding of cross-sectoral innovative projects that involve government.

However, several respondents also expressed to have some reservations concerning the granting of money prizes (for example budget coming from an innovation fund) or the awarding of public contracts to external parties as part of an innovation competition. Many refer to obstacles related to procurement regulation. With the hackathon for example, a respondent reported it was not possible to grant the winning parties the prize of a public contract to further develop their solution, as this would go against procurement regulation. It was also remarked by a respondent that,

“without the prospect of any financial incentives, it is more challenging to motivate the involved parties, especially external ones, to participate in these types of initiatives.”

4.4.2 Staff

The team at NIDO is convinced a lot of job functions will change in the near future and that it is therefore necessary to invest in the ‘skills of the future’. They try to create this awareness within government and put these new skills in the picture. It is reported that, in their view, people should be enabled to take responsibility for their own professional development and learning trajectory. They place fewer importance on formal trainings at this point, but claim raising awareness of changing job requirements among civil servants should be the main point of focus for now. In addition, a respondent mentions that too many employees at the FPS Policy & Support hold on to the notion of being a mere training provider, a view which is considered by the respondent to be too narrow. It is stated that

“Nido sees the FPS Policy & Support as an organization that should be focused on developing key skills among civil servants. How this should be done is not prescribed and should be determined by the leadership and vision in place.”

In line with this, certain organizations such as NSSO have indicated that they feel their workforce might not be prepared enough for the future (in terms of having the right skills).

Currently, there exists one single competency model within the federal government, that is used as a guiding and supporting tool for recruitment. Innovation as a skill is included in this competency model (under the French term ‘innover’ and Dutch term ‘vernieuwen’) but is only formally required for higher management positions. However, most organizations indicated they have included innovation-related traits in their general competency requirements, such as flexibility and creativity. Furthermore, the competency model also includes skills such as sharing knowledge and information, building relationships, networking, collaborating in teams and self-development (i.e. learning mindset), with the latter two being part of the five key competencies defined by federal government.⁹² These competences have all been identified as key for innovation in expert literature. This indicates the competency model has relevant building blocks for innovation. However, some of these crucial skills are only formally required for management positions, such as the competencies ‘networking’ and ‘building relationships’. A respondent also adds that

“in practice, the organizations decide which skills they require for their roles. Many only seem to ask for innovation-related skills when recruiting for technical, ICT-oriented roles.”

Recruitment for specific innovation roles (such as ‘Innovation Manager’) is reported to be still rare in government. The Innovation Managers present in FPS Policy & Support and FPS Home Affairs are an exception, as most federal organizations do not have such positions. The innovation profiles interviewed for this research all indicate their role description is rather generic. The criteria for specific innovation roles generally include traits such as curiosity, user-centered thinking, creativity,

⁹² Source: <https://fedweb.belgium.be/sites/default/files/Rooster%20generieke%20competentieprofielen.pdf>

enthusiasm, excellent communication skills, etc. All the innovation profiles that were interviewed were recruited internally. They initially held different roles in the federal organizations and have grown into their innovation role. For some it became a full-time role, for others it remains a responsibility that's added on top of other job tasks, such as project management. Some respondents remarked that there are probably more people that also work around innovation topics (not just innovation managers), without having a formal job title that indicates this. One respondent points out that

"it is nearly impossible to grant an innovation role to a person that comes from an external organization, as it is crucial to be well-networked within the federal government in order to push innovation projects forward."

Another respondent adds that

"it is preferable no-one holds a full-time innovation role, so people don't lose touch with the actual business of the organization."

NIDO on the other hand, plans to employ 2-3 internal staff full-time in the i-lab, as they believe this cannot be a part-time job. It is important to remark that the purpose and scope of a lab will be an important factor in determining staffing needs. For an organization-specific innovation lab, that aims to develop and implement innovations in a specific organization or area, having staff that combine their innovation role with another role in the organization can be more instrumental, to ensure the lab's activities align with the strategy and receives support from the wider organization. For labs with a government-wide scope, such as NIDO, having full-time staff dedicated to their innovation roles might be more suited.

[Leadership](#)

For most leadership positions, innovation is included in the competency requirements. How performance for this competence is measured is however less clear, as no 'innovation targets' are specified. All respondents agree that having the right leadership in place is key, as their vision can either hinder or stimulate innovation. In nearly all researched organizations, innovation is considered a key value for leadership. The NSSO specifically stimulates this value among her leadership by appointing top management to be part of their innovation board. This is also included in their performance evaluations (e.g. input, participation, collaboration, etc.).

One respondent remarks that

"problems can arise when leadership also takes on a 'gatekeeping' role, deciding which innovative ideas are developed and which are not. This makes innovation efforts very dependent on the personal vision of the leadership in place, which is not ideal."

The respondent argues 'gatekeeping' should best be done by peers, or at least include them, so others can also provide input on the value of an innovative idea. This again indicates that leadership plays a crucial role in the capacity of an organization to innovate.

Furthermore, a respondent indicates that the competency requirements for leadership personnel is up for urgent revision. It is stated

"it no longer fully captures the competencies that are required for leadership in the current context (of austerity, wicked problems, etc.)."

The process of revising the competency requirements has reportedly already started. Different federal organizations were consulted to assess the level of awareness that existed among them concerning the need to revise leadership skills. It appeared most organizations do value 'innovation' but turning this into a concrete competency turns out to be challenging. What the final competency model will look like is not yet clear, but it is stated special attention will go towards the 'skills of the future' such as digital skills, storytelling, cooperation, etc.

Most organizations do not establish a formal leader for innovation projects. NIDO does have designated project leaders for each innovation project, but this is for internal purposes only. Most organizations have (small) self-steering teams in place that oversee the progress and governance of such projects.

Training & Development

The federal organizations that were part of this research all provided innovation-related trainings and workshops to their staff. Workshops revolving around design-thinking and innovative methods (such as design sprints) are most popular. Organizations mostly rely on external, specialist service providers to provide in these trainings. One respondent points out that organizations are not obligated to consult the DG Recruitment & Development for workshops and trainings, and most organizations rather consult the market first.

Specific courses on innovative work methods are not a standard part yet of the central educational offer, which is managed by the DG Recruitment & Development. Currently, the centralized training offer does contain a number of trainings on project management skills that are related to innovative approaches, such as courses on 'scrum' and 'agile' methods. In addition, it contains a specific training on brainstorming techniques. This training consists of 1-hour workshop, in which the principles and basic rules of brainstorming are explained. Participants also learn how to implement these techniques and how to facilitate brainstorming sessions. Furthermore, the DG Recruitment and Development also manages a digital learning platform called 'e-campus', to complement their in-class trainings and workshops.⁹³ In several of the researched countries, e-learning is being used a tool to enable civil servants across government to acquire skills that are crucial for innovation. An example can be found in The Netherlands, where the digital learning platform OMOOC.nl offers trainings on design thinking and user-centered development of services, as well as the use of experimentation and co-creative methods. In Finland, eOppiva.fi, a digital learning platform for civil servants, offers a wide variety of e-learning courses covering topics such as networking and workplace learning, detailing how civil servants can make better use of both internal and external networks, and how they can work and learn in a network setting.

At the FPS Home Affairs, efforts focus on providing appropriate trainings in order to create a creative mindset among its employees, to stimulate innovation. From initial meetings with the internal innovation network it became clear that one of the main obstacles was lack of knowledge of techniques to think and work more innovatively. Besides relying on external experts, they often work with students (from Bachelor Idea & Innovation Management) that assist in the setup of ideation workshops where different brainstorming techniques are taught.

Additionally, NIDO offers workshops on innovation methods and challenge-oriented innovation for a wide range of federal organizations. Respondents from FPS Home Affairs and NSSO have already cooperated with NIDO for workshops and particularly appreciate their assistance in the domain of challenge-based innovation.

Furthermore, an internal network of coaches exists within the federal government, called 'Lumen'. The network consists of an internal network of civil servants, coming from different organizations, that have all received formal training in order to be able to perform individual and group coaching sessions. The trained civil servants can take on coaching assignments in different organizations, including assignments in organizations different than their own. This initiative intends to satisfy an

⁹³ See : <https://www.foifa.belgium.be/nl/fiche/brainstormtechnieken-voor-topideeen>

increasing demand for individual and group coaching in several federal organizations. Additionally, regular network meetings are held to exchange knowledge and stimulate networking. Nearly all FPS's are a member of this network, including FPS Justice, FPS Home Affairs, FPS Economy, FPS Social Security, FPS Policy & Support, etc.⁹⁴ One respondent mentions that this is a good alternative for smaller-scale projects (such as 1-day workshops or trainings), for the bigger projects it is reported they can rely on framework contracts with specialist providers. This illustrates there is also a need for internal knowledge exchange between federal organizations.

The federal government also has an organization-wide mobility program in place, called the 'Talent Exchange Mobility Program' in which various government organizations across all levels can participate. This mobility program offers staff the chance to – temporarily – go work in a different government organization for up to one year. For NIDO in particular this has been a valuable resource for staffing the lab. FPS Social Security will also consider opening up vacancies for their future innovation lab via the Talent Exchange program, in case they do not find the right profiles internally. The NSSO and FPS Home Affairs did not participate in the program. Respondents mention staff shortages and fear of staff not returning at the end of the program as main reasons for not participating. This critical concern was shared by multiple respondents, who mentioned they have regularly seen people leave their organization with the mobility program, who then never returned. This however goes against the original setup of the mobility program – and its official description:

"Talent Exchange assignments are temporary assignments that have the goal to contribute to the development of the original (sending) organization by sharing acquired competencies, new ideas and renewed motivation. The Talent Exchange assignments are not meant to be converted into definitive or long-term recruitments."⁹⁵

Most of the remarks made by respondents refer to the issue that the mobility exchange program, in practice, often concerns a one-sided exchange, whereby the original (sending) organization ends up permanently losing staff. This causes those organizations to obtain little to no benefits from the exchange program and makes many weary of participating. The setup of the Dutch mobility program 'Functieruil' can provide a possible solution, by implementing a two-sided exchange. In this program, a civil servant temporarily swaps roles with an employee of another department or organization within government. This approach ensures participating organizations are both on the giving and receiving end of the mobility program. Similar to the Belgian program, it also runs across governmental layers.

Conclusions

*The researched organizations all have a **certain budget set aside for innovation**. This has to be **sourced internally as there is no innovation budget available from centralized sources** such as an innovation fund. Different organizations use different budgeting strategies, but a common factor is that they all work with **similar short-term innovation budgets**, that are forecasted and approved year by year. This might limit the possibilities for planning more extensive, multi-year innovation projects. If a sound budget plan and justification for the proposed innovation projects is delivered, most organizations report they have no problems securing the required innovation budget.*

*Furthermore, allocated budget is not reported to depend on obtained results or evaluations of previous innovation projects. **Budgetary flexibility is argued by most respondents to be limited**, both within as well as between federal organizations. Transferring budget surpluses to other organizations, or from one year to the next, is not possible. If the foreseen budget is not entirely spent, it is stated budget cuts might follow in the next year based on the (usually) incorrect reasoning that a lower budget suffices.*

⁹⁴ Source: <https://www.ofoifa.belgium.be/nl/fiche/lumen-netwerk>

⁹⁵ Source: <https://www.talentexchange.be/nl>

Most government organizations have **no dedicated full-time staff for innovation**. They rely on staff that combine the management of innovation projects and initiatives with their usual day-to-day job. Currently, one single competency model exists within the federal government. **Innovation as a skill** is included in this model but is **only formally required for higher management** positions. However, most organizations do include innovation-related traits in their general competency requirements, such as flexibility and creativity. All respondents agreed that the **leadership in place plays a crucial role in stimulating innovation** in an organization. Depending on their personal vision, innovation can be either stimulated or hindered. Currently, the competency model for leadership roles is being revised, whereby special attention is paid to the 'skills of the future' such as digital skills, storytelling, cooperation, etc. The federal competency model already contains a number of skills that are crucial for innovation (such as networking and building relationships), however, often these are only required for higher management positions (like innovation itself).

Nearly all researched organizations provide innovation-related trainings and workshops to their staff, ranging from design-thinking to brainstorming techniques. They mostly rely **on external, specialist service providers to provide in these trainings**, as these are not a standard part yet of the centralized educational offer provided by government.

Furthermore, the government also runs the '**Talent Exchange mobility program**', which has both **opponents and supporters**. Supporters do not necessarily perceive it as a means to stimulate innovation, but rather as a tool for staffing solutions, allowing them to hire temporary staff to fill certain vacancies. On the other hand, the program is also criticized by some, stating that in reality it often results in the permanent departure of staff (despite the original intent of it being a temporary secondment). This is also the main reason why some federal organizations have decided not to join the program. Since research indicates mobility programs can be a useful tool for stimulating innovation, a revision of the setup of the program can be recommended. Concerns raised by the organizations should be addressed and focus should be put on ensuring knowledge exchange takes place and ensuring the original organization benefits as well.

4.5 Innovation evaluation

Overall, respondents indicate no specific strategies or indicators exist to assess the viability, success or impact of innovation projects. Different innovation teams use different methods, ranging from surveys, focus groups, pilots, to informal discussions. One respondent argues that

"the uncertainty that goes with innovation projects, particularly concerning the results that can be expected, makes it difficult to set predefined goals and targets at the start of these types of projects."

Most respondents indicate they do have to report on innovation projects, however, evaluation is usually not very strict and meant to be informative. Focus lies on keeping management up-to-date by reporting on the progress of the project. No mention is made of particular indicators or parameters that are used to measure the performance of innovation projects.

As discussed below, throughout their lifecycle, innovation projects are regularly evaluated to assess whether they should be further developed or not. In organizations where a learning culture is already reported to be present, dismissal of projects half-way through the process is not a problem, as long as lessons can be drawn from it.

All respondents reported using experimentation or testing as a crucial method for evaluating whether an innovation is suitable to be implemented on a larger scale or not. The innovation network and team

of the NSSO has a clearly prescribed process for innovation evaluation, which involves evaluation at different stages in the innovation process: Ideas collected via the ‘innovathons’ are evaluated by the Innovation Board. They decide which ideas will be developed into prototypes. The prototypes are then tested early on and once again evaluation follows by the Innovation Board to determine if the process should be continued with a pilot. Sometimes, prototypes are also evaluated by users (citizens), to determine if it has value as a service. For example, when they run a project on the use of speech technology, they will ask users whether they think this is useful and if it provides added-value. It is reported it is possible that at this stage, it appears the technology is not yet mature enough to be implemented or the innovation does not meet the needs of the organization. In this case, the project will be terminated and lessons will be drawn from it. After a successful pilot phase, the innovation is developed into a service and is also monitored in the beginning stages by the innovation board. Thus, in the case of the NSSO, there is a constant evaluation of innovations in different stages. A similar process of continuous evaluation is also reported by the DG Digital Transformation and NIDO. For the technical development of innovations, the NSSO relies on Smals. A respondent remarks however that *“internal actors are also closely involved as they need to evaluate what is strategically possible throughout the development process.”*

The hackathon ‘Hack4Gov’ is an example of an innovation initiative that was evaluated retrospectively, by means of a survey among participants asking them what their impressions and suggestions were. It is reported the results of this survey will be used to improve future initiatives, supplemented with more informal discussions with attendees. Here again, evaluation is more informal and not strictly imposed by top management.

Conclusions

*No specific strategies or indicators exist to assess the viability, success or impact of innovation projects. Each organization uses **different methods to evaluate** their projects, ranging from surveys, focus groups, pilots, to informal discussions. The uncertainty that is typically linked to innovation projects, particularly in terms of results, is argued to make it difficult to set predefined goals and targets, making evaluation more complex.*

*Generally, reporting is required for innovation projects, this is however **not strict and is mainly used as a tool to inform management of the progress of projects. Experimentation and testing** are commonly used methods for evaluating whether an innovation is ready to be implemented or scaled up. The organizations that work with experiments and prototypes, indicate a **continuous evaluation process takes place**, with the option of dismissing a project at any point when it becomes clear the innovation is not suitable to be implemented. Overall, evaluation for innovation projects is rather **informal, with no strict requirements concerning form or methodologies** being imposed by top management.*

4.6 Data governance

The federal government has an official open data strategy in place for four years now, which is built on the principle that data is ‘open by default’. A joint task force was created, composed of the FPS Policy and Support, DG Digital transformation and the Agency for Administrative Simplification, who have been tasked with the execution of the federal strategy. The open data strategy entails that all government organizations make their data available for re-use – free of charge – to citizens, researchers, companies and governments.

In particular, it involves data that:

- has been collected by government organizations during the execution of their assignments; does not contain any sensitive data (anymore) and does not fall under the protection of intellectual property rights of a third party;
- is released in a format that is easily re-usable (“machine readable”);
- may be re-used for commercial and non-commercial purposes⁹⁶

Effective implementation of this strategy is reported to be difficult, as this depends heavily on the efforts of the individual federal organizations. DG Digital Transformation has made extensive efforts to emphasize the importance of opening up data among all federal organizations. They however notice not all administrations are on board with this vision. One respondent states that

“Many (government organizations) are fearful of opening up their data, claiming they don’t have the necessary resources or know-how. Some are also convinced these data are their property, which is of course not the case.”

The open data strategy assumes that the data which government collects and uses are not in fact the government’s property. These are collected or created with tax money and should therefore be made available to the public under a special license (‘basic open data license’). It is important to remark this does not apply to personal, sensitive data. In theory, every administration should adhere to this open data strategy, but it is reported that in practice a lot of opposition remains. Besides cultural barriers, there exist other barriers as well. Particularly concerning the financial aspects – some organizations rely on the sale of their data to fund their own working – and the lack of insight into who uses the data and for what purposes (in order to open up data the correct way).

In line with the open data strategy, an open data platform was built at the federal level - ‘data.gov.be’ – which collects all available open data sets from the federal organizations. It is important to mention that each organization is responsible for organizing and managing the open access to their own data sets. The platform only provides links to the data sets, it is up to the individual organizations to ensure these remain functional and to contribute new data as soon as they are available. It is reported that currently, around 6000-7000 datasets are available.⁹⁷

Furthermore, the FPS Home Affairs manages the platform that contains all National Register data. This data is available for other government organizations to use, but special authorization is required since these are sensitive data. There is also a platform called ICMS, which is a security platform created by the crisis centre of the FPS Home Affairs. This platform is accessible by relevant government organizations from all levels as well as all emergency services, so operational and strategic information can be exchanged efficiently during crisis situations.⁹⁸ BE-alert is an example of a platform through which government data (concerning emergency situations) is exchanged with local governments and citizens, providing them with information and instructions in case of a crisis.⁹⁹

Currently, only a few government organizations have developed considerable experience in sharing their data with other organizations. In this respect, organizations active in the domain of social security are front-runners in the Belgian federal government. Both the NSSO and FPS Social Security are part of the network of organizations that rely on the ‘Kruispuntbank Sociale Zekerheid’ for exchanging data. This is a digital platform that gathers all information related to social security and benefits. All involved organizations (including all the public social security institutions) share their data via this platform. This enables them to offer citizens one central platform where they can find all information and communication related to their social security dossier. The data on this platform is highly secured,

⁹⁶ Source: <https://data.gov.be/nl/info-faq>

⁹⁷ See data.gov.be

⁹⁸ See <https://crisiscentrum.be/nl/inhoud/het-veiligheidsportaal>

⁹⁹ See <https://www.be-alert.be/nl/>

and the sharing of data is only possible between organizations that have the authorization to do so.

Overall, the realization of the ‘once only principle’, whereby citizens should only provide information to government once, is stated to be a work in progress still. It is already formally incorporated as one of the main priorities in ‘Digital Belgium’, a digital action plan launched by the Federal Government in 2015. This action plan outlines the objective to establish a single user-friendly digital portal through which citizens can report all of their ‘life events’ and can make use of all of federal government’s services.¹⁰⁰ In order to establish the once-only principle, effective data sharing between all government organizations is crucial. It should be noted that, in Belgium, lack of interoperability of data also poses a barrier to effective data exchange between federal organizations. Due to the lack of implementation of technical standards, data exchange is often difficult and time-consuming. This is partly due to insufficient awareness about the existing technical standards. On the other hand, the lack of standardization can also be attributed to the multi-governance structure of Belgium: data standards or practices cannot be imposed across the different governmental levels.¹⁰¹

In Europe, Estonia can be considered a front-runner when it comes to internal data-sharing in government and the deployment of the once-only principle. A crucial factor for achieving this has been the creation of a dedicated application called ‘X-road’, a data exchange layer that enables Estonian government databases to automatically communicate with each other and organizes data-exchange between all government organizations. In addition, data-sharing between government organizations has also been made mandatory by law. Estonia is the only researched country to have developed such a data-sharing platform / application at a government-wide level.

Furthermore, several government organizations, such as the NSSO, also publish statistical reports and raw data made available to the public via their website. The FPS Social Security also indicates they aspire to become a data-driven organization, where all decisions can be evidence-based and backed up by data. For this, it is stated it is necessary to build a team of people who are highly competent in managing data and applying them in policy-making.

Conclusions

*The federal government has an **official open data strategy** in place, entailing **data should be ‘open by default’**. In practice, the **implementation of this strategy is reported to be difficult**, since not all organizations are on board with this vision and it **cannot be effectively enforced top-down**. It is argued many organizations are fearful of opening up their data, stating they don’t have the necessary resources or know-how, while others wrongfully claim the data as their property. This indicates there are both cultural barriers as well as financial ones. Furthermore, a **federal open data platform** has been established, which collects all available open datasets across a range of domains and makes these available to the public. Still, this ultimately **depends on the willingness of individual government organizations to share their data**.*

*In terms of data-sharing between government organizations, those in the field of social security are front-runners, with the Kruispuntbank Sociale Zekerheid serving as a platform to exchange data as well as improve and streamline service-delivery towards citizens. For the realization of the once only principle, **data-sharing between different federal organizations still needs to be developed and incentivized further**. Here, **lack of interoperability of data** poses an important barrier for effective data exchange.*

¹⁰⁰ Source: <http://digitalbelgium.be/en/5-priorities/digital-infrastructure/>

¹⁰¹ Source: BRAIN-be – FLEXPUB Public e-Service Strategy – Report WP2

4.7 Risk governance

Most organizations confirm they have no separate strategy for managing risks related to innovation. They all use risk management processes that are standard and obligatory for each project that is undertaken, regardless of the type or topic of the project. Nearly all respondents also state they don't think there is any added value in creating separate risk management procedures for innovation projects.

NIDO considers testing and experimenting as crucial for mitigating risks. They emphasize that every innovative idea should first be tested in a separate and safe environment, away from the standard work processes. This ensures that, if mistakes are made, day-to-day business isn't affected. If tests are positive, only then should a pilot be initiated to test the solution in a real-life work setting. In order to ensure all the necessary steps are taken, before an innovation is implemented, NIDO has designed a specific innovation process. They always start with the description of a particular challenge. People are then stimulated to share their ideas on this challenge. Then, a type of jury decides which idea will be developed further into a prototype. This then gets tested and evaluated and possibilities for implementation are researched, often involving a pilot phase. A respondent states that

“following such a systematic approach for innovation minimizes risk and can prevent managers going from an idea straight to implementation.”

The NSSO reports to run a risk analyses proactively, for every innovation project, to assess the feasibility. Again, this is also required for non-innovation projects and the approach does not differ from the standard risk analyses performed for every type of project. One respondent argues:

“we are aware that risks related to innovation projects can be greater, but at the same time we don't want to impose overly strict limitations or rules as this would not be productive.”

The respondent refers to the all-important learning culture, where people should not be afraid to fail or be expected to bring all innovation projects to successful implementation.

Finally, it is also indicated by another respondent that there has been a shift towards a learning culture in their organization, where mistakes are tolerated as long as something can be learned from them. It is reported this culture still needs to be actively stimulated within the organization, as well as across government, as it is not firmly imbedded yet in every federal organization.

Conclusions

*The researched organizations have **no separate strategy for managing risks related to innovation**. They use a standard risk management approach that is obligatory for each project that is undertaken, regardless of the type of project. Most believe there is **no added value in creating separate risk management procedures for innovation projects**, as innovation should not be seen as a separate domain within the organization's business, but as an integral part of a project.*

***Testing and experimenting** are described as a **crucial step for mitigating risks**. NIDO emphasizes every innovative idea should first be tested in a separate and safe environment, so potential mistakes or failures do not affect the day-to-day business. Several organizations strive towards an experimenting and learning culture, and therefore do **not want to impose rules that are too strict or limiting**. Respondents agree this culture of experimentation has not been effectively embedded yet across the federal government.*

4.8 Incentives

Currently, not many incentives for innovation exist, nor at the overarching federal level nor at the individual organizational level. This is supported by a statement from a respondent, stating that

“projects with an innovative aspect are not necessarily rated higher or valued more than non-innovative projects.”

Incentives that are being used by the governments from the researched OECD countries, such as innovation awards and prizes, are not common yet in the Belgian federal government.

The hackathon ‘Hack4Gov’, jointly organized by the FPS Home Affairs and the FPS Finance, can be considered an incentive for civil servants to participate in new, collaborative partnerships. Similar to the variety of hackathons organized across the researched countries, this hackathon enabled the development of innovative solutions to address complex challenges governments deal with. However, different from the majority of hackathons organized by foreign governments, it is reported it was not possible to (immediately) grant the winning parties of the ‘Hack4Gov’ a prize or a public contract to further develop their solution, as this would go against procurement regulation. One respondent also remarked that, without the prospect of any financial incentives, it is more challenging to motivate the involved parties (especially external ones) to participate in these types of initiatives.

Currently, the FPS Home Affairs is the only organization that reports having any future plans to develop incentives for innovation. One of their concrete goals involves rewarding innovation. At the moment, no initiatives to reward innovation exist in the organization but there are plans to setup a newsletter, which will feature a particular employee that is working on an innovative project. The attention and recognition the featured employee receives, can be considered an incentive for innovation.

On the other hand, one respondent claims that, in their organization, there currently is no need for incentives to stimulate people to participate in innovation projects. There is said to be enough intrinsic motivation among staff and most appreciate the opportunity to be part of innovation initiatives such as innovation networks and trainings. They have noticed it is particularly important for staff to know that top management fully supports these initiatives, which motivates people to commit to these projects. Based on this finding, support from high-level executives can therefore also be considered as an important incentive for people to participate in innovation projects.

Finally, several respondents also point to the fact that government cannot make use of certain financial incentives – such as profit sharing – which are commonly used in the private sector.

Conclusions

Few of the researched organizations make use of incentives to stimulate innovation. Additionally, it is argued there are no incentives for innovation at the overarching, federal level either. It is pointed out that government cannot make use of financial incentives, common in the private sector. However, there do exist non-financial incentives – such as innovation awards or idea competitions – that have been used successfully by foreign governments. These can serve as a source of inspiration to investigate how this could be implemented in the Belgian federal context. Furthermore, the planned initiative from the FPS Home Affairs to feature innovative employees in a newsletter, can also serve as inspiration for other federal organizations. Recognition is an inexpensive, relatively easy-to-execute incentive that has proven to be useful for stimulating innovation. Finally, explicitly expressed support from top-management has also been claimed to be an efficient motivator to participate in innovation projects.

Part 5. Final Conclusions and Recommendations

In this concluding section, key findings are discussed from the comparative study on innovation architectures present in The Netherlands, Estonia, Finland, and the Belgian federal government. In particular, the following elements – which have been identified as key components of such an innovation architecture - are discussed:

1. innovation strategy & policy`
2. innovation networks
3. innovation labs & teams
4. innovation resources
5. innovation evaluation
6. data governance
7. risk governance
8. incentives.

The extent to which each of these elements have been developed in government, will be a key indicator of a government's capacity to facilitate innovation throughout its organizations. The findings have also inspired the formulation of a set of recommendations for strengthening the innovation architecture currently present within Belgian federal government. Throughout this section, textboxes are included that provide concrete examples of innovation initiatives encountered in the researched countries, which can serve as inspiration for the development of similar initiatives in the Belgian federal government. Part 5 concludes with a final summary on the state of the current innovation architecture present within federal government.

5.1 Innovation strategy & policy

The extent to which a government has included public sector innovation in its formal strategies or policies, is a useful indicator to assess to what extent governments are facilitating innovation by addressing it at the strategic level. Across the researched countries, existing policy and strategic documents have been examined to establish what efforts have already been undertaken to develop this element of an innovation architecture.

Recommendation 1: Establish a federal strategy for public sector innovation, serving as a centralized source of guidelines for innovation, allowing organizations the freedom to select those approaches that best fit their organization. The OECD Declaration on Public Sector Innovation can serve as a starting point.

None of the researched countries have created a formal, government-wide strategy for public sector innovation, meaning it is mostly up to individual government organizations to decide if and how they will develop a strategy for stimulating innovation in their organization. Across countries, there appears to be a consensus that this is the most suitable approach for now, arguing it would be detrimental to impose innovation onto organizations. This is supported by two main arguments: 1) Government organizations each operate in different contexts and face different domain-specific opportunities and limitations, making it difficult and even counter-productive too impose strict guidelines or targets for innovation; 2) In most countries a government-wide mindset in support of innovation still needs to be developed further. Such a mindset is a crucial prerequisite for the implementation of a government-wide innovation strategy.

Taking into account the above-mentioned considerations, it is recommended to develop a government-wide strategy for innovation, however not with the aim of enforcing specific approaches

or targets for innovation. Rather, the strategy document can act as centralized source of guidelines for innovation, that provide information on innovation methods (such as co-creation, experimentation) that have proven to be useful in a public sector context, accompanied with actionable information and recommendations for implementing these within one's own organization. This ensures organizations still maintain the freedom to select those approaches that best fit their organization.

For the development of this strategic document, The OECD Declaration on Public Sector Innovation, can serve as valuable starting point. This declaration is an official OECD instrument which has already been signed by the different researched countries, including Belgium. It legitimizes innovation as a core strategic function and establishes a set of five high-level principles, as well as action points, concepts and language which can be used by governments to stimulate public sector innovation. Importantly, the OECD Declaration was designed to be used by governments and organizations in ways that are relevant to their specific context, and it is expected different individuals will get different things out of it and will use it in different ways.¹⁰² This supports the recommendation that an innovation strategy should not impose a single approach across government organizations but rather hand them the tools to develop their own approach that fits their specific organization.

By providing a central point of reference for innovation, a more uniform, streamlined approach for innovation projects can be established throughout government. This will also facilitate collaborative innovation projects that require multiple government organizations to work together and develop a joint approach.

5.2 Innovation networks

Networks can play a key role in connecting government organizations with different stakeholders, who each bring different perspectives, expertise and experiences to the table. Networks also play a key role in facilitating knowledge exchange, both within and across organizational boundaries. Therefore, networks can be considered a crucial component of the innovation architecture in governments.

Recommendation 2: Participation in international networks and programs can stimulate innovation in the Belgian federal government.

Each of the researched countries participate to some extent in international networks. Examples of such networks include the OECD's Observatory of Public Sector Innovation (OPSI), connecting innovators from different national governments, and the Open Government Partnership program (OGP), which also consists of a global network of national and local governments. Both are formal in nature, however, OPSI is specifically aimed at stimulating public sector innovation, and is used a key knowledge source on this topic by all researched countries. This is not the case for the OGP, which has the primary aim to stimulate openness, transparency and inclusion in governments. Nonetheless, in some of the researched countries, participation in the program has led those governments to start experimenting with certain innovations in services or policy. Examples of this can be found in Estonia and The Netherlands:

- ◆ *In Estonia, their latest OGP Plan entails an update is planned of the e-Consultation Information System (EIS) with the aim to make it more accessible to stakeholders allowing them to participate in the earlier stages of the policy-making process and not just in the final stage of*

¹⁰² Source: <https://oecd-opsi.org/projects/innovationdeclaration-2/>
See also: OECD, Declaration on Public Sector Innovation, OECD/LEGAL/0450

coordinating or commenting on documents. (see p.49)

- ◆ *Similarly, in the Netherlands, the OGP inspired the development of a pilot project called 'Open by Design', about information being automatically publicly available immediately at the start of a policy process. In an experimental setup, the Ministry of the Interior and Kingdom Relations together with municipalities will trial the use of digital tools to achieve more direct involvement of people in policy-making and decision-making. The trial should enable the development of a set of criteria that are necessary for successful digital participation and raise awareness among authorities of the risks and opportunities of digital democracy. (see p.66)*

This indicates that, even if their title does not specifically refer to innovation, diverse networks or programs can still be instrumental in stimulating innovation within the public sector. Therefore, it is advisable that Belgium, which is the only researched country that is not a member of the OGP, reviews and enhances its participation in such international networks and as they can provide extra impetus to innovate in government.

Recommendation 3. The existing networks present in the Belgian federal government can fulfill a vital role in establishing an innovation mindset throughout government. Existing networks should clearly define their purpose, be scaled up where possible. Information on these networks and their purposes should be centralized to provide oversight to civil servants wishing to join such networks.

Each of the researched governments have also developed their own networks in support of innovation, which are mainly focused on connecting innovators within government, and facilitating the exchange of ideas and knowledge between civil servants in order to encourage the development of a collaborative mindset throughout government. Some government organizations have developed internal networks within their own organization. However, most of the researched networks have a government-wide reach, with some also reaching across governmental layers. Both types of networks can be instrumental in cultivating an innovation mindset, at an organizational level and at a government-wide level. In the Belgian federal environment, a number of networks have already been created with the specific aim to spur a shift in mindset among civil servants. This effort should be continued and existing networks, their activities and their reach should be further developed and scaled where possible.

Since a growing number of innovation networks start to emerge in the Belgian federal government, it can be recommended to re-assess the purpose and functioning of the networks that currently exist in order to ensure there is no substantial overlap. This exercise has already been done for the federal innovation network and the CoP (Community of Practice) Agile, which have been partially integrated. This will also contribute to a clearer landscape of existing networks and what the area of focus is for each of them. In line with this, it can also be recommended to centralize information on existing networks to provide civil servants with an oversight of which networks can be joined for what purpose. This clarity and oversight has been reported to be largely missing at the moment and in some cases even deters people from joining a network, as has been reported to be the case for the CoP Agile.

Recommendation 4: Both formal and informal networks can be instrumental in stimulating public sector innovation. The specific purpose and goals of a network should determine which approach is most suited to reach those goals.

Both informal and formal networks for innovation are created. This often depends on the aim of the network and specific goals it wishes to accomplish, as well as the vision of leadership in place. Many of the researched networks are aimed at stimulating knowledge exchange and networking among civil servants. Even though many networks focus on the organization of informal meetings for network

members, several networks do have a formal supporting structure with a Board that oversees the network's activities. In many cases, such formal networks have appointed representatives for each of the involved organizations, which is reported to be particularly helpful in networks that support specific government programs or projects, where each organization is held accountable for their contributions.

- ◆ *An example of this can be found in the coordinating bodies that have been created in Estonia and Finland, in support of the Open Government Partnership (OGP). Here, the principles of the Partnership entail that activities are steered by a body with representatives from both non-governmental organizations as well as government, who each are held accountable for the contributions of their respective organizations. (see p.32, 49)*

- ◆ *In the Netherlands, the 'Rijks Innovatie Community' network is overseen by a Program Council, consisting of representatives from various organizations. They guard the vision and strategy of the RIC and are responsible for the development of the network's program. (see p.67)*

Some respondents from the Belgian federal government expressed a clear preference for informal networks, as they are less hindered by red tape and are claimed to be more productive. Such Informal networks can be particularly helpful in stimulating the exchange of knowledge and ideas among civil servants. Formal networks can however be more adequate when there is a clear need for accountability of the involved network members, and if they are also expected to implement a network's program or agenda in their own organization. Overall, most respondents agree that both formal as well as informal networks are valuable for spurring innovation throughout government. When establishing new networks or further building existing ones, it should be given deliberate thought what exactly the network aims to achieve. This should ultimately decide if there is a need for a formal network, or if an informal network is more instrumental in reaching those goals.

5.3 Innovation labs & teams

Innovation labs and teams (also referred to as innovation units) can take on a number of roles to promote innovation across government. They can diffuse lessons from innovation projects, share insights on how different innovation tools and methods are best used, help with capacity building and support innovation networks. Depending on their purpose, they can also be involved with the development and implementation of innovations, or take on a supporting role by coordinating or funding projects. Innovation units have therefore been defined as a key component of a government's innovation architecture.

Recommendation 5: Both organization-specific innovation labs as well as those with a government-wide scope are valuable instruments for spurring innovation. The structural location of innovation labs within government organizations should be carefully considered. Labs are ideally located directly under top-management and should be allowed a high-level of autonomy in developing their own agenda and work methods.

The lack of a uniform strategy for public sector innovation might have led to the development of a scattered landscape of innovation initiatives in the researched countries. Many researched units or teams for innovation are decentralized and are located within specific ministries or agencies and have a scope that is limited to a specific organization or policy domain. They are part of the traditional organizational structure but are usually positioned high up in their organization, directly under top-management. Most labs also claim to function as a semi-independent unit, having a high amount of autonomy in setting their own agenda, recruiting staff and establishing their own work methods. This

is reported to be crucial to ensure the unit can work effectively.

Belgium and Estonia are the only studied countries that have an innovation unit with a government-wide scope. Ideally, units with a government-wide scope are situated in a transversal department of government. This is already the case for the Belgian federal innovation lab NIDO as well as the Innovation Team of the Estonian central government. While domain-specific innovation units offer opportunities for a targeted approach to stimulate the development of innovations in specific areas, governments can also benefit from the complementary presence of a central innovation unit. By maintaining a strong network with different innovators across government, it places such a unit in an ideal position to gather best practices and act as a ‘knowledge broker’ for innovation. In this respect, the Belgian federal innovation lab NIDO is already on its way to take on such a role. Nearly all Belgian respondents indicated they have already collaborated to some extent with NIDO or have relied on their insights and expertise concerning challenge-based innovation and the use of innovation tools and methods.

Recommendation 6: Extensive and transparent communication about innovation labs’ activities and associated spendings can help clarify and raise awareness of a lab’s core activities among the staff of the organization they are part of, and throughout wider government. This can help reduce any resistance they may experience from traditional structures within their organization or wider government.

It is reported by both the Belgian federal innovation lab NIDO and the Dutch innovation lab NOVUM, that their position within a certain department can add to the confusion on what their core activities are (among the staff of other departments of their organization). This lack of clarity concerning the activities of such labs have been reported to cause a certain amount of ‘resistance’ from the organization they are part of. This resistance can be attributed to other staff not being sure what budgets innovation labs receive and for what they are being used.

◆ *The NOVUM innovation lab, which is part of the Sociale Verzekeringsbank in Dutch government, has found that increasing transparency and communicating openly and extensively about the lab’s activities and associated costs helps reduce resistance from within their organization. (see p.73)*

These insights from the NOVUM innovation lab can be insightful for NIDO as well as future labs within the Belgian federal government.

Recommendation 7: Innovation labs with a government-wide scope can function as a central body that keeps oversight of the innovation activities and initiatives taking place in government. These labs are well positioned to gather best practices for innovation from across government, and act as a ‘knowledge broker’ for public sector innovation.

In each of the researched countries, respondents indicated they would benefit from a more centralized overview of what innovative approaches are being used already, and what has proven to be successful in other government organizations and what has not. In line with this, OPSI has expressed the view that innovation units can play a key role in diffusing lessons from innovation projects, in showcasing innovation projects and innovators, and by sharing insights about how different innovation tools and methods can best be used.¹⁰³ NIDO already takes on such a role to a large extent. It could be recommended that they further develop their role as knowledge broker and

¹⁰³ Source: OECD (2017), *Fostering Innovation in the Public Sector*, OECD Publishing, Paris.
<http://dx.doi.org/10.1787/9789264270879-en>

examine how they would be able to assist in centralizing information on innovation projects in federal government.

By gathering and centralizing information on planned projects as well as best practices and insights from completed projects, knowledge exchange can be stimulated across government. If organizations can have access to this information prior to starting an innovation project, it can help prevent any inefficiencies due to organizations not being aware of what others have done or tested already, or by organizations working on similar projects simultaneously and not taking advantage of the opportunities collaboration offers (e.g. shared input of resources, greater resource availability for the scaling of innovations, etc.).

Recommendation 8: Most of the researched innovation labs and teams operate with a relatively small amount of staff (between 4 - 8), allowing them to function as an agile unit. It is also recommended labs bring in additional external expertise, either temporarily (project-based) or as part-time members of staff who combine this with another function in or outside government..

All researched innovation labs and teams are rather small in size, with an average of four to eight staff members. Several respondents also indicated a small team facilitates the agile functioning of their unit. It can therefore be recommended to take this into consideration when setting up future labs. It is also possible to work with a lean, core team of full-time staff members, and supplement the lab's capabilities with external expertise, which can be hired on a flexible basis if and when it is needed.

◆ *In Dutch government, the Sociale Verzekeringsbank (an independent governing body tasked with the execution of social security law) has its own innovation lab called 'NOVUM'. The lab consists of eleven staff members of which three to four are external experts, called 'innovators in residence'. These are all experienced in leading innovation projects. Additionally, there is also an 'entrepreneur-in-residence', an entrepreneur who joins the lab to stimulate the entrepreneurial mindset within the lab. These external experts are hired for a short-term period, between three to six months, to ensure they can bring fresh and new insights to the lab. External expertise was also hired to guide the startup phase of the lab. (see p.72)*

Among the researched units there exist both those that have full-time staff as well as those that have part-time staff, who combine their role in the unit with another role in our outside government. Many units also recruited part of their staff externally, from private companies or academia.

◆ *The Innovation Centre, situated at the Finnish National Agency for Education (FNAE), is an experimentation, development and innovation unit that supports municipalities as they develop their educational system to better meet the needs of all learners. As the first agency-level innovation unit in Finland, the Innovation Centre is described as an experiment in and of itself. It consists of five full-time team members. Two staff members have been recruited from the FNAE itself, the other three have been recruited respectively from the cultural sector, a startup and from academia. (see p.37)*

◆ *Digicampus is a joint initiative of the Dutch government, academia and corporate life. It brings different sectors of society together to explore, design and test innovations in public service. Emphasis is placed on digital innovations, which can be implemented in the public sector to improve service provision to better meet the needs of citizens. The team is staffed with twelve employees from the founding organizations, which includes the TU Delft university as well as government bodies working on government digitalization. The majority of staff work part-time at Digicampus and combine this role with another role in their respective organizations. (see p.74)*

Most respondents agree that bringing in some extent of external expertise in the lab is essential, which can be particularly valuable at the startup phase of a lab, as well as for providing expertise on niche topics. As mentioned, this external expertise can also be hired on a flexible project basis, to complement the organizational and domain-specific knowledge of internally recruited civil servants when needed. Staffing an innovation lab with people who have diverse backgrounds and expertise is considered essential by nearly all researched innovation labs and teams.

Recommendation 9: Ensure stable and adequate funding for innovation units. For innovation units with a government-wide scope, co-financing by different ministries can help to embed the unit in government.

Most of the labs are funded with budget from the organization they are part of, being either a single ministry or agency, or, in the case of Estonia and its Innovation Team, several ministries providing co-funding for the initiative since it has a transversal scope. In addition, the Estonian central Innovation Team also relies on funding from the European Structural Funds (providing 50% of their total budget). It is remarked however that this external funding is not guaranteed for an extended period of time and does not constitute a long-term stable funding source for the Estonian Innovation Team. Since NIDO, similar to the Estonian Innovation Team, also functions as an innovation unit with a government-wide scope, situated within a transversal department, it could be recommended to establish a similar co-funding arrangement with different ministries. This can help ensure the lab receives adequate funding and can further embed NIDO within government. Having stable funding has been reported to be one of the key factors to ensure the survival of innovation units, throughout different government terms.

Recommendation 10: The researched innovation units employ a common set of methods throughout the innovation process, ranging from design sprints and hackathons for idea generation, to service-design, to experimentation and rapid testing. These methods have been proven to be effective and can therefore be recommended in public sector innovation projects.

All researched labs and innovation teams employ similar methods, such as experimenting, rapid, iterative testing, as well as innovative methods for idea generation, including design sprints and hackathons. A focus on service-design, placing users at the center when developing service innovations, can also be found across the researched labs. Similar to NIDO, many also organize their work around challenges that are based on specific societal issues. In particular, the use of small-scale experiments, co-creative development, and early testing are wide-used methodologies that have proven to be effective and can be recommended in a lab setting.

Recommendation 11: Address procurement red tape that hinders innovation: In order for innovation units to successfully employ methods such as experimentation, co-creation and rapid testing, new approaches for procuring services are required.

Several respondents in the Belgian federal government perceive existing procurement regulations as a key obstacle for public sector innovation. It has, for example, been reported to seem a hindrance in initiatives like 'gov buys innovation', a portal that is being developed to allow federal organizations to procure innovative solutions to specified challenges. In particular, issues arise with the existing framework for public procurement, that, with its strict and lengthy procedures and need for detailed pre-defined requirements on the desired solution, is ill-suited for innovation projects. Innovation projects are usually launched because it is unclear what possible solutions exist, and what these should look like. Such projects therefore require more agile, simplified procurement processes in order to be able to source the required services. It is also reported that the way in which procurement

officers navigate these procedures should be revised, and they need be offered support to implement existing procurement regulation in such a way that is more supportive of innovation projects.

In order to work around this procurement red tape (i.e. excessive procurement regulations), innovation units and programs – both in Belgium and abroad – reported that they deliberately budget their projects under the critical expenditure level of 25.000 euros. This allows government organizations the freedom to arrange the procurement process in such a way that service providers have the necessary freedom to propose those solutions that best address the challenge at hand. This approach has proven to work when it is applied in a phased process, where it is clearly outlined what is expected in each stage, at which budget. Inspiration for developing such an approach can be drawn from the Dutch innovation program ‘Startup in Residence’.

◆ *The ‘Startup in Residence’ program connects cities, ministries and provinces with startups and scale-ups to solve key challenges and develop innovative solutions. During a six-month development trajectory, a government organization and startup co-create a solutions for a specified challenges and develop a proof of concept. This development phase is financed by the government organization, for a maximum budget of €25.000. At the end of the program, the startup has the chance to pitch the developed concept to the government organization. If it is positively evaluated, the organization invests in the setup of a pilot to further test the solution. In case of success, the government organization will act as launching customer and buy the developed solution from the startup (for a maximum budget of €1.000.000). Importantly, this can be done under the same procurement contract as the one that was setup for the development of a proof of concept. This is considered one of the key benefits of the program, as it allows government organizations to implement the developed solutions faster and do not need to start a new and lengthy procurement procedure. (see p.75)*

Additional factors for success mentioned by several innovation units include:

Recommendation 12: Not claiming ownership of innovation projects, but instead empowering and helping other government organizations with the development of innovations.

This is particularly relevant for innovation units with a government-wide scope. It is also in line with the view expressed by NIDO, explaining they want to be facilitators of innovation projects, rather than being the owner or leading party of such projects. However, it is stated that they currently often need to take on a leading role in the development as well as the implementation of new, innovative services. It is therefore recommended to examine how government organizations can be motivated to take ownership of innovation projects. This will be further discussed in the ‘incentives’ section. In addition, many of the researched innovation units claim it is important to convey the view that innovation can happen anywhere, and that is not limited to a dedicated innovation team or lab.

Recommendation 13: Working across different governmental layers.

Furthermore, several labs and teams across the researched countries emphasize the importance of working across different governmental levels, since challenges often cut through these layers and require cooperation between the central and local levels of governments. In the Belgian federal context it is recommended to further build relationships and collaborative arrangements with innovation-oriented units at other governmental levels. In the Dutch ‘Startup in Residence’ program, the benefits of cross-administrative cooperation have also become apparent.

◆ *For the latest edition of the Startup in Residence program, five government organizations from different administrative levels, decided to join forces and develop joint challenges. By*

collaborating and formulating challenges based on shared problems, a much larger impact can be made. The problems that arise are usually very complex and don't limit themselves to just one specific administrative level. It is for example possible that a province faces a problem for which a pilot has to be run in municipalities. By working together, the number and complexity of challenges that can be addressed, can significantly be increased. (see p.69)

Recommendation 14: Ensure adequate political and administrative support for innovation units.

Having an adequate amount of political and administrative support has also been reported to be crucial for the effective functioning and survival of innovation units.

Recommendation 15: Provide innovation units with a clear mandate.

Finally, having a clear mandate is considered by several respondents to be a key factor in enabling innovation units to work effectively, and to ensure they have the required political support. This is in line with the recommendations mentioned by OPSI, stating that “without a mandate, innovation will be short lived”.¹⁰⁴ In particular, mandates are necessary to have authority to act, to grant innovation teams the authority to access resources and data, and to allow them to make decisions in the pursuit of their objectives. OPSI also remarks that, without a clear mandate, innovation initiatives risk being seen as “rogue”, making innovation itself seem illegitimate.

Each of these insights, which are based on the experiences of the various researched innovation units, should be taken into consideration for the development of future labs in the Belgian federal government. As a central innovation lab with a government-wide scope and connections with innovators across government, NIDO is ideally placed to act as a centralize knowledge source for public sector innovation. The development of decentral innovation labs in different government organizations can complement NIDO, by applying a targeted approach to stimulate the development of innovations in a particular policy area.

5.4 Innovation resources (budget & staff)

As stated by OPSI¹⁰¹, “one easy way of ensuring failure in innovation, is to not resource it properly”. An under-resourced innovation initiative risks failing, and in the process delivering no value at all due to a disconnect between the desired impact and the resources that are available. Therefore, the amount of resources that are available, both in terms of staff and budget, will be an important factor determining the potential for success of innovation projects and labs throughout government.

Recommendation 16: Establish an innovation fund which provides dedicated funding for public sector innovation.

None of the researched countries has a centralized budget which is entirely dedicated towards public sector innovation projects. It is up to individual government organizations to reserve part of their budget for innovation initiatives or look for other, external sources of funding. The creation of a public sector innovation fund can encourage government organizations to innovate, by providing a readily accessible fund for organizations wishing to launch innovation projects. Among the researched countries, Finland is the only country that has established an innovation fund, called ‘Sitra’. Although it is not entirely reserved for the public sector, its funds can be used to finance certain innovative

¹⁰⁴ Source: OECD (2017), *Fostering Innovation in the Public Sector*, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264270879-en>

projects from the Finnish public sector.

◆ *The Sitra innovation fund was founded in 1967 as a part of the Bank of Finland. Its operations are funded with the profits of its endowment (a donation of Nokia stock from the Finnish Parliament in 1992) and the profits of its operations. Sitra operates under the supervision of the Finnish Parliament, but functions as an independent organization that has full operational and financial independence and does not depend on state budget. It is important to note its funding is not solely reserved for the public sector and can also be allocated to other societal actors to spur innovation in other sectors. In order for organizations (both public and private) to receive funding from Sitra, projects need to align with Sitra's agenda, which is built on key societal challenges. Applications ideally need to be made by a consortium or team comprised of actors from different sectors. Because of this approach, the Sitra fund is instrumental in the funding of cross-sectoral innovative projects that involve Finnish government. (see p.40)*

The other researched countries, including Belgium, have also expressed interest in the establishment of an innovation fund and report to be assessing how they can implement this. The approach of the Finnish innovation fund has interesting features that are worth considering for the development of a Belgian federal innovation fund, such as their emphasis on cross-sectoral approaches for innovation. On the other hand, in terms of financing the fund, a different approach will likely need to be developed. As mentioned by OPSI, innovation funds can also be financed by allocating resources from the state budget. This will allow for the development of an innovation fund that can be dedicated fully to public sector innovation, which is not the case for the Sitra fund. For the development of a Belgian innovation fund, the latter approach can thus be recommended. It could also be suggested that a co-financing arrangement is developed, whereby federal organizations each contribute to the financing of an innovation fund that is used to finance innovation projects at the federal level.

Recommendation 17: Be careful when relying on external sources of funding to finance long-term innovation projects or units. They are often not a cost-efficient, long-term structural funding solution for public sector innovation.

A frequently used external source of funding are the European Structural Funds, which are granted to EU countries for a 7-year period. Even though funding for a period of seven year is longer than the annual budgeting practices of many government organizations allow for, there still remain some considerations to take into account. The European Structural Funds can only be used for projects that comply with very specific and strict funding requirements and the use of these funds comes with a heavy administrative burden. It is argued it therefore does not constitute a cost-efficient, long-term structural funding solution for public sector innovation.

Respondents agree upon the fact that stable funding is key for ensuring the long-term survival of public sector innovation initiatives, throughout different government terms. It can therefore be recommended to prioritize the establishment of more stable funding source (such as a public sector innovation fund) that provides dedicated financing for public sector innovation projects. As long as this is not in place, experiences from the studied countries have shown that even successful innovation projects are often discontinued due to a lack of resources.

Recommendation 18: Revise budgetary practices that restrict organizations in the flexible use of budgets for innovation projects. In particular, more budgetary flexibility is needed for transferring budgets across fiscal years.

Across the studied countries, most government organizations develop budgets on an annual basis, implying their budgets for innovation projects are also allocated on a yearly basis, with no guarantees

on the amount of budget that will be available the following years. This can be a particular hindrance to larger-scale innovation projects that run for multiple years and this can deter organizations to launch such projects. All respondents report budgetary flexibility is very limited in their governments, both when it comes to transferring budget from one year to the next, or the pooling of budgets for joint innovation initiatives. For the latter, there are reported to be no legal restrictions and barriers are argued to be more of an operational nature. The (perceived) complexity of such processes is perceived as key hindrance deterring many government organizations to initiate projects that rely on shared budgets. In order to create an optimal environment for organizations to innovate, it is recommended to revise budgetary practices that restrict organizations in the flexible use of budgets for innovation projects. In the Belgian context, particular attention can be paid to making budgeting practices more flexible, allowing organizations to transfer budgets for innovation more easily across fiscal years, without negative consequences (e.g. budgets being cut due to previous budgets not being spent entirely in the previous year).

Recommendation 19: For public sector innovation, staff with both full- and part-time roles in innovation can be of value. Full-time staff can be recommended for innovation units with a government-wide scope. For organization-specific innovation units, staff with a part-time role in the unit and part-time role in the wider organization can ensure a link remains between the unit's activities and the (long-term) strategy of the organization.

Each of the researched countries reported having both full-time staff for innovation, as well as part-time staff. Full-time staff can mostly be found in specific innovation labs and teams. In wider government however, most staff combine an innovation role with another day-to-day role in government (often in the areas of project or program management, strategy development, etc.). Many respondents indicate there exist a considerable number of 'hidden innovators' within their government, who's official job title or job description does not explicitly refer to innovation, but who are however involved with innovation to some extent. In line with this, some respondents have argued it is important for these staff members to stay connected with day-to-day business, making innovation part of their job but not considering it a separate role. Based on the input from across the researched countries, it can be concluded both full- and part-time staff for innovation can be useful. For innovation units with a government-wide scope, full-time dedicated staff will likely be needed. For innovation teams or units that operate within a specific organization (a single ministry or agency), the presence of part-time staff who combine their role in the innovation unit with another role in the organization could help ensure some alignment is maintained with the wider organization. This will be especially useful if innovation units also want to spur the implementation of developed innovations in their wider organization.

Recommendation 20: It is recommended to develop a centralized training offer for innovation, so the quality of trainings can be critically evaluated on a regular basis. It can also help ensure the training offer is regularly updated with new impactful methods for innovation.

Trainings specifically focused on innovation and innovative work methods are still rare in most of the studied countries. Finland is the only country in which the central training institute of the government ('Haus') provides a training program dedicated towards innovation in public administration.

- ◆ *Haus, the official training provider for the Finnish state, offers online as well as tailor made training programs for civil servants. Their offer includes a training program in 'Innovation Management in Public Administration'. The program aims to develop new operating models in public administration and provides access to tools and guidance models to help civil servants implement their organization's strategic goals through innovation management. Participants can work on an innovation challenge of their own organization, under the guidance of*

experienced trainers. They also receive coaching specifically aimed at strengthening their ability to justify the importance of innovation for their own job. It is recommended the program is followed by teams, either composed of different profiles from one particular organization, or in cross-cutting teams composed of different government organizations. At the end of the training, participants should have a better understanding of the possibilities and requirements of innovation activities, particularly in a network-setting. (see p.42)

In most of the researched governments trainings on innovative methods are provided by innovation units, often in the form of workshops and toolboxes for implementing innovative approaches. In practice, government organizations mostly rely on external service providers for the organization of specific innovation-related trainings. This is also the case in the Belgian federal government. Even though cooperation with external providers is often insightful and several respondents also indicated they obtain valuable information through NIDO, it would be recommended to re-asses the central training offer currently provided by the FPS Policy & Support. At the moment, this offer does not include innovation-related trainings, while it would be beneficial to also have a centralized source for such trainings, so their quality can be critically evaluated and updated on a regular basis.

Recommendation 21: Further build the federal coaching network Lumen, as it is a valuable tool to stimulate knowledge exchange across the federal organizations, and it can be instrumental in spurring innovation throughout government.

Each of the studied governments has a number of networks in place that contribute to the professional development of civil servants. Existing networks in the Belgian federal government should also be used to their fullest potential to stimulate learning among civil servants from different organizations. In this respect, the federal coaching network Lumen stands out as a valuable tool that can stimulate knowledge exchange across the federal organizations. By encouraging civil servants with experience in innovation projects to join the network, their knowledge and experience can be shared throughout the federal government.

Recommendation 22: Further expand the e-learning offer with trainings on innovative work methods, so these skills can also be developed through time- and location-independent learning. By making optimal use of the digital learning platform e-campus, civil servants can have greater flexibility in building the skills needed for applying innovative work approaches.

Most of the researched governments are already making use of the opportunities offered by e-learning, having developed central digital platforms to encourage online learning among civil servants. In the Belgian federal government, the digital platform 'e-campus' has been created and is managed by the DG Recruitment and Development. Although this online learning platform already contains trainings on a diverse set of topics, trainings on innovative work methods (such as service-design, experimentation, cocreation) are not incorporated yet. By including these in the digital learning offer, civil servants will have greater flexibility in building the skills that are needed to participate in new, innovative work approaches. Inspiration for digital training programs supporting innovation can be drawn from examples in the Netherlands and Finland:

- ◆ *OMOOC.nl, an initiative of the VOM (Vereniging voor Overheidsmanagement), collects a wide variety of online training courses with the aim to centralize new as well as existing knowledge concerning good practices in public administration, making it easily accessible to civil servants across government. The platform includes trainings on design thinking, teaching civil servants about user-centered development of services, and the use of experimentation and co-creative methods. (see p.81)*

- ◆ *eOppiva.fi, a digital learning platform for Finnish civil servants, offers a wide variety of e-learning courses and provides access to networks focused on e-learning and idea exchange. Course topics include networking and workplace learning, detailing how civil servants can make better use of both internal and external networks, and how they can work and learn in a network setting. Other themes include the development of digital skills and improving interaction in diverse teams that involve different stakeholders. (see p.43)*

Recommendation 23: Revise the current job mobility program for Belgian federal civil servants. By transforming it from a one-sided into a two-sided exchange program, a bilateral exchange of both staff and their expertise between organizations can be ensured.

Most of the researched countries have a mobility program in place that enables civil servants to temporarily take on another role, either in a different department in the same organization, or in another organization (or even another level of government). Having such mobility programs in place cultivates a work force that is competent in working transversally, with different organizations, across different governmental levels. In this way, it can function as an important facilitator for public sector innovation. In the Belgian federal government, a government-wide mobility program exists, that also allows for mobility across governmental levels. However, several respondents have raised critical concerns related to the current functioning of the program. Concerns mostly revolve around the fact that the exchange is one-sided; with one organization ‘losing’ an employee to another organization that is on the receiving end of the exchange. Even though mobility happens in the form of temporary secondments, experiences from different respondents indicate participants often end up permanently leaving their original organization, whereby the mobility program functions as a type of exit process. This explains why some remain skeptical about the added value of such a program. A possible solution might be found in the approach that is used in The Netherlands:

- ◆ *‘Functieruil’ is the mobility program from Dutch government, which, as the name suggests, entails a two-sided exchange, whereby a civil servant swaps roles with an employee of another department or organization within government. This approach ensures participating organizations are both on the giving and receiving end of the mobility program. Similar to the Belgian program, it runs across governmental layers. (see p.80)*

Therefore, a revision of the Belgian federal mobility program in its current form is recommended. The concerns raised by certain organizations should be addressed, in particular the fear of permanently losing staff. By focusing on two-sided exchange, with a bilateral exchange of both staff and their expertise between organizations, this issue can be mitigated.

5.5 Innovation evaluation

There is a growing awareness of the need to systematically evaluate innovation projects, even though such projects are often characterized by a high degree of uncertainty on what results can be expected. Attempts are being made by a variety of innovation teams and labs to measure their results, focussing not only on project outputs but also looking at the outcomes and impact. In order to optimize learning from past projects, and ensure similar mistakes can be avoided in the future, evaluation of innovation projects is essential.

Recommendation 24: Systematic evaluation of innovation projects should take place, not for the sake of applying sanctions or rewards, but to optimize learning opportunities from the experiences that have been gained.

The various innovation programs and projects mentioned in this report have all been subjected to some form of evaluation. However, evaluation often remains very case-specific and happens on an ad hoc basis, rather than through a fixed evaluation process with predetermined indicators of success. Evaluation of innovation projects appears to be primarily aimed at informing management of the progress of projects, rather than serving as a basis for sanctions or rewards. This approach seems to be best suited for innovation, since the potential of receiving sanctions will likely reinforce risk aversion among civil servants. In most cases, evaluation consists of periodic reporting carried out by the project team itself. It is argued by several respondents that it is difficult to perform a formal evaluation for innovation projects or experiments that are characterized by high levels of uncertainty concerning their outcomes, since this makes it difficult to predefine a set of concrete goals. Nonetheless, respondents also acknowledge there is a strong need to start measuring the performance of innovations in a more systematic way, and many are working on the development of a set of concrete measurements for the evaluation of innovation projects. Measurement is considered important – not to apply sanctions or rewards for innovation – but rather to be able to learn optimally from different innovation projects. So far, most evaluations consist of qualitative appraisals, sometimes supplemented with quantitative measures (related to project outputs).

Recommendation 25: Evaluations carried out by external actors (who are not part of the project team), can be a useful addition to internal evaluations. External evaluations can deliver objective, valuable insights on the outcomes and impact of innovation projects that involve multiple stakeholders.

A number of examples can be found of projects that have been evaluated externally, whereby evaluation is carried out by independent evaluators. This is particularly the case for larger government programs supporting innovation, that involve multiple stakeholders. Such external evaluations can help provide unbiased information on how effective projects are. These evaluations often take the form of impact assessments that focus not only on (quantitative) project output but also on its outcomes (= results achieved at the end of project) and to what extent it has been able to realize systemic change (=impact). It is important to note that impact only becomes visible after a certain period of time and that it can take a couple of years before this can truly be assessed. Furthermore, external evaluations can be performed by different types of actors, ranging from private consultancies to academia as well as government organizations that are not part of the original project team (and have no particular interests in the project). Examples of these types of evaluation can be found in Finland and the Netherlands:

- ◆ *The Finnish innovation fund 'Sitra' (and its lab) has been externally evaluated, by means of seven separate impact assessments carried out in the period 2017-2019, by a number of independent consultancies. During this time, Sitra's work, operations and effectiveness were evaluated at regular intervals. The final evaluation report summarizes the findings of these impact assessments and analyzes whether Sitra is doing the right things, at the right time, in an impactful way, and concludes with ten recommendations for its further development. This series of assessments of Sitra forms one of the most extensive and comprehensive organizational evaluations ever carried out in Finland and included nearly 500 interviews with different stakeholders. (see p.44)*
- ◆ *Sitra has also relied on academic researchers to provide insights on some of the initiatives they have launched, for example for the evaluation of the use of challenge prizes as a tool to spark social innovation. Three researchers (coming from different universities) evaluated the Ratkaisu 100 challenge prize competition throughout its duration and carried out approximately 100 in-depth interviews with the Ratkaisu 100 teams as well as online*

questionnaires. (see p.44)

- ◆ *For the **City Deals** that have been completed, evaluation reports have been created that can be consulted online, via the City Deals website itself. These are evaluations carried out internally, by the City Deals teams themselves. A larger-scale, external evaluation report has also been made by the PBL Netherlands Environmental Assessment Agency, commissioned by the Ministry of the Interior and Kingdom Relations. At the time of evaluation, most city deals were still running, so it concerns an ex-durante evaluation. For this report a qualitative approach was used, consisting of both desk research as well as interviews with a number of leaders from different City Deals, coming from all involved stakeholder parties. (see p.82)*

This demonstrates it is also possible to combine regular internal reporting, with a periodic external assessment. This approach can be found at both the City Deals, as well as the Sitra lab, that undergoes external evaluation as well as internal evaluation by its staff, once every half year.

Recommendation 26: Establishing a culture that perceives failure as a learning opportunity is essential to counteract risk-averse behavior and encourage experimentation.

The researched innovation labs and teams all state to have adopted a learning culture, considering failure a learning opportunity. Such a mindset is also needed to encourage experimentation. However, in most countries, such a learning culture is said not to be widespread yet throughout government. Especially experimentation with tax payers' money induces some resistance from traditional government structures. This is also the case in the Belgian federal government, where respondents indicate a large shift in mindset is still required. Finally, it is crucial that know-how is shared between organizations once innovation projects have been completed, however, in practice this is not always the case which results in missed learning opportunities. This again emphasizes the importance of encouraging knowledge exchange and ensuring best practices from innovation projects across government are collected and shared.

5.6 Data governance

In order to enable and stimulate innovation, opening up government data to the public and allowing data reuse by a wide range of actors is necessary. In addition, internal data sharing among different government organizations can help them to address collective problems and achieve shared goals. Effectively implementing such data sharing strategies will therefore be a crucial factor in enabling public sector innovation.

Recommendation 27: Ensure federal organizations comply with the Belgian federal open data strategy. Increase their awareness of the benefits of opening up data to the public in order to stimulate the development of innovations within government.

All studied countries – including Belgium - have established national data strategies and open data portals that direct the sharing of government data with the public, free of charge. However, it is reported to be difficult to ensure every organization complies with these and effectively makes use of such portals. Across the researched countries it is frequently argued such a strategy is difficult to enforce top-down, as it ultimately depends on the motivation of individual government organizations to develop open data and ensure these are available on the dedicated platforms. For open data to work, government organizations need to be convinced of the benefits sharing data with the public brings. Belgian respondents indicated several federal organizations do not fully support such a mindset yet and are fearful of opening up their data. Besides cultural barriers, other barriers should be addressed as well. Particularly concerning the financials aspects – some organizations rely on the

sale of their data to fund their own working – and the lack of insight into who uses the data and for what purposes (in order to open up data the correct way).

Recommendation 28: Ensure the legal framework for (mandatory) data-exchange between federal organizations is implemented.

The digital agendas from the researched countries all focus on enhancing data-sharing among government organizations in support of the once only principle. This objective is also outlined in the Belgian federal action plan for digitalization ‘Digital Belgium’. Most respondents indicate government-wide data-sharing is not yet common practice in their government. For Estonia however, it is reported government-wide data-sharing and the deployment of the once-only principle are already well advanced. Crucial for achieving this was the creation of a dedicated platform/application ‘X-road’, which organizes data-exchange between government organizations, and makes this mandatory by law (within the confinements of what is legally allowed). They are the only researched country to have developed such a platform at a government-wide level.

◆ *X-Road is a data exchange layer that enables Estonian government databases to automatically communicate with each other. Government officials can search and access data from various databases (within the limits of their authority). The system also enables eServices that make use of data that are held in different databases. X-Road enables – and obligates- all government organizations to share data internally. (see p.73)*

In the Belgian federal government, the successful development of the Kruispuntbank Sociale Zekerheid, a digital platform that organizes the exchange of social security data between a number of government organizations, can serve as an insightful example to establish a similar platform serving all federal organizations.

5.7 Risk governance

Innovation projects are often accompanied with a higher degree of risk. On the other hand, the public sector is characterized by a risk-averse culture, where even the slightest mistake or perception of risk can be met with great resistance. It is therefore crucial governments do not seek to avoid risk at all cost, but rather ‘govern’ risks in such a way that it does not stifle innovation.

Recommendation 29: In innovative projects, applying too strict rules in an attempt to minimize risks will hinder flexibility and experimentation and will be counterproductive for innovation. By experimenting with new solutions in a safe environment, it can be ensured the daily operations of an organization are not at risk.

The research reveals there is widespread consensus on the belief there is no need for a separate risk management approach for innovation projects. All respondents, across the researched countries, indicate they do not use special risk management strategies for innovation. Instead, standard methods, similar for all types of projects, are used. It is acknowledged innovation projects are usually accompanied with a higher degree of risk, however, through experimentation in secure (lab-like) environments, these risks can be mitigated. NIDO also adheres to these principles and sees safe experimentation and testing as key approaches for managing risks associated with innovation. It is recommended these insights are collected to create a set of guidelines concerning safe experimentation, so they can be distributed throughout government. Additionally, in the Belgian federal government, several respondents indicated they believe imposing too strict rules to reduce risks would be counterproductive for innovation projects. Taking into consideration the amount of flexibility and the room to experiment many innovation projects require, this appears to be a valid

approach that is also supported by civil servants in the other researched countries.

Additionally, one of the most commonly identified risk related to innovation concerns the lack of stable, long-term funding. This supports the previously made recommendation on the establishment of stable funding resources for public sector innovation initiatives. Other risks that should be taken into consideration concern existing policies, structures and management models that do not align with new forms of cross-administrative collaboration, as well as the risk that only pioneers find their way to the innovation initiatives and the wider user group is not reached sufficiently.

5.8 Incentives

Government organizations are typically characterized by a high degree of risk aversion, which is counterproductive for innovation. In order to encourage civil servants to leave their comfort zone, share their ideas, and take risks, incentives need to be created to develop a culture that supports such behaviors among civil servants.

Recommendation 30: Make use of innovation competitions and challenge prizes to spur public sector innovation.

Across the researched countries the use of innovation competitions, often in the form of hackathons and challenge prizes, is the most common found incentive for stimulating innovation in the public sector. Winners are often granted money prizes to further develop their solution or have the opportunity to obtain a public contract. Such competitions help demonstrate that innovation is happening in government and it can motivate civil servants to participate in these new types of collaborative innovation projects. They can also serve as a platform where motivated innovators from across government can come together to exchange ideas and experiences. In federal government, the hackathon that was jointly organized by the Ministry of Home Affairs and the Ministry of Finance can act as a valuable inspiration for other federal organizations. It is recommended the organizing ministries share their experiences and lessons learned across government. Inspiration can also be drawn from competitions organized abroad:

- ◆ *‘Ratkaisu 100’ (‘Solution 100’), was a challenge prize competition organized by the Finnish innovation fund Sitra in 2016. This was an open competition (open to both public and private actors) and was aimed at solving one of Finland’s key future challenges. Via an open call people were asked to define a key social challenge affecting Finnish society. Selected teams (diversity of the team was a key selection criterion) were tasked with solving this challenge. A one million-euro prize was eventually awarded and split between two competing solutions. This is a particularly interesting example as it allowed civil servants to partake in both the challenge definition and the development phase of an innovation. (see p.47)*
- ◆ *The Dutch ‘Accountability Hack’ is a recurring hackathon format jointly organized by the Ministry of the Interior and Kingdom Relations, the Ministry of Finance, Statistics Netherlands (CBS) and the Netherlands Court of Audit. In the hackathon two challenges are put forward for which teams are invited to come up with innovative data-driven solutions. A jury awards the winning team for each challenge with a budget of €20.000 for the further development of their prototype into a functional tool. (see p.81)*

Recommendation 31: Make use of idea competitions to incentivize civil servants to share and develop their ideas. Grant recognition and visibility to civil servants who are involved in innovative projects.

Certain innovation teams in Dutch government have also experimented with idea competitions to harvest innovative ideas from all levels of staff. Since encouraging civil servants to share their ideas is crucial for spurring public sector innovation, it is recommended to promote the use of such idea competitions throughout the Belgian federal government as well. In this respect, the planned initiative of NIDO to create a digital idea platform where civil servants can share their ideas is a promising project that could also boost innovation within government. Additionally, the plan from the FPS Home Affairs to setup an innovation-oriented newsletter which would feature employees who are working on innovative projects, can also inspire other employees. This method for granting recognition to innovation-minded employees can be replicated in other federal organizations as well.

Recommendation 32: Create and use government awards as a tool to reward federal organizations and civil servants who are launching innovative projects and are cultivating an innovation mindset in their organization.

The annual Dutch Government Awards can serve as a useful example that can inspire the creation of similar awards in the Belgian federal government.

◆ *Each year, the VOM (Vereniging voor Overheidsmanagement) organizes awards for the 'Government Organization of the Year' and 'Government Manager of the Year'. When organizing such awards, it is important to apply selection criteria that assess the innovative capacity of organizations and civil servants. In this respect, the Dutch government awards can also serve as an insightful example since its selection criteria focus on connective capacity through collaboration and co-creation, as well as the development of a learning culture that tolerates mistakes. (see p.86)*

If awards are used to reward capabilities that are considered key enablers for public sector innovation – such as those used in the above-mentioned Government Awards - they can encourage government organizations as well as individual public managers to prioritize the development of innovative, collaborative approaches and to cultivate a supporting mindset.

5.9 Concluding Summary

It can be concluded a number of elements of the Belgian federal innovation architecture are already considerably developed:

Several federal organizations have already taken the initiative to include innovation in their policy and strategy documents. The development of a central strategy for innovation can encourage all federal organizations to start innovating, and provide them with guidelines on innovative approaches that can be applied in government.

A number of innovation-oriented networks have already been developed in federal government, both within organizations as well across organizations (with a transversal reach). By optimizing these networks' capacity for knowledge exchange, it can be ensured they function as an effective instrument for spurring innovation across federal government.

Furthermore, Belgium is one of few researched countries to have established a centralized innovation lab with a government-wide scope (NIDO). Several federal organizations have already relied on their insights and expertise concerning the efficient use of innovative methods and tools. Given their role as knowledge-broker and the guidance they provide to organizations wishing to undertake innovative projects, they form an essential part of the federal innovation architecture. However, in order to ensure the optimal functioning of NIDO, further alignment is needed regarding the role they should

take on, either being that of a 'facilitator', or that of an 'owner' of innovation projects. In addition, the development of organization-specific innovation labs can help spur innovation in specific policy domains.

It is reported that currently, innovation projects are not hindered by overly strict rules for reducing risk. In line with risk management approaches encountered in the other researched countries, testing of concepts in secure environments and piloting are the main approaches used in federal government. These are an adequate and effective means to manage risks in innovation projects.

In other areas however, considerable improvements can be made to strengthen the federal innovation architecture:

When looking at the capacity to resource innovation appropriately, it becomes apparent current budgeting practices are often an obstacle for the effective financing of innovation projects. By allowing more budgetary flexibility, both the planning and execution of innovation projects can be encouraged and facilitated. In terms of staff, many 'hidden innovators' are reported to exist within government. Since these are a valuable resource to drive innovation forward, people should be given sufficient flexibility to allow them to engage with innovation initiatives, while combining this with another day-to-day role in government. By further developing the e-learning offer and including courses on innovation-related topics and skills, civil servants will have greater flexibility in developing the skills that are needed to support innovation.

By developing more streamlined approaches for evaluating innovation projects, it can be ensured that people can learn optimally from innovation projects that have been undertaken. Currently, evaluation largely remains limited to progress updates and (quantitative) outputs of projects. More attention should be given to the evaluation of outcomes and impact, as it will provide more concrete insight into what has been realized at the end of a project (outcomes), and what systemic change (in services, policies) the innovation project has been able to realize (impact).

In terms of data governance, a number of strategies have already been established to spur data exchange between federal organizations, as well as with external actors (citizens, companies). By addressing cultural barriers that exist within certain organizations and hinder data sharing, it can be ensured the existing data strategies and infrastructure optimally contribute to innovation.

Finally, few incentives currently exist within federal government that motivate civil servants or government organizations to innovate. By organizing incentives such as idea competitions and innovation awards, recognition and visibility is granted to those who are involved with innovation. Such incentives can be instrumental in demonstrating innovation is valued and can motivate others to start adopting innovative approaches.

Annex

Overview sources document analysis Finland

Document name	Source type	Source location
Reformative Finland: Research and innovation policy review 2015–2020	Policy document	
Vision and Roadmap of the Research and Innovation Council Finland	Online policy document	https://valtioneuvosto.fi/documents/10184/4102579/Vision_and_roadmap_RIC.pdf/195ec1c2-6ff8-4027-9d16-d561dba33450/Vision_and_roadmap_RIC.pdf
Open Government Partnership	website	https://www.opengovpartnership.org/
Open Government National Action Plan for 2019-2023 Finland	Online policy document	https://www.opengovpartnership.org/wp-content/uploads/2019/09/Finland_Action-Plan_2019-2023_EN.pdf
Sitra innovation fund	website	https://www.sitra.fi/en/themes/about-sitra/#about-us
Sitra lab	website	https://www.sitra.fi/en/topics/sitra-lab/#latest
Experimental Finland	website	https://kokeilevasuomi.fi/en/frontpage
OECD Case Study – Place to Experiment Finland	Online document	https://www.oecd.org/gov/innovative-government/embracing-innovation-in-government-finland.pdf
Innovillage	website	https://www.innokyla.fi/en/tietoa-innokylasta , https://innokyla.fi/en (updated link)
Innovation centre	website	https://kokeilukeskus.fi/%EF%BB%Bfinnovation-centre/
Changemakers network info file OPSI website	webpage	https://oecd-opsi.org/wp-content/uploads/2019/07/Change-Makers-Network_Finland_2013-1.pdf
Internal notes Work 2.0 Lab (2020)	Internal document	
Interview D9 Team	Online article	https://medium.com/@leeseungho/interview-with-anni-lepp%C3%A4nen-of-d9-team-b648608bbbeb
Solution 100 innovation competition (Ratkaisu 100)	webpage	https://www.sitra.fi/en/topics/ratkaisu100/
Klash innovation competition	Press release	https://www.kommunforbundet.fi/pressmeddelande/2019/utmaningarna-i-tavlingen-klash-har-oppnats-nu-letar-vi-efter-team-som-ska-losa
Tutki Hankintoja platform	website	https://tutkihankintoja.fi/
Open Data Program	website	https://vm.fi/en/open-data-programme
“Finnish Open Data Programme eliminates obstacles to data reuse”	online article	https://joinup.ec.europa.eu/collection/nif-national-interoperability-framework-observatory/document/finnish-open-data-programme-eliminates-obstacles-data-reuse-api-julkictlab-odip-ckan-juhta
Opendata.fi – national open data platform	website	Opendata.fi
Comparative analysis of public sector innovation strategies in the nordics	Internal document	
Overview innovation actors in Finland	Internal document	

Overview sources document analysis Estonia

Document name	Source type	Source location
Estonia's Open Government Partnership Action Plan for 2016-2018 (Government Office)	Online document	https://www.opengovpartnership.org/wp-content/uploads/2017/05/Estonia_NAP3_2016_0.pdf
Estonia's Open Government Partnership Action Plan for 2018-2020 (Government Office)	Online document	https://www.opengovpartnership.org/wp-content/uploads/2018/08/Estonia_Action-Plan_2018-2020_EN.pdf
Estonian Research and Development and Innovation Strategy 2014-2020 (Min. of Education and Research)	Online document	https://www.hm.ee/sites/default/files/141stonian_rdi_strategy_2014-2020.pdf
Innovation Team information page	Webpage	https://www.riigikantselei.ee/et/innovatsioonitii m
Connected Health	Website	http://connectedhealth.ee/
Open Government Partnership – network coordination	Webpage	https://ega.ee/project/open-government-partnership-network-coordination/
“The government approved a new open government partnership action plan”	Web article	http://avatudvalitsemine.ee/uudised/valitsus-kiitis-heaks-uee-avatud-valitsemise-partnerluse-tegevuskava/
Accelerate Estonia	Website	https://accelerateestonia.ee/en/
“An innovation unit to be created at the joint ministry” (2018)	Web article	https://www.riigikantselei.ee/en/news/innovation-unit-be-created-joint-ministry
Competency Framework – Top Executives Civil Service	Webpage	https://www.riigikantselei.ee/en/top-civil-service-excellence-centre https://www.riigikantselei.ee/en/supporting-government/top-executives-civil-service/competency-framework
Presentation Public Sector Innovation Team	Internal document	
Digital Agenda 2020 for Estonia (update 2018)	Online document	https://www.mkm.ee/sites/default/files/digital_agenda_2020_web_eng_04.06.19.pdf
Information portal e-Estonia	Online portal	https://e-estonia.com/

Overview sources document analysis The Netherlands

Document name	Source type	Source location
Competentiegids Rijk	Online document	https://www.functiegebouwrjksoverheid.nl/binaries/content/assets/fgr/mijn-loopbaan/competentietaal-rijk/competentiegids_rijk_01112018.pdf
Rijks Innovatie Community	website	https://www.rijksinnovatiecommunity.nl/
City Deals	website	https://agendastad.nl/city-deals/
Startup In Residence	website	https://startupinresidence.com/
Startup In Residence	webpage	https://www.zuid-holland.nl/onderwerpen/economie/startup-residence/
Intergov Startup in Residence	website	https://intergov.startupinresidence.com/news/Ov-erheden-bundelen-kracht-voor-een-nieuwe-Startup-in-Residence-editie

Startup In residence Impact Report	Online document	https://startupinresidence.com/amsterdam/media/sites/2/2019/06/Startup_In_Residence_Report_Engels.pdf
Evaluation City Deals	Online document	https://www.pbl.nl/sites/default/files/downloads/pbl-2017-evaluatie-city-deals-2915_1.pdf
Agenda Stad – City Deals	website	https://agendastad.nl/city-deals/
Association for Government Management (VOM)	website	https://www.vom-online.nl/
Government Awards	website	https://www.vom-online.nl/
Futur – the young civil servants network	website	https://www.futur.nl/
Action Plan for Open Government 2018-2020 “It must be open”	Online document	https://www.opengovpartnership.org/wp-content/uploads/2018/11/Netherlands_Action-Plan_2018-2020_EN.pdf
NOVUM innovatielab	website	https://novum.nu/
“The Innovation Officer”	Podcast	https://novum.nu/podcast/
Innoveren binnen het CJIB: denk groot, begin klein	Web article	https://www.digitaleoverheid.nl/achtergrondartikelen/innoveren-binnen-het-cjib-denk-groot-begin-klein/
Odyssey Hackathon	website	https://www.odyssey.org/
Hackathon Regie op Gegevens	website	https://www.digitaleoverheid.nl/overzicht-van-alle-onderwerpen/gegevens/regie-op-gegevens/
Accountability Hack	website	https://accountabilityhack.nl/wat/
The State of Innovation in the field of Justice and Security (2018)	Internal document	Print publication
Innovatie Toolbox – Ga aan de slag met je idee (2017)	Internal document	Print publication
Innoveren & Innovatiegericht Inkopen (2018)	Internal document	Print publication
Innoveren in de keten: lenW als launching customer (Dialogic, 2017)	report	https://www.dialogic.nl/wp-content/uploads/2018/05/Dialogic-2017.-Innoveren-in-de-keten-lenW-als-launching-customer.pdf
Bill Digital Government	Online document	https://www.digitaleoverheid.nl/document/wetsvoorstel-digitale-overheid/
Dutch Digitalization Strategy (2018)	Online document	https://www.rijksoverheid.nl/documenten/rapporten/2018/06/01/nederlandse-digitaliseringsstrategie
Dutch Digitalization Strategy 2.0 (2019)	Online document	https://www.rijksoverheid.nl/documenten/rapporten/2019/07/05/nederlandse-digitaliseringsstrategie-2.0
Digicampus infopage	webpage	https://www.dedigicampus.nl/index.php
Experiment ‘Aanbesteden op 3A4’	Online document	https://www.ubrijk.nl/documenten/verslagen/2019/03/27/index
Functieruil mobility program	webpage	https://www.ubrijk.nl/service/loopbaan-entalentontwikkeling/loopbaanbegeleiding/functieruil
Algemene Bestuursdienst	website	https://www.algemenebestuursdienst.nl/organisatie/algemene-bestuursdienst
“Topambtenaren zijn vooral bezig hun minister uit de wind te houden”	Newspaper article 21/02/2020, NRC Handelsblad	https://www.nrc.nl/nieuws/2020/02/21/een-kaste-van-loyale-probleemverwijderaars-a3991281
Twopager Innovatie & Technologie op de 3e Horizon	Internal document	

Presentation ABDTOPConsult: Innovation	Internal document	
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Overview sources document analysis Belgium

Document name	Source type	Source location
Management Agreement FPS Policy & Support 2018-2020	Online published document	https://fedweb.belgium.be/sites/default/files/downloads/Bestuursovereenkomst%202018-2020.pdf
Management Agreement FPS Home Affairs 2016-2018	Online published document	https://www.ibz.be/download/Bestuursovereenkomst.pdf
Management Agreement NSSO (update and extension for 2019-2020)	Internal document (not yet published)	/
Management Agreement FPS Social Security 2016-2018	Online published document	https://socialsecurity.belgium.be/nl/bestuursovereenkomst-2016-2018
Innovation Roadmap (FPS Home Affairs)	Internal document	/
Info fiche CoP Agile	Webpage	https://www.foifa.belgium.be/nl/fiche/cop-agile
DG Digital Transformation website	website	https://dt.bosa.be/nl
NIDO website	website	https://nidolab.be/
'Gov Buys Innovation' platform	website(beta-version)	https://govbuysinnovation.belgium.be/over/
'Hack4Gov' hackathon website	website	https://www.hack4gov.be/
Foresight Manual by UNDP Global Centre for Public Service Excellence	Online publication	https://www.undp.org/content/dam/undp/library/capacity-development/English/Singapore%20Centre/GCPSE_ForesightManual_online.pdf
Generic competency model	Online published document	https://fedweb.belgium.be/sites/default/files/Roster%20generieke%20competentieprofielen.pdf
Accelerate Yourself – Min. of Infrastructure and Water Management	webpage	https://www.grit-academy.nu/Modules/accelerate-yourself-iw/
Info fiche Lumen network	webpage	https://www.foifa.belgium.be/nl/fiche/lumen-netwerk
Talent Exchange Mobility Program website	website	https://www.talentexchange.be/nl
ICMS Safety portal	Data portal	https://crisiscentrum.be/nl/inhoud/het-veiligheidsportaal
BE-Alert	Data portal	https://www.be-alert.be/nl/
Data.gov.be	Data portal	data.gov.be
Federal open data strategy	Webpage	https://fedweb.belgium.be/nl/nieuws/2015/20150724_opendata

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