The Innovation System of the Public Service of Canada

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Foreword

The public sector cannot be a stranger to innovation. As in the private sector, it needs to be able to implement novel approaches to deliver on its core functions. As technologies, circumstances and needs change it means that it cannot be assumed that existing structures, processes and interventions remain the most appropriate or most effective. New options must be developed and assessed on a continual, consistent and reliable basis in order to be ready for both expected and unexpected challenges. This is true for both the private and public sectors. The process of innovation must therefore take a more central role if government is to remain effective, relevant and suitable.

A systematic approach is required for innovation to become a resource that governments can rely on to help address the priorities of both today and tomorrow. While innovation has always occurred in the public sector, it has often been a somewhat reactive, opportunistic or serendipitous process. Innovation efforts have frequently been piecemeal attempts, delivering isolated projects and building dispersed or disconnected pockets of capability. If the increasing expectations of the public sector from citizens and their governments are to be met, this must change. However, despite a developing practice of public sector innovation in a number of governments around the world, it is still not clear what a mature public sector innovation system looks like.

The Government of Canada has sought to develop a culture and practice of measurement, evaluation, and innovation in programme and policy design and delivery. Ministers have been mandated to ensure there is experimentation to achieve government goals, senior-level bureaucrats have been directed to explore and engage with innovation, and there is co-ordinated support for the development of innovative approaches to deliver on government priorities. As part of this agenda of experimentation and learning, the Impact and Innovation Unit (IIU) within the Privy Council Office (PCO) collaborated with the OECD's Observatory of Public Sector Innovation (OPSI) to explore and understand how a systemic approach to innovation can be supported in the Government of Canada.

This report puts forward a new framework for understanding and appreciating public sector innovation systems. This model is built from the progressive development of an evidence base gathered by OPSI about what is required for an effective innovation system. The report begins by looking at the experience of Canada over the last 30 years to showcase what has been achieved so far and to gain insight into why previous efforts may have been insufficient. It then examines the case for a new, more sophisticated approach to supporting public sector innovation. The report reviews what is known about the characteristics of public sector innovation in the Government of Canada. It then introduces the model, building on the experience of innovation within the Public Service of Canada.

The current state of the innovation system of the federal Canadian civil service is appraised to identify areas for attention. The functioning of a system can only be truly understood over a longer time frame rather than from a static snapshot. Therefore, the report considers the dynamics of the system through the use of three different scenarios, to consider what

issues may evolve over time. Finally, the report draws on these different components to outline interventions likely to best assist the Public Service of Canada in its ongoing innovation journey.

Given that much is still being learnt about public sector innovation, and that each country will have different contexts, the report avoids a prescriptive approach as to what should be done. It identifies potential areas of intervention, but recognises that the context will continue to evolve, and that the specific actions taken should be matched to the ambitions and intent of the actors involved. A further aim of the report is to empower the different actors of the system to see their role in it, and to consider how they might best play a part in its functioning. While the IIU and the PCO clearly play a central role, the success of the innovation system – i.e. its ability to consistently and reliably develop and deliver innovative solutions to meet the goals and priorities of the government – will depend on a collective effort, involving action from many different actors at the individual, organisational, and system levels.

It is intended that this initial public sector innovation system review will provide a contribution to the understanding of such systems, and help other countries as they navigate their own innovation journeys.

Acknowledgements

This review was prepared by the Observatory of Public Sector Innovation in the Public Sector Reform Division of the Governance Directorate of the OECD. The Observatory of Public Sector Innovation (the Observatory) collects and analyses examples and shared experiences of public sector innovation to provide practical advice to countries on how to make innovation work.

Alex Roberts (Innovation Specialist) developed the review with contributions from Piret Tõnurist (Innovation Specialist) under the co-ordination of Marco Daglio (Head of the Observatory) and Edwin Lau (Head of Division, Public Sector Reform). The work also involved contributions from members (past and present) of the Observatory including Jamie Berryhill, Theó Bourgery, Cezary Gesikowski, Angela Hanson, Matt Kerlogue, Kevin Richman and Daniel Tostado. Daniel Gerson (Public Employment and Management, Reform of the Public Sector) also contributed to the review. Special thanks go to Liv Gaunt and Raquel Paramo for their help with the preparation of the final publication.

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Executive Summary

Governments today are confronted with a complex array of interconnected problems, increased citizen expectations, and fiscal constraints. Technological, geopolitical, economic, social, and environmental changes mean that the operating context for the public sector is one of increasing flux rather than stability. Governments cannot assume that existing policies and programmes remain the most suitable options for today, let alone that they will suffice for tomorrow. Governments therefore require a systemic approach to public sector innovation to develop and deliver novel solutions that meet the existing and emergent needs of citizens.

What does a systemic approach to public sector innovation at the level of national government look like? This report looks at the experience and context of the Public Service of Canada, where significant emphasis has been placed on innovation. The Canadian civil service has been on an ongoing journey of discovery and learning about public sector innovation, and this report outlines some of the notable points from the past 30 years. It reveals that, despite ongoing effort, more is needed if the Canadian Public Service is to achieve its own stated ambitions. The report provides some suggestions as to how this gap might be overcome, as well as proposing a new public sector innovation system model to assist other countries. There are no easy answers, however, and there is a need for ongoing stewardship of the innovation system.

The most appropriate actions will depend on the level of ambition and intent for the innovation system. Accordingly, three different scenarios (continuing as is; additional effort and investment; a radical shift to truly emphasise and embed innovation at the heart of the state) are explored to consider different possibilities. These scenarios highlight the different trade-offs that may be encountered as the system develops over time.

Key Findings

- The Government of Canada starts with a strong base, having a long demonstrated history of innovation. The civil service also has a longstanding awareness and appreciation of the need for innovation.
- However, there has been an ongoing recognition that the Public Service of Canada needs to continue to adapt and be responsive. Respective Clerks (the Heads of the Public Service) have repeatedly identified the need to go further.
- Much of the ‘low-hanging’ fruit (i.e. activities to support public sector innovation such as awards, efforts to remove hurdles, introduction of new tools) has already been picked, but this is unlikely to lead to long term sustainability.
- The innovation system is still relatively fragmented, in that most actors are experiencing the same system in different ways. New approaches are needed.

- This need for new approaches is linked to the significant change occurring in the public sector operating environment. When everything else is changing, existing measures and interventions cannot be relied on to be the most appropriate.
- In such a context, innovation needs to shift from something that is often a sporadic and *ad hoc* activity to something that can be drawn on consistently and reliably.
- The current lived experience of innovation within the Public Service of Canada reveals a range of insights about the nature and dynamics of public sector innovation systems. This includes the need to pay attention to four particular areas:
  - Clarity – is there a clear signal being sent to system actors about innovation and how it fits with other priorities?
  - Parity – does innovation have equal standing with other considerations when it comes to proposed courses of action?
  - Suitability – are the capabilities, systems and infrastructure appropriate and sufficient for the available options?
  - Normality – is innovation seen as integral, rather than as an occasionally accepted deviation from the norm?
- Where the system elements are not sufficiently developed, then innovation activity will be relegated to the organisational or individual level. When this occurs, it will leave innovation practice vulnerable to chance or circumstance, and is thus unlikely to be a sustainable or reliable activity.

Key Messages

- Public sector innovation is fundamentally difficult and much is still being learnt about how to support and embed it as a practice within governments.
- The Canadian Public Service has made some significant steps, including the introduction of a structural driver for innovation in the form of the Experimentation Directive, towards a more systemic approach to public sector innovation. However, it is likely that without continuous efforts and direction the innovation system will not be able to consistently and reliably contribute to the delivery of the best outcomes for citizens.
- An innovation system is made up of many parts and contributed to by many actors. While the Impact and Innovation Unit within the Privy Council Office plays a central role, the effectiveness of the innovation system – i.e. its ability to consistently and reliably develop and deliver innovative solutions that contribute to achieving the goals and priorities of the government – will depend on collective effort, involving action from different actors at the individual, organisational, and system levels.

While a range of options are put forward, the aim of this review, and the guidance included within it, is to help provide a reflection of the system so that all actors can see themselves within it. This can provide a contribution to the ongoing discussion and deliberation about what the collective aim for innovation is within the Public Service of Canada, and how everyone can play a part, and be supported in that. This will help the Government of Canada to achieve the best outcomes that it can for Canadian citizens.

Chapter 1. Overview

The OECD has collaborated with the Government of Canada on the first ever country review of a public sector innovation system. As the review is the first of its kind, new research was required to establish an emergent model that could be applied in order to understand the nature of the innovation system of the Public Service of Canada and consider possible options for intervention. This chapter provides a high level overview of the context, the key insights from the review, and explains the methodological steps and structure of the review process and this resultant report.

The Government of Canada has a long and proud history of innovation. Innovation, which can be defined as "implementing something novel to the context in order to achieve impact" (OECD, 2017), has been a key ingredient of the Public Service's success in adapting and responding to the challenges and opportunities of an ever-changing world.

However, Canada, like other countries, is facing significant shifts that ask more of government. These include digital transformation, evolving expectations on the part of citizens regarding their needs and what is possible, an increasingly interconnected world, and issues of rising complexity and volatility. Society is facing large-scale changes ranging from automation to ageing. Transformation will affect all walks of life, whether governments are prepared for it or not. Better results and better outcomes are being demanded – by citizens, politicians and public servants themselves – and agile and effective responses to these demands must be underpinned by new thinking, new ways of working, and new ways of interacting with and delivering for citizens. Doing better often requires doing things differently … or doing different things. This environment requires more than occasional flashes of innovation; it demands more discipline, more routine, more reliable and more consistent innovation. Canada needs innovation to become part of the core business of government, so it can be drawn upon – when and as needed – to achieve better outcomes for Canadian citizens.

Recent years have seen the emergence of an increasingly ambitious agenda to drive and embed innovation in the everyday work of government. Perhaps the most tangible demonstration of this has been the government's commitment that a fixed percentage of programme funds should be devoted to experimenting with new approaches and measuring impact to instil a culture of measurement, evaluation and innovation in programme and policy design and delivery. This commitment – a global first – provides a powerful structural driver for exploring how and when to do things differently in the public sector. In addition, the government has put in place a range of other initiatives that seek to ensure that innovation is a systemic rather than a sporadic phenomenon. The Government of Canada is working to build a pipeline between identified priorities, delivery and impact, and sees innovation as a tool to ensure that the pipeline is effective.

However, innovation by definition involves doing something that has not been done before. Any innovation process entails challenges with much still to learn about what works and what does not. In the context of government are current efforts sufficient to meet current and future needs? And is the Public Service of Canada well placed to embed innovation or does more need to be done?

As part of its openness to experimentation, the Government of Canada has asked the OECD to conduct an inaugural review of its public service innovation system. The objective is to understand its performance, and to consider what might be done to reinforce its capacity to innovate in order to deliver better outcomes for citizens.

The review takes a novel approach. While other countries have undertaken investigations undertaken work on public sector innovation, the present review is the first to explore in depth what a public sector innovation system looks like, and the factors affecting its performance. The public sector is historically well versed in managing systems, such as human resources, and finance, legal and other corporate systems. However, examining these systems in isolation often results in the introduction of solutions that shift problems from one part of the system to another. This review attempts to explore the innovation system of the Public Service of Canada as a whole (i.e. looking at its structures, actors and processes and their relationships). This attention to the system level is needed if the Public

Service hopes to be confident in its ability to consistently identify, develop and apply new approaches as needed, responding to both emerging threats and to opportunities.

The challenge of public sector innovation in Canada – as in many other countries – is to deliver across two priority areas, and to have the capabilities to underpin both:

- **Delivering on today –** This relates to innovation taking place to meet key priorities and that government has the ability to innovate in order to reach its goals. Such innovation will usually be incremental in nature and exploit current knowledge resources. However, in some cases it will be transformational with a view to responding to more ambitious agendas.
- **Delivering for tomorrow –** This refers to exploration and engagement with emergent issues and technologies that will shape future priorities, future commitments and future responses. It will likely involve more radical forms of innovation that will be harder to embed in existing structures.
- **Ensuring innovation readiness –** This means ensuring the necessary absorptive capacity across the Public Service to engage with new ideas, new methods and new ways of working and delivering. Innovation is not a capability or capacity that can be turned on and off at will, and it is likely that innovation readiness can only be achieved if nurtured and considered explicitly. Furthermore, innovation needs supporting structures to allow it to happen. Effective innovation cannot exist in a vacuum – familiarity, experience, knowledge and processes need to be present for it to function as a reliable resource.

This review builds on existing research undertaken by the OECD Observatory of Public Sector Innovation (OPSI), but also breaks new ground in understanding public sector innovation systems. It draws on both theory as well as lived experience to appreciate what has influenced whether and how innovation has occurred.

From May 2017 to March 2018, the OECD spoke or interacted with almost 200 Canadian civil servants and stakeholders through interviews, online forums or workshops. They described in their own words the nature of the innovation process in the Canadian context, the underlying history, the actors involved and the experience of innovation in the Canadian Public Service. The review combined this exploratory approach with desktop research and other investigations to build a complete picture of the activity, actors and ambitions involved in innovation. It should be noted that while innovation has been a significant focus in the Public Service of Canada for some time, this attention has been ramped up only recently. Accordingly, a number of relevant interventions are still quite new and cannot be judged until their impacts are observed over a longer timeframe. The aim of this review then is not to critique, but rather to uncover what has happened, and to appreciate the present state of innovation in the Public Service of Canada, why it matters and what it might mean for the future. On the basis of this investigation, the OECD developed four understandings about innovation in the Public Service Canada: offered four insights:

1. While increased attention has been paid to innovation, the Public Service's relationship with innovation is still unsure and there is uncertainty about the nature of this relationship (e.g. the role and place of innovation).
2. Innovation is happening across the Public Service, however it is often a by-product of other processes or of determination on the part of particular individuals, rather than the quality or merit of an idea, or the underlying need for innovation.

3. While government is changing how it operates, there is a mismatch at present between what can be done inside and outside of government, risking a public service that becomes unsuited to its context.
4. The practice of innovation has developed significantly, however it often remains a marginal activity and is not viewed as part of core business or the ways that things are done.

These four understandings about the system build on 28 underlying findings that were collected and tested over the review period. Given the relative novelty of public sector innovation as a practice, these understandings should be interpreted as an emerging picture of the state of the system and not as a conclusive judgement of its functioning.

These insights are a starting point, but are also by their nature retrospective. The public sector innovation context in Canada is changing fast, with new initiatives introduced throughout the review process, while the effects of previous initiatives have started to become more clearly felt in the system. There is a need for measures to assess the contributions of recent additions, in order to help reflect as adjustments and changes occur in the future, and to make deliberate changes as more is learnt about public sector innovation and what works.

The OECD review therefore proposes a model for public sector innovation to help Canada (and others) better assess the development and implementation of innovation across the Public Service and with its partners outside government, and to help plan its innovation journey leading into the future. This new framework draws on the lived innovation experience in Canada, while also providing global insights into the nature of public sector innovation and its determinants. It identifies the factors that shape innovation at the individual, organisational and entire Public Service/system level. This model – developed in partnership with the Government of Canada – is illustrated with examples from other countries that help clarify possible considerations and provide inspiration for potential avenues of exploration.

Applied to the Canada context, the framework serves to assess the aggregate contribution of existing innovation efforts and to identify possible measures that can help the Canadian Government meet its ambitions. It is intended to provide all actors with a sense of what is happening, what more might be needed, and how they can contribute to ensuring that innovation is embedded into the broader system and that their actions are in line with the goals of the Government of Canada. This is essential to obtain real impacts and results for Canadians both in the short and the long term.

However, a point-in-time snapshot alone is insufficient. Like any system, an innovation system is dynamic. Different initiatives and existing measures interact with each other, producing effects that play out over time. The review proposes three scenarios to test and confront assumptions about the current state of innovation:

- A continuation of the current approach.
- The introduction of a range of new policies or interventions.
- A radical shift that prioritises innovation, placing it at the centre of thinking, and involves significant and ongoing shifts in the operations of the Government of Canada in order to continuously meet citizens' needs and expectations.

By drawing on these separate elements – a reflection on the journey to date, current performance and how things might play out under different future scenarios – the review

highlights a number of issues and proposes possible interventions for consideration. These are provided at a whole-of-system level alongside possible options that organisations or individuals could pursue to strengthen their innovation performance.

Public sector innovation is fundamentally challenging. The public sector consists of a diverse set of activities, actors, issues and considerations, and is relied upon for stability, continuity and security. However, governments are also expected to respond quickly, effectively and efficiently to sometimes fast-changing issues and demands in an environment characterised by a generally low tolerance for risk, surprises or mistakes. To truly embed innovation in the public sector as a resource for achieving better outcomes requires balancing these and other competing tensions.

The Government of Canada has undertaken significant efforts to promote innovation as a core capability and has made significant progress to date. It has demonstrated its commitment to experimentation and has undertaken a number of pioneering initiatives, with no assurance that these will succeed, but with the guarantee that it will learn more. In turn, these lessons will help provide insights into how to achieve the best results and deliver the greatest impact.

The Government of Canada now has the opportunity to embed the progress it has made thus far, and to go even further. This review aims to provide support for this journey, and to equip the Public Service (and its partners) with a framework that will enable them to consider what can be done and reflect on the lessons and outcomes of experiments and innovation currently underway.

Purpose and methodology of the study

The current study is the first of its kind. Unlike other OECD public governance reviews, this review is not designed to directly benchmark Canada against a pre-defined model or framework for public sector innovation. Public sector innovation is in itself an emergent topic, and has never before been examined from a systemic perspective. Accordingly, much of the work underlying the review has involved theory building. In this context, the Government of Canada has shown great leadership in supporting the development of an emergent systemic model of public sector innovation that will hopefully benefit not only OECD member states, but also other countries around the world.

Due to the absence of similar earlier studies the work has been necessarily exploratory in nature and loosely guided by grounded theory (inductive) approaches. In particular, it involved the generation of theory from systematic research characterised by simultaneous involvement in data collection and analysis phases of research, the creation of analytic codes and categories developed from data, the writing of analytic notes to explicate and fill out categories, and theoretical sampling (Charmaz, 1996; Strauss and Corbin, 1990). Methodologically, the work aimed to gain insights into and familiarity with the functioning of the public sector innovation system, and thereby construct a first model that could be employed in other contexts (including other countries). In addition to robust grounded theory techniques, the review also drew upon a design-led approach to provide key insights relevant to the Public Service of Canada, and network analysis techniques.

Once the review arrived at a set of preliminary findings, the subsequent steps included looking for deviance from the general narrative, in order to identify possible exceptions or contradictions. An accompanying critical instance case study analysis was applied to challenge the generalised assertions and the casual linkages observed within the system (Yin, 2011).

As such, the data for the review were triangulated from a variety of sources including: desktop research, semi-structured interviews, workshops, focus groups, online engagement tools and expert consultations. The understandings about the system and the model were validated through several workshops, focus groups and international experts throughout the study process.

Due to the number of unknowns connected to the subject matter at hand, and to minimise risks throughout the review process, an iterative, step-wise research design was developed that would allow the methodology to be adapted throughout the course of the review if and when the need arose. The research design is outlined in Box 1.1. International insights and comparisons with system(s) in other countries were provided by the direct involvement of two peer reviewers (senior officials in the Australian and UK governments), and via the OPSI's existing research and network of international partners.

Box 1.1. Step-wise exploratory design

Given that the present review is the first of its kind, the OECD and the Government of Canada agreed upon a flexible, step-wise research design, which consisted of the following steps:

1. Agreement on the study design (March 2017). The Observatory of the Public Sector of Innovation and the Central Innovation Hub (now the Impact and Innovation Unit) at the Privy Council Office of the Government of Canada agreed on a review of the innovation system of the Public Service of Canada. The review would encompass the range of actors and what the system delivers, the position and role of the different components of the system including their strengths and weaknesses, and the ability of the system to deliver change when needed. The terms of reference for the review are provided in **Annex A**.
2. Desktop research (March-July 2017). During this phase the available documentation on Canada's public sector innovation efforts was analysed. These included corporate strategies, reports and expert opinions identified by the Privy Council Office.
3. Online engagement (April 2017). A public engagement process designed to reach the wider civil service was initiated on two Government of Canada platforms: GCcollab and GCconnex. Three open-ended questions were posted on the platform to capture expectations of the review, personal experiences with innovation in the public sector and the relative importance of innovation in the Public Service of Canada.
4. First exploratory mission to Canada (May 2017). During the first mission to Canada, four teams conducted over 60 semi-structured interviews with public sector innovators or interested parties. The interviews included both inductive and deductive questions with a majority of inductive, open-ended queries. The aim was to capture the "lived experience" of innovation in the public sector, with a focus on how civil servants defined public sector innovation in their own language, the kinds of examples they identified with and the opportunities or barriers they observed across the sector. The specific backgrounds of interviewees were also discussed. Interviewees ranged across all levels of the civil service (interviewees are listed by name in **Annex B**). A snowball methodology was applied to identify other significant figures and resources in the field of public sector innovation.

5. Peer reviewers from Australia and the United Kingdom (selected together with the Canadian Government) accompanied the mission and participated in the interviews. The role of the peer reviewers was to identify potential similarities or contrasts within the innovation systems in respective countries, and to reflect upon noted barriers, issues and opportunities. In addition a discovery workshop was organised for public sector innovators, identified by the Privy Council Office, in order to test the insights in a semi-expert environment.
6. Analysis of data collected (June-September 2017). All interviews from the prior phase were transcribed and initial coding was attempted with a focus on identifying commonalities in language on the definition of innovation. Additional material identified in phase 2 was collected and analysed. A series of intermediate artefacts were developed including a general timeline of main events in the development of the innovation system, and the mapping of main stakeholders and their roles alongside key examples of innovation in the Canadian Public Service. These artefacts were posted on online platforms to collect feedback from the Public Service. Based on the triangulated data from desktop analysis, narrative and actor analysis, clusters of main findings were assembled resulting in 28 preliminary findings. Critical instance cases deviating from the main findings were identified for future study to challenge the general cause-effect relationships of the observed interlinkages.
7. Second case study mission to Canada (October 2017). The second mission focused on undertaking critical instance case study research surrounding cases identified in the previous phases. Interviews with case owners and main beneficiaries were undertaken with case-specific interview approaches employing both deductive and inductive questions. Additional research was conducted to further investigate and explore system elements and activities, and to present and validate the preliminary findings. During the mission, one team member also conducted participatory observations within the Central Innovation Hub and key innovation networks. The preliminary findings were posted on the online platforms in order to identify gaps in the work.
8. Validation of preliminary findings with OECD member country delegates (November-January 2018). The network of OPSI National Contact Points provided feedback on the findings with a focus on whether they resonated with their country's experience.
9. Systems dynamics analysis and model development (January-February 2018). Based on the triangulated data, three levels of analysis – individual, organisational and system – were identified and the main issues of concern were outlined in the context of Canada. This resulted in four main understandings about the system. A preliminary model for public sector innovation and scenarios based on systems dynamics were developed.
10. Third mission to Canada and validation of the system comprehension (February 2018). This phase involved focus group interviews with key organisations in the field of public sector innovation and a validation workshop with the Policy and Program Entrepreneurs of the Deputy Minister's Taskforce on Public Sector Innovation. This was followed by the drafting of the report and the validation of

the model by country delegates at the Public Governance Committee (February-April 2018).

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Chapter 2. Canada's historical innovation journey

In order to understand the innovation choices facing Canada in the future, it is necessary to examine the past. This chapter explores the innovation journey of the Public Service of Canada over the past 30 years – a period covering the effective living memory of the system. However, any attempt to develop a single narrative for an inherently ambiguous concept such as innovation presents difficulties. The historical innovation journey is thus viewed in terms of a chronology of relevant developments and through a thematic analysis of observed patterns and trends. The chapter also considers the indicative roles of some of the key actors involved. It concludes by drawing out some of the implications of this historical journey and exploring their meaning for the journey yet to come.

This review seeks to understand innovation in the context of the Public Service of Canada. In order to do so, it is first necessary to examine the history of innovation in Canada. What has already happened and what developments and beliefs have set the scene for today?

This chapter aims to reflect back the historical journey of the Public Service of Canada, with a view to illustrating the main issues involved and analysing how the Public Service has traditionally understood and engaged with innovation. An appreciation of this history allows for a better understanding of current issues and how they developed. Only then is it possible to identify new forms of innovation that might be needed.

The importance of history to innovation

Canada is well regarded for its public administration (e.g. see International Civil Service Effectiveness (InCiSE) Index, 2017 which ranks Canada on top of a list of thirty-one countries; OECD, 2017a). As with any effective public sector, this adeptness has necessarily involved elements of innovation: responding to change with novel solutions, reacting to crises in innovative ways, engaging with new technologies, undertaking experimentation and learning, and sometimes undertaking more transformative change.

> *The Public Service has a long history – spanning generations – of rising to the challenge and meeting the needs of Canada and Canadians. In the past, significant changes in Canadian society, like global crises, changing demographics and the advent of computer technology, had a transformational impact on the work of the Public Service. On every occasion, the Public Service has risen to the challenge and found ways to change and to improve services to Canadians. (Government of Canada, 2014: 5)*

However, no country can be complacent in a time of volatility, uncertainty, complexity and ambiguity (VUCA) (OECD, 2017b); disruptive technological, ecological and political shifts; demographic changes; and new and ongoing economic and social issues. Success in the past cannot be relied upon as an indication of future performance.

In particular, a changing world means changing expectations as new possibilities become apparent, and old ones fade away. Governments, and the civil services that support them, are obliged to adjust to this changing world, or risk losing relevance and the support of their citizens.

Where governments do seek to adjust to, react to, adapt to or even to shape change, it will generally involve some degree of innovation – doing different things or doing things differently (or both).

Responding to a changing world requires changing what is done and/or how it is done, and will often involve doing things that are new to the context, sometimes significantly so. While this process of change is not the sole responsibility of those in the public sector, the civil service clearly has a particular duty in this regard – hence the interest in public sector innovation.

The Public Service of Canada recognises this. The current Clerk (and Head) of the Public Service is supportive of innovation and recognises its importance:

> *Through Blueprint 2020 we have laid the groundwork for a Public Service where extensive and broad engagement is the new normal, where innovation and challenging orthodoxies and old patterns are seen as essential to sound policy*

> *development and service delivery, and where collaboration and openness are fundamental in day-to-day work. (Wernick, 2016: 21)*

However, in order to understand how the Public Service is currently situated with regard to innovation or to establish how equipped it is to face future challenges, it is first necessary to look at what has gone before. While innovation as a subject is inherently future-oriented – being concerned with what has not been done before – it does not emerge out of nowhere. Innovation and the possibilities of innovation are shaped by the past. After all, an innovation is only innovative if it differs from the past and present state of things. Where you start determines where you will get to.

As the Clerk has said:

> *We have to avoid, in a rush of energy and adrenaline, to miss some of the lessons of the past (Wernick, 2017b).*

Before looking ahead it is therefore essential to look backwards, in order to understand the innovation journey so far. Only once the past can be described and understood, can the current approach and innovation context begin to be appreciated.

Piecing together the Canadian journey

Building a picture of the innovation journey is not straightforward. Innovation is an inherently ambiguous and contextual thing, and is not always easy to recognise or identify. What is innovative to one person or to one organisation or country may not be to another. What might seem significant may turn out not to be, and what might seem at first to be minor may turn out to be, in time, truly transformative. Determining what is part of the innovation journey and what is not, then, is not clear-cut. No single story can capture all of what has happened in Canada that is of relevance to the innovation journey.

Nonetheless, given the need to understand the innovation context, an attempt must be made to appreciate what has already occurred. In order to do, the following section looks at the history through two lenses. The first takes a chronological view of the key developments and milestones, in order to ascertain what actually happened. The second presents a thematic overview, and builds on this chronology to establish which themes and patterns were present over that history.

Neither perspective is exhaustive. Any story is an act of curation – of choosing elements to focus on. Every history will have many different interpretations, and some elements of the history provided here are inherently speculative. Additionally, as innovation is a fuzzy concept, different people will have different views regarding what should belong in the story and what should not.

Therefore, the following is not an attempt to provide the definitive official history of public sector innovation in Canada. Instead, it aims to reflect what has been heard and seen, some of which may well be mistaken or misinterpreted. Only by making this history explicit can it be challenged or learnt from; otherwise it remains a thing of assumptions and beliefs. In order make use of the "lessons of the past", they must first be recognised. This synthesis draws both from the relevant literature and historical artefacts and from interviews and consultations.

A chronological outline of key developments and milestones

This history concentrates on the "living history" of the system – the past 30 or so years that have had the most impact on the current culture and operations of the Public Service. It focuses on a whole-of-system level complementing investments made in research, science, policy and programs, all of which are foundational in innovation capacity. It is recognized that many other incidents, events and actions have occurred at an individual and organisational level will also have had some impact. However, a whole-of-system view of history must, by necessity, limit itself to key trends and milestones if it is to be coherent.

An initial examination of the recent history of the Public Service of Canada reveals multiple efforts to import new models of thinking and reform. By some counts, there have been at least eight sets of initiatives of varying significance related to public service renewal since the late 1980s (Heintzman, 2014: 6). While not all (or perhaps most) of these explicitly concerned innovation, some of them helped to shape the environment for innovation and are thus worth noting.

The first major renewal initiative was the *PS 2000* process. This began in 1989 and led to the enactment of the Public Service Reform Act of 1992 (which, among other things, designated the Clerk as the Head of the Public Service).

> *In 1989, the senior public leadership in Canada launched a major internal assessment and renewal of the public service and public management: PS 2000. One of the elements of this exercise was an attempt at cultural change that would foster a spirit of initiative, and convince public servants to shift their focus from adherence to rules and regulations towards producing excellence in service. (Public Policy Forum, 1998)*

While not a direct initiative of the Public Service itself, a concurrent (and possibly related) development in 1990 was the creation of an Award for Innovative Management by the Institute of Public Administration of Canada (IPAC) and private sponsors (IPAC, 2018). (The award, which continues to the present day, is not limited to the federal Public Service, and aims to recognize and encourage innovation across all levels of government.) The award helped to raise awareness of innovation, and also provided a valuable source of cases to inform research into its practice (e.g. Borins, 2014).

One outcome that did emerge explicitly from the *PS 2000* process was the creation of the Canadian Centre for Management Development (CCMD) in 1991. Its legislated objectives included: working to ensure that managers possess the skills and knowledge to respond to change, helping managers enjoy a successful and co-operative relationship with staff including through the encouragement of innovation, and performing studies and research into the theory and practice of public sector management (Government of Canada, 1991).

Among its early activities, the CCMD established Expo Innovation, which gave government departments a forum to showcase innovation to other public servants and members of the public (Shortliffe, 1994). The Expo was held every two years, and became the forum for the presentation of the Margaret Cottrell-Boyd Innovation Award, created in 1994 (Löffler, 2001: 30). This award was granted to any group or individual "who has attempted or implemented a project in the federal Public Service ... which is unique in the federal Public Service, and pushes the boundaries of creativity and innovation; and which has the potential to make a significant contribution to the improvement of the federal Public Service" (Doherty, 1995). The award and the Expo can be seen as examples of the Public Service actively promoting and emphasising innovation in practice.

In the mid-1990s, a project called *Canada 2005* was established to "identify and analyse the major forces that will affect Canada in the next decade" (Bourgon, 1997). This in turn led to the establishment of the Policy Research Secretariat, which would support a relevant interdepartmental committee of assistant deputy ministers. This was an early example of forward-looking activity and preparation for a changing future.

In the late-1990s onwards, the Clerk(s) laid emphasis on the Public Service becoming a learning organisation – one in which there would be recognition that mistakes would be made, where ideas would both be generated and sought from elsewhere, and where knowledge and insight would be disseminated to expand their potential applications (Bourgon, 1998: 21-22). A learning organisation orientation can be significant for innovation, as it helps to identify the gaps between what is and what could be (OECD 2016).

In 1999, Canada launched the Government On-Line Initiative, a whole-of-government multi-year effort to help accelerate the development of online services (Government of Canada, 2006). This was a significant initiative that led to the Canadian government being, at the time, the world's most connected country to its citizens (Government of Canada, 2006: 1). It constituted a prime example of innovation being pursued (successfully) at a whole-of-government scale.

The year 2000 saw the release of *Results for Canadians: A Management Framework for the Government of Canada* (TBS, 200). This was another significant reform initiative for the public service, emphasising a citizen focus, the achievement of results for Canadians, the importance of sound public service values, and the need to "promote discipline, due diligence and value for money in the use of public funds" (TBS, 2000: 1). One of the central agencies, the Treasury Board Secretariat (TBS), as part of its management role identified a business line around "service and innovation" that "works with departments to improve access to convenient and seamless service, to increase satisfaction with what is delivered and to promote innovation, partnership and best practices" (TBS, 2000: 23). This constituted a significant step in identifying an explicit responsibility for innovation within the machinery of government.

The same year saw the Policy Research Secretariat become the Policy Research Initiative, a shift characterised by a move away from being a facilitator towards becoming a leader in conducting medium-term, horizontal research projects (Policy Horizons Canada, 2018a). This change is indicative of a future-oriented outlook and an interest in emerging issues (and thus potential areas for innovation).

The early 2000s also witnessed a number of high-profile cases or developments that helped to attune, or reinforce the wariness of, the Public Service to the consequences of getting things wrong. Incidents of perceived mis-administration such as the Human Resource Development Canada Audit in 2000 (Sutherland, 2003) or the Commission of Inquiry into the Sponsorship Program and Advertising Activities in 2005 (Greene and Shugarman, 2006) may not have been about innovation per se, but provided strong cultural memories, the effects of which still resonate powerfully today and clearly shape part of the context for how some people think about innovation, as well as the appetite for risk in the Public Service.

> *We have also suffered some setbacks that we need to examine and learn from. We were all dismayed by what we have heard about incidents of serious mismanagement and, most disturbingly, breaches of the public trust. These incidents sadden all of us and we will address them. […] Now we have to get the*

> *balance right. We have to restore the rigour without smothering the creativity. We know from long experience that more red tape is not the answer; it would surely stifle the creativity that we need in order to serve Canadians well. As well, in our drive for renewed rigour, we cannot lose sight of the fact that the Public Service is all about people. Whatever change we introduce, we have to do it with humanity, taking care to help staff through transitions and to thrive in the midst of ambiguity and change. (Himelfarb, 2004: 4-5)*

Even with these high-profile incidents and the accompanying reshaping of risk appetites, this time period also involved some developments that were reflective of leading edge thinking, and which contributed to the precursor activities of the current focus on innovation. For instance, in 2002 the CCMD published *Organising for Deliberate Innovation: A Toolkit for Teams*, one of the first innovation toolkits to be targeted at the public sector. It provided a "practical, deliberate approach for individuals and teams that want to maximize their potential to innovate" (Dinsdale, Moore and Gaudes, 2002: 9).

In 2005, the Canadian Forest Service (CFS) released their report *Canadian Wildland Fire Strategy: A Vision for an Innovative and Integrated Approach to Managing Risks*. While very much a topic-specific activity, this report can be viewed as an example of a forward-looking document that included among its principles the statement that "Innovation and evaluation are essential to ensuring the continuous improvement of wildland fire management policies and practices across Canada" (CFS, 2005). This report, while only an example, is a demonstration of innovation being taken seriously and subsequently integrated into the core work of an agency. This work, as well as the emphasis on learning organisations from consecutive Clerks, helped prepare the ground for the formation of a learning organisation community of practice within CFS that same year.

While a relatively informal grouping, this particular community of practice appears to have made significant contributions to the undertaking of public sector innovation, especially through its influence on people who were involved in its meetings and participated in the training offered. Some individuals in the Canadian system highlighted the importance of this community to their individual innovation journeys.

In 2006, the Policy Research Initiative was moved to another agency, where it focused on providing advice and improving the dissemination of work within the senior ranks of the Public Service (Policy Horizons Canada, 2018a).

In 2008, another significant, forward-looking initiative entitled *canada@*150 was launched. This activity, which ran for a year, "was sponsored by the Clerk of the Privy Council as a learning and development initiative that asked 150 early-career public servants to think broadly about Canada and its future" (Policy Horizons Canada, 2018b).

> *canada@150 was a unique opportunity to explore the future of public service. It experimented with social, cultural, organisational, and technological innovations we could embrace as we move to new ways of working. It developed leadership skills, built life-long networks, and offered a positive vision of the Public Service. Perhaps the most important result of canada@150 is bringing forward a new generation of public servants who speak with confidence about the future of their institution with a commitment to preserve the best while adapting it to new times and conditions. (Policy Research Initiative, 2010: 5)*

Such activities appear to have played an important role in introducing new possibilities to a wider audience, and helping to empower individuals with the sense that different outcomes could be achieved.

The development of GCpedia in 2008 was another forward-looking initiative indicative of a desire within the Public Service to engage with new technology and the new ways of working that it enables. GCpedia also laid the groundwork for later collaborative platforms including GCconnex in 2009 and GCcollab in 2017.

In 2009, the Web 2.0 Practitioners Group was formed. This informal group had a lasting impact: it was an important formative experience for a number of innovation practitioners/allies, some of whom are now progressing into more senior positions in the Public Service.

Another important informal initiative, Policy Ignite, was created shortly afterwards in 2010. Policy Ignite was created as "a grassroots event – organized by federal public servants, for federal public servants and other policy stakeholders – to showcase bright ideas in policy development" (Policy Ignite, 2018). This event-based initiative continues and has, at times, been an important, although not official, avenue for sharing ideas and exposing new thinking (and thinkers) to senior leaders.

From 2010 onwards, a greater range of actors began to engage more often and more seriously with innovation as a practice and an issue. A number of experiments were designed to encourage public servants to put forward their ideas. One such formal scheme was the Employee Innovation Program, created in 2010, which would "see public servants with a 'creative or practical idea' receive a cash award of 10% of the cost savings, up to $10,000" (Karam, 2010). Such initiatives helped build a more sophisticated understanding of how to (or sometimes not) engage with innovation as a process, rather than seeing it as either a serendipitous activity or an abstract concept.

The year 2011 was of particular note. The Deputy Minister Committee on Public Service Renewal embarked on a foresight study on the future of the federal Public Service and outlined a proposed vision for the Public Service. This led to the most significant milestone in the recent history of public sector innovation – the Blueprint 2020 process, which ran until 2014. This process involved an extensive engagement strategy, including the development of Blueprint 2020 Champions in each department. This spurred a plethora of department-based activity, including the establishment of a number of innovation labs. The Blueprint 2020 process represented a major development for many individual innovation actors, as both a forward-looking exercise and as an opportunity and an invitation to think about what else might be possible.

The same year also saw the Policy Research Institute become Policy Horizons Canada, with a mandate to provide foresight and help anticipate emerging policy challenges and opportunities for Canada in a rapidly changing world (Policy Horizons Canada, 2018a).

Other significant events included the decision by the former Department of Employment and Social Development to implement testing of new funding instruments (e.g. pay for performance), and Canada becoming a member of the Open Government Partnership.

A concurrent development that was also noteworthy was the creation in 2012 of the Deputy Minister's Committee on Social Media and Policy Development, which shortly thereafter became the Deputy Minister's Committee on Policy Innovation. The Committee held one of the first "Dragons' Den" exercises for the Public Service of Canada in 2013, and introduced "reverse mentors" into the committee structure. Reverse Mentors were working-level staff who were paired with Deputy Ministers for meetings to provide advice and insight into emerging issues that Deputy Ministers might not be intimately familiar with (e.g. social media). The introduction of the reverse mentors proved important because it helped feed the innovation skills and practitioner pool, and acted as a form of validation

for the involvement of a wider group of people in innovation. It also demonstrated that relevant knowledge, expertise and insight could come from all levels, not just senior leadership.

It should be noted that this period of major innovation-related developments took place within a broader context of cost-cutting (the Strategic and Operating Review/Deficit Reduction Action Plan of 2011). This inevitably influenced how some perceived these new innovation-targeted initiatives, and may have contributed to a perception by some that the focus on innovation was primarily about efficiency and cost reduction, rather than a true interest in doing things differently, or in trying to achieve better outcomes.

Nonetheless, the Blueprint process helped to spur the development of a range of departmental initiatives, including the creation of a series of labs in 2014 and 2015. These events played a key role in starting to develop a more visible (and thus accessible) innovation community across the Public Service. The Blueprint process also led, in 2015, to the creation of the Central Innovation Hub (the precursor to what is now the Impact and Innovation Unit). This was a major demonstration on the part of the central government that innovation was important, expected and wanted. Two other relevant initiatives that came out of the Blueprint process were the establishment of an Internal Red Tape Reduction Tiger Team to identify and tackle process issues, and the establishment of an annual Innovation Fair in 2015.

The various innovation labs and hubs created in agencies helped to kick-start a more intense and visible period of exploration around public sector innovation, leading to a growth in learning about what worked and what did not. At the same time, some of the activity could be (and has been) interpreted as a form of "innovation theatre" – activity designed to be seen as undertaking innovation but that does not in reality actually involve serious innovation. As innovation became more widely practised (albeit from a small base), there was a gradual increase in the collective development of more sophisticated innovation practice(s). Some of this learning was reflected, for instance, by the development and release of the Novel Policy Instruments Portal, which helped to bring together a range of different tools and approaches, contextualised for the Public Service of Canada.

Possibly the most important recent event, from a system-wide perspective, was the 2015 Mandate Letter for the President of the Treasury Board (Prime Minister of Canada, 2015), which set out the government's expectations vis-à-vis innovation in the public sector. Every department would henceforth engage in experimentation, using a percentage of their spending for experiments. This mandate introduced a major driver for agencies to engage with innovation. This emphasis on experimentation accompanied a separate but related Results and Delivery Agenda, which strongly emphasised impact and delivering on identified government priorities and commitments.

In 2016-17, even more concerted and serious innovation efforts were launched amid an uptick in innovation activity. These were led in particular from the centre, with the Treasury Board Secretariat and the Privy Council Office undertaking a number of keystone initiatives. The many different initiatives included the release of guidance around experimentation, changes to key administrative processes to allow for the use of more innovative methods (e.g. the creation of generic terms and conditions allowing for the use of incentive-based funding, prizes and challenges, and micro-funding), and the development of easier ways to recruit different skillsets (e.g. the introduction of the New Directions in Staffing policy, which allowed for greater variety in hiring processes).

Another significant landmark at this time was the Transformation of Pay Administration Initiative (resulting in the Phoenix pay system). This high profile project, intended to centralise and consolidate different pay systems, and which had earlier been touted as an "innovative and effective solution" (Wouters, 2014: 23), resulted in significant issues for a number of public servants, including underpayment, overpayment or non-payment. While the initiative itself was not necessarily a significant innovation, being more of a modernisation effort involving great complexity than a process introducing significant novelty, this event clearly shaped people's faith and belief in the ability of the Public Service to engage effectively with technology and to manage complex projects. It also influenced the perception of innovation and the extent to which it is seen as being feasible.

Other notable developments have included the Free Agent programme (an initiative to make access to talent within the public service more flexible), the Talent Cloud pilot (a proposed platform to better matching skills with needs across the public service) and the Policy Community Project (and the subsequent establishment of a Policy Community of Practice). The period from 2017 to 2018 also saw the closure of at least two innovation labs set up at the height of the Blueprint 2020 process. The significance of this shift in approach by some agencies is not immediately clear.

Finally, in late 2017, there were two particularly significant developments. The release of the Federal, Provincial and Territorial Declaration on Public Sector Innovation provided a high-level commitment to innovation from the most senior public servants across the country. This was accompanied by the launch of the Impact Canada Initiative, a formal whole-of-government effort that will help departments accelerate the adoption of outcomes-based funding approaches to deliver meaningful results to Canadians. This headline initiative places innovation front and centre in the public sector.

As noted in the introduction to this history, this chapter is not (and cannot hope to be) an exhaustive exploration of all of the initiatives, developments or noteworthy events. There will be some omissions, some nuances missed or even mistakes that come from piecing together a fragmented history and series of events distributed over time and across organisations. Rather, it constitutes an effort to capture the significant elements of the innovation journey, with a view to providing a sense of the breadth and depth of the Public Service's engagement with innovation over the last 30 years. The next section presents a thematic overview of these developments in order to derive the significance of this history.

A thematic overview of the historical innovation journey

The following section attempts to describe some of the key issues or trends that have been observed from an examination of the historical innovation journey of the Public Service of Canada. In addition to primary research, it draws in particular from a range of artefacts and literature, in order to illustrate and reflect the narrative the system has, in effect, been telling itself. It makes deliberate use of and emphasises quotes and wording employed in various artefacts, in order to highlight and reinforce patterns that become apparent.

Recognition of a changing environment

Over the years, there has been consistent high-level recognition that ongoing forces are reshaping the operating context for government. The messages of respective Clerks or reform initiatives have acknowledged the existence of powerful drivers for change.

> *Under the influence of several significant trends – globalisation, new information technologies, fiscal pressures and the changing fabric of society – governments are*

> *confronted by ongoing changes to their political, social and economic environments. Because of the sweep of their impact and the type of change they represent, these trends are forcing governments to redefine the way they interact with citizens and even the organization of political systems. (Bourgon, 1995)*

> *Why is public service work different and in many ways more challenging today than in the past? Many books have been written in an effort to answer this question, but the key factors that emerge in any serious study of public management today invariably include: Globalization […] The information revolution […] The emergence of many more horizontal issues […] The sheer complexity of Canada today […] Changing public attitudes toward government. (Lynch, 2007)*

> *A number of drivers are putting pressure on the ways in which the Public Service operates, including: Increasing globalization, issue complexity and interconnectedness […] Accelerating technological change […] Changing demographics […] Growing demand for accountability and the achievement of results as efficiently as possible […] Shifting workplace expectations with respect to work and workplaces. (Government of Canada, 2013: 3)*

This consistency suggests that one of the necessary preconditions for innovation is in place – an acceptance that the status quo cannot hold and an openness to new approaches.

Recognition that change is accelerating

There is also consistent recognition that the rate of change is accelerating.

> *The process and the importance of change will continue to accelerate. (Bourgon, 1995: 12)*

> *Values endure, but our world is changing. Wherever you work in the Government of Canada today, you can feel the forces compelling change in the Public Service: the recent financial and economic crisis, and the Government's response; the demographic transition occasioned by retirements and the arrival of a new generation of public servants; the growing diversity of our workforce, reflecting an increasingly diverse Canadian population; and, the revolution in technology that has made the Internet a primary working tool and the BlackBerry a near-universal way to connect with others. The cumulative impact to date has been profound, and these forces will continue to have an effect on the Public Service for many years to come. (Wouters, 2010: 1)*

This recognition that the need for change will, if anything, increase, is important because it demonstrates an acceptance that the stresses affecting the Public Service are not temporary, but rather enduring. The need for innovation is not going to go away, and thus innovation must be taken seriously.

Longstanding interest, attention to renewal, innovation and looking to the future

Given the recognition that there are external drivers for change, and that that the rate of change is likely accelerating, it is unsurprising that there has been a longstanding interest in renewal. Formal signals from the leadership, for example, through the *Annual Report to the Prime Minister on the Public Service of Canada*, or through supported initiatives and activities, reveal a strong and ongoing interest in and emphasis on renewal of the Public Service. Though clearly shaped by and reflecting the needs of the respective governments

of the day, this interest nonetheless appears to have been driven equally by the belief that the Public Service has a strong role to play in changing itself.

This focus on renewal has also often included, to some extent, explicit attention to innovation (e.g. Bourgon, 1997; Cappe, 2000; Himelfarb, 2003; Shortliffe 1994; Tellier, 1992; Wouters, 2010). There has also been an ongoing focus on the future (e.g. "Canada 2005", *canada@150*, the creation of Policy Horizons Canada and the Blueprint 2020 process) and the ways in which the Public Service can respond, adapt and prepare for its changing environment.

This consistency of messaging and focus may be due in part to an early recognition in the discussion about renewal that change would not be a simple exercise. Rather, it has always been viewed as a process that would either take time, or simply be ongoing, and would require the involvement of everyone in order to make a difference.

> *Do all public servants understand the need for renewal and the direction which that renewal ought to take? Not yet, but that is because in the end people change themselves, and that takes time. (Tellier, 1992)*

> *Why, exactly, is it important in 2007 to focus on the renewal of Canada's Public Service? Many would say that the Public Service seems to have been renewing itself for much of the past 20 years. Is this process never going to end? Why is it necessary to put people and institutions through still more change and, some would say, upheaval, when there are so many other things to be done by government in the service of Canadians? The answer, to put it simply, is this: if the Public Service, as a core national institution, does not renew itself for future as well as current service to the government and people of Canada, it risks becoming less relevant, less useful and less respected as the years go by. If we do not commit ourselves to a continuing process of renewal, the Public Service will not remain a creative national institution, central to the governance and development of our country. (Lynch, 2007: 2)*

> *All organizations must focus on renewal to remain efficient, effective, and relevant. The Public Service is no exception and is continually assessing how it can serve Canada and Canadians more effectively. (Wouters, 2014: 24)*

> *Modernizing and renewing the Public Service serves three interconnected goals: it is fundamental to providing excellent service to Canadians, it is needed for a well-supported government, and it is the foundation for a healthy and productive workforce. (Wernick, 2017a: 9)*

The growing awareness that reform not only takes time, but is an ongoing process, suggests a degree of acceptance that renewal and innovation are actually core activities for the Public Service, rather than temporary distractions.

Ongoing emphasis on traditions and core values

Simultaneous with the focus on renewal there has been a consistent emphasis on the core values and traditions of the Public Service of Canada, and an insistence that these are important and should not be perceived as being in tension with renewal. Renewal and innovation are presented as the means by which the Public Service can continue to do its job, rather than embodying a change in its essential mission or the fundamental tenets of the Public Service.

> *I am convinced that the Public Service is heading in the right direction. As we prepare for the challenges of the next century, I am confident that the traditional values of the Public Service – the values of loyalty, integrity, professionalism, fairness and impartiality that characterized the institution I joined 32 years ago – will remain its driving force. (Shortliffe, 1994)*

> *The Public Service of Canada has a clear vision and mandate. No matter what the job, the task, the program or the location, all federal public servants are governed by a core philosophy: to serve Canadians and their government. Public attitudes and political institutions evolve, but our tradition of a professional, non-partisan public service transcends any specific reform or restructuring. (Bourgon, 1995: 47)*

> *Renewal is about making sure that the federal Public Service preserves and strengthens its capacity to contribute to Canada's successes through the delivery of excellent public services and policy advice. (Lynch, 2008: 4)*

> *Although the core work of the Public Service will not fundamentally change in the years ahead,* how *we work must. (Wouters, 2012: 8)*

However, this insistence has not always gelled with experience on the ground. The act of integrating innovation and traditional elements has not always been easy.

> *The new public service values of innovation and risk-taking are often perceived as clashing with the traditional values of accountability and neutrality. As well, public servants often perceive disconnects between the values stated by leaders and their actions. Failure to clearly communicate and demonstrate how the new and traditional values can be integrated may have increased resistance to more innovative approaches in the public service. (Public Policy Forum, 1999)*

> *There is this sort of struggle between continuity and change in the public service and getting that balance right. There is a tendency to over-dramatize innovation and change because we do need to constantly improve and constantly think about how we do our work and what are we trying to accomplish, and renew our capacities and competencies. I am very supportive of the policy innovation conversation. But there is also continuity that the role that we play is embedded in Westminster democracy in a federal system that has served Canadians very, very well for 150 years. (Wernick, 2017b)*

This tension between continuity and change is not easily resolved, and sits at the core of the difficulty of reform/renewal and innovation.

Ongoing reform efforts

Reflecting this longstanding interest in renewal and innovation, the Public Service of Canada has engaged in multiple reform initiatives over the last 30 years. In turn, this recent history builds on many other efforts reaching back to the Glassco Commission (looking at the organisation of the Government of Canada) in the 1960s (Jarvis, 2016; Scott-Kemmis, 2010).

Given the context – recognition of the need for change, an ongoing interest and commitment to change, an understanding that change is not a short-term exercise, and ongoing efforts to balance the old and the new – this ongoing engagement with reform processes/exercises is not surprising. It should also be viewed in an international context where many other countries are grappling with similar issues.

There is also evidence of ongoing reflection and questioning by the Public Service of Canada (and interested others) about the nature of this domestic reform vis-à-vis that of other countries. The general verdict is that, in some ways, the reform in Canada has been more gradual or perhaps more cautious than that occurring in other countries (e.g. Lindquist, 2006). In addition, this gradual but continual approach is not seen as a drawback, but rather a feature.

> *The new trends have brought about, in Canada and elsewhere, a reforming of the role of the federal government and the public sector over the last 15 years. Canada has adopted a gradual, phased approach to permit time for reflection and adjustment. (Bourgon, 1995: 11)*

> *While Canadians have traditionally been known as innovators in public sector management, there is some evidence that in recent years other countries – Australia, the United Kingdom, New Zealand and the United States – have begun to move forward more boldly than we have. (Lynch, 2007: 9)*

> *Compared to other Western governments, Canada has been slow to adopt more innovative approaches. (Jarvis, 2016: 9)*

> *We are less prone to the stop and start zig-zaggy path many other countries take. (Wernick, 2018b)*

This suggests that while the need for reform (and innovation) has been accepted, it is by no means absolute or unconditional. It also suggests that the Canadian civil service has perhaps taken pride in not being faddish, but in being the "slow and steady" reformer.

Continuous improvement and/or/versus innovation

However, the consistent messages on renewal, modernisation, continuous improvement and innovation have perhaps not been accompanied by consistency on what is meant by innovation, and/or how it differs (if at all) from continuous improvement. The concepts often appear to have been bundled together or treated as interchangeable.

> *We are creating a public service which is innovative, open to new ideas, and one which strives for continuous improvement. (Cappe, 2000: 7)*

> *Public service excellence, driven by constant improvement and innovation, helps fuel productivity. A professional, well-trained and well-managed Public Service provides a competitive advantage for Canada. (Government of Canada, 2013: 2)*

> *We know meaningful and continuous improvement is possible. There are examples everywhere of departments and agencies applying innovations to their day-to-day work so that government makes sense to those within it and, most importantly, to those we serve. (Wernick, 2016: 9)*

While there has been ongoing attention towards innovation, and increasing efforts to foster an environment more open to innovation, what is meant by innovation and what distinguishes it, has not always been especially clear.

Renewal and results

A common theme in the various reform efforts is an emphasis on results, rather than simply on activity or outputs. This longstanding interest and attention to results has been an integral part of the renewal push, along with the recognition that getting better outcomes often necessitates doing things differently or innovatively.

> *Are we now doing business in a fundamentally different way? No, but we are changing the way we do business – we are more focused on cost and value for money, increasingly oriented to results, and more receptive to innovation. Over time we will be serving Canadians differently and better. (Tellier, 1992)*

> *Public and private sector organizations that measure and evaluate the results of their work find that this information transforms and empowers them. It allows them to reward success, to learn from experience and to build public confidence. Being able to measure and evaluate results is a prerequisite to delivering the quality programs, services and policies that Canadians deserve. (TBS, 2000: 10)*

> *I am very proud of the work being done across the Government of Canada by the Impact and Innovation Unit at the Privy Council Office as well as the Canadian Digital Service at Treasury Board. We are working together to make sure that, not only do we see the opportunities and the challenges of new technology and new services, but we know how to measure the impact. It is not good enough just to have novelty and innovation. It is about having an impact and delivering better services. (Wernick, 2018a)*

This suggests that while innovation has been linked to strategic aims, there has been a practical preference for more immediate and concrete priorities, as opposed to more exploratory and anticipatory aims.

Renewal and risk

A companion theme to results has been an ongoing focus on risk. Discussion has revolved around different approaches to navigating and engaging with the challenges involved.

> *It is equally important to accept that there can be no experimentation without risk. Ministers and senior officials must accept some of the uncertainty implicit in giving up a degree of control. Not every experiment will be a success. Some honest mistakes will be made. This needs to be understood and accepted. Our commitment should be to learn from these situations. (Bourgon, 1997: 26)*

> *Although public servants do not necessarily imagine themselves facing a commission of inquiry for every decision they make, there is a perception that public servants who make mistakes, even if under the orders of their superiors, will pay a heavy price. (Public Policy Forum, 1998)*

> *Change involves uncertainty; it requires a measure of risk, a measure of leadership and a measure of vision. But risk must be calculated, assessed and embraced prudently. By managing and taking risks, the Public Service will adapt, learn and be strengthened. If we do this well, the public trust will be stronger. If we fail, we should be held to account for our miscalculations, admit to our mistakes, learn from them and take corrective action. (Himelfarb, 2003: 7-8)*

> *That pressure signals the necessity to take intelligent risks in pursuit of opportunity. Yet, at the same time, risk must be better managed. The public is not willing to write a blank cheque and demands forthrightness from public institutions. Recent controversies have underscored the need for a management agenda that ensures probity, transparency and responsible stewardship of public resources. (Stoyko, Henning and McCaughey, 2006: 14-15)*

> *Whether the size of the federal government grows or retrenches, public servants will need to become more skilled at communicating the benefits of calculated risk-*

> *taking to Canadians and decision-makers. Risk-taking is essential to ensuring that new programs and initiatives are sufficiently innovative to meet their objectives, or alternatively that a lower overall number of government dollars are creatively used to achieve better results with a smaller fiscal footprint. (Policy Research Initiative, 2010: 168)*

The conversation around risk, while evolving over time and becoming more sophisticated, has also retained a level of consistency in its appearance. Recurrent topics include the need for risk to be taken, the notion of intelligent risk, the importance of communicating clearly about risk and an acknowledgement that risk-taking is not without consequences. This consistency suggests that certain fundamental tensions have not been resolved, nor has the ability for innovation to sometimes actually reduce risk (through testing and experimentation) been embraced.

Balancing empowerment with accountability and control

These tensions are highlighted in another clear theme found in the discussion of earlier reform initiatives: the challenge of finding the right balance between providing greater freedom from process controls, and ensuring that sufficient control and accountability mechanisms are in place. After PS 2000, there was a significant shift towards providing much more freedom.

> *In many places, we are seeing the first signs of a real transformation in management culture. The old "command and control" model is not dead yet, but it is rapidly being replaced by a new kind of institutional culture in which people are valued and decisions are taken with much greater input from those who have to implement them. (Tellier, 1992)*

However, this freedom was soon perceived as having gone too far, and began to be scaled back in the late 1990s.

> *When the concept of empowerment was first introduced into government culture, it was sometimes perceived as conferring the right to break the rules. Political, bureaucratic and media reactions to initiatives seen as irresponsible decisions to ignore rules have contributed to maintaining risk aversion in the public service. As well, the continuing development of generalized controls to ensure that resources are not mismanaged are often perceived by the public servants as proof that they are not trusted to make the right decisions. (Public Policy Forum, 1999)*

While there were continual efforts to find some sort of appropriate balance, a satisfactory compromise was clearly not easy to achieve. Formal guidance emphasised trying to find a middle ground, but the practice did not necessarily resemble this ideal.

> *This philosophy underscores an important management balance: flexible enough on the delegation of decision-making authority and on administrative rules to support initiative and common sense – but tight enough on standards and control systems to ensure clear accountability. (TBS, 2000: 19)*

> *The reputation of our institution has been damaged in recent years. Core competencies have been criticized and questioned. There have been public controversies about the way we managed grants and contributions, distributed sponsorship funds and managed a national registration system. This scarring may not be permanent, but it shakes the pride we have in our institution. It undermines the contract of trust between citizens, parliamentarians and us. We must be vigilant*

> *at all times, being as careful as required, but operating in a manner that does not stifle innovation. (Himelfarb, 2003: 7)*

There was open admittance that things had gone too far one way and that greater control was needed (or perhaps demanded).

> *But we also lost some of our rigour. We removed some departmental controls while we were reducing central oversight. As we brought in new staff, we did not make sure that they had the training they needed to do their jobs well. We did not develop the information systems that would help us keep proper track of financial and operational performance. In our drive to serve Canadians better, we may have lost sight, sometimes, of the basics. (Himelfarb, 2004: 5)*

There was also recognition that there was a need to find a better solution, rather than shifting back and forth between excesses.

> *History tells us, however, that the Public Service has oscillated between a tendency to implement overarching controls and a tendency to empower its employees. Those pendulum swings have led to much confusion and exasperation. The cycle needs to be broken to achieve a sustainable balance between risk-taking and care-taking. This is precisely what the Government is doing with its on-going agenda to improve public management. (Stoyko, Henning and McCaughey, 2006: 15)*

However, balancing between adequate controls, accountability, and giving the public service sufficient flexibility to adapt and respond, remained an ongoing challenge (Lindquist, 2006: 48). In more recent years, there has been a sense that the emphasis on rules and controls has once again become too stifling and restrictive, impairing the ability of the Public Service and public servants to do what needed to be done. Despite this realisation, it has apparently not been easy to make the transition back from an emphasis on control to a state of appropriate and responsible agility and empowerment. This difficulty is demonstrated by the repeated acknowledgement of the issue in recent years.

> *Increased innovation will help us become more effective and efficient. We need new ideas, experimentation and better implementation. However, I recognize that it is difficult to innovate when hampered by unnecessary rules. That is why unravelling the web of rules at both the public service and departmental levels must continue. (Wouters, 2010: 13-14)*

> *We must resist the urge to create layer upon layer of rules and processes to shield ourselves from every possible error. This has been our tendency in the recent past. It cannot be our approach in the future. (Wouters, 2012: 10)*

> *Employees have told us that they are equally concerned about internal red tape as Canadians were about external red tape prior to the successful Red Tape Reduction exercise. Public servants are looking for the reduction of unnecessary burden in internal processes, and provided many ideas on to how to streamline business processes, including approvals. (Wouters, 2014: 26)*

> *However, while they recognize the need for rules, public servants noted that the current rules, policies and guidelines are difficult to find and, once found, difficult to understand. The judgement applies to both Treasury Board policies and the vast number of rules created by departments to supplement them. (TBS, 2016: 3)*

> *We also need lighter processes and simpler structures in order to be more agile and nimble in serving Canadians. We must make sure that the rules, structures, and*

> *policies in place are enabling and empowering. We need to get rid of process for the sake of process, or because we have always done it that way. If certain things are not working or getting results, we need to have the courage to change course, and sometimes stop doing them. (Wernick, 2017a: 21)*

This question of finding the right balance – the right mix of freedom to operate, and of responsibility to due process and accountability – has been at the heart of many reform efforts that have taken place in the Public Service of Canada.

Enough reform?

It is clear there have been consistent efforts at reform. These have likely been instrumental in delivering results and ensuring that the Public Service of Canada has been able to continue to meet the expectations and demands placed upon it.

And yet, another ongoing theme that is clear from looking at the history is that differing reforms have been perceived as insufficient to meeting the challenges at hand.

> *When PS 2000 was launched in 1989, it included an objective to change the public service from a focus on rules and regulations towards an approach which promoted initiative, entrepreneurship, and innovation. Senior leaders, both political and bureaucratic, as well as public servants at all levels, have expressed disappointment at the results. (Public Policy Forum, 1999)*

> *Yet, after more than a decade of grappling with many governance challenges, some unique to Canada and most encountered by all OECD governments, and as well as a series of reform initiatives by governments and public service leaders, there are decidedly mixed views about what has been accomplished and the state of the public service. On the one hand, there has been considerable restructuring and innovation to address significant challenges, resulting in deserved pride about accomplishments. On the other, there is a perception that the Canadian government has been less bold and coherent in its approach to public sector reform. (Lindquist, 2006: 1)*

> *Notwithstanding the benefits of being cautious and avoiding faddish reforms, our research found that past reform initiatives did not effectively address the core challenges confronting the civil service. Nor have past reform efforts set the civil service on solid footing to effectively respond to the scale of disruption currently taking place. (Jarvis, 2016: 6)*

In many ways, this fits with the earlier observation that renewal has been consistently understood as an ongoing undertaking, and therefore something that will always need further work. In this light, any perceived shortcomings about renewal and innovation efforts can be perceived as part of a broader recognition that change requires ongoing learning and discovery. From this perspective, any (and every) initiative will naturally not be sufficient, because each one represents a single stepping stone on a longer path.

> *There is no master plan – nor can there be. Everyone must join in and make a contribution. We will learn from each other. In so doing, we will discover new ways of modernizing the public sector and the Canadian federation at the same time. (Bourgon, 1997: 27)*

Need for further innovation

Given this mature understanding of renewal and innovation as an ongoing journey of discovery and learning, it is logical that there would also be an acceptance that more innovation is needed. Indeed, this is apparent throughout the recent history of the Public Service. There is an ongoing awareness that more innovation is required; that previous efforts to encourage, allow and support innovation have not been enough; and that many public servants also actually want to innovate.

> *However, the general sense remains that an adequate level of innovation and responsible risk-taking has not yet been reached at either the management or staff levels. An inquiry is needed to identify the barriers that still exist to innovation as a more frequent characteristic of good performance in government. (Public Policy Forum, 1998)*
>
> *We have begun the transformation to a modern, people-centred Public Service of Canada, one which is more flexible and responsive, adaptive and innovative. But the transformation is taking place too slowly. Current laws, rules and structures for managing people in the Public Service are neither flexible nor responsive enough to allow us to compete for talent in a knowledge economy. As well, the industrial era mindset and culture is still alive in many parts of today's Public Service. (Cappe, 2001: 3)*
>
> *Earlier, I outlined a number of significant public service innovations. While these are notable, more are needed and I look forward to seeing them. (Wouters, 2010: 14)*
>
> *The level of public service innovation in Canada appears low and disconnected. A defined innovation process and strategic approach is required. (Deloitte and Public Policy Forum, 2011: 1)*
>
> *To meet the rising expectations of Canadians, we need to accelerate the pace of modernization and renewal. (Wernick, 2016: 9)*
>
> *More efforts are also needed to make successful and innovative practices the norm. (Wernick, 2017a: 21)*

It is, thus, fair to say that the Public Service of Canada has had, and continues to have, both an *expectation* and a *desire* for more innovation, as a means to achieve better results, meet rising expectations and to continue to be a Public Service that strives for excellence.

Summary

The thematic analysis of the innovation journey of the Public Service of Canada of the past 30 years highlights a number of issues including:

- Recognition of a changing environment – there has been consistent acknowledgement of drivers of change.
- Recognition that change is accelerating – there has been consistent acknowledgement that the pace of change is not slowing.
- Longstanding interest and attention in renewal, innovation and looking to the future – there is acceptance that things need to change.
- Ongoing emphasis on traditions and core values – there is a focus on retaining core elements of the Public Service, even while seeking to change how it operates.

- Ongoing reform efforts – there are consistent efforts to effect change.
- Continuous improvement and/or/versus innovation – these two concepts are often blurred.
- Renewal and results – there is a focus on results and impact on citizens, rather than just on activity or outputs.
- Renewal and risk – there is an evolving, but still consistent, concern with risk.
- Balancing empowerment with accountability and control – there are ongoing difficulties with finding the right balance between flexibility and restriction.
- Enough reform? – renewal and innovation are seen as an ongoing journey of learning and discovery.
- Need for further innovation – there is an expectation and desire for further innovation to meet a changing world.

The actors in the history

Throughout the history, the roles of different actors can also be noted. In a complex interconnected system the contribution of individual actors is hard to truly quantify, and so the following should not be taken as a definitive assessment of the historical role of each player. Rather, it seeks to show that the innovation journey has developed through the efforts of many organisations and many individuals.

- The Privy Council Office (PCO) and the Treasury Board Secretariat (TBS) have played the most significant roles, in accordance with their functions as central agencies. They have been priority setters, enablers, process owners and sometimes potential blocking points (for reasons both structural and otherwise).
- The relationship with other actors across the system and with PCO and TBS has not always been harmonious. As might be expected with an issue under constant evolution, the respective roles and contributions of different players with regards to innovation have not always been clear, and sometimes this has led to tension.
- Some departments, such as Natural Resources Canada, appear to have had a longstanding engagement with innovation, which has contributed to more developed innovation capabilities or understandings of the value and use of innovation.
- In the absence of more formalised structures, informal groups and networks appear to have functioned as a significant avenue for individuals to engage with innovation, build their understanding and as a means to develop their innovation practice. The impact of these groups, many of which have been temporary, can only be truly appreciated in retrospect as their members progress in their careers and share their lessons/experiences over time.
- A review of the history highlights the impact of certain individuals over time. This might reflect the fact that public sector innovation has not been a "crowded space". As innovation has not been either a routine or a formalised practice, despite the consistent highlighting of this need, individuals have often had an outsized impact as compared to other, more established practices and systems.

A long history of innovation

In summary, the Public Service of Canada has a long history of innovation. It also has a lengthy tradition of engaging with active efforts to foster, support and stimulate innovation, to varying degrees of success. Canada has, at times, been at the forefront of this field, even if it has not necessarily been as bold as certain other countries.

It is also apparent that this has not, at times, been a comfortable journey. There have been challenges. Finding the right balance between holding on to core traditions and engaging with new ways of working, between engaging with risk-taking and "care-taking", and between control and empowerment has been difficult. Innovation has been valued, but it has not necessarily always fit neatly with some of the core elements of the Public Service.

Implications

What is the significance of this historical view of the innovation journey of the Public Service of Canada? What does it matter to the current or future journey? The following implications are proposed as considerations for future efforts to support innovative activity within the public service.

- **Innovation is hard:** Innovation as an idea is not a new to the Public Service of Canada. It has been reflected in action, discussion and high-level messaging for at least 30 years. Existing activity has been significant, in some ways, and has contributed to the Public Service of Canada being generally well regarded and perceived as effective. However, there has been an ongoing sense that more needs to be done to encourage and engage with innovation. This suggests, then, that getting to grips with innovation is not an easy task, nor one that can be accomplished quickly or with a single push. It takes consistent, significant and repeated effort.
- **It is not enough to do the obvious:** The Public Service of Canada has already implemented many of the actions expected to encourage, stimulate, support and recognise innovation. For instance, it has:
  - created awards to recognise and raise the profile of innovative efforts
  - looked to reduce the barriers and hurdles for those trying to undertake innovation
  - introduced a structural driver for innovation (the experimentation directive)
  - produced ongoing messaging about the need for and the importance of innovation (the Federal-Provincial-Territorial Declaration on Public Sector Innovation)
  - introduced dedicated spaces and units (labs and hubs) to help build innovative practice
  - introduced and enabled new tools
  - engaged in an ongoing discussion about risk and how to negotiate it when undertaking innovative activity
  - issued a signal from the centre of government that innovation is both important and expected.

There are some possible gaps and there may be debate as to whether some of these initiatives were as consistent or sophisticated in their implementation as needed or whether the underlying support was truly sufficient. However, this does not negate the fact that many of the more immediately apparent or logical approaches have already been attempted. This suggests that there are no easy answers, in line with the implication that innovation is hard.

- **Beware of innovation theatre:** Another possibility, although one that is not mutually exclusive, is that there may have been some instances or occasions of "innovation theatre". Such activity and initiatives and rhetoric are not serious in intent or sufficient in scope to be effective. Innovation theatre can be detrimental because it can engage and then disappoint or de-motivate people, as the gap between what is promoted and what actually occurs becomes apparent. It can also absorb resources and support that could otherwise be deployed towards emergent or more serious endeavours. This is a particular risk where innovation is not really understood, is seen as a fad or where the impetus for change is not really appreciated.
- **The informal is as important as the formal:** Formal initiatives are of course important, but the history presented here demonstrates that informal groups, networks and activities are also significant and can have lasting impacts. By their very nature, they cannot necessarily be mandated or arranged, but they can be facilitated and supported if and when they do emerge.
- **Repeating patterns and the need to understand the history:** Over a longer timeframe it becomes possible to see certain patterns in activity as well as recurring issues and themes. This suggests that the relevant lessons are not always captured or disseminated. This is especially a risk when innovation practice is not identified as explicitly related to innovation, but rather as an individual issue, project or management change process. If something novel is viewed only through the lens of a specific policy domain or issue (e.g. improving veteran services), it will probably be harder for those working in unrelated areas to learn from it (e.g. fisheries management), even when the knowledge is relevant or of use. Innovative practices can only develop across a diverse system if they are seen and talked about it in a cross-cutting manner, and are clearly referred to as innovation.

Further developing the innovation practice of the Public Service of Canada

The practice of innovation in the Public Service of Canada has developed over time. However, given the established desire (and need) for further innovation, and ongoing attempts to build more sophisticated and mature innovative practices, more is needed. But what form might they take?

The next chapter examines current knowledge about public sector innovation and considers what the implications might be for the Canadian context.

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Chapter 3. What is known about public sector innovation?

This chapter explores what is known about public sector innovation, and why a shift in governments' approach towards innovation is necessary. It looks at the characteristics of innovation and examines its implications in the government context. The chapter also assesses current knowledge on innovation and evaluates how it might inform the development of a model for public sector innovation systems. It concludes by analysing which forms of support best ensure consistent and reliable innovation in the context of a changing environment.

The previous chapters demonstrated the need and desire for greater innovation in the Public Service of Canada. However, the historical journey also demonstrates that this knowledge is not, in and of itself, sufficient. Wanting and asking for innovation are not the same as ensuring that innovation occurs to the extent expected or required. Innovation and the practices that support it clearly pose a number of challenges. What approaches, then, play a significant role in promoting innovation and is there a theory of change for successful public sector innovation?

This chapter investigates the current state of innovation and its practice in the Public Service of Canada. While the focus of this investigation is Canada's innovation efforts, many of the relevant issues are either reflective of broader trends and pressures, or relate to the underlying nature of public sector innovation as a process. Therefore, this chapter takes a step back from the immediate Canadian context, to gain insights into the key issues, which can then be brought to bear on the Canadian setting.

Accordingly, this chapter examines the following questions:

- Why is innovation growing in importance for government? What are the underlying factors and why do these likely require a more systematic approach?
- What is known about the nature and characteristics of public sector innovation and what are the implications of that knowledge for governments trying to raise their level of innovation?

Understanding innovation's increasing role as a core resource in government

The previous chapter outlined the history of innovation in Canada – a history of talking about and trying to foster innovation – and described the broad consensus on some of the drivers for innovation. However, what is really driving the increased focus on innovation? Why is it important and why might the existing practice of governments (in Canada and elsewhere) be insufficient?

Why is innovation important?

In essence, the case for why innovation is important is that in a changing environment, what worked once cannot be assumed to continue doing so (or to work as well), and thus new responses will often be required.

This is because a changing context often requires a changed response, one that might involve some degree of innovation. As new knowledge is developed and new technologies emerge, the range of things that might be possible, what *could* be done, changes. These new possibilities, in turn, shift the perception and the calculation of benefits from existing possibilities and previous choices.

Innovation in one section of society or one part of the world may alter people's expectations of what they want or need. For instance, the introduction of online services changes the perception of non-online processes (e.g. "why can I not just do this online?"). As new approaches are tried in other parts of the economy, those working with or in government are likely to change their understanding of how government could, and therefore should, work.

Similarly, innovations of the past may not continue to function adequately once conditions have changed. Therefore, in a changing environment continuing innovation is often

required in order to respond effectively. Innovation, then, is necessary for governments to remain relevant, appropriate and effective.

What is different now?

Given the necessity of innovation for effective government, it should come as no surprise that governments have always innovated to some extent. Innovation in government is itself not new, either in terms of policy, services or the operations of government. All government services have been an innovation at some point – whether in the form of policing, health services or welfare systems. Governments continue to innovate today, for example, by delivering biometric systems or developing new ways of interacting with citizens (OECD, 2018).

It is clear from the history explored in the previous chapter that the Public Service of Canada has also innovated and is likely to continue to do so. Why then is it necessary for any further attention to be paid to this issue?

One answer is that while innovation has always happened, it has rarely been a consistent process. Innovation, in general, has happened sporadically. Governments have generally shied away from changing too much or too quickly. Often, innovation is a response to acute pressures, such as crises or external drivers; in other cases, it happens more gradually and incrementally. It has not been a consistent feature.

The occasional nature of public sector innovation has traditionally been an asset – a feature rather than a bug. Stability, predictability, trustworthiness, accountability and due diligence are perceived as core values for bureaucratic models of government (OECD, 2017a, p. 33). People do not look to government for surprises, and politicians do not expect the Public Service to deliver the unexpected. They want to have confidence that the civil service is careful and considered, and that core government services, activities and frameworks are going to remain relatively consistent.

When, or if, a crisis arises, exceptions are made (or demanded) permitting quick action or a new approach. When a political mandate for change is granted, the machinery of government is expected to quickly adjust and to deliver. However, these windows of opportunity for innovation are often expected to be brief and come to an end, so as to ensure a return to the normality of stability and routine.

While this approach has generally functioned over time, the question for governments is whether this model of operation is still sufficient. Is it suited to a world that is experiencing significant (possibly exponential) change – change that may be rapid, drastic and radical in form? More specifically, is the current paradigm sufficient to deliver the outcomes people are looking for? A trend of declining confidence in national governments around the world seems to indicate that it is not (OECD, 2017b, p. 215).

A changing context for governments: Stability to flux

As previously noted, the public sector is contending with a state of volatility, uncertainty, complexity and ambiguity (VUCA). The public sector operates in a highly interconnected world, which means that events in one area can rapidly impact other areas, often in unpredictable ways. Social media has vastly accelerated the flow of information and the rate at which an issue can become the focus of attention – and thus a potential political concern – even if only momentarily. The consumerisation/democratisation of technology (as demonstrated by the ubiquity of smartphones and the creation of global participative digital platforms) means that individuals now have access to capabilities that were once

only in the reach of large organisations, thereby accelerating the rate of possible change. This VUCA state is one of effective flux, where change may occur quickly and the scope and degree of the directional shift of potential change can be large.

It is likely that the rate of change will accelerate further, with even greater resulting impacts. New technologies offer the potential for new and faster self-sustaining waves of change. For instance, machine learning introduces the potential of non-human "thinking", and algorithm-driven systems create situations that do not require (or are not limited by) human intervention or decision-making. Distributed technologies such as Blockchain offer the possibility to accelerate and magnify the existing marginalisation and elimination of intermediaries facilitated by the Internet. Globally interconnected systems and platforms allow for changes to be rolled out almost instantaneously across the world. All of these examples offer the potential for change to happen even faster, with fewer mediators or arbiters to arrest the process, while the transaction costs involved in introducing change are decreasing. The gap between an idea and its realisation at a global scale has, perhaps, never been smaller.

All of these changes potentially impact the range of what government can deliver and citizens' expectations of government. In the face of such change, governments will need to spur innovation in order to achieve societal goals and impacts (e.g. tackling disease or combatting climate change). However, sometimes governments will need to push back against change in order to guard core values of society that are at risk from technologically led disruption (e.g. managing or mitigating structural economic adjustment). Greater change will lead to more innovation, requiring governments to become increasingly agile and operate in new and sometimes very different ways.

The condition of flux that comes from shifting between relatively low and relatively high rates of change in the operating environment for governments has a number of potential ramifications. It implies that individual governments need to consider their relationship with innovation on a number of fronts. This includes thinking about government:

- As an entity – how can government remains functional in terms of how it operates?
- As a policy maker – how can government remain effective in its core responsibilities?
- As a decision maker – how can government remain able and recognised as an authority?
- As a democratic body – how can government deliver for and be accountable to citizens?
- In terms of risk and uncertainty – how can government make the right investments or hedge for different possibilities?
- In terms of practice – how can government make innovation a core competency?

The functioning of government in an environment of high change

In an environment where change is happening slowly or where there is only minimal innovation, it is likely that an effective and well-performing government department will know:

- its mission and associated priorities
- the key stakeholders and their general views about relevant issues
- which capabilities are needed and what processes and strategies are effective in meeting its mission
- what issues are on the horizon
- which key issues and timings will affect any long-term planning and investments.

However, in an environment of high change and potentially transformative innovation, this is less likely to hold true. For instance:

- The mission may need to be reframed or readjusted. For example, if the incidence of fires in a city decreases as new technologies and materials reduce associated risks, then the mission of firefighters will need to change (Donaldson, 2018).
- The relevant stakeholders may change. For instance, decentralised renewable energy technologies such as solar and battery storage can increase the range of stakeholders from a relatively small number of energy companies to potentially millions of households.
- Knowledge about what works and the associated capabilities needed to deliver those strategies can become uncertain. For example, a police response to cyber-crime will require very different capacities compared to more traditional forms of criminal activity.
- New issues can arise quickly and from unexpected quarters. For instance, the arrival of ridesharing was unexpected for many transport groups and policy makers.
- Long-term planning can become problematic as certainty is reduced. For example, climate change may significantly complicate infrastructure planning.

Table 3.1 explores further the potential differences between environments with lower and higher rates of change and innovation. While these differences will not always necessitate increased public sector innovation, public sector organisations will need to adopt, adapt, and engage with new technologies, new thinking, new ways of working and new relationships over time, if they are to remain functional. It is likely that innovation will form part of this process.

> *... the environment that most individuals and organizations confront today is not what it was at the recent turn of the century; it is even radically dissimilar from what it was, say, 25, 50 or 100 years ago – market conditions were consistent; assumptions would remain valid for years; decisions would not have to be revisited for some time. (Serrat, 2012, p. 4)*

Table 3.1. Differences between low and high rates of change for public sector agencies

Factor	Environment or context with a lower rate of change and innovation	Environment or context with a higher rate of change and innovation
Stakeholders/ Actors	Relevant actors and stakeholders are likely to be known or understood The capabilities, motivations and intentions of actors are likely to be relatively understood	New players are likely to emerge, probably with different skills, attributes and motivations The interests of existing actors are likely to change (potentially towards maintaining position and/or harnessing opportunity), or the dominant discourse will likely shift away from the previously understood and expected positions Relationships between and with stakeholders are more likely to fluctuate and operate with a degree of flux as the context changes and interests shift
Knowledge	Relevant knowledge (or gaps in that knowledge) is likely to be known and appreciated	New knowledge is likely to appear from unexpected or unfamiliar sources Existing knowledge may be challenged, discredited or attacked New knowledge may be rejected or devalued
Organisational expertise/ Proficiency	Organisations are likely to have established and understood expertise, capability and proficiency in areas of relevance to their function Skills and capability needs for the organisation are generally well understood, and reflected in recruitment, management practices and training and development	Existing capabilities and expertise may quickly become insufficient for the issues or challenges at hand New expertise and new capabilities are likely to be needed and developed, sometimes in tension with existing expectations, interests, traditions and values of the organisation Skills needs can be difficult to articulate and existing training or development practices may focus more on previous skill areas that are more easily identified and catered to
Emergent issues	Likely problem areas, while not predictable, are more often than not unsurprising Many issues arise slowly over time that (or if a crisis) can be responded to with a combination of existing strategies and the application of more resources	Weak signals can transform into consequential trends quickly and unexpectedly Problems come from surprising and previously unrelated areas Issues may often be most effectively engaged with when they are still emergent; however issues at this stage may not yet be seen as a political issue or viewed as serious/worthy of scarce attention/resources
Planning	Plans and the underlying assumptions are generally in line with reality Resource allocation can be (roughly) predicted and planned for	Assumptions underlying long-term plans often do not hold true Greater flexibility and adjustment is needed as feedback
Understanding of what works	There is a shared consensus around what strategies, tools, approaches and interventions are likely to be effective under particular sets of circumstances	Existing strategies can become less effective as the environment changes Alternate approaches (new or previously tried or rejected) may promise greater effectiveness Greater experimentation with new approaches may occur to identify strategies more effective/appropriate to a new setting
Infrastructure/ Investment	Understood capability needs, priorities and preferred interventions can be used to identify and match infrastructure and investment needs	Longer-term investments can become difficult as certainty about the future decreases A portfolio approach that invests in multiple bets may be more appropriate and/or lots of small investments in differing options until the most promising options are identified
Decision-making/ Organisational priorities	Decision-making processes and organisational priorities are understood and relatively stable Decision-makers share the same information and are aware of the main issues Core operations are unsurprising and associated responsibilities can be delegated	Organisational priorities can be subject to quick changes Decision makers may not share, be aware or familiar with all of the relevant information or issues Novel functions, issues or challenges may require a significant amount of decision-making attention, while core functions may need to adjust or change
Responsibility	Responsibility for particular issues and functions is demarcated	Responsibility can often blur across reporting lines, organisations and sectors
Leadership	Organisations may often have consistent leadership for long stretches of time When leadership change does occur, new leaders are often selected from within the organisation or from one with a similar mission/function.	New or different qualities may be expected leaders Traditional career paths may not be indicative or predictive of where future leaders will be sourced from.

Government effectiveness in an environment of great change

Governments also need to pay attention to how innovations affect others, as well as their own operations. For example, technology can make old production methods and those skilled in them redundant. Over time, innovation changes the economy, changes society and affects citizens in myriad ways: some of these are positive; some are less so.

Innovation therefore affects the context for policy making. In particular, it affects which rules and regulations are relevant, and which broad framework conditions are necessary for society and the economy. As the economy evolves, the appropriate policy settings will also change.

> *In an evolving economy, a static (or scaled) structure of policy and services will become increasingly dysfunctional or inappropriate. It will be adapted to an economic world that, by increment, no longer exists. Economic evolution thus renders extant policy settings increasingly dysfunctional. […] an evolving economy requires policy innovation and not just the increased efficiency or scaling-up of existing policy. (Potts 2009, p. 37)*

As Potts (2009, p. 42) argues with his version of the "Red Queen hypothesis",[1] public policy has to be continually innovative just to remain in the same place – in other words, policy settings need to continually evolve in order to have the same effect. For instance, ride-sharing has forced a change in the regulations around taxi industries; the rise of drones challenges existing air-space laws; and autonomous vehicles raise questions around liability, road safety and planning settings. An evolving economy, brought about by accelerating technological change, requires the public sector to "run" in order to stay in the same place. This suggests that innovation is a prerequisite for governments if they wish to remain effective.

Decision making in an environment of considerable change

Governments are not neutral players in any society or economy. As well as policy makers, they are also rule makers, standards setters, investors, arbitrators and mediators, partners and service providers, crisis managers and risk managers, amongst other things. Moreover, governments are expected to know enough to be sound decision makers for each of these myriad roles.

In an environment with a low rate of change, it is easier to understand and appreciate the nature of the change occurring, to assess its implications and to respond accordingly. In an environment with a high rate of change, it is much harder to appreciate the intricacies, issues and possible implications and interactions. For example, developments in artificial intelligence, augmented reality, biotechnology and additive manufacturing all promise large-scale change, though how that change will play out is highly uncertain. Furthermore, while each of these changes will have a significant individual impact, they will also interact and intersect with each other, producing further aggregate effects.

If governments, then, are to make appropriate decisions – as regulators, as catalysts for and aids to industry development, as investors and procurers, as both mediators between winners and losers, and as overseers of structural adjustment – they need to have, or be able to rely on, a working understanding of the changes that are taking place. While governments may have the authority to act, the legitimacy and effectiveness of any action will depend on the perception that those decisions and actions are backed by competence.

The nature of many of these changes, however, means that governments cannot simply become knowledgeable or familiar with them as and when required. Any technologies that are evolving rapidly involve a host of possible issues, nuances and possible points for intervention. Onlookers will not be able to fully appreciate or grasp these aspects, as the learning (in the form of tacit knowledge) comes only from being involved and from getting

[1] See https://en.wikipedia.org/wiki/Red_Queen_hypothesis.

their "hands dirty". Many of the relevant decisions will be based upon knowing the players and the issues, understanding the background and being aware of the potential scenarios that could play out.

If governments are to make decisions about these things, about new technologies, new business models, new ways of working and interacting, they therefore cannot be spectators. They need to be involved, in some form, in the practice of innovation. Many governments may not want to be at the "cutting edge" due to the costs and risks (real and perceived) involved, but nor can they realistically be late or reluctant adopters if they wish to be successful decision makers in their various capacities.

This also suggests, then, that sophistication in the practice of public sector innovation is a prerequisite for governments.

Expectations of government in an environment of significant change

In a slow-changing environment, expectations are also likely to stay relatively static. However, a high rate of change provides opportunities to revisit long-standing practices and assumptions. New technologies, new operating models and new practices allow for new types of understanding, new ways of working, new ways of relating and interacting, and new forms of collaboration.

For instance, in a world where information about nearly any topic can be accessed almost instantly through a smartphone, a requirement to access information in person becomes burdensome, whereas previously it may have been normal. The ability of a multinational company to offer highly tailored services drawing on a person's own information, may mean that users have less patience with a taxation system that requires laborious data entry and expects them to respond to questions they have already answered. What is known to be possible will shape and change expectations of what government should be. The needs and wants of citizens will adjust rapidly in a world where what is possible is also changing quickly.

Change can thus provoke questions from those working in government, as well as citizens and observers, about how things are being done. It provides an opportunity to ask, "Why isn't this done differently, now that we know there are other, possibly better, alternatives?"

Once the question is asked, there is, arguably, a democratic responsibility to try and do better, to undertake innovation in order to achieve the best outcomes and results for citizens – results that are both possible and feasible.

This too, then, suggests that public sector innovation is not simply a "nice to have", but rather a prerequisite for governments.

Government and the risk of a mismatch in the rates of change

Each of these different factors – whether government is sufficiently functional, effective, knowledgeable and responsive – point to risks that might arise from government not being sufficiently innovative. Whenever there is a mismatch between the rate and direction of change outside government (e.g. in science, industry, society or other governments) and the rate and direction of change inside government, there is potential for the following risks:

- Government investing more to achieve less – for instance, the efficiency of past practices will decrease as older systems fail to keep pace with more innovative (cheaper and/or better) systems used elsewhere. An example of this is operating a postal service

in a digital age, where it can become more expensive and yet delivers less (at least against established performance measures).

- Expectations being unmet or misaligned – if government operates in ways that increasingly diverge from what citizens can experience or achieve elsewhere, and is not seen to be able to fulfil what are assumed to be reasonable expectations, there will be a decline in trust/faith in the institution. For example, if people start to ask themselves why government cannot offer the easy online portals for transactions and services that are offered by many companies, they might lose faith in its ability to remain relevant to their lives.
- Insufficient absorptive capacity/investment readiness – government's ability to effectively "buy-in" or contract-out for solutions will become limited if it loses its sophistication as a customer, by lacking sufficient understanding of the possibilities on offer. For example, the potential of artificial intelligence cannot be understood overnight unless government already has experience in the field, established relevant networks and activity to keep up to date with emergent practice.
- Reactivity rather than adaptation – reacting to problems once they are fully developed, rather than engaging with them when they are still nascent, is usually more resource intensive and complex. For example, responding to a shift to autonomous vehicles after they arrive is likely to be harder than helping to evolve policy settings as the technology develops and lessons are learnt about the implications.

Again, all these risks suggest that public sector innovation is important for the operation, effectiveness, relevance, appropriateness and value of government.

Innovation as a core competency

Innovation is often characterised as a means to an end, as something to be accomplished in order to get to something else. It is seen as a possible option, rather than as a core competency.

In an environment of low change this view intuitively makes sense. Problems require a response and innovation can be one of a number of options to choose from when selecting that response. Pursuing innovation with its attendant potential for disruption, destabilisation of existing relationships, devaluing of previous investments and unpredictability will often not be the preferred option. Why risk changing more than is needed and introducing new issues? If something goes wrong, then the cost (and blame) is likely to be greater than the promised benefit. A low-change environment may lean towards a preference for incremental, gradual adjustments and optimisation, over abrupt or significantly novel changes.

In an environment of rapid change, however, innovation can take on greater importance. Take, for example, finance, human resources, procurement, strategy and other elements that have become core corporate functions for any effective government organisation. None of these functions deliver value in and of themselves; they are all instrumental functions. It is unlikely, however, that any effective, sustained and meaningful results or impacts will be achieved without them. In an environment of rapid change, where predictability is reduced and existing activities are likely to become (gradually or abruptly) less suited to the operating environment, innovation may also need to be viewed as a core function of equal importance.

In a rapidly changing environment, the need for innovation (e.g. in order to respond to technological change, changed service expectations or to a political issue) may strike

anywhere across a system, and in multiple places at the same time. Therefore, anywhere (and everywhere) might need to engage in innovation.

In such an environment, the ability to predict what will work and what will be effective (by drawing on established knowledge) also declines over time. There is thus a need to increase the range of potential options that could be applied. Where there is growing uncertainty, an organisation must spread its bets across multiple possibilities if it hopes to obtain a result.

In short, in a rapidly changing environment the perception of innovation can shift from something considered to be useful under certain circumstances, to a core function that should always be considered, even it if is not used or selected as the option to pursue.

When the latter is the case, innovation becomes a part of everyone's job, even if not everyone is expected to be an innovation expert – a situation that is similar to the current perception of human resources, procurement, financial management and so on. Everyone needs to be able and ready to engage with innovation, even if the time and place cannot be predicted. And as with other corporate functions, innovation will also need to be guided and supported to ensure maximum impact. Those undertaking innovation will need to be able to access expertise to help them make the most of the process.

The need for a systemic approach to public sector innovation

It can be said then that the following factors affect the operating environment of government:

- Changing functions – in an environment of change, governments must also change how they operate.
- Running to stay in place – in an evolving economy, governments have to change policy settings just to maintain the same outcomes.
- No room for spectators – in order to remain effective, governments must have experiential knowledge of innovation; they cannot wait for answers to be given to them.
- More is expected – many politicians, citizens and public servants want and expect things to change.
- Risk of a mismatch – a government that does not innovate is one that is at risk of always being behind, always reacting yet forever disappointing.
- Innovation as a core competency – the need for innovation can strike anywhere. Therefore, everyone must be ready to play a part.

Taken together, these factors suggest that innovation needs to move from a sporadic activity, to one that one should be done consistently and reliably. Innovation needs to be seen not as a serendipitous occurrence, but as a dependable resource that can be drawn upon.

One simple real-world test of this proposition is to consider how many areas of government can be described as truly contemporary, truly appropriate to their setting, and thus delivering a level of results that meets or exceeds expectations? How many parts of government can be considered as being truly aware of all of the issues, effectively using available technology and processes, and not just responding to the environment but helping to shape it? If this does not describe a government's activities overall, then it suggests that innovation is happening at a rate below that which is needed.

A partial explanation of this state of affairs is that while innovation is (and has been) occurring within governments, it is generally a by-product of existing processes and ways of operating, rather than a focus in its own right. Innovation within the public sector has

rarely been a deliberate focus of government, except in very specific areas, and thus its occurrence has, generally, been ad hoc.

If innovation is already possible and is already happening, but not to the level necessary or expected in a high change environment, it is likely that something else is needed. If innovation is happening some of the time, but not enough of the time, this suggests that there are systemic factors at play. In such cases, something is limiting the level of innovation in government, despite the need for more innovation. What is it?

In order to answer this question, it is necessary to focus explicitly on the innovation system – the actors, actions, ambitions and interactions that shape and affect innovation performance. Relying on innovation occurring as a by-product is insufficient, as is relying on crises or other external catalysts to drive innovation. If government needs innovation to be a dependable resource, and have innovation as a consistent, systematic and reliable activity, then it needs to understand the system that produces innovation. It needs to understand the drivers, the actors and the factors that shape when and how innovation occurs.

In short, if a government wants to influence how and when innovation successfully occurs in government, then it will need to understand its public sector innovation system.

Understanding public sector innovation

To understand public sector innovation at a system level, it is first necessary to understand the nature of public sector innovation. What is public sector innovation really? How, if at all, is it different from innovation occurring in the private sector? What are the features of public sector innovation that might affect it at a system level? The following discussion seeks to outline the relevant characteristics of innovation.

Defining public sector innovation

As noted in Chapter 1, innovation refers to ideas being applied in new settings or in new ways in order to achieve impact. This question of "new" means that innovation is inherently an ambiguous concept, because what is new will change between contexts and adopting something otherwise "old" in a different context can still make it novel. What was once innovative can soon become routine or even old-fashioned, and what is innovative in one organisation may not be for another. Despite this intrinsic haziness to the word, the OECD (2017a: 23) suggests three characteristics of public sector innovation:

- *Novelty*: innovations introduce new approaches in a defined context
- *Implementation*: innovations must be implemented, not just an idea
- *Impact*: innovations aim at better public results including efficiency, effectiveness and user or employee satisfaction.

This definition distinguishes innovation from creativity (coming up with new ideas) and invention (the creation of new things that may not be used).

However, because innovation can only be understood in context, the precise definition will vary between settings. While these high-level characteristics will likely be of relevance to innovation no matter where it happens, the exact understanding of what is innovative should be tailored to the situation in which it occurs. What is innovative for one person, team, organisation, system or country may not be innovative for another.

Box 3.1. "What we're talking about when we talk about innovation"

The Impact and Innovation Unit used the following definition of innovation in their 2016-17 Annual Report:

"Too often innovation is understood to simply mean doing something new, interesting, or novel. Used in this way, the term can lose its meaning.

The Hub takes a specific view of what innovation is to guide its work. In our context, innovation means applying new insights, resources, technologies, or approaches that can be demonstrated to improve outcomes for the public compared to conventional ways of doing things. Demonstrating the effectiveness of an innovation requires, where possible, using rigorous evaluation and structured experimental methods to generate evidence of impact.

In the coming year, the Hub will be working with government departments along with external partners to promote a shared view and approach on public sector innovation and experimentation" (Privy Council Office, 2017).

The significance of this for any consideration of a system is that any innovation system will also be contextual. If what is innovative depends on the context, then what is included within an innovation system will also depend on the context. What a public sector innovation system includes, or how it looks, will differ between country contexts.

Defining what public sector innovation is not

A core element of innovation is the notion of "discontinuous change", or change that is not in line with what has gone before (Osborne and Brown, 2013: 3). This inherently means that innovation is not the same as continuous improvement or incremental change.

> *It is a quite different task, for example, to support staff in developing their existing skills than to tell them that these skills have been made redundant and that they need to re-train to retain their post (if it has not been made redundant too, of course). The distinctive nature, and challenges, of innovation, as opposed to service development or change (such as the management of risk, uncertainty and failure), become lost in such sophistry. (Osborne and Brown, 2013: 3)*

Continuous improvement is, of course, often an important activity. It is a key approach to making efficiency gains and an important means of transforming things that were innovative into established and efficient practices. But it is not the same thing as innovation. Therefore, if innovation is *not* about incremental change, it will often be in competition *with* incremental change.

Innovation is also not inherently good. Innovation may be necessary, but that does not mean that any and every specific innovation will be worthy or beneficial (Osborne and Brown, 2013). Innovation therefore may sometimes be in conflict with current values and priorities, and it may benefit particular interests that are not in alignment with the collective (or even individual) good.

These aspects of innovation (or what innovation is not) are important when taking a system-wide view, because they imply that the system must actually incorporate and allow for tension and potential divergence in order for innovation to emerge. However, they also suggest that innovation should not be left to its own devices when it does emerge, as the

innovation process does not guarantee that the innovation that arises is that which is needed or wanted. Innovation must therefore be managed.

Public sector innovation is about uncertainty and learning

As innovation represents discontinuous change, it is associated with a high degree of uncertainty. Innovation fundamentally involves taking actions that lack a defined or guaranteed outcome. By definition, it involves the possibility of the unexpected. If something can be perfectly predicted, then it is not innovative.

This characteristic means that innovation is inherently about learning – about engaging with and reducing uncertainty, and building a better understanding of the relationship between things. The OECD (2016) has outlined many of the issues related to learning and innovation, including the importance of single-loop learning (learning what is) and double-loop learning (learning about what underlies what is).

While this may initially seem obvious, learning is not a straightforward process, and involves people changing what they know to be true – something that is not always easy or welcomed. Supporting public sector innovation requires supporting learning in its different forms. It must also involve a degree of "unlearning" and ensuring that new truths do not become entrenched. From a system perspective, this is important because it points to another inherent tension – ensuring that the different types of learning that come with innovation are supported and that the results are spread and shared, but avoiding the emergence of a new unquestioned orthodoxy that inhibits future innovation.

Differences from private sector innovation

Public sector innovation is not the same as private sector innovation. The public sector operates in a different environment with different operating forces. Most notably, the public sector lacks the private sector's generally overriding driver of profit, and in its place, operates with a far more contested and nuanced driver in the form of politics. This creates an environment that requires different approaches to innovation.

> *The skills to innovate and encourage innovation in others associated with leadership in the public sector are distinct from private sector ones. The scope of the environment, the complexity of the relations and the histories of the organizations suggest a culture that is far from clear and unitary, and hence a mode of leadership formed much more on consensus and longer-term perspectives. (Hall and Holt, 2008: 25)*

The public sector is there to deliver on the priorities of the government of the day (although these are sometimes balanced against longer term considerations such as core institutions and values). However, this is not a technocratic activity of implementation, but an inherently political activity of navigating different options, different possibilities and different sets of power relations.

> *When considering innovation in the public sector, we need to think about the public sector factors that may be particularly important. One of them is the importance of engaging with politics. Innovation is not just a matter for technical experts or administrators; engagement with politics is essential to making any major innovation work. That engagement will almost certainly identify multiple and competing objectives, and it also offers a process to allow these to be tested and weighed up. The other key public sector factor concerns the role and values of*

> *public service: having impartial, professional, consistent and stable management, notwithstanding the need to be innovative. (Podger 2015: 122)*

The political aspect of the public sector – its responsibility to the government – manifests most starkly when it comes to the question of risk. Innovation, as an inherently uncertain process, is one that involves the risk of negative consequences being realised, whether predicted or not. For any public sector organisation, these consequences might concern a wide range of eventualities (Osborne and Brown, 2005), including potential impacts on the health and safety of citizens, unintended consequences that draw political attention or an outcome that is not sufficiently successful to be feasible even if "works". Innovation, as an uncertain event, can result in surprises, and as such is uniquely placed to disturb the relationship between a public service and a government's political leadership. Risk aversion is therefore a common feature of many public sector environments.

From a system perspective, this indicates that the appetite for public sector innovation will always be subject to potential fluctuation depending upon political shifts.

Importance of surrounding ideologies and paradigms

The political nature of public sector innovation means that it is not value-neutral or isolated from the political choices and forces that shape the public sector. The dominant paradigms of the time will naturally affect or influence any proposed innovation as well as its chances of adoption. For example, New Public Management (NPM) was a dominant philosophy in a number of countries and helped shape how innovation unfolded.

> *Notably, NPM favours innovations that support the decentralization, privatization and contracting-out of services; promotes competition between public providers and private firms/not-for-profit organizations; develops consumerism; and separates political and administrative decision making from service production. (Windrum, 2008a: 15)*

The different paradigms are important to recognise as they will likely act as filters for any innovation that is attempted, and may well limit the range of the possible, regardless of what may be otherwise conceptually or technologically feasible.

> *If one cares about minimizing misgovernment rather than maximizing good government, one will be disinclined to grant officials discretion. (Kelman, 2008: 38)*

Different paradigms will also likely encourage or support different types of innovation, and place emphasis on different actors and different relationships, which will in turn affect the performance and evolution of the innovation system.

Different forms of innovation

Public sector innovation can come in different shapes. Windrum (2008a: 8) provides a taxonomy of six different types of innovation:

- Service – the introduction of a new service or an improvement to an existing service
- Service delivery – new or altered ways of interacting with clients in the supplying of services
- Administrative and organisational – changes to structures and routines
- Conceptual – the development of new world views that challenge existing assumptions
- Policy – changes to the thinking or intent behind a policy paradigm

- Systemic – new or improved ways of how the public sector operates in a foundational way.

Any individual innovation may straddle one or more of these categories.

This variety in the forms that innovation can take is significant because it helps to illustrate the range of different capabilities and knowledge that may be of relevance to the innovation process. Innovative service design will often be different, and involve different people, skills and capabilities than policy innovation. Different forms of innovation will also likely involve different considerations and potentially require different types of support.

From a system perspective, this highlights the point that will likely be multiple sub-systems and ecosystems of relevance to different functions of the system.

Different degrees of innovation

Innovation can also vary in the magnitude and scope of its impact. For instance, innovation can range from the radical to the incremental (Freeman, 1982). Here, incremental innovation does not refer to incremental/continuous improvement, as it still involves the introduction of significant novelty and, thus, requires a different set of tools and management.

Radical innovation, which implies significant disruption and change to existing patterns of activity and relations, will necessitate different approaches (and responses) than more incremental innovation, which is unlikely to significantly challenge the status quo. It is likely that the capacity of any system to tolerate incremental innovation will far extend far beyond its capacity to tolerate radical innovation.

There are other possible additional categorisations of degrees of innovation (e.g. see Miles, 2013); however, the main point is that innovation can range in the degree of change that it entails. The different degrees of innovation will involve different responses, strategies and different ways of inculcation.

Innovation and time

A core characteristic of innovation is the importance of time. Time influences whether any innovation is seen as a success or failure (Dodgson, Gann and Satter, 2005). One innovation may initially appear to be quite successful, only for the progress of time to reveal that the innovation either did not work, or that it was not actually related to the observed impact. Another innovation may be perceived initially as small and relatively inconsequential, but later be praised for its wide-ranging and cascading impacts. Time may change how an innovation is seen in terms of the form it takes (a service innovation may become seen as a conceptual innovation in time) or the degree of radicalness (e.g. moving from something incremental to something truly radical).

The importance of time for public sector innovation means that any snapshot of innovation will inevitably mislead. Innovation needs to be seen in context, including that of time. From a system perspective, innovation must be assessed contemporaneously *and* reflected upon over longer timeframes.

Different waves of innovation

> *For if public sector innovation endures, and it clearly does, it still does not stay the same (Borins, 2014).*

Innovation is the practice of doing what has not been done before (in a specific context). The innovation process, therefore, also changes, as previous innovations reveal new possibilities (and sometimes remove old ones). For instance, open innovation involves different supporting infrastructure, tools and relationships than are necessary for innovation primarily led from within an organisation. Innovation is a dynamic process, as the results of prior innovations will sometimes alter how innovation occurs in the future. New technology allows for new waves of innovation that will favour different techniques, relationships, infrastructure, and underlying logics and notions of value.

The implication of this is that there is no set pattern that can be used to support innovation, either at an organisational or a systemic level. How innovation is done and, thus, how it is supported or engaged with, will change over time, and require continual attention, investment and thinking in order to remain relevant and useful to the context of the time.

Different speeds of innovation

The process of innovation is also dependent upon the intersection of time, uncertainty and the different degrees, forms and waves of innovation. How fast innovation can be attempted depends upon the combination of all of these. If a situation is well understood and there is broad agreement about what is needed, it is more likely that the innovation process will proceed quickly. Where there is a high degree of uncertainty, no consensus or clear mandates for significant innovation, or where there are significant possible consequences, it is likely that a more deliberate and slower approach to innovation will need to be taken.

In such circumstances, the focus may be on harvesting insights and learning through the innovation process, rather than rapid action, in order to avoid unwanted inflection points – thresholds beyond which there is no return. Sometimes "slow" innovation will be needed, before gaining the requisite acceptance and support needed to proceed effectively.

> *The relationship between speed and uncertainty is therefore highly contingent. It may, for example, be highly advantageous to speed up the innovation process when it is routinized and outcomes are relatively well specified. Speed may be disadvantageous when the innovation is disruptive to existing ways of doing things and warrants extensive reflection and learning. An overemphasis on speed would also rest uneasily when the consequences of mistakes are high, as in the design of aircraft or nuclear power plant. (Dodgson, Gann and Satter, 2005: 22)*

Differing parts of the system will need to engage with innovation at different speeds, depending on the level of uncertainty faced combined with the pressure for innovation to occur.

This question of speed adds another consideration to the innovation process. From a system perspective, it raises the question of how different speeds of innovation can be supported concurrently.

Top-down and bottom-up innovation

Innovation can be driven from the top (i.e. it can be mandated and directed) or it can emerge as a bottom-up process (e.g. from front-line staff).

The origin of the idea can greatly affect the path that it will take. An idea that comes from a newly elected government with a clear mission will likely fare very differently to an idea that comes from a public servant in an agency trying to consolidate previous change efforts.

Borins (2014) has found that a significant amount of public sector innovation is bottom-up. However, given the challenges of innovating in the public sector environment, this implies that it is important to consider the motivations of those that might contribute to the innovation process. The role of managers and leaders is, thus, particularly important, as they will have a significant impact on the appetite for trying something new (Kelman, 2008).

> *If innovative ideas can come from anywhere in an organization, rather than a senior elite, then organizations will be most innovative if they stimulate innovation throughout (Borins 2006: 27).*

The source of innovation therefore affects how it is engaged with, how it might need to be supported and the path that the innovation might take. The same ideas can play out very differently in an innovation system depending upon where they originate.

Different purposes for innovation

The distinction between bottom-up and top-down innovation also helps to draw attention to the different purposes that innovation may have.

> *Politicians or agency heads are associated with innovations in response to crises. Middle managers and frontline staff tend to initiate innovations together and are more likely to be the initiators when there is a problem than when there is a crisis. (Borins, 2014)*

Within the public sector proper, innovation can be seen as generally problem-driven (e.g. Windrum, 2008b), even if that problem is an issue identified at the working level (Borins, 2014), a crisis or a political imperative (although not strictly a "problem", a political priority certainly requires a response and action on the part of the civil service).

However, innovation can also be "mission led", directed towards a particular aim or set of goals. This form of innovation may be instigated to solve specific problems, it might be exploratory in character or it may be more aspirational.

Missions and problems both share the advantage of reducing the uncertainty around the innovation process, by providing a means to assess innovative initiatives and their results (i.e. did it do what was needed). They also represent a tangible driver for innovation (e.g. an acceptance that things need to change) in opposition to the inertia within the system that will likely support the status quo (OECD, 2016). More exploratory innovation can struggle with these criteria, as its potential value or support from incumbent interests may not be immediately apparent.

Of course, public sector innovation is not solely a matter for those in public service – increasingly other actors can contribute to the process, either directly or indirectly. In these instances, other drivers may be of more relevance, such as public value, commercial opportunity or other interests.

The reasons for undertaking innovation will thus differ, and these different purposes will affect the nature and conduct of the respective innovation processes.

Different pathways for public sector innovation

Just as innovation may be undertaken for a number of different purposes, it can also follow different pathways, some of which may be better suited to particular types of problems or purposes/aims. Some authors (Bessant, Hughes and Richards, 2010) have proposed a range of models for the different pathways available to innovation:

- R&D led – "Ideas are developed by specialists, refined, developed and launched."
- High involvement – "All employees are engaged in the process of incremental problem solving."
- Network – "Ideas are developed, adapted and adopted through networks."
- Radical/discontinuous – "A group is given the license to think the unthinkable and develop ideas on the edges or apart from the mainstream."
- Entrepreneur driven – "Ideas are developed on a small scale inside or outside an organisation."
- Recombinant – "An idea is adapted and adopted from one setting into another."
- User led – "Users innovate themselves through co-production with professionals or by using voice or choice."

Other authors (Eggers and Singh, 2009) have suggested an alternative set of pathways:

- Cultivate – best suited for engaging employees
- Replicate – best suited for adapting an existing innovation to a new context
- Partner – aimed at developing partnerships to leverage different environments, resources and competencies
- Network – utilises the innovation strengths of a range of individuals and organisations
- Open source – uses open source approaches to engage an even larger range of potential participants and contributors.

A possible addition to both of these sets of pathways would be "positive deviance", which refers to finding and replicating or scaling examples of innovative adaption already happening, but not commonly, within a system (Pascale, Sternin and Sternin, 2016).

These different pathways have different uses or strengths, and different enabling patterns. Accordingly, different types of innovation will be required for different types of issues, problems, opportunities or missions, and the selection of the most appropriate pathway will depend on the available assets and investments and relationships. An innovation system will likely be more effective if it draws upon and supports multiple approaches.

Public sector innovation as a process rather than an event

Given the previous considerations, it is clear that innovation does not occur in isolation or on command. Similarly, innovation does not come out of nowhere; rather it depends on a range of conditions, capabilities and supporting factors.

> *Governmental innovation emerges from a months- or years-long developmental process, a process that accommodates many players and interests. (Bardach, 2008: 113)*

Relevant factors might include prior knowledge and learning, infrastructure, previous investment, existing relationships and networks, and previous experience with innovation. When looking at the innovation process, or the ability to consistently and reliably generate a stream of innovations, a concerted innovation approach by an individual organisation may require considerable sustained investment.

> *In our experience, it can take an organization three to five years to build the kinds of skills, tools, management processes, metrics, values, and IT systems that are required to support ongoing, across-the-board innovation. (Skarzynski and Gibson, 2008: 16)*

In addition, innovation as a process of learning does not necessarily happen quickly. The introduction of a new innovation does not lead to immediate comprehension, nor does it guarantee that it will integrate or fit with existing routines, or that it will be used in the right way, be defended or explained well, or achieve what was expected.

> *… innovation is a process that has to be gone through. Staff have to leave old beliefs behind and learn new ones. An innovation cannot simply be "plugged in" from elsewhere. Each team or organization has to make its own* innovation journey. *(Osborne and Brown, 2005: 197)*

Innovation, then, is an individual and organisational process, a journey rather than an event. This is also true for a civil service as a whole, as illustrated by Chapter 2 and the historical innovation journey of the Public Service of Canada.

The implication of this from a system perspective is that there will be different rates of learning, and thus different experiences of the same developments. An innovation system will involve many different actors at varied stages of the innovation journey.

Public sector innovation is fundamentally complex

Public sector innovation is irreducibly complex. The associated dimensions of innovation explored here represent some, but by no means all, of the relevant factors that make public sector innovation fundamentally difficult and uncertain.

> *A successful public sector innovation process depends on an evolving interplay of interpersonal, organizational, political, social, and economic factors. What is more, it grows out of a history of previous successful, and unsuccessful, efforts. (Borins, 2014)*

This is not to say that public sector innovation cannot be supported; rather it is to suggest that there are no easy answers or ready-made solutions. Innovation is not something that can simply be commanded or directed, and then expected to occur.

> *But making innovation a priority is not the same thing as making it happen. All too often, innovation becomes nothing more than a buzz-word or a bumper sticker – the management theme du jour – that receives a lot of reverential rhetoric in company meetings, corporate ad campaigns, and annual reports. (Skarzynski and Gibson, 2008: 4)*

An innovation system that results in innovation as a dependable resource cannot then be wished into being. It requires careful thought, ongoing engagement, and observation and reflection to build an understanding of how it operates.

Summary and implications for a system perspective

In summary, public sector innovation consists of a wide range of characteristics that have a bearing on how it can be engaged with and supported or encouraged.

1. What it is: innovation involves novelty, implementation and impact, but what is and is not innovation is essentially contextual. Innovation systems, then, will also be **contextual** and will vary between different country contexts.

2. What it is not: as innovation involves discontinuous change, this means that it is not a process of continuous improvement, and thus cannot be expected to just happen naturally. Neither is innovation an inherently good thing. Innovation, therefore, cannot be left to its own devices. It requires **active management**.
3. Innovation is about uncertainty and learning. There are different forms of learning, and each can be supported in different ways. An innovation system must involve spreading the resulting insights, but prevent them from becoming established orthodoxy that limits future innovation. It must balance **learning and unlearning**.
4. It is different to private sector innovation. Public sector innovation has different constraints and issues, including politics, the lack of a unitary driver for innovation such as profit, and the existence of a different risk environment. Innovation may be strongly desired and then suddenly pulled back from. There will be a **fluctuating appetite for innovation** in the public sector, which is likely much sharper than that in the private sector.
5. Innovation is influenced by surrounding ideologies and paradigms. Public sector innovation should not be perceived as value neutral or a technocratic exercise. These ideologies and paradigms will shape the nature of the system and the expected roles and capabilities of its actors. What is wanted from a system will depend on the **dominant views and beliefs of the time**.
6. There are different forms of innovation. These range from a new service to an entirely different way of understanding issues and engaging with citizens. **Different forms will make different contributions** and may require different types of support and involve different parts of the system.
7. There are varying degrees of innovation. Innovation can range from the incremental (but still involve discontinuous change) to the radical. From a systems perspective, **different degrees will necessitate different responses**.
8. Innovation can only be judged over time. Success or otherwise can only be understood over time, through learning and observation. Consideration of the workings and performance of an innovation system must therefore consider the immediate (what is working now) and the longer term (the impact over time). **Time will change the view of performance**.
9. Innovation occurs in different waves. The practice of innovation and what it involves will change as new techniques, insights and technologies become possible. An innovation system may need to be flexible to **move between or maintain multiple waves of innovation**.
10. There are different speeds of innovation. When the field of uncertainty is reduced (e.g. there is clear agreement that something different is needed quickly), innovation might occur more rapidly. In other circumstances, the innovation process may need to unfold more slowly, before committing to steps that may not be reversible. An innovation system will need to be able to **maintain different speeds of innovation simultaneously**.
11. Innovation can be bottom-up or top-down. Innovation will involve different considerations depending on where it comes from, but the significance of bottom-up innovation is that important ideas can come from anywhere. Whether they will is dependent upon the environment and the signals from leadership. The progress of an idea through an innovation system will be shaped by its origins. **Where an idea comes from matters as much as what the idea is**.
12. Innovation has different purposes. Public sector innovation is usually problem led, and sometimes mission led. Both of these approaches provide a basis for innovation to counter any biases to not innovate. An innovation system will involve undertaking

different types of innovation for differing purposes. **These different purposes will affect what the innovation process involves**.

13. Public sector innovation can occur through a number of different pathways. There is no one approach for generating innovation – each approach will have different uses, and will require differing forms of support or investment. **Different approaches will offer different strengths and require different support**. An innovation system will likely involve and benefit from a range of different approaches.
14. Innovation is a process rather than an event. Public sector innovation does not come out of nowhere; it builds on the past. Developing an effective and reliable public sector innovation process will likely take considerable and sustained time and investment. An innovation system will encompass many different actors at different stages in the innovation journey. There will thus be **different rates of learning across the system**.
15. Public sector innovation is fundamentally complex. **There are no easy answers**, no "set and forget" approaches. It requires constant engagement and movement to remain appropriate to the changing context.

In short, public sector innovation is not a straightforward exercise. Other than demonstrating that innovation is challenging what are the takeaways from these varied nuances and characteristics of public sector innovation? Furthermore, what are the consequences for a systems perspective? Table 2 identifies four main implications.

Table 3.2. Implications of the nature of public sector innovation for a systems perspective

Innovation involves ongoing discovery	Innovation is varied and multi-layered	Innovation requires intervention	Innovation will be interpreted differently depending on the past, the present and the possible futures
1. Innovation is contextual	6. Differing forms of innovation will make differing contributions	2. Innovation requires active management	5. The dominant views and beliefs of the time will shape the system
3. Innovation involves balancing learning and unlearning	7. Different degrees of innovation will necessitate different responses	11. Where an idea comes from matters as much as what the idea is	8. Time will change the view of the performance of the innovation system
4. There is a fluctuating appetite for innovation	9. Different waves of innovation will need to be maintained or moved between	13. Different approaches will offer different strengths and require different support	
15. There are no easy answers	10. Differing speeds of innovation need to be maintained simultaneously	14. Different rates of learning will occur across the system	
	12. Different purposes will affect what the innovation process involves		

- **Innovation involves ongoing discovery**: No one single "innovation system" will be appropriate or suitable for all contexts. New insights and lessons from the innovation process will (or should) shape what is desired of the system and the understanding of what is possible. This in turn will change the destination. There is therefore no one recipe or solution for an innovation system. Rather, it is an ongoing journey.
- **Innovation is varied and multi-layered:** There is no one single type of innovation. Innovation varies in its form, degree, patterns, speed and purposes. An innovation system will therefore involve multiple streams of innovation, and will thus require diversity of efforts, actors and structures.
- **Innovation requires intervention:** While innovation frequently arises from structural or circumstantial factors (e.g. a crisis or a particular problem), an innovation system will require deliberate intervention and oversight. Intervention is required whether this involves ensuring that the innovation meets wider goals than just solving an immediate problem, ensuring that the ideas of some actors are not unduly prioritised, ensuring that the requisite capabilities are available or integrating lessons from across a distributed system. An innovation system cannot be relied upon to deliver what is needed in the absence of oversight.
- **Innovation will be interpreted differently depending on the past, the present and the possible futures imagined:** How innovation is viewed will change over time, either because the practice of innovation will have evolved, because more has been learned about the impact or success of an innovation, or because values, beliefs and ideologies will change. Any assessment or thinking about an innovation system should therefore consider the past, the present and different possible futures.

Public sector innovation is therefore necessary, but must be undertaken in a more consistent and reliable fashion, and requires a systematic approach. That systematic approach must involve ongoing learning, a nuanced approach that caters to the varied nature of innovation, oversight and intervention, and a concurrent short-term and longer-term perspective.

Understanding and shaping public sector innovation systems

Existing discussion of the characteristics of public sector innovation mostly draws or builds on what has been learnt at an individual or organisational lens. But as Bourgon (2008) points out, it is possible to think about the individual capacity of public servants, organisational capacity and *collective capacity*. If innovation is only considered from an individual or organisational perspective, it will not result in a systemic approach that a government can rely upon to be sufficiently consistent and reliable to meet the increasing pressures for transformation. There needs to be a focus on the innovation system, and this focus needs to provide some way of making the inherent complexity of public sector innovation manageable.

However, most of the existing guidance, both in the private sector and the public sector, is developed for or relevant to an individual or organisational perspective.

There is, however, some existing thinking about innovation systems. The main premise of innovation systems literature is that it is impossible to evaluate a component of the innovation system without seeing how it fits with other structural elements and the innovation process as a whole. In effect, the approach examines (also institution driven)

capabilities and their fit and effect on innovative performance within these systems (Lundvall et al., 2011).

At the same time, innovation systems analysis is conceptually very heterogeneous (see Gault, 2007; Soete, Verspagen and Ter Weel, 2010). There are different approaches to innovation systems, including national innovation systems, both broad and narrow (Edquist, 1997; Lundvall, 1992; Nelson, 1993), regional innovation systems (Cooke, Heidenreich and Braczyk, 2004), sectoral innovation systems (Dolata, 2009; Malerba, 2005) and technological innovation systems (Carlsson and Stankiewicz, 1991; Hekkert et al., 2007; Johnson and Jacobsson, 2001). Many researchers do not consider these different perspectives as either-or approaches to innovation systems, but rather view them as interlinked and embedded systems of innovation (Markard and Truffer, 2008).

Each approach examines different levels of the system. For example, actors in the technological innovation systems (TIS) approach can be both individuals and organisations (research institutes, public bodies, etc.) or networks of actors such as value chains (Bergek et al., 2008). In essence, the TIS perspective is primarily a meso-level approach with structures and functions on the technology system level (Kukk, Moors and Hekkert, 2015: 47; Markard, Suter and Ingold, 2015: 82; see further argument in Hekkert et al., 2007). This is seen as more empirically "manageable" compared to national, regional or sectoral systems of innovation that operate primarily at the macro level.

These models though are all based on the private sector. As discussed previously, public sector innovation is different: it has different drivers, different actors, and different constraints. Are there any public sector models of innovation systems?

Some countries have previously taken a holistic view of public sector innovation at the national government level. These include Australia (Australian Government, 2010) and the United Kingdom (NAO, 2009). The Australian research also included cross-country analysis of different public sector innovation (Scott-Kemmis, 2010), which considered and proposed a public service strategy for innovation performance. Other national governments (e.g. Denmark) have also undertaken significant work on fostering or supporting innovation in their civil services.

However, overall there does not yet appear to be a consistent model for considering, understanding and driving innovation across a civil service.

Without such a model, there is a real risk that the efforts of any individual public service will be somewhat piecemeal, responding to symptoms in turn, rather than addressing root causes and harnessing underlying drivers. Without a model, it is likely that entrenched issues will continue, that existing tensions will remain, and that progress will be limited and subject to relapse.

In conclusion, despite two decades of structural reforms and performance management, innovation has not generally become the hallmark of public sector behaviour. Better training for public managers in leadership and problem-solving skills have assisted in encouraging innovation, but the structural impediments have remained. While some agencies have undoubtedly engaged in innovation and have spent considerable efforts implementing mandated reforms within the organizational processes, it has not proved possible to mandate public sector innovative behaviour beyond niche process areas (e.g. the adoption of IT-enabled customer services). Indeed, the culture of the public service in almost every nation tends to be risk averse and procedural, owing to administrative requirements for accountability, procedural fairness and predictability. (Head, 2013: 153-154)

Three primary concerns for innovation

Innovation, as discussed, can take many forms, may be undertaken for many different purposes and can range from the incremental to the radical or disruptive. However, there is no suitable model in the existing practice and literature designed to make the complexity of innovation more manageable and accessible for public sector innovation systems. The challenge is that not every innovation can be treated individually from a systemic view, but having one overly simplified conception of innovation would lead to overlooking significant differences. Something in between is required.

Building on what has been examined so far and drawing on the experience of the OECD's Observatory of Public Sector Innovation, this section suggests three core public sector innovation concerns. These concerns differentiate between different aspects of innovation that have bearing on how innovation can or should be supported:

- **Delivering on today –** This relates to innovation taking place to meet key priorities and that government has the ability to innovate in order to reach its goals. Such innovation will usually be incremental in nature and exploit current knowledge resources. However, in some cases it will be transformational with a view to responding to more ambitious agendas.
- **Delivering for tomorrow –** This refers to exploration and engagement with emergent issues and technologies that will shape future priorities, future commitments and future responses. It will likely involve more radical forms of innovation that will be harder to embed in existing structures.
- **Ensuring innovation readiness –** This means ensuring the necessary absorptive capacity across the Public Service to engage with new ideas, new methods and new ways of working and delivering. Innovation is not a capability or capacity that can be turned on and off at will, and it is likely that innovation readiness can only be achieved if nurtured and considered explicitly. Furthermore, innovation needs supporting structures to allow it to happen. One way to illustrate the importance of this is to substitute procurement for innovation: effective procurement cannot occur if the necessary systems are not in place, or if those involved have no experience or knowledge of the items or services being procured or procurement processes. While not everyone needs to be a procurement expert, most actors need to be familiar with and accept procurement as a core function of the public sector. Likewise, effective innovation cannot exist in a vacuum – familiarity, experience, knowledge and processes need to be present for it to function as a reliable resource.

These aspects, by no means set in stone, are intended to illustrate that an effective public sector will need to consider and support different streams of innovation activity at the same time.

However, while these three lenses may be helpful for clarifying why and how different types of innovation are needed, and the different factors that might come into play for each, they provide more of a functional perspective than a systemic one. They demonstrate that governments will need a diversified approach when it comes to innovation, but they still do not address the underlying question: what can be done to more consistently and reliably generate, implement and scale innovation in response to the varied needs of government?

Reaching a model for public sector innovation systems

This chapter has demonstrated that in a period of increased change, governments need to engage with innovation in a more sophisticated fashion than has generally been the case. Governments need innovation to be a consistent and reliable part of their arsenal as they pursue better outcomes and respond to changing expectations. Governments need a systematic and systemic approach to innovation.

It has also been shown, however, that innovation is inherently complex, varied and cannot be supported through any one single approach. There are no easy answers or ready-made solutions. The ongoing attention and myriad efforts of various governments, including the Government of Canada, illustrates this point – if someone had mastered it, it is likely that others would have followed.

The challenge of supporting public sector innovation at a system level is further exacerbated by the lack of existing relevant guidance, with most resources aimed at individual practitioners or viewed through an individual organisation lens. Most of the existing innovation system models are derived from private sector practice, which cannot be assumed to be relevant or appropriate for the differences inherent in the public sector context.

If governments are to avoid piecemeal responses that address symptomatic issues, then a model is needed to support innovation.

However, out of what is known, it is only possible to identify three different priority areas for government: delivering on today, delivering for tomorrow and ensuring innovation readiness. These perspectives will not be enough, however, to help governments drive and support public sector innovation. Existing knowledge is not sufficient to develop the required model.

In order to help identify a model that can render the complexity of a systemic approach to public sector innovation more manageable, it is necessary to learn more.

The next chapter seeks to do this by exploring the experience of innovation in the Public Service of Canada.

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Chapter 4. The lived experience of innovation

This chapter explores the "lived experience" of innovation in the Public Service of Canada. What does innovation mean, what does it look like, what does it involve, and what does it feel like in the context of the Public Service of Canada? The chapter outlines four major understandings of the current state of public sector innovation, and building on these, considers the implications for understanding what shapes and affects the performance of innovation from a systemic perspective.

It has been established that the Public Service of Canada has a history of both practising of innovation and looking at how to foster more innovation. What have the results of this been on the ground, however? What does the reality of trying to innovate or engaging with the innovation process look like in the Canadian civil service?

The operating environment of the Public Service

To appreciate innovation in the Canadian context, it is first advisable to appreciate the operating environment. Many of the elements of the Canadian context have been illustrated in Chapter 2 on the historical journey and the actors involved. However, it is also worth noting the size and scope of the public service, and what this means for efforts to embed engagement with innovation across its structures.

The current Clerk of the Public Service has summarised the operating environment as follows:

> *The Public Service is a complex entity. There are, at last count, more than 250 distinct organizations, everything from the massive Canada Revenue Agency, to small agencies with a dozen employees, and everything in between. We are a big institution, or family of institutions. We have over 600 distinct walk-in points of service in Canada, and over 170 missions abroad. Our payroll is over 50 billion dollars a year for over 400,000 people; 260,000 in core public service, and of course the RCMP and the military; with over 650 distinct classification bands. (Wernick, 2018)*

The Public Service of Canada is sizeable, but divided between many different entities geographically distributed across a large country. The scope and range of its responsibilities are considerable. It sits within a federal system, with provinces and territories, which means that its work intersects with that of multiple other governments.

Innovation in this context, therefore is unlikely to be straightforward.

The challenges of measuring and quantifying innovation

An examination of the lived reality of innovation in the Public Service warrants a methodological note. While it is possible to ask people about their work environment and innovation (see Table 4.1), there are inherent limitations to doing so. Do all the participants have the same understanding of what innovation is and what it looks like? Do people have the same understanding of what it means to be encouraged to be innovative? The responses to these questions may differ significantly between people with significant experience in innovation and those who have not really engaged with the subject.

This is not to critique such surveys; rather it is an attempt to highlight the inherent difficulties in comparing experiences unless there is a common language and understanding of innovation. As highlighted by the complexities of innovation in Chapter 3, this is unlikely to exist in many (if any) jurisdictions. Therefore, the following section is premised on the notion that in order to understand innovation in a particular context, it is necessary to engage with people about their experience in that context. Otherwise, the ambiguity that accompanies innovation may result in respondents talking about different things, resulting in misleading conclusions.

Box 4.1. Selected Public Service employee annual survey results for the Public Service

Question 3. I am encouraged to be innovative or to take initiative in my work.

Survey year	Strongly agree (%)	Somewhat agree (%)	Neither agree nor disagree (%)	Somewhat disagree (%)	Strongly disagree (%)	Total responses
2017	31	35	14	11	8	129123
2014	27	36	16	12	9	18176

Question 4. I believe I would be supported if I proposed a new idea, even though it might not work.

Survey year	Strongly agree (%)	Somewhat agree (%)	Neither agree nor disagree (%)	Somewhat disagree (%)	Strongly disagree (%)	Don't know (%)	Total responses
2017	22	36	16	14	10	1	129149

Source: TBS (2017)

Summary of the lived experience of innovation

There is considerable activity taking place across the Public Service of Canada, supported by many passionate people trying to achieve better outcomes for Canadians. However, the overall picture of the public sector innovation system shows that it is still relatively fragmented, in that most actors are experiencing the same system in different ways. There is a lack of consistency in how innovation is understood as a concept, a process and an outcome. While there has been a notable rise in the sophistication and co-ordination of activity, this has yet to broadly penetrate the core operations of government. There are encouraging examples (see Box 4.2) that demonstrate the benefits that can be achieved with innovation; however, these remain more of an exception than the rule.

Box 4.2. Behaviour change and the Carrot Rewards App: A story of Canadian innovation

How do you incentivise positive behaviour change in a way that is demonstrable and measurable?

This was a key issue facing the Public Health Agency of Canada (PHAC), a government agency that works to empower Canadians to improve their health. Healthy living (e.g. reducing smoking, increasing physical activity and healthy eating) has been a persistent area of concern for the Canadian Government, and one where there has been a strong desire for measurable outcomes and impact at the population level.

This focus on results has helped foster a desire in the agency to test innovative ideas and partnerships models that might lead to better results. Health has the advantage of being an area where results are very tangible, as impacts make a real and noticeable difference to the lives of citizens. Innovation in this sector can therefore be seen to make a real difference.

However, as part of a federal system, PHAC does not have access to all the levers needed to influence change. It needs to work with other levels of government in order to be effective. Any innovation will thus usually involve some degree of partnership and collaboration.

The story of the Carrot Rewards app started with a simple question: could the power of loyalty points be harnessed for a positive societal outcome? Building on evidence from work initiated in the energy efficiency space - Air Miles for Social Change, which attempted to shift consumers towards more eco-friendly consumer behaviour by rewarding them with loyalty points. Would a similar approach in the public health sector get people to exercise more?

The initial work began with a randomised control trial across four specific sites (YMCA locations) to see whether rewarding people with loyalty points (nine out of ten Canadians belong to a loyalty programme of some kind) would lead to changed (increased) exercise behaviours. This pilot involved experimenting with different scenarios and incentive structures to see what worked. Like many innovative ventures, the initial results were very interesting, and provided some significant data, but revealed some potential issues with the model and the delivery. The idea clearly had potential, but needed to be carefully thought through, particularly with regard to how to structure the funding appropriately. This sparked thinking about outcomes-based funding.

Building on this thinking, PHAC initiated an open solicitation for a pay-for-performance model, whereby the agency would pay for outcomes achieved (e.g. awareness raised/behaviour changed). This deviated from the standard approach of using advertising for public health campaigns. For this exercise, PHAC collaborated with the Province of British Columbia (BC), whose health agency was interested in exploring new approaches, including mobile applications, and evaluating how they might be better used to engage with people.

Through a multi-stage process, PHAC and BC cooperated with a project proponent to explore the potential issues and work through the bureaucratic steps involved with introducing a different payment approach. Some of main issues involved matters such as data sharing, structuring payments in a suitable fashion, and ensuring that learning is enabled throughout the process, including an ability to halt the project if it did not work, and the ability to expand if it did.

Other partners (not-for-profit organisations) were also brought in as the proposal developed. A key part of the process was ensuring a high level of trust among all the parties involved, as this would create the confidence needed to discuss possible issues and work through potential hurdles. It was also important to have a clear sense of the shared objectives and governance arrangements, to facilitate the introduction of any additional partners.

The provider, Carrot Insights, developed a platform that allowed for a pay-for-performance model, so that partners could provide a set amount of funding. It was developed in an iterative way to enable the partners to learn what worked and what might not, and to test which approaches might be most cost-effective. The platform was designed to provide public sector agencies with rich insights into the population demographics of the app users, allowing them to target or assess the impacts on different population groups.

Over time, further provinces and other federal public sector agencies (e.g. Financial Consumer Agency, NRCan and Stats Canada) also used the app. The initial scope of the partnership umbrella – healthy living – was expanded to health and wellness, to allow for other relevant public good uses. Communication by PHAC was important in diffusing knowledge of the innovative project to others, and encouraging their involvement. Given that each of the partners was attempting to do something different, it was valuable for them to be able to collectively troubleshoot the potential issues and hurdles. This helped with the navigation of any procedural, bureaucratic or risk management issues.

This innovative venture has provided some significant results, and offers a different model for agencies looking to obtain real-time information about awareness, knowledge and behaviour with regard to different policy areas across a variety of demographics.

Key elements for the success of the project included the following:

- The original partners were aware of the changing context (e.g. mobile applications) and were searching for ways to respond to it.
- There was a keen sense of the problem, and thus a clear understanding of what progress might look like (e.g. results and impact with regards to awareness and behaviour).
- The participants possessed knowledge and familiarity with the relevant ecosystem of potential partners.
- The vision was both specific (healthy living) and expandable (health and wellness). This allowed the project to evolve, so that others could take advantage of what had been achieved without compromising the values and needs.
- The project created a high-trust environment, which resulted in a willingness to share lessons and assist others in navigating through the inevitable issues that arise from introducing a very different approach.
- The ability to run small test projects before committing more fully minimised the costs associated with the necessary learning and discovery.
- Effective communication and outreach about the work helped diffuse the lessons and prompted others to consider if or how it might be used in their work.

Source: Interviews.

The review arrived at four major **understandings** concerning the lived experience:

1. While increased attention has been paid to innovation, the Public Service's relationship with innovation is still unsure and there is uncertainty about the nature of this relationship (e.g. the role and place of innovation).
2. Innovation is happening across the Public Service, however it is often a by-product of other processes or of determination on the part of particular individuals, rather than the quality or merit of an idea, or the underlying need for innovation.
3. While government is changing how it operates, there is a mismatch at present between what can be done inside and outside of government, risking a public service that becomes unsuited to its context.
4. The practice of innovation has developed significantly, however it often remains a marginal activity and is not viewed as part of core business or the ways that things are done.

Therefore, while the Public Service of Canada is pursuing innovation, current innovation practice is not likely to occur in a sufficiently consistent and reliable fashion to meet its self-described ambitions. Some of this is likely a by-product of the relatively recent co-ordinated focus on innovation. Over time, some of these issues may resolve themselves, given the efforts already underway. Other issues may be resolved simply by drawing attention to them, and allowing and empowering people and teams to come up with their own solutions. Alternatively, some aspects are likely to require additional thinking, investment and action.

The rest of this chapter explores each of the four understandings in detail, and the implications for appreciating innovation from a systemic perspective. These four understandings build on 28 underlying findings that were collected and tested over the review period. Each of the preliminary findings is presented with accompanying "clarifying sentiments", which are intended to represent something that anyone within the system could say to describe the system.

Understanding 1

While increased attention has been paid to innovation, the Public Service's relationship with innovation is still unsure and there is uncertainty about the nature of this relationship (e.g. the role and place of innovation).

Box 4.3. Key Points

There was a general sense that it was unclear how innovation fits, and uncertainty about what it really means in the context of the Public Service of Canada. There was a degree of confusion about:

- To extent to which the Public Service of Canada is innovative, reflecting significant diversity in how innovation is currently experienced across the Public Service.
- What innovation really means for the Public Service (Does it refer to continuous improvement? Experimentation? A culture? A duty? A buzzword? A new idea? Sustained change?), and how it fits with past, present and future priorities and agendas.
- What innovation is actually occurring across, and with, the Public Service.
- Who is responsible, for what, and what roles should be played.

Innovation is an inherently ambiguous concept so some confusion should be expected (and even welcomed). The current lack of clarity about innovation and how it fits, however, is potentially holding back innovation performance. If innovation as a process is not really understood, then it is not likely to be used proficiently in the pursuit of better outcomes or to create opportunities for learning. The lack of clarity may also be limiting engagement on the part of system actors ("why would I get involved if I don't understand it"), as well as creating friction for collaboration, as actors lack a sufficiently meaningful and shared understanding of what is needed/why things need to change.

Without clarity about the role of innovation and how it fits, it is unlikely that many actors will engage with the innovation process in a consistent or reliable fashion, with attention more likely to go to well understood, tangible and measurable agendas. In turn, this will limit the ability to develop innovation as a consistent and reliable capability that can be called upon when new approaches are needed to achieve different outcomes.

Box 4.4. Understanding 1: Exemplar quotes and relevant preliminary findings

Exemplar quotes from interviews

- "I think that bureaucracy struggles from some fundamental questions about why we do innovation, what is the purpose?"
- "How would we describe what the government wants to accomplish in public service innovation?"
- "It's interesting because I think we've been talking more about innovation during the last 18 months or so, more than we have, in some ways, in the last ten years."
- "… we have a history of it. Making it more deliberate, I think, is where you sort of need to head, so it's not so ad hoc."
- "… the innovation narrative is very exciting and people want to do these things … But we don't have a good enough sense of what our key objectives are. At the policy level."
- "I'm not sure that we should be innovative, or how innovative we should be."
- "If innovation is a big framework that has complex parameters in it and complex formulation of it, it's going to fail, I believe."
- "We're in the early days of the innovation story."

Preliminary finding 1: Whether the Public Service of Canada is innovative depends on who you ask. **Clarifying sentiment:** There are a lot of different views about how innovative the Canadian Public Service is.	**Preliminary finding 2:** There is not a widely shared conception of "innovation" **Clarifying sentiment:** I don't think everyone is talking about the same thing when we talk about innovation.
Preliminary finding 3: The focus on public sector innovation is relatively recent, and takes place within a rich history. **Clarifying sentiment:** I don't trust that the public service is really committed to innovation … yet.	**Preliminary finding 4:** There is "narrative confusion" about the innovation agenda and its intersection with other agendas. **Clarifying sentiment:** I don't think it is clear how innovation fits together with other agendas and priorities.
Preliminary finding 5: There is no overall picture of the innovation that is occurring. **Clarifying sentiment:** It can be difficult to know what's going on in other areas or agencies.	**Preliminary finding 6:** The role played by the Central Innovation Hub is not widely understood or recognised. **Clarifying sentiment:** I don't have a good idea of what the Central Innovation Hub does.
Preliminary finding 7: The roles played by other organisations with regards to innovation is not widely understood or recognised. **Clarifying sentiment:** The respective roles of different agencies in supporting or driving innovation is not clear.	**Preliminary finding 8:** There is no commonly understood view about what role individual public servants can or should play in the innovation process. **Clarifying sentiment:** I don't think everyone knows how they are expected to contribute to innovation.

Discussion of this understanding

Box 4.4 provides an overview of the key issues underpinning this understanding, building on the research, interviews and investigation conducted. The following discussion provides additional narrative about the issues in order to help provide sufficient context and background. The quotes provided are taken from interviews undertaken about innovation in the Public Service of Canada.

The starting point for the research undertaken for the review was to ask participants whether the Public Service of Canada was innovative. The varied answers helped demonstrate that there was no consensus on this topic, with opinions ranging from definitively not to decidedly yes. More often the responses highlighted the nuanced nature and experience of innovation.

> *"I would lean towards no, but they're trying. I think people are slowly starting to come out of the old ways of working … When you think innovation, Government of Canada isn't the first word that comes to mind but I think we're moving towards a place that could happen."*

> *"I would say I think there are definitely pockets of innovation and we should be proud of those, but on a whole, the way government operates, I think it's pretty poor. Which makes me sad."*

> *"I think on the whole, I think yes. I think, as I say, there's that potential. There's a lot of things that just get managed on a status quo kind of basis, and there's not always the motivation to always look for improvements."*

Such a range of views about whether or not the Public Service is innovative indicates either

- no agreement about what it is to be innovative, or
- significant diversity in the experience of innovation across the different parts of the public service.

However, further investigation throughout the review process suggested that both factors are at play.

For instance, there was also a considerable range of views around what innovation actually means. This is not surprising, given that innovation is an inherently ambiguous concept and what it means depends on its context. For instance, what is innovative in one agency may have been implemented long ago in another, what is truly innovative in the public service, may be seen as established practice in some parts of industry – or vice versa.

> *"To me, I think the beauty and the horror of the word is that it can, and in fact it probably should, mean something different to everybody depending on how they intend to use it."*

However, this variance in how innovation is understood or talked about does suggest, at least in part, that innovation is not a well-established common practice. If it was, more commonality and consistency could be expected in the way innovation is described, as would be seen with any other well-understood or commonly practised activities. It also implies that there is no strongly established sense of how innovation "fits" – what place it should have in relation to other concepts and concerns.

One area where innovation does not yet comfortably fit is the history, traditions and stories that the Public Service tells itself. While innovation has long occurred within the Public

Service of Canada, the historical context of how the service has engaged with innovation is multi-layered. It has, for instance, included times where innovation was generally not seen as valued or worth the risk.

> *"So in that context, the public service became very risk-averse, incredibly conscious of the amount of scrutiny that they were facing, and very afraid of the sort of big public embarrassment from trying something new or from even continuing in the same vein as they had, and having some sort of a public mistake."*

This is not surprising. Any country will experience changing priorities, contexts and demands, as well as shifting views regarding what is considered important or deemed appropriate or necessary. This means, though, that innovation – a practice which involves going outside the norm, and thereby making oneself vulnerable – may not be fully engaged with as an idea by many, unless they feel reassured that it is actually wanted, and that this desire is sincere. Even when that sincerity is there, it may take time for people to feel confident that it is genuine, to unlearn the lessons of the past, and to accept that this time is different.

> *"… you've had now here in Canada at the federal level at least four Clerks of the Privy Council successively who have maintained a focus on public service renewal or transformation in one form or another. That has kind of provided a platform for public sector innovation to kind of take shape …"*

Another way in which innovation does not fit easily within the context of the Public Service of Canada is that it is not always clear what the place of innovation is, among all of the other pressing priorities, concerns and needs. How does the innovation agenda relate to, complement or conflict with other priorities?

> *"And then probably we need more coherence on the different agendas for innovation. So you've got the Blueprint 2020, there's the Business Intelligence stuff, we have a conversation under way on a Digital Maturity Strategy, knowledge management …"*

This uncertainty is potentially troublesome given that innovation is inherently an ambiguous concept, being as it is about what has not been done before, whereas other agendas and priorities are likely to be more clearly articulated or better defined. The intersection and interplay of different agendas can become messy, and a focus on innovation (a fuzzy concept) is unlikely to compete with other strategic priorities if there is any narrative confusion about what is wanted. Innovation (unclear) is likely to come second to other (clearer) priorities.

This tension can be exacerbated as additional, related concepts are introduced, but before innovation has been fully understood. For those who are not yet across "innovation 101", perhaps having had little exposure or opportunity to really make sense of it in their context, the addition of other new terms may further contribute to a state of confusion, ambiguity and uncertainty.

> *"I think adding this experimental layer to the innovation lens allows us to pursue the proper methodologies, to really know what works. That's kind of the distinction and I think there's a lot of confusion in the system right now because we've introduced this experimental language, experimentation language, that I think people feel like we've changed the guideposts as they were barely getting used to one guidepost, which is the innovation language."*

This is likely an unavoidable tension, and a natural consequence of some actors becoming more sophisticated and, accordingly, using more nuanced language and a greater range of methods. Nonetheless, it can add to the challenge of reaching a coherent sense of innovation.

One approach that can help people come to grips with innovation and what it means to them is to provide them with a sense of the different ways in which innovation is already taking place, thereby enabling them to obtain an idea of what it looks like, what it does and what it achieves. The ambiguity surrounding innovation can sometimes be diminished by "showing the thing", by making it tangible and real. However, many people did not seem to have a clear sense of innovation processes that were already occurring, or familiarity with many of the innovations that had been introduced (successfully or otherwise). Difficulties with gaining an overall picture of current innovation can make it harder to put innovation into context, or obtain a clear sense of how it fits within an organisation, and identify its relationship with other agendas, priorities and concerns.

> *"So you've got again, 250,000 people. I think there's actually more than 300 organizations in the government of Canada. So there's a lot of, 'Well, you've got this wonderful idea. Wait over here.' Somebody else, 'Oh, we've got this wonderful idea' and so you end up with and people trying to do stuff but not being aware that it's either been tried and didn't work or it worked but you need this or just all the context around that."*

Identifying how innovation fits may also be difficult if the relevant roles and responsibilities are not clear. If there are clear functions, clear workflows, and clear points of contact around innovation, it will generally be easier for people to form a mental model of the innovation system, and identify how they relate to it and what it means for them (if anything). At present, however, there appears to be a lack of clarity about the role of each agency with regard to innovation and how they fit with each other. This was the case for the Impact and Innovation Unit, a team perceived as the centre of the system, and for the functions or parts played by many other organisations or innovation teams.

> *"I feel like they've [the Impact and Innovation Unit] been doing some work with different departments on some of their programs, but it still feels very disconnected. I'm not sure, it's not entirely clear to me what the objectives are. Again, it's totally possible it's just a function of where I sit."*

> *"I think they're [the Impact and Innovation Unit] good in that they exist and that they're passionate and they have these ideas and they've had uptake on the ideas. So I like the challenge platform kind of stuff, and I think that was good and that wasn't going to come from anywhere else. And kudos for coming up with that and getting it through."*

This unsureness reflects a broader uncertainty about the roles that individual public servants should or do play when it comes to public sector innovation. This is likely a natural consequence of the combination of the factors mentioned above – uncertainty about the current state of innovation in the public service, what the concept means, how it fits with the wider context of the public service, and the exact formal responsibilities of the different agencies – making it hard for individuals to get a clear sense of their role in the innovation system.

> *"I think we need to accept that not everyone is an innovator."*

> *"So, I would say that highly operational organization, it's unrealistic to ask them to really focus too much on innovation because, you know what? They're fighting fires all day long."*

> *"… it's about getting everyone to understand their roles in that ecosystem. So making innovation everybody's business."*

In summary, there is still significant ambiguity around innovation at the moment in the Public Service of Canada, and a lack of lived clarity about what the relationship with innovation should be for many public servants.

> *"I honestly think, I think I would wave a magic wand and say please allow people to see themselves as part of a system. Because I think, we only can control ourselves and yet we get overwhelmed by the system needs to change and something outside of me needs to change, and we don't really think, turn that mirror back on ourselves to say, well what is the thing that I can do to influence this situation I am in right now."*

Implications of this understanding

Primary observation

Any public sector will have a range of priorities concerning what should be done or what should change at any one time. If, or where, there is competition or conflict between those priorities, it is likely that those that are best understood, promise clear results and that fit with the dominant narrative(s) and expectations will be prioritised, at the cost of those unable to meet these conditions. Innovation – by definition a process of doing what has not been done before and challenging the status quo – is ambiguous, offers inherently uncertain benefits, and often runs counter to aspects of the dominant narrative. All other things being equal, this tension means that innovation is often likely to be considered a secondary priority.

Primary effect

Innovation cannot be consistent or reliable in the absence of a clear understanding about why it needs to occur, or a clear signal about why it is important. Individuals and organisations may have their own reasons to innovate, but these reasons are unlikely to converge in the absence of a broader story about the why, what and who of innovation. Without this, innovation will likely be a fragmented activity, in tension with, and thus subordinate to, other priorities.

If there is no clear understanding, the resulting confusion regarding what should be done will result in one of the following:

- **Inaction** – why should anything be done if it is unclear why something should be done
- **Inappropriate action** – the confusion leads to a misunderstanding about what is actually needed or is appropriate
- **Appropriate action for the wrong reasons** – the action taken is serendipitous/accidental and thus not reliable or scalable.

Reasoning

In formal systems, what is not understood or clear will generally come second to what is. For instance:

- If innovation is not understood, it is likely that it will not be prioritised.
- If innovation is understood but not seen as relevant (e.g. the status quo is seen as acceptable and/or there is no appreciation of the risks involved with inaction), it will be sidelined.
- If innovation is understood but does not fit with the context or lived experience, it will not be seen as meaningful, and/or will be resisted, seen as confusing, or judged as rhetoric/insincere language;
- If innovation does not fit with other more clearly articulated or understood agendas, it will come second to them.
- If innovation is not seen as part of someone's role, it will generally not be pursued.
- If innovation is not witnessed or seen in practice, it will be thought of as an abstract or intangible concept rather than something relevant or needed.

As noted previously, innovation is an inherently challenging activity. The difficulties involved can be exacerbated if organisations and individuals do not have clearly established responsibilities, roles or capabilities in regard to innovation. If there are no set responsibilities, it can be hard to know whom to contact for help, advice or support. If those with the responsibilities lack the requisite capabilities, they can become a bottleneck or worse. Informal networks thus become more important. However such networks can potentially add to rather than detract from the level of confusion, as each will likely have differing narratives to contribute, as opposed to a more consistent message.

None of this is to say that innovation will never happen under these circumstances; rather, it is more likely to remain ad hoc or sporadic and driven by individual and organisational concerns and needs rather than collective or overarching aims.

Understanding 2

Innovation is happening across the Public Service, however it is often a by-product of other processes or of determination on the part of particular individuals, rather than the quality or merit of an idea, or the underlying need for innovation.

Box 4.5. Key points

While it is clear that innovation is taking place in the Public Service of Canada, the following factors are acting as filters for the innovation process:

- The implementation, interpretation or perceptions of regulations, rules or practices (whether an idea is allowed to be considered or given credence)
- Hierarchies and getting ideas to the relevant decision makers for consideration (whether an idea actually gets considered)
- Risk aversion (the lens through which an idea is considered)
- The need for people to go "above and beyond" in order to ensure new ideas receive consideration (the range of ideas that are possible for consideration).

While these factors are not necessarily unusual or unexpected, and will likely persist to some extent, they appear to be reducing unnecessarily the possibility for innovation. More often than not, the innovation process appears at present to be effectively governed by factors less to do with innovation (the merit, value or potential of an idea or proposal) and more to do with the ability of those behind the idea or proposal to overcome the relevant hurdles, filters or circumstances.

If innovation is primarily occurring as a by-product of other processes, then it is unlikely to be generated consistently or reliably, and is therefore not a dependable response to emergent or longstanding issues.

Box 4.6. Understanding 2: Exemplar quotes and relevant preliminary findings

Exemplar quotes from interviews

- "There are a lot more checks and balances for doing anything, which slows down progress, which could delay the potential for innovation."
- "For the majority of people, it's not an instinctive mindset yet. If anything, they applaud themselves on doing what they're currently doing better. They're rewarded for compliance, and they're rewarded for efficiency gains. Their sense of self and their worth draws from the knowledge of what the processes and practices are, right."
- "The only reason why we've gotten there is because we have top-level cover. Otherwise the system would have crushed us… It was top-level cover. And even there, sometimes, it's almost impossible."
- "If there's no incentive and there is a possible downside of attempting innovation, you won't do it. People to tend to be/are willing to change the status quo if they don't have to change."
- "Departing from convention on how we work … which parts of which organisations and legs and arms are doing, we can be quite consumed with that at times, to sometimes I think very little net benefit or value to the taxpayer on a

day to day basis in terms of accruing value. I think we need to let go of our current understanding of what the boundaries are and what the rules are."

Preliminary finding 9: There are many barriers and obstacles that confront the innovation process. **Clarifying sentiment:** I feel that there are a lot more hurdles with innovation than there should be.	**Preliminary finding 10:** One main barrier or obstacle is the hierarchy; particularly the "Clay Layer"/middle management. **Clarifying sentiment:** Middle management (the clay layer) is often a common problem with innovation.
Preliminary finding 11: The barriers to innovation are not absolute **Clarifying sentiment:** It can be hard to innovate, but innovation is happening despite the barriers that exist.	**Preliminary finding 12:** Innovation can feel like a fight, and one where winning does not feel like winning **Clarifying sentiment:** I see people who are trying to do new things have to go to great effort.
Preliminary finding 13: Risk Aversion is an endemic issue. **Clarifying sentiment:** Risk aversion is a core characteristic of the Canadian Public Service.	**Preliminary finding 14:** The notion of risk is beginning to be reframed and renegotiated, but it's not there yet. **Clarifying sentiment:** I think the attitude towards risk is starting to change, but there's a long way to go.

Discussion of this understanding

Box 4.6 provides an overview of the key issues underpinning this understanding, building on the research, interviews and investigation conducted. The following discussion provides additional narrative about the issues in order to help provide sufficient context and background. The quotes provided are taken from interviews undertaken about innovation in the Public Service of Canada.

The research undertaken for this review reveals that while innovation is definitely taking place within the Public Service of Canada, many people felt that it was typically difficult or demanding to achieve.

Contributing to this state of affairs are very real hurdles that face those trying to do new things. These hurdles include formal rules and requirements.

> *"What has hindered innovation or made it more difficult, is the rules and regulations which apply to all government services, especially things like procurement."*

These rules and regulations can act, deliberately or unintentionally, as a limiting factor to the range of options that are open to consideration.

> *"We limit ourselves by the legislation that we've created. We limit ourselves by the policies that we've made and we believe that there's valid and solid reasons for those policies we've created. But, we do not push that further and say, 'Well, wait a minute. Maybe there's a different way.'"*

In many cases, however, the limits or hurdles may not be explicit or codified rules. Rather, it might be the interpretation of the rules, rather than the rules themselves, that constitute an obstacle to innovation – an issue shared by other countries (see OECD, 2017a, p. 32).

In some cases, the rules or issues behind the perceived barriers may not even exist, but still be taken as a fact. Alternatively, it may simply be conventional wisdom that constrains the range of the possible.

> *"But there's a bit of a disconnect into what is possible and then what people sort of think is possible … Sometimes the wisdom of the system is wrong."*

Another concern often raised during the research was that middle management acted as a filter or dampener for innovation.

> *"There's a push from the top, there's a push from the bottom, but that middle layer, which is sometimes called negatively the clay layer or whatever, it's very difficult to get anything to happen because they're the managers and they kind of control the employees, there's a bit of stagnation I think that happens."*

However, this might be a case of correlation rather than causation. In any organisation, middle management will act as a filter, attempting to translate strategic intent from the top levels into practical action at the lower levels, and trying to synthesise and sift information from staff into meaningful intelligence that can be provided to leadership. This could reflect a natural structural issue rather than something particular to the quality or type of people in middle management. This would seem to be supported by the fact that this same issue (including similar language around "managerial clay") occurs in other countries (see Australian Government, 2010, p. 42).

> *"I think a lot of time people blame middle management for the lack of change, but I feel like that's just a cheap shot, that I don't really know that that's true."*

Risk aversion introduces another set of issues. In addition to the question of whether an innovation can be considered (Is it legal and could it potentially fit within existing frameworks and rules?), and whether it will be considered (Will it receive the attention of the appropriate decision makers?), the next potential concern is how it will be perceived as and when it is considered. The research findings emphasised risk aversion as a major issue in the Public Service of Canada, endemic to the operating environment.

> *"My sense is that there's a lot of perceived risks; I'm sure there are some real risks as well, but there are a lot of perceived risks that aren't necessarily as serious as I think people perceive them. There are opportunities that are just being missed because people are afraid to take them."*

While the conversation around risk was seen as beginning to change, it was still identified as an issue that could be very difficult to negotiate with or manage.

> *"That risk aversion is scary. It's scary because you can have the greatest ideas and the greatest plans and you can say, 'You know, this is going to work,' but if people don't want to take that risk, even though it's a calculated risk, this is not willy-nilly jumping out of an airplane with no parachute. They just will not, they will completely kibosh a project, an idea, whatever it is. I don't know how you get past that."*

In combination, these different aspects can make it very difficult to ensure an idea actually receives consideration. Given that a fundamental factor affecting the potential impact of innovation is the breadth and range of possibilities feeding into the process (OECD, 2017b), these filters can be of potential concern. If possibilities are being *unnecessarily* filtered for reasons other than the merit or value of the idea, then the potential for innovation will be reduced.

Another potential concern is the extent to which people feel inclined to put forward their ideas or are prepared to fight for them. While the experience of innovation was by no means uniform, there was often an element of struggle involved, with people having to invest significant effort in the process.

> *"It's a battle day to day fighting upstream and in my experience, the best innovators are not only great innovators, they're very strong people being able to swim upstream day in and day out. It's not easy."*

If the innovation process requires significant personal and emotional investment, it can also act as an unintentional filter. If innovation is seen to be something that is difficult and demanding, it will limit those who are prepared to become involved, or it will filter out those who have participated as they become worn out by the process.

> *"You can only fight so many times before you become quite tired."*

While some people are prepared to bear these costs (or may not even recognise them as costs), there appears to be a significant degree of arbitrariness in relation to which ideas receive consideration.

> *"I find there's a lot of excitement at the top level and there's a lot of excitement at the bottom level. The top level has the authority but doesn't have the time and then the bottom level has the time but doesn't have the authority to put into a project. It's really up to that middle section to make or break a project. It's luck of the draw of what kind of manager or director you get because they can either pass along the information from top down or bottom up, but if they're not willing to then things aren't going to happen."*

While innovation is always an uncertain process, this can be exacerbated if the range of possibilities that gets to be considered is also filtered by factors other than the merit of the idea, the potential of the proposal and the effort those involved contribute.

In summary, the innovation process in the context of the Public Service of Canada appears currently to be governed by a range of factors other than those most relevant to innovation.

> *"You can try innovative projects that end up getting you weighed down and mired in dealing with either criticisms or problems that arise from having tried to do things differently, fair or unfair. You hear conversations where people ask the question, 'Why don't we do things differently?' This is why we don't do things differently."*

Implications of this understanding

Primary observation

There is fundamentally an inherent tension between existing sets of processes and ways of working, and innovation. The former is about repeating (and possibly improving) established practices and therefore focuses attention on a reduced range of possibilities. The latter is about doing things in new and different ways, and therefore involves considering a wider or different range of options. All other things being equal, this tension makes innovation something that is difficult to do.

Primary effect

Innovation will not happen consistently or reliably if the following circumstances are present:

- The process is reliant on individuals or organisations trying to challenge and overcome default settings and risk aversion.
- Success or failure (perceived and real) feels arbitrary and is determined more by the circumstances of participants (e.g. who is their manager, who they know and what else is going on at the same time), than by the effort they exert, the merit of the idea or the intent they were trying to achieve.

Reasoning

Innovation involves novelty and attempting something new and possibly unexpected. This requires going up against the status quo and the default settings. By trying to achieve something different, it is trying to change what is.

Public sector organisations and systems are composed of structured sets of interactions. There are processes, precedents, protocols, traditions and expected ways of doing things. For example, if someone wants to access external expertise or capabilities, there is a range of options from which they can choose, such as hiring, buying or partnering. If someone wants to attempt something new, the first step will often be to consider whether it has been done before and then proceed from there.

Of course, innovations can and do happen, and no organisation or system is static and unchanging. However these changes are often in response to one of the following:

- External drivers or shocks
  - A crisis – an event or development that makes the status quo untenable and therefore requires a new or modified response
  - A political commitment – similar to a crisis, a political commitment can make the status quo untenable for the public sector, and therefore drive new responses or activity
  - External pressure – this takes the form of consensus and/or significant distress from external stakeholders that things need to change and is either consistent and/or high profile/in intensity.
- Internal pressures
  - Efficiency driven change – this results from becoming better at/optimising existing activity, such as business process improvement
  - Specific leadership or strategic/operational priorities that necessitate a change to how things are done
  - Individuals pursuing particular agendas.

In order for innovation to take place in circumstances other than these (i.e. occurring in an adaptive or proactive, rather than reactive, fashion), some other mechanism needs to be present that allows for consideration of different approaches, with regard to their merit as innovative proposals.

Understanding 3

While government is changing how it operates, there is a mismatch at present between what can be done inside and outside of government, risking a public service that becomes unsuited to its context.

Box 4.7. Key points

Innovation often appears to happen in spite of the underlying capabilities and enabling systems within the Public Service, rather than being aided or accelerated by them. While innovation *is* taking place, and there is activity to better calibrate for innovation, there is a significant gap between what is currently possible within government and what is possible outside of government. As technological change continues, this gap will potentially grow.

The exact cause of this mismatch is not clear; however, it could be attributed to:

- Insufficient ability to prepare for emerging issues and technologies
- The implications of emerging issues and technologies not fitting with existing activity/focus areas or the associated mind-sets and models of operation
- Feedback from the operating environment not being sufficiently resonant to shift or alter existing investment and commitment
- Existing capabilities and enabling systems being sufficient in most cases, and able to be stretched if needed where not, thereby masking the need for the development of new capabilities.

There is a risk, therefore, that the Public Service will not be able to apply innovation as and when needed, and would first need to invest additional resources, learning and effort before being able to get the innovative responses it requires.

Box 4.8. Understanding 3: Exemplar quotes and relevant preliminary findings

Exemplar quotes from interviews

- "Our biggest weakness is systems. It's our infrastructure, essentially. Old infrastructures. Whether it's IT, or our human resources management model. They're old, old models, and old systems."
- "The system adopts and changes, but it takes time."
- "The technology on the market is not necessarily what we're using."
- "I think the Canadian Public Service knows that it needs to be innovative. I'm not sure that it knows how to do that yet. I just think about my folks, in terms of, I've given them license to do things differently and I know, I can see a lot of hesitation."
- "And so there's this mismatch, I think, between what we expect people to do with the abilities and experience that they have."
- "And I'm not sure how government will survive when outside of the government we're moving so much faster."

Preliminary finding 15: The underlying systems of government are not calibrated for innovation. **Clarifying sentiment:** It feels like much of the basic machinery of government is in tension with innovation.	**Preliminary finding 16:** The systems of government have the ability to change, but not quickly. **Clarifying sentiment:** The Public Service of Canada is like a large ship – it takes time to turn.
Preliminary finding 17: Government is confronted by significant rates of technological change. **Clarifying sentiment:** I don't think we really understand the technology that is now available to us.	**Preliminary finding 18:** There is a focus on impact, but not necessarily a strong connection to those being impacted. **Clarifying sentiment:** I think we care strongly about impact but we don't often get to see that impact.
Preliminary finding 19: There are a number of "limiting factors" that are affecting the capability and capacity to innovate. **Clarifying sentiment:** I don't think we have the critical mass needed for widespread innovation.	**Preliminary finding 20:** The commitment necessary to match the expectations of innovation may not be there yet. **Clarifying sentiment:** I don't know that we're really doing what we need to if we're going to make the Public Service of Canada really innovative.

Discussion of this understanding

Box 4.8 provides an overview of the key issues underpinning this understanding, building on the research, interviews and investigation conducted. The following discussion provides additional narrative about the issues in order to help provide sufficient context and background. The quotes provided are taken from interviews undertaken about innovation in the Public Service of Canada.

The research identified a sentiment that while innovation could and did take place in government, the institution was not designed or calibrated for innovation.

> *"Our systems are very, I don't know what the right word is, but our systems don't seem to be well designed, our structures don't seem to be well designed to support change, it seems."*

> *"Down to the actual makeup of government, it's not set up for innovation."*

This dissonance in the underlying systems is perhaps related more to the implementation of innovation, rather than efforts to identify whether innovation is needed or to propose innovative ideas. The identification of a problem does not ensure that a solution will be implemented.

> *"The Public Service of Canada has a lot of very smart people […] And they very often identify what is wrong and even suggest exactly what needs to be done to fix it. The problems seem to be in actually implementing the fix."*

If this is the case, it suggests that an important limiting factor for innovation is the ability to undertake innovation, rather than the ability to conceive of innovative possibilities. Ideas and the case for innovation might be present, but the ability to realise them may not be available. For instance, regulation does not appear to lend itself well to a more innovative and agile approach.

> *"Because there is a full understanding that with the speed that we go to regulate, it takes two to five years to put a regulation in place, and there are good reasons why we have to want to go slowly. It has a huge impact on the people and the economy. But also the economy and the sectors are going so far ahead"*

The gap between what is known to be necessary and the ability to carry it out can sometimes be too great to overcome.

Another potential cause of this underlying dissonance is that the government does not prepare sufficiently to face potential issues, and is thus unprepared when it comes to acting on them. Innovation might fit better with government systems if the groundwork was laid in preparation.

> *"If I had to characterize the policy making process in Canada, as it's described by officials and by scholars, is that it's short-term, focused on firefighting, heavily driven by media and managing media responses to potential government failures. As a result, we don't do long-term planning, we're not sufficiently preparing for emerging issues, and that there's often a lack of data and evidence to informed decision making."*

All this suggests that there are some underlying tensions between how government works and its ability to carry out, implement and conduct innovation.

This is not to say that government systems are not adjusting or responding to this misalignment. Many developments currently underway are aiming or helping to address this challenge. Action is occurring at the system, agency and individual levels. The underlying systems do have the ability to change, and that ability is being put to use.

> *"but there's still a lot of change movements within departments and across departments, so the system is constantly adjusting itself."*

However, there are questions about whether this adjustment is sufficient to meet the magnitude of the changes potentially required of government. There is an underlying concern that government is failing to get to grips with the technological shifts in society and the associated changes in how things can and therefore should work.

> *"… we're thinking of tomorrow with the technology we have today. We're not thinking of tomorrow with the technology of tomorrow. So we always seem to be playing catch up because everything is so expensive because you're government"*

> *"… the pace of change in government does not align with the pace of change going on out there and so even as I talk about these things and think about the new stuff we're trying, the world is evolving really, really rapidly in ways that people cannot predict and whether it's AI or robotics or the big data on the AI and the algorithms. The stuff that we're dealing with here, even the way we approach disruption and transformation even at the most cutting edge, at the most accelerated ways, I think there is a general concern that even our most ambitious thinkers are far behind what's the pace of change that is going on outside of government."*

> *"Things that are changing quickly, and things that have emerged over the last decade or two, we haven't been able to respond. We haven't been able to respond in incremental ways. And we haven't been able to respond in transformational ways."*

Why might this potential disparity between what is happening outside of government and what is capable of being done within government exist? A possible explanation lies in

whether or how that disparity is actually recognised, and whether that recognition informs the investments, infrastructure and capabilities of government.

> *"I think the biggest challenge, to my mind, in terms of an overarching, more innovative approach in the government of Canada is having the tools and capacity to actually measure how effective or efficient our programs or policies are."*

A growing focus on outcomes and impacts was observed. This may provide a stronger sense of what is working (and what is not), and thus help identify relevant gaps in capability and any other key needs.

> *"Much more focus on outcomes as opposed to compliance to process. That has been, for the public service, that shift of perspective is really, really important. It then liberates you to think about, 'Well, there are other ways. This is what we're trying to achieve."*

However, there still appear to be weaknesses in the feedback loops regarding whether or how innovation is making a difference in the Public Service, and therefore whether the underlying systems and capabilities are sufficient to cope with the challenges involved. Without a strong awareness of and connection to the outside environment, the Public Service's ability to know whether its processes are really working and whether change is needed will be limited.

> *"I think it's starting that relationship with Canadians and citizens, where we don't know where to start because we haven't done it."*

> *"But I think most people are willing to feed into those processes. Sometimes they feel over-consulted, and I think that feeling of over-consultation would be because they see a lack of action following the past consultations."*

These weaknesses may be holding back the system from aligning effectively with outside rates of change, and building the capabilities needed to innovate effectively and sufficiently close this gap.

Other concerns regarding the capability of the Public Service to innovate relate to the availability (or not) of the necessary skills, capabilities and capacities to undertake widespread innovation.

> *"There are a lot of enthusiastic public servants who've learned about these new tools. Might have been exposed to them through training or through Twitter. On the off, off chance in their work outside of government. But we have a pretty short bench. We don't have a lot of people that have experienced the use of these new tools. Or implementing or designing."*

Even where people may be keen to try new things and have approval and opportunities to innovate, they may not necessarily have the elements they need to ensure success. It is one thing to want to innovate; it is another to be able to develop and apply new ideas in fields outside current areas of activity. Any such disconnect poses a potential risk to support for innovation. If innovative projects are proposed and agreed to but are not successful or are seen to falter, it may harm future backing for innovative initiatives ("maybe innovation isn't the way to go"). Even worse, it may send a signal that innovation should not be attempted ("it might fail!"), instead of the message that innovation might be even more necessary ("government is not keeping up!").

> *"There are capacity challenges within the system to use new tools, processes, approaches, how we do data analysis or random control trials or the data analytics*

or integrate really rigorous program evaluation into decision making so that there're huge capacity issues. There are lots of political risks if some of these things go off the rails or don't do well whether they get shut down, we need demonstrable successes early before the inevitable mistakes occur."

There is also a potential mismatch between the signals being sent and the commitments being made. While there is an increasingly stronger signal that innovation is needed and wanted, this is not yet fully reflected in the way government is working and investing, and thus in its actual capability to undertake innovation.

"So I think where the government of Canada Public Service has been encouraged to be innovative, it's clear from the Prime Minister, it's clear from the Clerk. The tools that we have at our disposal don't necessarily currently allow for that, in terms of reporting, in terms of internal processes, in terms of constraints from the Treasury Board, in particular. Now, we're working with them on that, but I wouldn't say we've completely found a happy place."

"So, no. Neither are we equipping our staff with the new tools and technologies that they need, nor do we fully yet, as a public service. I think we have a sense of what's coming, but I don't know that we've fully anticipated all the ways in which we, as a public service, will need to design policies for our citizens, that will enable Canada to be prepared for the fourth industrial revolution.

But we're not ignorant to it, either. And I think probably, compared to other countries, we're not in a terrible space in terms of knowledge and awareness. Execution is a different story."

In summary, there is a mismatch between the underlying capabilities and enabling systems within government, and those outside of it. The current capability to perform innovation does not match the capabilities that might be needed to realise the scope of opportunities available for innovation. Thus, there is a risk that government is not currently suited to the environment in which it is operating, or able to take advantage of the innovative options potentially available to it. This mismatch is conceivably growing as the technology and capabilities available outside of government continue to develop rapidly.

Implications of this understanding

Primary observation

Innovation often involves doing what has not been done before, whether it is new to world or new to context. The capabilities required for any individual innovation are thus going to be somewhat speculative.

Innovation often involves doing what has not been done before, whether this action is entirely new or just new to the context in question. The capabilities required for any individual innovation are thus going to be somewhat speculative.

However, the capabilities valued in any system are going to be those that are known or prioritised. Technology, infrastructure and operating models will all tend to reflect current operations, or business-as-usual, which delivers known results. The activities of any system will focus on the purpose for which it was designed. Without feedback from its operating environment that existing capabilities are insufficient or are under-performing, existing system strengths are likely to remain entrenched, preventing investment or commitment in

more innovative (and uncertain) options. All other things being equal, a system will be suitable for what it does, rather than what it could potentially do, making innovation harder.

Primary effect

Innovation will not happen consistently or reliably if the following circumstances are present:

- The underlying capabilities, technologies, infrastructure, and operating models are not suited to what is required/or what might soon be needed.
- Investment and commitment are primarily geared towards existing activities and operating models, with insufficient development of new options.

Reasoning

Any system such as the public sector, or any connected series of parts that work towards a common purpose, will develop and invest in capabilities to undertake what is encouraged, what is reinforced by its interactions with its environment (e.g. an education system will invest in schools, teaching standards, curricula and testing). If feedback consistently reaffirms that things are working, then the system is unlikely to change. If feedback emphasises that things are not working, then the system is more likely to be open to new ways of working, to encouraging investment in new or different capabilities, and to being open to new partnerships or collaboration that might provide the needed access to relevant capabilities.

The longer a system is not suited to its context, the greater the likelihood that there will be significant divergence between what is available and what is needed in terms of the capabilities to undertake the relevant innovation effectively. Individual innovation initiatives may still be possible, but the ability to tap into a broader wave of innovation or disruptive technology will be hampered. For example, just because a project uses artificial intelligence/machine learning, it does not necessarily entail a wider capability to consider and explore the potential of AI more broadly, which could then be drawn on to inform projects in different areas.

In short, innovation will still occur within a system even when the system is not calibrated for that purpose or lacks some of the necessary capabilities. However, innovation under those circumstances will likely exist in pockets around people and organisations with the necessary drive to obtain access to or stretch existing capabilities. Where this happens, innovation will be dependent upon capabilities likely not found in other parts of the system. These other parts of the system will also be unlikely to share the same motivation or need to innovate, which will prevent the impact of the innovation from spreading.

Understanding 4

The practice of innovation has developed significantly, however it often remains a marginal activity and is not viewed as part of core business or the ways that things are done.

Box 4.9. Key points

While innovation is taking place in the Public Service, it is not yet widely integrated as a practice or as an expected part of how things work or how things are done. It generally occurs in pockets that, while beneficial, have not yet led to widespread change or transformation. This both generates and is caused by a situation where:

- default settings favour business-as-usual activity
- being an "innovator" is seen as a separate identity, rather than an attribute that anyone can manifest
- leaders may not know how to best enable innovation and may not be adequately empowered or informed to contribute constructively
- behaviours that potentially compete with those better suited to innovation are reinforced
- people may find it difficult to articulate and negotiate the balance between "innovation is welcomed and sought" and "not all innovation is equal".

As innovation happens mostly in pockets, this limits the potential impact of any individual innovation. Innovation as a practice is seen as limited in its impact and is therefore naturally viewed as something marginal. This marginalisation means that innovation happens mostly in pockets… and the cycle repeats itself. In such a setting, innovation as both a process and as a practice will continue to happen by exception, rather than as a familiar, trusted and practiced activity that can be drawn on to achieve better outcomes.

Box 4.10. Understanding 4: Exemplar quotes and relevant preliminary findings

Exemplar quotes from interviews

- "I think there's pockets of innovation"
- "I think it's appreciated, but again, when decisions need to be made in terms of, 'Do we continue to work on this? Or do we do our core business?' We got to do our core business."
- "Bringing new ways of working in is easy. Having them implemented and used by the employees is the hard part."
- "It's like, no, things have context and place and power relations. They're not as simple as you parachute the innovator in and they'll fix everything."
- "I still think that the discussion and the discourse on innovation is in a bubble, so I don't think it's as pervasive as it needs to be. I don't think it's as well understood as it needs to be."
- "So I think innovation by example is a good approach. Stop talking about it and just show us how you're doing it. And again, I think it's if we can do a better job or just a job at showing that innovation is just a way of being, it's not something that scientists do in a corner, but anyone can innovate. Like, show us."
- "So I think we're getting there, but it takes time ... to reinforce it, as this is a normal part, this has always been a normal part of our culture, but that now, we

have new ways of doing it that we didn't have before. And so how do we help people with that, as well?"

Preliminary finding 21: There are a lot of pockets of innovation. **Clarifying sentiment:** It seems like innovation is only happening in small pockets.	**Preliminary finding 22:** Innovation is often something that is done "side-of-desk". **Clarifying sentiment:** Innovation is not very well integrated with our day-to-day work.
Preliminary finding 23: The innovation community is not well integrated into the broader Public Service of Canada. **Clarifying sentiment:** I think there's a bit of an innovation "bubble" which can be a bit cliquey.	**Preliminary finding 24:** Senior leadership's relationship with innovation is patchy. **Clarifying sentiment:** I think leadership is inconsistent when it comes to innovation.
Preliminary finding 25: The behaviours appropriate and necessary for innovation to thrive are still being developed. **Clarifying sentiment:** I don't think that we, as individuals, always know how to act in a way that supports innovation	**Preliminary finding 26:** The appropriate balance between innovation and other needs is not clear. **Clarifying sentiment:** I don't think there's a clear notion of how much innovation would be too little or too much.
Preliminary finding 27: There's energy and optimism about the journey ahead. **Clarifying sentiment:** I think we're heading in the right direction, even if we don't have all of the answers.	**Preliminary finding 28:** There is a considerable diversity of views about what needs to happen next. **Clarifying sentiment:** There's no consensus on what should be done to improve innovation in the Public Service of Canada.

Discussion of this understanding

Box 4.10 provides an overview of the key issues underpinning this understanding, building on the research, interviews and investigation conducted. The following discussion provides additional narrative about the issues in order to help provide sufficient context and background. The quotes provided are taken from interviews undertaken about innovation in the Public Service of Canada.

The research undertaken for this review demonstrated that much of the innovation seen occurring in the Public Service of Canada happens in "pockets", or small, discrete, unconnected areas of activity.

> *"I can think of all kinds of great examples of innovative things that are happening in pockets."*

These individual pockets – these specific areas of activity and projects – can be important in their own right, and may well make a difference with regard to their specific context and the specific issues they are dealing with. However, these pockets remain, generally, just pockets.

> *"We have good examples of trying new things, but we don't have good examples of these new things yielding an impact that's either incremental or transformational."*

> *"I think there are pockets of innovation in the Canadian Public Service that have been working very hard for the past number of years to try and drive innovation deeper into it. I think there are structural changes, partially as results of these pockets and pockets are always people. It's not like this organization that's innovative. It's the people that are moving around."*

The issue of innovation activity remaining in pockets rather than spreading or having further influence is likely associated with its lack of integration into day-to-day work. Innovation might be demanded or requested, but that does not mean it is viewed as part of doing the job. Rather, it is often seen as something to be done in addition to the job.

> *"What I can say is that a lot of times being innovative means doing something that's not part of your daily job, not part of your core duties, and we're constantly being asked to do more with less, but when push comes to shove, because there tends to be an aversion to risk, if there's a choice between doing your business as usual versus doing something new and risky, it tends to go back to do what you're supposed to be doing."*

Even in cases where innovation is framed as an express objective of the job, the default settings and expectations can be stronger, and may actually enforce a focus on continuing as before.

> *"I would say that a lot of times, while there might be interest in finding ways to do things differently, there's also a lot of pressure to keep doing things the way we've always done them or for change to happen on the margins."*

For some, innovation remains something disconnected to their everyday work, to their sense of normality. It is not integrated into what they do or who they are.

> *"But, innovation falls to the margins because it's not a core function, and there's a lot of confusion, and confusion is even a strong word, it's like complete... what's a word that's like, it's non... no one even knows it exists. You know, it's just like completely on the margins of anybody's core business."*

Similarly, those undertaking innovation are also often perceived as not really being integrated with the broader Public Service of Canada. A number of factors contribute to this difference or separation, including structural ones. Sometimes innovation is perceived as a process only undertaken by certain people.

> *"I think you need to incorporate innovation in the day to day. I think often because we want to give it a focus or give it an importance, we carve it off as a separate role, but if you don't engage who's actually delivering the service or who's actually doing the work, you can't sustain the change or you can't build that culture of change."*

Sometimes, those who "do" innovation may unintentionally reinforce this gap between those seen to be involved with innovation and those who are not. Innovation – the act of doing things differently – can sometimes act to emphasise and exacerbate difference rather than contribute to cohesion and a shared mission.

> *"I think there's a policy innovation bubble in Ottawa at the federal level. I think we talk a lot amongst ourselves and there's an echo chamber. I don't know. I don't think that's the intent. I think people have very good intentions, but it can be self-reinforcing and it can be limiting and not really inclusive, particularly to the vast majority of public servants who need to be engaged in the process."*

The extent to which innovation is integrated into the day-to-day business of the Public Service is an issue that also carries over into leadership. Leaders can themselves be the difference between whether innovation is seen as normal, or whether it remains something marginal, to be done "side-of-desk". In the absence of a clear signal from leaders demonstrating their openness to innovation, default settings and an associated assumption that innovation is not really wanted is likely to dominate.

> *"The DGs [Directors-General] may have been very well open to innovative ideas but, if they're not signalling it, there's an assumption from the staff that senior management isn't willing to accept responsible risk-taking, or to encourage innovation."*

Due to these default expectations, senior leaders within current hierarchical structures often play an outsized role in the innovation process, whether they mean to or not. However leadership, as currently practised, may not always recognise this, or enable leaders to act on it.

> *"Whereas I have all confidence in my senior management, the trickle down of information is minimal at best. They just don't have time. They don't know what to report to me. They're still struggling with understanding it, so I experience these huge disconnects and it's a feeling of yes, I know how to be innovative. I would like to adopt a practice. I want to encourage particular things that should be done, but bump up against… the need to have that approved, and in order for it to be approved, it has to be understood."*

In a changing operating environment, new behaviours might need to be normalised. Innovation requires openness to doing things differently – to thinking differently. It involves being vulnerable (e.g. "What if my idea is rejected? What if I admit I don't know something"). It also involves respecting others when they make themselves vulnerable by participating in the innovation process. Innovation requires different behaviours to those typical for many bureaucratic professional organisations.

However, such an adjustment in behaviours may take time – and not just for those in leadership positions. It is apparent that appropriate behaviours that enable innovation in the Public Service are still in development.

> *"And then we realized that around innovation, people were really adopting the language of innovation, but maybe not as much the doing, which was quite interesting. In some cases, they knew what the buzz words were."*

This development of appropriate behaviours may be impeded in cases where previously valued or emphasised behaviours are effectively in conflict or competition with those that are supportive of innovation. Often, the environment and culture still work to reinforce the dominant paradigms and ways of working, with innovation viewed as something that is at the edge or foreign.

> *"I mean, we're all trained in secrecy, to be honest. That's what you get taught a lot as you grow up in the system. And so getting that out, and getting people to kind of be more open about things they may be working on, or co-development of ideas and proposals for people... It's gonna take a while. We'll have them in pockets, but we're not on any broad level. I think it's gonna take a while."*

These behaviours can do as much harm to the innovation process as anything else. Irrespective of whether innovation is emphasised, allowed or encouraged, or the relevant

resources and commitments are available, it is behaviour that will often determine whether innovation is successful or welcomed.

> *"So all of this kind of stuff, the habits that get formed were as harmful essentially to innovation, as much as a barrier as anything written on paper, and because they were kind of more amorphous, it's actually harder to deal with, like at least the rule, the rule I have a really torturous process to change it, heaven help you if it's legislative, whatever, but usually at least there's a way you know how to do it, right? That stuff is harder because it's harder to put a finger on it."*

This tension might be due in part to the absence of a strong or sophisticated understanding of when innovation is needed or of how to balance innovation with other expectations. Even if innovation does become part of the norm, there will still be times when innovation is not appropriate or not needed or wanted. Just because innovation is sought, it does not mean that *all* innovation is welcome, or that all innovation is equal. There needs to be a balance of some sort.

> *"Why is the Government of Canada not more innovative? It's certainly a massive ship. You don't turn it on a dime, and think that is for good reason. There are certain areas where I'm not sure it's in our best interest or Canadians' best interest to attempt to be highly innovative."*

> *"… if you want to engrain innovation as a way of being, you need to appreciate some of the forces that are working against it that will try to marginalize it, because it's a little abstract, it's confusing, and, yeah, people like doing what they're doing, so don't change what we're doing, right?"*

Finding and maintaining the appropriate balance is likely to be challenging. The overall need for innovation is clearly high, but an ever-changing context makes knowing when innovation is actually appropriate more difficult. The risk is that the default settings, behaviours, expectations and culture will ensure that innovation remains a marginal activity.

> *"I think there's a much greater awareness now of the importance of innovation. … I think the risk is we have just enough innovation going on that deputies can happily write a report to the Clerk every year about how they're being innovative, and maybe delude themselves into thinking that they have an innovative ecosystem."*

On the other hand, as more people are exposed to innovation and its outcomes, and become more familiar with the practice of innovation and what it is for, innovation is likely to start to inform and become part of the overall culture of the Public Service. As it becomes normalised, it will become part of the new normal.

> *"A lot of these components I think, is moving us up that maturity curve that I think for those folks that have been out there in their little pockets working hard and driving against convention a little bit … I think that we now are starting to see, okay, there is a collective willingness and understanding that this is important across the government scheme."*

For the moment, however, innovation is still a marginal activity, most of the time that intersects with core work on only a limited basis. It is not yet integrated into standard behaviours or day-to-day expectations.

> *"So, we're always going to have a bubbling need to be able to convert people into folks that believe in innovation and so on. But, I think, I wanted to pass more on the*

message that if people can embrace innovation, there's less of a need of a machine in the back that's pushing it."

Implications of this understanding

Primary observation

Innovation is about difference, about deviating from the status quo. However, norms, processes, systems and culture are generally about replicating certain ways of doing things, certain ways of acting and certain ways of interacting. Unless innovation is somehow considered normal and legitimate, and systems and people have the opportunity to become familiar with it, it is likely to remain in conflict with or to contrast with people's expectations. This will stop innovation from being seen as normal, and thereby prevent people and systems from becoming familiar with it. All other things being equal, this tension means that innovation will generally remain marginal rather than integral.

Primary effect

Innovation will not happen consistently or reliably if it is seen as an aberration or as something unusual that is required only occasionally.

Reasoning

As with any capability, innovation takes practice before those involved learn enough to become good at it. As with any behaviour, innovation will not be reinforced unless it is recognised, encouraged or expected. As with any process, innovation will not become efficient if it is only undertaken very occasionally.

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Chapter 5. Introducing a new model for public sector innovation

This chapter proposes an emergent model for understanding the determinants that affect innovation performance at the individual, organisational, and systemic levels. It explores each of the determinants at the system level and illustrates them using examples from different national governments.

A model for public sector innovation systems

This chapter provides an emergent model for understanding public sector innovation systems. This model has been developed from (and for) the Canadian context, but is intended to be relevant and applicable to other countries and their own contexts.

As noted in Chapter 3, most models of innovation systems have been developed for understanding private sector contexts. However, public sector innovation systems have different drivers, different risks and uncertainty appetites, and different constraints, and should not be assumed to operate in the same manner.

This review has worked to explore the underlying factors influencing the innovation performance of the Public Service of Canada (e.g. does it produce innovation at a sufficiently consistent and reliable rate to meet the context).

Building on the research undertaken, Chapter 4 highlighted four key understandings about the practice of innovation in the Public Service. These understandings highlight core dynamics of the very nature of innovation. This chapter proposes a model for examining the innovation system of the Public Service of Canada (and that of other countries), by building on these understandings and combining them with insights from other elements of the OECD's work with member countries.

What do these understandings suggest about the nature of innovation systems?

The four understandings and the 28 findings on which they build help to articulate some core issues that affect the innovation system. Each of the understandings also helps to illustrate fundamental tensions between innovation-as-a-practice and business-as-usual. These tensions can then be used to consider the respective underlying drivers. Table 5.1 outlines these drivers.

Table 5.1. Identifying the underlying drivers of innovation at a systems level

Understandings about innovation	Realisations/Implications	What determines how the innovation system performs?
While increased attention has been paid to innovation, the Public Service's relationship with innovation is still unsure and there is uncertainty about the nature of this relationship (e.g. the role and place of innovation).	Because of the inherent ambiguity surrounding innovation as a concept, any additional confusion (relating to innovation as a thing, a practice, a process or a system), will result in it becoming a secondary priority behind other, better-understood priorities.	The extent of **clarity** about the role, importance and purpose of innovation, and about how innovation fits with everything else.
Innovation is happening across the Public Service, however it is often a by-product of other processes or of determination on the part of particular individuals, rather than the quality or merit of an idea, or the underlying need for innovation.	Because existing processes are biased towards the default/status quo, innovation will not be prioritised in decision making unless there are external drivers, or those involved go above and beyond normal processes.	Whether there is **parity** between innovation and the status quo in decision making, and whether innovation exists on an equal footing with the default settings.
While government is changing how it operates, there is a mismatch at present between what can be done inside and outside of government, risking a public service that becomes unsuited to its context.	Because existing systems and capabilities are biased towards current ways of doing things, they will not be suitable for attempting innovation without the input of additional learning, investment and time.	The extent of the system's **suitability** for innovation, and whether it is sufficient to undertake new ways of doing things.
The practice of innovation has developed significantly, however it often remains a marginal activity and is not viewed as part of core business or the ways that things are done.	Because the existing culture and behaviours relate to current ways of doing things, innovation will exist in tension with this conception of "normal", and will therefore encounter obstacles to integrating with core business.	Whether innovation forms part of the **normality** of the system, and the extent to which innovation feels part of the regular way of doing things.

There are thus four factors to consider about a system:

- Clarity – is there a clear signal being sent to system actors about innovation and how it fits with other priorities?
- Parity – does innovation have equal standing with other considerations when it comes to proposed courses of action?
- Suitability – are the capabilities, systems and infrastructure appropriate/sufficient for the available options?
- Normality – is innovation seen as integral, rather than as an occasionally accepted deviation from the norm?

Each of these drivers will be of relevance to different aspects of innovation (e.g. delivering on today, delivering for tomorrow, and ensuring innovation readiness).

The system level as one of three levels of innovation activity

Before discussing these elements further, it is useful to consider how innovation can play out differently depending on the level of analysis used. Building on the discussion in Chapter 3, this section proposes that innovation can be looked at through three lenses:

- **The individual** – any individual can undertake or start something innovative. It may only really affect themselves or it might have wider ramifications. This individual lens helps to give insight into innovation at a practical level – e.g. what do people need to do/go through when undertaking innovation.
- **The organisational** – an organisation may have multiple innovative initiatives underway in response to multiple identified needs for innovative approaches. This

organisational lens helps to give insight into innovation at a process level – e.g. what is involved when orchestrating innovation across multiple people.

- **The system** – across the public sector there are interactions between multiple initiatives, contributions and issues from individuals and organisations, as well as intersections between other structures, knowledge, processes and fields of activity (e.g. the budgeting system). The system lens gives an insight into more than just specific initiatives or activity. It provides an opportunity to view things in aggregate, and to look at overall performance (i.e. just because there might be useful innovation occurring at an individual and organisational level, it does not mean innovation will be occurring as needed when viewed at the whole-of-system level).

While the aim of this review is to understand the system level, in reality this cannot be achieved without some regard to understanding innovation at the individual and organisational level. In addition, if the drivers identified at the system level are really reflective of the underlying nature of public sector innovation, then they should also be reflective of innovation at these other levels.

What, then, is known about innovation at the individual and organisational levels?

At the individual level, building on the work of Boxall and Purcell (2011), the OECD (2017a) identified a framework for public sector innovation consisting of:

- the ability to innovate
- the motivation to innovate
- the opportunity to innovate.

At the organisational level, the OECD (2017b) has identified a six-stage lifecycle for understanding the innovation process (building on previous contributions Australian Government 2010; Eggers and Singh, 2009; Murray et al., 2010):

- identifying problems
- generating ideas
- developing proposals
- implementing projects
- evaluating projects
- diffusing lessons.

Drawing on what has been learnt from the Canadian context and adapting this and other work (OECD, 2017a, 2017b), this review proposes a model for understanding the core determinants of innovation, including what they look like at the different levels (individual, organisational and system).

The framework identifies four determinants of innovation – four prerequisites for innovation (doing something significantly different to what is established practice) to take place.

- Reason – why is the innovation happening?
  - At the individual level, innovation relates to personal motivation – why someone wants or needs to innovate.
  - At an organisational (or collective effort) level, where there is more than one person, motivations will vary and are thus not usually enough to ensure everyone is working to the same end. Innovation will usually then be about responding to a problem.

  - At the systemic level, where there are multiple organisational and individual actors with differing perspectives, there may be a convergence of interests around particular problems. However, more often there will be different priorities, different interests and different responsibilities, along with a high potential for confusion, competition or conflict. Thus, there needs to be clarity about innovation and how it relates to the current activities, processes and objectives of the public service.
- Possibility – is innovation an option and what range of options have been considered?
  - At the individual level, this is about opportunity. Does the opportunity exist for the individual to try something different?
  - At the organisational level, the presence of multiple people increases the range of options significantly. Effort therefore needs to be focused. Organisations can consider a range of options, but then need to develop and agree on specific proposals and specific courses of action.
  - At the systemic level, default settings will generally favour the status quo. Does innovation have parity with business-as-usual in the consideration of options? Is the risk of *not* innovating built into collective action?
- Capability – are current capacities sufficient for undertaking innovation?
  - At an individual level, this is about the ability to innovate – are the necessary skills, tools and resources available?
  - At an organisational level, ability is not enough; you need systems to co-ordinate the different resources and the capabilities of all those involved with innovation. This is a matter of project management, resourcing and maintaining a portfolio of differing projects.
  - At the systemic level, with multiple organisations and actors, capabilities refer to more than project management, or even a portfolio of projects. System capabilities will generally reflect what is done, rather than what might be done. Effort needs to be made to ensure the suitability of capabilities, systems and infrastructure to undertake new directions of activity.
- Experience – will the experience of innovation lead to innovation being attempted again?
  - At the individual level, experience is about learning – what does someone learn from undertaking innovation, and does it encourage or support him or her to undertake further innovation?
  - At the organisational level, lessons from multiple people and multiple perspectives need to be made explicit and integrated or aggregated in some form, particularly if they are to inform future innovation efforts. Experience in this context is about evaluation and the diffusion of lessons, including through the scaling up of chosen innovative initiatives.
  - At the systemic level, with multiple organisations and actors, learning reveals itself in the form normality takes – in what is integrated into day-to-day operations and is seen as expected, and in what is embedded and supported.

Table 5.2 outlines this proposed model.

Table 5.2. Public sector innovation – determinants of innovation at the individual, organisational and system levels

What level of analysis is the focus? Core determinants of innovation	Individual (individual effort)	Organisation (collective/shared effort)	System (intersection and aggregate of multiple efforts)
Reason for innovation: What is driving the intent to innovate?	Motivation to innovate (e.g. I need to or want to solve a problem / try something new; stand out from the crowd/differentiate myself from others; do it as part of my job/role/identity)	Problem identification/Ideas generated (e.g. we have to or want to fix policy or service delivery challenges; respond to crises or political priorities; meet stakeholder expectations; achieve/work towards a mission)	Clarity about innovation (e.g. it is clear that things need to change; innovation makes sense and is a priority; innovation is a responsibility)
Possibility of innovation: What affects the likelihood of innovation being attempted?	Opportunity to innovate (e.g. I can work on a project where innovation is appropriate or wanted; apply a new technique or approach in my work; try, or to be exposed to, something different)	Ideas generated/Proposals developed (e.g. we have identified options for how we might solve a problem in an innovative way; processes are open to doing things differently; approval exists for trying something differently where appropriate)	Parity of innovation (e.g. default settings can either be challenged, or are open to doing things differently; system-wide rules or processes do not unfairly bias against innovative proposals)
Capability for innovation: What is needed in order to carry out the attempt at innovation?	Ability to innovate (e.g. I have the tools, skills and resources to undertake the innovation)	Project implementation (e.g. we have what we need to undertake the project(s), including the relevant skills, systems, technologies and resources)	Suitability for innovation (e.g. the infrastructure, investment, and commitment exist to ensure that general systems are suitable for innovative endeavours, even when they may not have been anticipated)
Experience of innovation: What affects whether innovation continues?	Learning from innovation (e.g. I learn about how people and things react, what it's possible to achieve/impact, and whether that change is valued)	Evaluation/Lessons diffused (e.g. we know what effects occurred as a result of the innovation and have used this knowledge to inform other projects; this helps shape the organisation's culture and attitude about innovation)	Normality around innovation (e.g. innovation is not seen as an aberration, an oddity or a frolic, but rather as something that is integrated and built upon)

Where the responsibility for, and locus of, innovation lies

This model suggests that where the focus of innovation is not at the system level (i.e. not at the level of intersecting activity and processes across multiple organisations, actors and structures), then it will fall to organisations. In other words, if the innovation system is not sufficiently developed and innovation is not guided at a systemic level, the locus of innovation activity will lie with organisations, which are unlikely to have the necessary whole-of-system perspective to ensure the right overall level, nature and impact of innovation. Where organisations lack sufficiently developed innovation processes, the responsibility (or rather, the burden) of innovation falls to individuals. Where this occurs, innovation will effectively be driven by and dependent upon the needs, beliefs, opportunities, abilities and lessons of individuals. This is a recipe for relying on luck or chance – for innovation as a sporadic and spontaneous activity driven by external events, rather than one that is systemic and systematic and driven by collective needs and goals.

Equally, if the overall system does not see innovation happening at the individual level, it is unlikely that the necessary insights will emerge to inform new approaches, new

organisational efforts or new system understandings. All three levels – individual, organisational and systemic – should be seen as important, and any system that relies too heavily on any one level is likely to encounter problems before long.

It should be acknowledged that this model is currently agnostic with regard to the other consideration of innovation responsibility: between the centre and the edge. Innovation will, and must, to some extent, occur and emerge from the edge – from where current ways of working are not meeting what is needed. However, the centre plays an important role in establishing the parameters by which others in the system can innovate, and the extent to which they feel empowered and connected to a wider, collective mission. The exact mix – centre vs. the edge – will likely be an ongoing dynamic one. Different actors will all have different roles to play, and the combination of what that could or should look like will vary between contexts. Each of the determinants will also have differing considerations and opportunities for the centre and other actors to contribute.

A closer look at the four determinants

This section examines each of the four factors that affect innovation performance at a system level in further detail, and includes illustrative examples from different contexts.

Determinant 1: Clarity

"The quality of being certain or definite."[2]

Innovation is unlikely to occur at the desired rate unless there is sufficient clarity about what is needed and how innovation fits in with other priorities. In the absence of this clarity, innovation will often be driven by individual motives, the needs of individual organisations and external events. While innovation under these circumstances may often be beneficial in a specific context (e.g. by introducing a different way of working or providing a new service), in a complex system with interconnected and collective needs, such innovation in its own is unlikely to provide what is needed (e.g. a holistic and connected view of the problem and an equally holistic and connected response).

Clarity should not be taken to mean that everyone is aware of everything that is occurring, or that everyone has absolute certainty about innovation. Rather, it means that the actors involved understand enough to know how innovation relates to them (and comprehend the overarching aims) to feel empowered to engage with its processes – just as they might with human resources, procurement or other core corporate functions. Neither does clarity equate to unanimity: there can still be disagreement and conflicting views over innovation.

Too much clarity is likely to be as detrimental as too little. Any system will need to ensure a balance between clarity and confusion. Table 5.3 shows what this balance might look like.

[2] See https://en.oxforddictionaries.com/definition/clarity.

Table 5.3. Finding a balance between too little and too much clarity

Too little	Balance	Too much
System actors question why they should participate or engage with doing things differently ("that isn't my job").	Actors have a broad sense of what innovation means in the context of the system, how it fits, why it is needed, what their role and that of others is, and know what innovation looks like in practice.	A prescriptive certainty around innovation removes much of the ambiguity, tension, negotiation, and push/pull of innovation, and thus actually inhibits innovation (the asking of "what if?").

Achieving such a balance can be difficult, particularly because at a whole-of-system level there is no single lever that can be pulled to provide clarity. Any clarity will result, if at all, from the intersection of multiple initiatives, events and experiences happening at the individual, organisational and system level. Many relevant system actors (e.g. partners and service providers) will not even be part of the Public Service. The overall clarity of the signal being sent to system actors about their role, the context for innovation and how innovation fits, will need to be continually assessed and recalibrated.

To further complicate things, there are also a number of potential risks or worries in striving to achieve a level of clarity about innovation. These include the following:

- Providing clarity can make unstated tensions explicit by rendering clear things that were previously unclear (e.g. by making visible potential conflict between incumbent interests and new ways of doing things – "why do you think things need to change when we think they are fine?").
- In a formal system, clarity may be mistaken as being definitive ("this, and only this, is innovation") rather than leaving space for a conception of innovation as contextual and nuanced to the setting at hand ("I know what innovation looks like when I see it").
- Articulating the value of innovation and expressing an expectation for people to be innovative is not a tap that can simply be turned on and off. Asking for innovation means asking people to think differently. However, once people and organisations start seeing innovation as part of their role, power shifts away from centralised decision making. This represents a significant change in the culture of a bureaucratic system.
- Any clarity will emerge from a multi-directional conversation. Innovation will often occur at the "edge", where different needs reveal limitations in how things are currently done. Clarity about how innovation actually works will often therefore be a bottom-up realisation. Clarity will involve top-down elements and messages from the centre that set the scene and the parameters for innovation, but will be combined with feedback from the edges about what is actually happening.

What might "clarity" look like?

Given these nuances, what does clarity actually mean in practice? Proposed elements around clarity include whether:

- actors understand what innovation means, either from talking about it, seeing it or experiencing it firsthand
- actors know why, when and how innovation is a priority, and can situate it in relation to other priorities
- actors know how (if) they can contribute to innovation and what role others play
- actors see how innovation fits with shared history and their own context.

Actors understand what innovation means

There are a range of way that system actors may come to understand what innovation means for them, their context, and how it fits. Some of this may result from having the tools to engage in a conversation or ongoing dialogue about innovation and what it means in the public sector (see Box 5.1).

Box 5.1. Clarity about innovation in Denmark

In Denmark, there is a broad understanding of innovation, as measured by the InnovationBarometer, a national survey of public sector innovation.

This shared understanding of innovation is assisted by the following:

- Definitions are widely available, and have been shared through groups such as the Centre for Public Sector Innovation, MindLab and the Danish Design Centre
- Conceptions of innovation reflect different local versions, adapted to the needs and tasks at the different levels and in the different "subsectors"
- Two-thirds of Danish municipalities, regions or ministries have an innovation strategy or are in the process of developing one.

The InnovationBarometer survey also functions as a tool for connecting innovation. By providing some measures of innovation performance across agencies, the tool also serves as a prompt for organisations to discuss and consider their own relationship with innovation.

The wider environment also aids this shared understanding of public sector innovation by integrating learning about public sector innovation into the educational system at secondary and tertiary education level.

Source: Information provided by the Danish National Centre for Public Sector Innovation (COI).

Another way in which the actors might increase their understanding is by "seeing" innovation – having access to real-world examples that help really communicate what innovation might look like in their context. This might take place through platforms such as the OECD Observatory of Public Sector Innovation case study library. Other approaches include highlighting stories of innovation and putting them in context – not just what was done, but why and the people behind them. This approach has been taken by Australia with its Australian Public Service Innovation Snapshot. Alternatively, increased understanding might stem from seeing examples and cases in other sectors or domains.

Innovation is not just a conceptual issue. Innovation is also very experiential. At the individual level, it involves understanding one's own relationship with uncertainty – with doing something where the results will be unknown. Given this, possibly the most helpful approach for actors to get to grips with innovation and what it means for them is to engage in the process, acquire experience and see what it can achieve. This can be supported through formal training, but involvement in actual innovation projects can provide significant value. For instance, public sector innovation labs can sometime serve as an important entry point for those unfamiliar with public sector innovation, and can provide a safe way of introducing and engaging with new ways of thinking and working.

Actors understand innovation as one of many priorities and agendas

Even where innovation is a priority or part of the agenda, its importance or the moments when it is appropriate or sought may change (i.e. some things will likely be off-limits for innovation, or the risk appetite or tolerance for innovation in a space may shift abruptly).

For those actors involved, an explicit agenda or a call to action, such as a manifesto for public sector innovation, can help promote clarity around innovation (see Box 5.2).

Box 5.2. French manifesto for public sector innovation

"The current innovative momentum in the public sector must be dedicated to improving the life of citizens. These innovations are termed 'human-centric' or 'user-centric'. They must grow out of an in-depth understanding of the needs and expectations of users, be they shop customers or users of a public service. This is one of today's challenges: redefining the primacy of the individual in the digital age."

The French manifesto outlines a series of values around public sector innovation. It also supports a high level of ambition for innovation.

The French government must tackle five challenges to take diffusion of innovation to a new level:

- develop and disseminate innovations of value to the greatest number of people
- encourage the innovative capacity of the five million French civil servants
- opening public sector to civic engagement
- make humans and computers work together
- transform the work format of the public sector.

Source: SGMAP (2017).

Helping actors understand the nuances of innovation and why, when and how it is wanted can be a difficult matter. Given the contextual nature of innovation, where and what is appropriate will change depending upon the circumstances, and individual and organisational judgement will play an instrumental role. Such judgement will be informed by learning, direct experience, and strategic and situational awareness. In turn, that learning and awareness will only occur if, or as, actors engage with innovation directly and develop a more sophisticated understanding about its practice.

Actors understand the roles played in the innovation system

What are the differing roles played within the system? Which agencies are responsible for what? How does innovation relate to the work of different organisations, and what role are individuals expected to play?

There are many different roles that can be played. Given the early stages of most public sector innovation systems, it may be difficult to identify formal roles (e.g. Chief Innovation Officers, Design Leads or Behavioural Insights experts). Instead, it might be helpful to talk more broadly about the different ways in which people can relate to innovation (see Box 5.3).

Box 5.3. Denmark's eight innovation archetypes

- Accelerator: The accelerator may be an Innovation Intermediary or a Program Manager, who has an operational responsibility. They initiate projects and initiatives in their departments, and want to inspire and help employees to take the lead in finding new solutions. They often find it difficult to find time and resources.
- Firebrand: The passionate front-line worker who knows their field intimately, and burns to make it better for the citizens with whom they are in daily contact. They fight to implement their ideas and seek allies to make it happen, but often lack the time and management support, as there are operational priorities to meet.
- Consultant: Someone who works solely on innovation as a project manager, development or innovation consultant. They help colleagues, runs projects themselves and love to get others to think outside of the box. They often have a large network and works across all levels of the hierarchy. They can feel a bit alone with their innovation skills, in an environment where few others have them.
- Team player: Often works directly with citizens where they help make concrete changes for the benefit of citizens and businesses. They play more of a supporting role in relation to innovation, and participate most if asked by their manager. They do not see their role as innovation. Such people may find it difficult to see value in working with organisations that are very different from their own.
- Missionary: The Missionary seeks examples from across the country that they could use to promote innovation widely. The missionary talks a lot about innovation and seeks to inspire others with their initiatives. They do not have much practical experience with innovation, but have read a lot and are good at staying up to date and sharing their knowledge.
- Strategists: This might be a director who sets the strategic direction for their organisation, and decides which innovation projects should be launched. They see innovation as a necessary and exciting part of the work needed to develop the organisation.
- Tourist: The tourist is not directly involved in innovation work, but it seems exciting to them. They will attend network meetings and events and stay updated on LinkedIn. They are curious about what is happening in the field of innovation and would like to join in when something new and exciting happens. They have a hard time translating innovation back into their home organisation.

Source: Information provided by the Danish National Centre for Public Sector Innovation (COI), http://coi.dk/fakta-og-cases/kender-du-innovationstypen.

The roles should not be limited to those in the public service itself. There might be consideration of other system actors, what they can do and how they can contribute or participate. For instance, the OECD has also discussed the different roles that politicians can play with regards to public sector innovation (OECD, 2017c). Citizens, businesses and not-for-profits all have important things they can contribute, but not often a clear sense of how (or if) they can contribute. How can these potential partners, supporters and instigators be given clarity about what role they might play?

Actors can see how innovation fits with the shared history and context

Innovation will not make sense to people and actors if it does not fit with the history or the context. If there is a shift in position from not explicitly welcoming innovation to one where it is actively sought and prioritised, then it will take time for actors to believe it and to adjust their interaction accordingly.

One way to assist such a transition is to consider the narrative around innovation and how it helps people understand the shift in emphasis over time (see Box 5.4).

Box 5.4. A changing narrative about the public sector in Denmark

In 2009-10, the Danish innovation lab MindLab undertook a project called "MindBorger" (MindCitizen), which explored the relationship between citizens and the public sector. The narrative they developed portrayed a shift from the public sector as a father (the paternalistic welfare society), mother (all-embracing comforting welfare society) and merchant (welfare state steered by results and contracts) to the public sector (welfare society) as collaborator.

This narrative is now reflected at the municipal level, with a shift in focus from New Public Management models towards a focus on new public governance and the public sector as a collaborator. For instance the mid-size municipality of Skanderborg defines itself as a "municipality 3.0". In general, the paradigm shift from new public management towards new public governance including hybrid forms of the two, is representative of the development of a main narrative for the public sector, with networks, collaboration and co-production fitting nicely together with the innovation agenda.

Source: Information provided by the Danish National Centre for Public Sector Innovation (COI), http://coi.dk/fakta-og-cases/kender-du-innovationstypen.

Guiding questions for thinking about clarity

One way to assess the level of clarity around innovation is to establish whether there are clear, practical and shared answers to the following questions:

- What signal is being sent about innovation?
- What story is being told about innovation?
- Is there sufficient clarity about innovation, its value, and what is expected, to ensure that it is a focus?

It should be noted that clarity does not equal consensus. Tension between competing interpretations and thinking is a core ingredient for innovation. However, there should at least be a shared understanding of the dominant narrative, so that it is possible for different parts of the system to interact without having to continually re-establish shared ground.

Box 5.5. Prompting question to consider whether there is sufficient clarity about innovation within the system

Do the system actors that are external to government (and therefore are least familiar with the inner workings and are likely to only hear a dominant narrative) have a clear sense of what the Public Service means by innovation, where it is seeking innovation, and how they can contribute?

Determinant 2: Parity

"The state or condition of being equal"[3]

Unless innovation enjoys sufficient parity with business-as-usual, such that it is placed on an equal footing, it is unlikely to take place at a desired rate. In the absence of parity, innovation will occur primarily as a result of exceptional efforts on the part of individuals ("going above and beyond") working to surmount the obstacles that arise, and organisations responding to external drivers for change or pursuing narrow agendas. While this will result in innovation, it is not a recipe for resolving complex system needs.

Parity should not be taken to mean that all ideas deserve equal treatment. Rather, it means that the status quo or default assumptions are never left unchallenged, and that in a fast-changing world ongoing reassessment of what is possible is essential.

Finding the right balance for parity may be difficult. It can range between continuing with business-as-usual, being able to ask questions and questioning everything all the time. Table 5.4 shows what that balance might look like.

Table 5.4. Finding a balance between too little and too much parity

Too little	Balance	Too much
System actors question why they should give any attention to new ideas ("that's not how we do things").	Business-as-usual options are not automatically deferred to, but nor is every idea seen as equally meritorious.	Every idea is considered to have equal merit, even where established practice is performing well, leaving decision making and prioritisation bogged down in process and debate.

Achieving parity for innovation at a system level will be complex, as there is no simple means to ensure that innovation is put on an equal footing with business-as-usual options. Attempting parity of innovation will challenge existing practices and processes, if only because it implies that existing practice is not good enough. In addition, there will often be areas where innovation might be legitimately considered high risk or worrisome, thus there will always be a case to argue that innovation should not apply.

There are also a number of potential risks or concerns in trying to ensure parity. These include:

- Alienating those who are trying to do a good job/protect what they think is important. There will also be individuals who may be invested in the status quo and view efforts to question it challenging or even offensive – "are you saying we haven't been doing the right thing?"
- Opening the door to those who, for whatever reason, may be looking to weaken standards, subvert processes or reduce rigour, and who might use "innovation" as an excuse to do so. Not everyone will approach such an effort with good faith.
- Alerting the "immune system" to possible threats ("these people want an exception to the process, therefore they are doing something that is questionable and that needs to be watched/made harder/stopped").

What might "parity" look like?

What does parity mean in practice? Proposed elements around parity include whether:

- processes are open to challenge
- information and decision-making bottlenecks can be circumvented

[3] See https://en.oxforddictionaries.com/definition/parity.

- it is easy to find and build a coalition of the willing around shared issues
- different types of risk can be distinguished, and the difference between risk and uncertainty is appreciated.

Processes are open to challenge

One way to enable innovation to achieve greater parity with business-as-usual is to ensure that the default is not just accepted as a matter of fact. This can be achieved through processes or mechanisms that let alternatives options be raised (see Box 5.6).

Box 5.6. Portugal's SIMPLEX programme

The SIMPLEX programme was first launched in 2006, in the context of a strategy aimed at modernising public administration and involving all services both at central and local level. Ten years later, the initiative returned as SIMPLEX+. This collaborative and nationwide simplification programme launched by the Portuguese government to co-create new online public services, optimise existing ones and de-bureaucratise the relationship between public institutions and civil society, involved reviewing processes and practices, and covered all the domains where the state is actively present.

Since citizens and entrepreneurs were consulted and contributed to the design of the measures, and continued to do so during its implementation, SIMPLEX+ is a participatory, co-produced and transparent initiative. In addition to arranging nationwide hearings with stakeholders, both public and private, the SIMPLEX website acts as an open channel for communication and the submission of ideas, where data regarding the execution of the programme are regularly disclosed.

In some organisations these may be relatively informal (idea-sharing processes) or more structured (e.g. "Dragons' Den"-type events where new ideas are competitively pitched and judges choose between them). Such processes can take many different forms. At a system level, the most pertinent aspect is whether new or different perspectives can be given serious consideration.

An alternate approach is to flip the defaults by introducing more active and deliberate mechanisms of challenge, whereby the existing option has to justify itself, rather than putting all of the responsibility on new options to prove themselves. A mechanism of challenge might mean that the existing option has to defend or justify itself as being the most appropriate thing, rather than having it assumed (see Box 5.7).

Box 5.7. Example of a mechanism for giving innovation parity – "Never say no"

Report from the Singapore Committee on the Future Economy, Recommendation SC1.6: "Regulatory innovations (such as "no action letter" and sandboxes) to enable innovative and new business models:

Regulatory agencies should adopt a "never say no" approach when dealing with a new business model, and be prepared to allow it to be piloted under conditions, even tight ones. This could mean setting up regulatory sandboxes, such that within certain parameters, new business models can make forays into the Singapore market. This can be complemented with "no action letters" issued by regulatory agencies, to assure disruptive players that they are within the law so long as they operate within prescribed parameters. To ensure a fair playing field, such measures should be time limited, after which a new set of regulations that take into account these new business models would be formulated accordingly."

Source: CFE (2017).

Bottlenecks can be circumvented

Any hierarchical organisation will inevitably have bottlenecks where decisions or the flow of information is slowed down. This can have negative consequences on the ability to effectively challenge the status quo, as a limited supply (of decisions or information) will likely result in priority be given to the area where there is the most demand (e.g. the established ways of doing things). This might be dealt with through the use of open (online) forums (see Box 5.8) where information is open by default, making it easier to work around or eliminate blockages or bottlenecks. Clear delegation and efforts to ensure that system actors are empowered to make decisions up until the point that a wider perspective is absolutely necessary can also contribute to circumventing these problems.

Box 5.8. United States: Project Open Data

The White House leverages the code repository and social media platform GitHub to co-ordinate and collaborate with government officials and the public to continually innovate around implementation of the US Open Data Policy through Project Open Data.

Project Open Data comprises a collection of living policy guidance, code, tools and case studies to help government organisations implement the US Open Data Policy and Data.gov to unlock the potential of government data. The platform has evolved over time as a community resource to facilitate the broader adoption of open data practices in government. Through GitHub, anyone – government employees, contractors, developers or the general public – can view, contribute and communicate through threaded discussions. Resources and staff are dedicated to collaborating and communicating with users, reviewing feedback and revising policy based on feedback, as needed, and are empowered to make the decisions needed to execute this role.

In addition, bi-weekly meetings for interested government employees are held, both in person and electronically, on open data and governance topics to discuss formal policy updates, as well as to provide an opportunity for informal interaction and knowledge sharing.

There can be tension between circumventing bottlenecks and taking a more systemic approach, as one leads to decentralisation and empowerment, and the other suggests a more co-ordinated view.

Allies can be found

Sometimes the defaults will be entrenched, and existing ways of doing things will be deeply embedded, even if there might be more promising, though not yet tangible or fully realised, possibilities. Innovations will initially never be as good as the process in place, as the former is in the earliest stages of development, whereas the other has likely been invested in and refined over time.

One way to overcome this obstacle is for those who see the potential for a new way of doing things, or those who suffer most from the problem, to find allies that can help make the case for why the status quo is not sufficient, and why innovation needs to be considered.

At a system level, this will likely take place around informal channels, whether through communities of practice, networks or just the ability to connect with likeminded people across other parts of the system (see Box 5.9).

Box 5.9. Finland's Change Makers Network

The Change Makers Network is a loosely organised and self-directing team of experts from different ministries, with different backgrounds, education and expertise. What the participants share is a need and will to build up a working culture based on a "whole-of-government" mindset and a "crossing the silos" ways of working.

The network is also willing to test and adopt modern, explorative and digital ways of working. The participants are all volunteers and are not nominated to represent any particular point of view or ministry in the network. The network model differs dramatically from the traditional approach whereby a working group or committee is set up and participants are nominated to fulfil a particular set target.

The Change Makers Network is a bottom-up community or "movement", which crosses boundaries of all kinds: administrative, professional, attitudinal and so on. It also strongly challenges traditional, hierarchical management practices, as well as old-fashioned human resource management practices. Management practices as well as administrative services should all be seen as enabling this renewal, rather than creating obstacles against change.

Risk and uncertainty can be navigated

Doing something different brings risk. Of course, doing routine things also involves risk, but those risks are already known, accepted to some degree and can be more easily navigated (or dismissed). This means that the potential risks linked to new approaches can take on oversized dimensions, whereas the risks of existing activities can fade into the background.

Helping system actors to put these different types of risk into perspective can to help shift default assumptions about the real level of risk. This can also be aided by helping actors to distinguish between risk (known possible consequences) and uncertainty (what might happen is unknown). It might also be necessary to ensure that individuals are aware of and

competent to navigate risk, but do not unnecessarily shoulder personal risks while attempting to undertake worthwhile efforts.

Guiding questions for thinking about parity

Key questions to guide thinking about parity include:

- Are existing processes and practices inimical or open to doing things differently?
- Do those putting forward new ideas feel challenged to improve and develop their innovative proposals through their interaction with the relevant processes and practices, or do they feel exasperated, exhausted and worn down by them?
- Do those in middle management positions feel able, equipped, and empowered to engage with new ideas and innovative possibilities?
- Do the relevant processes and practices encourage a healthy engagement with risk? Do they generally encourage consideration of the risks of *not* innovating?

Box 5.10. Prompting question to help consider whether there is parity between innovation and the status quo

Is it easy to think of many significant innovations that have occurred as a result of their potential promise, rather than: (i) the people behind it going above and beyond, and putting in exceptional effort; (ii) the innovation being a response to a crisis or urgent matter where the usual rules were bent or did not apply; (iii) the innovation occurring due to political focus; or (iv) the innovation taking place under the radar, thus avoiding the usual oversight?

Determinant 3: Suitability

"The quality of being right or appropriate for a particular person, purpose, or situation" [4]

Unless the system has the requisite suitability for engaging with new ways of working, government will be unable to effectively innovate at a system level. In the absence of suitability (of technology, infrastructure, systems, and capability matched to the operating context), individuals and organisations will face a range of increased costs when innovating. These might include making investments to build or access the relevant capabilities, ensuring the necessary capacity is available, developing skills, learning about what works, and developing infrastructure. Such up-front costs will likely lead to innovation occurring as isolated projects/pockets with limited ability to scale or inform the operations of other parts of the system.

Suitability should not be understood as meaning readiness for any and all imagined possibilities. Rather, it means that there is an awareness of future horizons which informs investments and commitments.

Any system will need to find a balance in the level of suitability that is sufficient to the context. Table 5.5 outlines what this balance might look like.

[4] See https://en.oxforddictionaries.com/definition/suitability.

Table 5.5. Finding a balance between too little and too much suitability

Too little	Balance	Too much
The ability of government to engage with new issues and technologies is likely to be limited as it will not have the requisite understanding or experience, and this will hamper its relevance, appropriateness and effectiveness.	Emergent needs are identified, considered and monitored to track their implications, and system actors have clear senses of where and when to make investments and commitments so that they will fit their context.	System actors invest too much too early for initiatives that are still going to require significant development/are speculative, or have numerous systems still in development/being refined despite citizen expectations of stability/ consistency of service/experience (e.g. the "bleeding edge").

Potential risks or issues in trying to achieve system suitability include:

- Government can easily be criticised for "waste" or inefficiency by investing in things that are emergent or "not ready"
- A pursuit of the new can sometimes lead to prematurely abandoning things that work well before they are actually ready, tested, and sufficiently reliable
- There is the potential to invest in things that turn out not to be able to deliver what was promised.

What might "suitability" look like?

What does suitability mean in practice? Proposed elements around suitability include:

- being able to learn from areas that match the external rate of change
- technologies and their implications are socialised in government
- new operational models are engaged with and tested and tried in government
- understanding changing expectations, and trends and signals that existing capabilities are insufficient.

Learning from those keeping pace

Are there areas of government effectively keeping pace with change happening outside of government? Are there areas of government that are managing to effectively engage with change and even helping to shape it? Or are there areas that have a healthy relationship with outside partners (potential or current) engaging in new thinking and developing new capabilities (see Box 5.11)? These areas of government might have valuable lessons that could be leveraged for other parts of government. Alternatively, these areas might be the result of previous investments, relationship building and nurturing of their context. Either way, there will likely be lessons for the wider system about what might be needed or appropriate.

Box 5.11. The Open Innovation Team

The Open Innovation Team (OIT) in the UK Cabinet Office was set up in August 2016 to help Whitehall departments generate analysis and ideas by deepening collaboration with academics. The team is supported by Research Councils UK and sponsored by four leading universities: Bath, Lancaster, Southampton & Warwick.

The team provides a variety of ways for policy colleagues across government to engage with academics from light-touch advice, through brokering collaboration agreements, to intensive support led by OIT. The OIT has also developed a new form of PhD placement, enabling doctoral students to spend between three and six months based in a government department working on public policy challenges relevant to their research interest.

Government officials benefit from better and easier access to academic research and the latest thinking, while universities and individual academics benefit from being able to illustrate direct public policy impacts of their work.

Socialising technologies

How are technologies and their implications socialised within the system? In other words, how do decision makers and others become aware of new capabilities or new possibilities that come with new technological developments? How do they know what the implications of these technologies might be, or how current operations might be affected?

Given the fast pace of change, and the reality that a lot of technological change will occur outside of (a particular) government, keeping abreast of new technology is not something that many decision makers can devote sufficient time or "headspace" to as part of their existing roles and responsibilities. Often, much of the socialisation of new technologies (e.g. social media) will occur outside of the workplace (e.g. through personal experience). This may work for some new technologies, but is unlikely to be sufficient or reliable for all. Explicit and deliberate mechanisms to socialise technologies may be needed. These mechanisms might take a range of forms, from awareness raising (e.g. see Box 5.12) to more "hands-on" activity.

Box 5.12. Emerging Citizen Technology Office (ECTO) and Atlas

The US General Service Administration launched ECTO to work with a network of partners from 300 federal, state, and local government entities – including all Cabinet-level departments, all branches of the armed services, and more than a dozen states – to help evaluate, test and implement IT modernisation initiatives with emerging technologies. Although individual technology focuses will change with time, current efforts include:

- Artificial Intelligence and Robotic Process Automation
- Blockchain and Distributed Ledger Technologies
- Social and Collaborative Technologies
- Virtual and Augmented Reality

ECTO hosts the US Emerging Citizen Technology Atlas, an open source and crowdsourced repository designed to capture ongoing emerging technology efforts, provide stakeholders with resources, and foster better collaboration between public services and US businesses.

Source: GSA (n.d.).

Exploring new operational models

Changes in technologies and thinking are creating capacity for new business models and new ways of operating. Is there capacity within government to test new models, without disrupting existing operating models? Or is there capacity to create spaces or structures that allow for new models to be tested adjacent to or outside of the Public Service (see Box 5.13)?

Box 5.13. The Future Policy Network

The UK Future Policy Network (FPN) are a group of innovation teams in government who work on cross-cutting priority issues which require innovative thinking and future-facing solutions. Projects are principally commissioned on a quarterly basis by a Projects Commissioning Board including No. 10 officials (the Prime Minister's Office), the Cabinet Secretary and the Minister for the Cabinet Office.

The EDS Projects team (within the Economic and Domestic Affairs Secretariat in Cabinet Office) secretariats the Commissioning Board and acts as a central hub that brings together the teams in the network to provide a coordinated function on:

- Short policy or service design projects - by generating new insight and ideas
- Long-term, cross-cutting strategic analysis - by providing leadership and raising capability on future trends
- Latest thinking and knowledge about innovative policy-making - including championing new methodological approaches across government.

The Future Policy Network has extensive experience in executing novel and innovative approaches. The network works with departments in applying different policy and design tools, including: behavioural insights and large scale trials; co-design and co-creation with people affected; collaborations with external experts and the academic community;

innovative financing approaches; new partnership models; rigorous testing to deliver evidence on "what works"; independent statistics and the latest data science techniques and approaches to impact measurement; and, horizon scanning and strategic futures.

Projects have included: running behavioural trials around reducing mental health service drop-out, using commercial insight to raise the efficiency of the childcare market, exploiting the government's complaints data to spot live issues and trends, working with industry to trial new drone applications and developing analysis of future job automation.

The network also works with departments and public sector organisations to share knowledge about innovative policy techniques, drawing on the latest national and international practices.

Keeping track of changing expectations

What mechanisms, if any, are there to provide for a system wide awareness of how expectations are changing, and what that signals about existing capabilities?

Guiding questions for thinking about suitability

Key questions to guide thinking about suitability include:

- Are the underlying systems of government seen as being calibrated for innovation?
- How are new technologies socialised and introduced into government?
- Is there a clear understanding of citizen expectations of government in an environment of high rates of external change and innovation?
- Does the commitment to and investment in innovation match the rhetoric about the need for innovation?

Box 5.14. Prompting question to consider whether there is system suitability for innovation

If the Public Service announces it is going to undertake a significant transformational technology project, is the immediate reaction one of immediate scepticism, questioning or eye-rolling, or one of consideration, enthusiasm or anticipation?

Determinant 4: Normality

"The condition of being normal; the state of being usual, typical, or expected"[5]

If there is no sense of normality around innovation, it will remain a marginal activity that occurs in response to pressure, rather as a result of its potential. If innovation is not viewed as part of the day-to-day business, it will be perceived as an occasionally useful aberration, rather than something that everyone should act in alignment with in order to achieve better outcomes.

Normality should not be taken to mean that innovation is the only way of approaching issues, or that innovation should be the answer to problems. Rather, it implies that people should not see innovation as unusual or exceptional.

[5] See https://en.oxforddictionaries.com/definition/normality.

A balance will be needed that involves a healthy tension whereby innovation is seen as normal, but does not invite a state of continual reinvention or revolution. Table 5.6 examines this tension.

Table 5.6. Finding a balance between too little and too much normality

Too little	Balance	Too much
Innovation is seen as a frolic, as something that is not serious or *really* supported, and will be marginalised instead of integrated.	Innovation is seen as integral to achieving the best outcomes, and default behaviours are supportive of innovation.	Optimisation and efficiency may suffer as there is tension between the new and the existing. Stakeholders may disengage or become alienated, and change exhaustion may occur.

Creating normality around innovation is also potentially risky. Such a push may result in a culture clash, as core elements that are currently valued and appreciated come under question, and new expectations are put in place that may sit uncomfortably with previous ones.

What might "normality" look like?

What does normality mean in practice? Proposed elements around normality, include:

- identified behaviours to support innovation
- reinforcing the links between innovation and regular business
- socialising innovation
- upholding innovation.

Behaviours to support innovation

If innovation is to be seen as normal, then the behaviours surrounding it must reflect that. Identifying and demonstrating behaviours that are supportive of innovation (see Box 5.15) can be a key contribution to developing a culture where innovation is accepted and expected.

Box 5.15. Innovation behaviours for the Australian Public Service

Innovation is about people – whether it is about getting support for an idea, having people actually use or act on the idea, or thinking about what the idea does for other people. Because it is about people, it is largely tied to interacting with others, and the behaviours that are modelled. If leaders want to encourage innovation then they need to exhibit behaviours that will lead to innovative thinking and doing on the part of their employees. The following behaviours were identified by the Australian Public Service as being relevant to supporting innovation – either by leaders or by others.

For leaders – people wanting others to do something innovative:

- empower others – share where innovation is most needed
- invite in the outliers – demonstrate that diversity is valued
- say "Yes, and" not "No, because"
- don't over-react – appreciate experimental error
- support innovators and share stories of success

For innovators – people seeking to do something innovative:

- ask questions – of others and of yourself
- try things – experiment a little (or a lot)

- (help) tell a story – who does this matter to and why?
- focus on the problem to be solved – don't get attached to "your" idea
- stick at it – believe in the power of persistence

Source: Roberts (15 February 2016).

Of course it will be the demonstration of those behaviours – seeing them acted out and reinforced and even rewarded – that really matters. Keen attention will be paid to how those who demonstrate the behaviours are treated – what happens to them will help other system actors decide whether to emulate their behaviours.

Linking innovation with regular business

If innovation is never linked to priority projects or initiatives, it will never be seen as truly significant, or as something that needs to be truly integrated.

On the other hand, if innovation is only ever associated with top-down priority projects, it will never be seen as truly routine. Innovation will be viewed as a process used only for select projects, rather than a bottom-up approach or a process that others (including external actors and partners) can influence.

Mechanisms to connect innovation with regular business can play an important role in demonstrating that innovation is part of the new normal. This can be complemented by allowing space for smaller innovations, and by facilitating the sharing and socialising of smaller innovations, which also help demonstrate the regularity of innovation, and show that it is an entirely normal thing.

Socialising innovation

Innovation can seem remote from the day-to-day job. Even if innovation is understood and there are tangible examples ("clarity"), it can still seem like a process undertaken only by other people or other areas. How can innovation be socialised at the system level, so that system actors get to see how it contributes to their work, rather than adds to it?

One way is through events and activities to help public servants, their organisations, and other system actors become familiar with innovation, to see it as part of the normal (even if not every day) routine of things (see Box 5.16).

Box 5.16. Australian Innovation Month

Innovation Month is an annual series of events and activities organised by the Australian Public Service, but open to other levels of government and partners. It provides an opportunity for participating agencies to have different types of conversations, and, importantly, to see and participate in innovation. During the month, the Institute of Public Administration Australia also announces the winners of the Public Sector Innovation Awards.

Source: Public Sector Innovation Toolkit, https://innovation.govspace.gov.au.

Upholding innovation

Innovation in the public sector can invite criticism, and the tolerance for governments experimenting, and thereby sometimes failing, can be very low. This can create a culture where the Public Service is averse to trying new things for fear of being singled out if something goes wrong (or is represented as going wrong). The converse situation, where innovation goes well, may well be unremarked, but the cost of failure can be high.

However, innovation, and experimentation, involves doing things that have never been done before (in that context) and thus also involves a high level of uncertainty as to what will happen. "Failures" are a key part of the innovation process that help narrow down the field of uncertainty, thus getting closer to knowing what might work.

Innovation in the public sector will never be accepted as normal if this characteristic is not understood, appreciated or even defended when necessary. Innovation must be upheld as something that is needed even if it does not always work. Therefore, a key test for any public sector interested in innovation is what happens when innovative processes receive pushback and are critiqued, even though they have been attempted with rigour, regard to appropriateness and done with care.

Guiding questions for thinking about normality

Key questions to guide thinking about normality include:

- Is there a set of identified and demonstrated behaviours for supporting innovation?
- Is innovation (and the associated breaking with convention/questioning of current practices) valued in regards to career progression?
- What happens when there is public criticism of something that is seen (mistakenly or otherwise) as being innovative? Is the default response defensive or openness?

Box 5.17. Prompting question to consider whether there is normality around innovation

Is it usual in job interviews for candidates to be asked about or considered in reference to their experience with innovative projects, their innovation skills or their project management in situations of novelty and uncertainty?

A reinforcing cycle

Each determinant will influence the others; however, the strongest relationship will be clarity>parity>suitability>normality>clarity.

- Clarity – lack of understanding of innovation, its importance and the areas where it matters will prevent innovative processes from enjoying parity with business-as-usual. Alternately, if there is a clear sense of why innovation matters, then it is much more likely that it will be given equal attention in decision making.
- Parity – if innovation is not placed on an equal footing with default operations, and occurs only because of exceptional individual efforts or occasional external drivers, it is unlikely that the need to change underlying capabilities, systems and infrastructure will be understood, and innovation will remain an occasional activity. In contrast, if innovation is always given consideration in decision making, then investments are likely to better reflect new possibilities.

- Suitability – if underlying systems are not suitable for innovation, and innovative processes therefore takes more time, effort and learning to be accomplished, innovation is unlikely to become integrated into core business and perceived as normal practice. On the other hand, if underlying systems are suitable for innovation, it will feel more normal to undertake innovation, as there will be less of a learning cost.
- Normality – if innovation is not integrated into core practice it will remain a marginal activity; there will not be a lot of clarity around how innovation fits, including what it is, why it is important or to whom it matters. However, if innovation is integrated into core practices, then it is likely that there will be a much greater understanding of innovation, what it means, and why it is important.

This interdependency between the different determinants means that the overall performance of the system will be limited by the weakest factor. System issues will likely converge around the driver that receives the least support.

An innovation system is about more than just producing innovation

The model proposed above is concerned with the basic performance of an innovation system – does it produce innovation in a reliable and consistent fashion that matches the need or appetite for innovation? This could be considered "Level 1", or the baseline of what might be expected or needed from a public sector innovation system.

Yet in a democratic system, this is not sufficient. There must also be regard to whether the right sorts of innovation are occurring – not just that the innovation that occurs solves immediate problems, but that the innovation also addresses or reflects higher order concerns.

Table 5.7 proposes a somewhat speculative maturity model. This is an examination of what different levels of sophistication for an innovation system might look like, in an attempt to reflect that the concern with an innovation is not just about whether innovation (even good innovation) is occurring. If level 1 is the baseline, level 2 could be considered as reflecting a system where innovation is integrated, where there is deliberate reflection on what innovation is wanted for, whether it is appropriate, sustainable, and accepted. Level 3 could be considered as reflecting a system where innovation is deeply embedded and is informed by societal values, and where disruptive shocks actually strengthen the system rather than weaken it.

This maturity model is not sufficiently developed or tested for the purposes of considering the innovation performance of the Public Service of Canada. Rather, it is included here purely as a prompt for reflection as the practice of innovation develops, to help aid the consideration of broader concerns. It should be considered as a starting point for discussion, rather than a prescription, as there is still much to be learnt.

Without such reflection, there is a risk that any innovation system will become unstuck or undone. A system could, for instance, allow for the promulgation of highly effective innovation that contravenes some societal aspirations and values, and thereby damages the government's social licence for innovation.

At the same time, innovation will shape and change values and ambitions, and thus what is expected of government. There will be no one answer to what a mature system should look like.

The maturity model will be further refined and developed as public sector innovation systems become better understood, and more is learnt about how the practice of public sector innovation can (and potentially) should evolve.

Table 5.7. Public sector innovation – Determinants of innovation at differing levels of system maturity

Level of analysis Core determinants of innovation	Innovation System Level 1: a) Is the system functional? b) Is innovation happening? c) Is the wider innovation context being reacted to? d) Is innovation tolerated?	Innovation System Level 2: a) Is there reflection/learning about the system? b) Is the innovation that is happening, the innovation that is wanted? c) Is the wider innovation context being proactively engaged with? d) Is innovation accepted?	Innovation System Level 3: a) Is there realisation about/insight into the nature of the system? b) Is the innovation that is happening, the innovation that ideally should be happening? c) Is the wider innovation context being actively shaped? d) Is innovation embraced?
Reason for: What is driving the intent to innovate?	Clarity about innovation Is there a clear sense of why innovation is needed, what it's for, and who is responsible/can play a part?	Aspiration for innovation Is innovation not only needed, but wanted in order to achieve goals and objectives beyond the current priorities?	Vision of innovation Is innovation not only wanted, but seen as central in order to realise a vision of what could be?
Possibility of: What affects the likelihood of innovation being attempted?	Parity of innovation Are processes and default settings open to unexpected innovative proposals and possibilities?	Legitimacy of innovation Are processes and default settings not only open to allowing innovation, but put priority on those that have a social licence and contribute towards the legitimacy of innovation and government?	Values informing innovation Are processes and default settings not only attuned to the legitimacy of innovation, but reflective of core societal values, and aware of how innovation intersects, interacts and informs them?
Capability for: What is needed in order to carry out the attempt at innovation?	Suitability for innovation Are underlying technologies, infrastructure, operating models and investments aligned with the global range of the possible, and suitable for whatever might be attempted?	Sustainability of innovation Are the underlying technologies, infrastructure, operating models and investments not only aligned to the range of the possible, but they actually help sustain the ongoing capability for innovation?	Anti-fragility of innovation[1] Are the underlying technologies, infrastructure, operating models and investments not only contributing to the sustainability of the innovation system, but also contributing to a system that will be improved by further disruption when it occurs?
Experience of: What affects whether innovation continues?	Normality around innovation Is innovation seen as part of the day-to-day of how things are done and responded to accordingly?	Assimilation of innovation Is innovation seen not just as normal, but accepted and assimilated as an integral part of how things operate?	Modality of innovation Is innovation not only integrated, but different modes of innovation and thinking are appreciated, encouraged and used regularly, so that learning and unlearning can take place in different ways, and the new dominant paradigms are open to challenge?

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Chapter 6. Appraising current efforts

This chapter examines the innovation system of the Public Service of Canada through the four lenses of the model, in order to obtain an understanding and appreciation of the impact of current initiatives, drivers and developments.

Overview

The previous chapter provided a model for considering the different determinants of innovation in a public sector innovation system. Each of these determinants can then be used as lenses through which to view an innovation system – using each of them as the primary view, what is seen of the varied activity occurring? This chapter considers the Public Service of Canada's innovation efforts through those four different lenses of this framework, in order to make sense of the cumulative impact of the different initiatives, activities and agendas in place.

The range of encouraging activities already in place is indicative of the considerable investment and action taken to ensure the Public Service is able to draw on innovation to achieve better results for Canadian citizens. Some of these initiatives are likely to make a significant difference in how innovation is understood, engaged with and practised.

However, more needs to be done if the Public Service of Canada is to fulfil its own ambition to become a truly innovative public service. The public sector innovation system has already evolved significantly, but there is still further to go. In its consideration of the Public Service's current innovation efforts through the lenses of the model, this chapter attempts to explore and identify potential areas where additional effort might be useful.

The model, as presented in the previous chapter, is not intended to be prescriptive. Rather, it introduces a framework to help appreciate and understand the aggregate impact of the diverse initiatives and factors at play across the system. The model is also meant to provide individual system actors with a means of gauging the system's robustness, to enable them to appraise their own contributions and assess what else might be needed.

The need for ongoing assessment will be particularly important as the desired "level" of innovation performance will continually adjust and change over time. Accordingly, the "right" settings and the "right" activity will not remain fixed. The model should therefore be used as a means of reassessment as circumstances and the appetite for innovation change, in order to guide the adjustment of activities into the future.

It should be noted that one of the most problematic aspects of an emerging, and thus fragmented, innovation system is that it can be difficult to ascertain what is definitively a part of the system, and what is not. Factors that may not at first appearance seem to relate to innovation (e.g. anything that changes the risk appetite or culture, such as a crisis, a scandal or a major implementation issue?) can affect the system. In addition, innovations, being novel, will not always be immediately recognised. Identifying all components that are (or might be) relevant across a fragmented system with only a loose understanding of innovation is therefore highly challenging.

This examination therefore attempts to identify the elements likely to be the most pertinent to the practice and infrastructure of innovation. This exercise is not, and cannot be, exhaustive, as any system involves myriad processes often occurring at once. Instead, the intent is to present the overall picture, rather than identify every single nuance. A natural consequence is that some existing activities and elements have been omitted, missed or could be interpreted differently. However, the overall aim is to provide a starting point for considering the general strengths and weaknesses of the system.

Given current activity, the following broad assessments can be made:

- **Clarity:** Important steps have been taken that are contributing to a stronger sense of clarity about innovation and its importance. However, there is less clear evidence

that these steps will be sufficient in order to help fully integrate innovation into the broader 'story' of the Public Service of Canada and how people understand it.

- **Parity:** Significant efforts have already been made in regard to parity, and these should be recognised (and learned from). More might need to be done to raise awareness of what is now possible, in order to combat legacy perceptions and defaults that presume something cannot be done. In other respects, there is still opportunity to do more to help challenge the dominance of the status quo in terms of what is considered possible/appropriate.
- **Suitability:** In many ways, the issue of suitability is the area where the least is known about what works, and thus what needs to occur. The activities already underway may be sufficient, but this is an area that will need to be observed and tracked over time to see whether sufficient steps are being taken.
- **Normality:** This is an area where central initiatives can set the parameters/provide the license, but much of the responsibility will need to be reinforced across the system, in different agencies and by different actors. Various elements are in place, but their effectiveness will need to be observed over time.

The following section examines each of the lenses in detail including current strengths and potential gaps.

Lens 1: Clarity

Is a clear signal being sent to system actors about innovation and how it fits with other priorities?

A number of recent developments have contributed to a much stronger and clearer signal about innovation, its importance and its role:

- The explicit identification of experimentation in the Mandate Letters from the Prime Minister to Ministers spelled out the expectations and requirements for greater innovation in the pursuit of government priorities.
- The Federal, Provincial and Territorial Declaration on Public Sector Innovation (see Box 6.1) outlined a national public sector consensus on the importance of innovation, its value and opportunities for collaboration and shared learning.
- The establishment of the Deputy Minister Task Force on Public Sector Innovation (TF-PSI) (see Box 6.12) and its companion, the GC Entrepreneurs (see Box 6.15), highlight the importance of innovation for senior leadership, and help demonstrate their willingness to try new things and commit dedicated resources.
- The Impact and Innovation Unit (Privy Council Office) and the Innovation and Experimentation Team (Treasury Board Secretariat) both send an important structural signal from central agencies about how innovation is regarded as integral to the work of the public service.
- The establishment of the Impact Canada Initiative (see Box 6.5) illustrates that innovation is not incidental to the core work of government, but central to how it will be achieved.

These changes, along with an array of smaller initiatives and activities, illustrate a definite shift in the operating environment, and a move to having a stronger and clearer signal

within the system about innovation. As a result, it will become progressively harder for any civil servant within the Public Service of Canada to remain unaware of the increased focus on innovation.

However, this signal has yet been integrated into more operational aspects. This may just be a matter of time and effort to ensure that the signal remains consistent and strong. Alternatively, additional action, emphasis or clarification may be required.

Box 6.1. Federal, Provincial and Territorial Declaration on Public Sector Innovation

On 14 November 2017, the Federal, Provincial and Territorial Clerks and Cabinet Secretaries signed the following declaration outlining the actions they would take to support innovation in the public sector across Canada.

"To achieve meaningful and lasting results for the people we serve, governments need to work in new and inventive ways with a greater focus on what works and what doesn't. Innovation can do more than just drive strong economic growth. It has the potential to solve the big challenges that we face as Canadians.

Innovation, experimentation and openness require constant effort–even if they present risks. We need to be ambitious, nimble and collaborative to achieve meaningful and lasting results. We need to rely on the diversity, ingenuity and creativity of Canadians to solve real problems. In times of considerable change and uncertainty, the greatest risk is refusing to take chances and try new things.

Following this third annual Clerks and Cabinet Secretaries Conference on Policy Innovation, we, the Federal, Provincial and Territorial Clerks and Cabinet Secretaries, commit to taking the following actions to support innovation in the public sector:

- Seeking out and applying new insights, ideas, tools and technologies to complex problems by working within and across governments to continuously improve policies, programmes and services;
- Experimenting and measuring results by identifying what works and what doesn't, so that we can invest where we can have the greatest impact;
- Sharing knowledge and data with citizens in an open and transparent way, while learning from them and incorporating their expertise and input into our work;
- Putting citizens first by collaborating with all sectors of society including Indigenous peoples, the non-profit and private sectors, and civil society to co-design and implement better policies, programs and services;
- Exploring opportunities to work together on prizes, challenges and other outcomes-based funding mechanisms; and
- Continuing the dialogue on innovation and experimentation across Canada by sharing experiences and knowledge, making linkages and establishing partnerships.

Canada is a resilient, inclusive, diverse and outward-looking country. These are our strengths. But we must build on them and be even more inventive if we are to succeed in the face of rapid social, economic, environmental and technological change. Rapid innovation is now the norm in the scientific, business and social sectors. Embracing this

innovation is no less important in the public sector and is crucial to building inclusive, sustainable communities."

Source: Government of Canada (2017).

Actors understand what innovation means

Innovation is of obvious importance, however it is not yet clear that there is a shared understanding of what innovation actually means. Some of this definitional/conceptual uncertainty will be resolved by ongoing communication from the centre of government and senior leaders about what innovation means to them. Other areas of uncertainty will be resolved as more and more people become involved in the innovation process. There are, however, potential areas where these approaches may not be sufficient.

Actors outside of the public sector, for example, may not have a clear idea of what the Public Service means by innovation. Furthermore, in the absence of a clear, shared understanding of innovation within the Public Service, it is unlikely that those outside the sector (industry, not-for-profits, other potential partners and stakeholders) will find it easy to engage in collaboration on innovation-related matters (potential opportunities, problem areas, etc.). This may lead to mismatched expectations that could harm innovation efforts.

Additionally, as the practice of innovation becomes more sophisticated in certain areas, it is likely that some people will possess a very nuanced and developed appreciation of the subtleties of innovation and the associated vocabulary, while the greater population will have a more basic understanding of the term and its significance. Thus, there is potential for confusion as the available language used to talk about innovation develops faster than the collective understanding and practice of innovation.

For instance, as a natural consequence of the focus on experimentation, new language has been introduced (see Box 6.2) under the broader umbrella of innovation. However, this has also contributed to some confusion, as the two related but distinct concepts have become conflated or muddled for some.

Box 6.2. Experimentation direction for Deputy Heads – December 2016

In December 2016, the Treasury Board Secretariat and the Privy Council Office issued a direction reinforcing the Government's commitment to devote a fixed percentage of programme funds to experimenting, and providing context and directions for Deputy Heads on how to implement this commitment.

The direction defines experimentation as testing new approaches to learn what works and what does not work using a rigorous method that could feature:

- deliberate, thoughtful, and ethical experimental design;
- comparisons between interventions and base cases to capture evidence (e.g. randomized controlled trials, A/B testing, counterfactual experiments, baseline performance data, pre- and post-tests);
- randomized assignment to test and control groups, whenever possible;
- rigorous impact measurement and causality assessment; and

- transparent publication of positive, negative and neutral results.

Source: Government of Canada (2016).

This particular tension will likely resolve itself over time as experimentation becomes more embedded, and aided by key actors with the public service, particularly in central agencies (e.g., TBS, PCO). However, as the language under the innovation umbrella expands (e.g. behavioural insights, impact investing/innovative finance, experimentation, design thinking, foresight, entrepreneurship,) there is potential for further confusion to arise.

The inclusion of innovation examples in high-level reports may help promote understanding, although there does not appear to be an easy way for those within the Public Service, or those without, to acquire a comprehensive overview of innovative activity occurring across the system.

Direct experience and engagement with innovation will likely remain an effective means of reducing lack of clarity about what innovation means. While there are a growing number of innovation-related projects or initiatives where novel approaches are being used or are appropriate, it will still likely take time for most public servants to have "hands on" experience with innovation. Relying on top-down directives to ensure such engagement may not result in a "critical mass" of understanding within the system about innovation, what it means, what it looks like and why it matters.

Additional clarity can come from empowering actors with the knowledge and skills to better assess the opportunities for innovation in their own context. Innovation teams and labs, for instance, may be a more systematic way of achieving this (see Box 6.3).

Box 6.3. Office of Energy Efficiency Social Innovation Lab

"Relationships, possibilities then action"

The Social Innovation Lab within the Office of Energy Efficiency (OEE) at Natural Resources Canada works to co-create service transformation by applying new policy methods and approaches. The lab avoids putting a methodology at the centre of its work, and instead places a lot of emphasis on the "human" element and understanding the context, the relationships and how the lab can best add value. Only through understanding the people involved and the context can the lab's team begin to understand the needs and then the possibilities for change.

Among its projects, the lab has contributed to initiatives in a range of areas:

- The lab works to engage Canadians through their smartphones on energy efficiency awareness and action. This involved collaborating with Carrot Insights to reward Canadians for increasing awareness of the Energy Star symbol that identifies high-efficiency products.
- The lab has taken a cross-jurisdictional approach to improving the uptake of EnerGuide labelling and reporting in the housing sector.
- The lab works to improve awareness and uptake of fuel-efficient vehicles.

These projects have not only provided a means for the OEE to explore new approaches, they have also given the lab an opportunity to test and develop its offering, and

understand how it can best help to embed continuous improvement and innovation into core service delivery.

The lab also acts as a source of advice on experimentation and facilitation for other staff in OEE, Accordingly, all staff in the lab have been trained in learning organisation practices through the learning organisation community of practice.

The lab adopts a developmental evaluation approach in order to ensure that it is continually learning and self-assessing as it operates. Established in early 2016, the lab and has taken time and investment to develop expertise, an understanding of the operating environment and the operating model for the lab. One challenge for the lab has been helping to expand understanding of what "results" are – that they include learning, insight, capacity building and knowledge, all of which are then used to inform future projects. In short, results are not just a matter of achievements, they involve preparing the organisation for the future.

Finally, the Social Innovation Lab demonstrates how innovation labs can help take a sometimes ambiguous and abstract concept (innovation) and help turn it into something very real and tangible that has real world significance and resonance for both staff and stakeholders.

Source: Interviews.

It may be though that additional effort is needed to equip, empower, expose and engage public servants and external actors before public sector innovation becomes meaningful at a system-wide, rather than individual or organisational, level. It will also be important for on-the-ground learning about innovation to feed back into the shared understanding of innovation.

Actors understand innovation in relation to other priorities and agendas

The current emphasis on innovation at the political level, from senior leadership, and within key central government agencies, is acting to establish that innovation is an important agenda. However, it is not yet apparent that the initiatives in place will be sufficient to contextualise innovation among the array of other agendas.

For instance, the Results and Delivery work (see Box 6.4) is about ensuring that government priorities are delivered on. However, a results and delivery approach by its very nature will have an implicit bias to existing understandings and ways of seeing the world, and thus may be in tension with innovation. It can also be a powerful contributor to innovation, by helping to identify areas where current approaches are failing to deliver on expectations and priorities, but this is by no means automatic.

In the presence of an ongoing and consistent emphasis on innovation, the why, when and how of innovation, in relation to other agendas, may become more obvious to the actors involved. This should not be assumed though, and it may be an area where additional consideration is required.

Box 6.4. A results and delivery approach

The Canadian Government is committed to delivering real and meaningful results for Canadians. Fulfilling mandate letter commitments is essential but not sufficient. The government's goal is to improve outcomes for Canadians, which means reporting on short, medium and long-term results. The government is currently implementing a results and delivery approach, which builds on existing best practices in Canada and globally. It is characterised by three activities:

- defining programme and policy objectives clearly (i.e. what are we trying to achieve?);
- focusing increased resources on planning and implementation (i.e. how will we achieve our goals?);
- systematically measuring progress toward these desired outcomes (i.e. are we achieving our desired results and how will we adjust if we are not?).

The approach means measuring and reporting not just government activities, but also the government's impact on issues that matter to Canadians. This results and delivery approach will help to ensure that the government is having a positive impact on Canadians and that it is on track to implement its commitments.

The results and delivery approach is based on careful planning, performance measurement, solid empirical evidence and more open collaboration with stakeholders and Canadians.

Source: Government of Canada (2018a).

The relative position of innovation in the various agendas of government may also need to be better communicated to actors who are outside the Public Service, but who are still part of the innovation system (industry, not-for-profits, etc.). Activities such as the Impact Canada Initiative may help in this regard by highlighting both areas of concern and areas where innovative activity is sought. However, there might be other approaches the government/Public Service can use to signal where and how innovation is wanted.

Box 6.5. Impact Canada Initiative

The Impact Canada Initiative (ICI) is a whole-of-government effort that helps departments to accelerate the adoption of outcomes-based approaches to deliver meaningful results to Canadians. It provides a prominent example of efforts to highlight the need for and value of innovation in achieving government priorities.

The ICI promotes a range of innovative approaches, including:

- **Challenges**: the ICI issues prizes to reward those can first or most effectively find a solution to a defined problem. It also makes use of structured, open competitions to solicit proposals to fund the best ideas with the potential to solve thematic problems.
- **Pay-for-Results**: the ICI uses customised instruments to shift the focus towards issuing payments based on funding recipients who are achieving positive and

measureable societal outcomes (e.g. social impact bonds, pay-for-success mechanisms).

Initial areas of focus have included:

- **Smart Cities Challenge** (with Infrastructure Canada): this initiative empowers communities to improve the lives of their residents through the use of data and connected technology.
- **Clean Tech Impact** (with Natural Resource Canada): this initiative seeks breakthrough technology solutions to support clean growth and the transition to a low carbon economy.
- **Responding to Canada's Opioid Crisis** (with Health Canada and other federal partners): this initiative accelerates action on innovative approaches to harm reduction and treatment
- **Improving Indigenous Outcomes** (with Indigenous Services Canada): this initiative improves service delivery through the co-creation of new and meaningful partnership models with indigenous communities and civil society.

Source: Government of Canada (2018b).

Actors understand the roles played in the innovation system

As the system evolves over time and develops in sophistication, a clearer understanding of the respective roles and demarcations in the lines of responsibility is likely to develop. These roles will likely evolve as a greater appreciation develops of what is needed and what different actors are best placed to offer. As new capabilities are developed or as new pockets of expertise, specialisation or support emerge, more formal governance arrangements around innovation may become appropriate.

However, while there may be clear lines of responsibility around certain initiatives, much innovation will occur in the "white space", the space between those lines of responsibility. Innovation often occurs at the edge, where the spheres of influence are blurred and it may not be clear who, exactly, is responsible. Formal guidance around roles will prove insufficient in such spaces, as the willingness to contribute and collaborate will be shaped by relationships (their strength and their quality) rather than mandate. This relational aspect will likely depend on more informal aspects of activity, such as networks, collaboration and joint exploration.

One consideration here might be the mapping of different possible roles that are (or can be) played, similar to what has been done in Denmark with the eight innovation archetypes (see Box 5.3 in Chapter 5). It might also be appropriate to more formally identify how different actors fulfil different functional roles and/or the capabilities that they are best placed to offer, as well as how they will be resourced and supported. More deliberate reflection on what might be expected, and what private and third sector actors can offer may also be appropriate.

Actors see how innovation fits with the shared history and context

Understanding how innovation fits with the shared history and context is also something likely to mature over time, as the innovation system develops and more activity occurs. As

discussed in Chapters 2 and 4, it is fair to say that innovation does not yet overlay entirely comfortably with the history of the Public Service of Canada, despite a history of innovation and its pursuit. Formal commitments such as the Declaration will assist, but are unlikely to change the understanding quickly. Despite repeated inclusion, the integration of innovation into the dominant narrative about the Public Service has not yet occurred. It is unlikely then that current activity is going to contribute significantly to changing this perception. It may be appropriate to consider an approach similar to that used in Denmark (see Box 5.4 in Chapter 5), where innovation was more explicitly integrated into the self-perceived identify of the public sector. This might also be assisted by greater recognition of the role that innovation has already played in the story of the Public Service of Canada.

Summary

A number of important steps have contributed to a stronger sense of clarity about innovation and its importance. However, there is less clear evidence that these steps will be sufficient to fully integrate innovation into the broader "story" of the Public Service of Canada and how people understand it.

Lens 2: Parity

When considering what action to take, do actors accord innovative options an equal weighting as existing or traditional courses of action?

Some significant recent developments have contributed to greater parity between innovation and business-as-usual operations:

- The Blueprint 2020 Internal Red Tape Reduction Tiger Team and their process to review internal tape and their recommendations for reducing unnecessary hurdles to the working of the Public Service.
- The introduction of the Experimentation Commitment in the Government's Mandate Letters, and the associated Experimentation Direction, has provided a structural force for questioning existing ways of doing things.
- The Deputy Minister Task Force on Public Sector Innovation, and its focus on core systems transformation and disruptive policy solutions, provide a high-level driver for new thinking.
- The PS Renewal Agenda works to ensure continued excellence in public services, and thus helps to question whether existing practice is the best option.
- The Policy on Transfer Payments (see Box 6.6) and the Impact Canada Initiative both allow for non-traditional options for using government funds to solve problems.
- The New Directions in Staffing policy is designed to simplify and streamline staffing, provide more variety in hiring processes, and introduce agile approaches to staffing and policies.

All these initiatives provide evidence that actors can and should question the status quo in search of alternative approaches. However, it is possible that many of these initiatives or approaches will still be viewed as special cases or applicable only to particular issues, rather than an ethos that applies more broadly. At the same time, many of those in management positions may not feel that parity is appropriate, given the need to deliver on existing

identified commitments, rather than spending time on the potentially fruitless exploration of untested ideas.

One potential risk in the area of parity – one that has not yet been realised but has a clear potential to emerge – is that there will be increasing clamour for the centre to change perceived barriers and make it easier for things to be done. Pressure to remove nominated blockages or impediments may lead to responses from the relevant areas of the Public Service and the removal of the perceived blockages. However, if the nominated blockages are not the actual source of the issue, their removal will not change the underlying innovation dynamic, and the problem will remain. This may result in continued pressure for something to be done, leading to additional changes or the removal of further perceived blockages. This cycle creates a risk that change will occur faster than the system's ability to learn about the potential impacts. This could lead to overreach in certain areas, with the potential for pushback once the results become apparent (e.g. if an experiment was undertaken without the requisite supporting expertise). Such a dynamic may have formed part of the ongoing imbalance between excessive control and excessive freedom observed in the historical innovation journey (see Chapter 2).

Out of the four lenses, parity may be the area where there is the most danger of the Canadian Public Service being overly responsive in some areas, while not doing enough to make a real difference in many others.

Processes are open to challenge

The Public Service's openness to doing things in new ways has been demonstrated in a number of important initiatives. Perhaps one of the most significant of these from a procedural viewpoint is the new policy on transfer payments, which opens up the ability for agencies to use incentive-based funding over a five-year pilot period (see Box 6.6).

Box 6.6. Policy on Transfer Payments (Generic Terms and Conditions for innovative transfer payments)

The Treasury Board Secretariat is giving departments new options for distributing government grants and establishing contribution programmes that aim to resolve existing problems. The new TBS approach, entitled Generic Terms and Conditions, applies to all departments and agencies covered by the Treasury Board Policy on Transfer Payments. This new policy enables agencies to use incentive-based funding, prizes/challenges and micro-funding over a five-year pilot. These tools will help the Government of Canada make the transition from funding based on tasks and activities to funding based on the achievement of concrete goals.

Source: Government of Canada (2018c).

Another example is the work done to cut red tape through the Blueprint 2020 Internal Red Tape Reduction Tiger Team (see Box 6.7). This significant exercise was not just limited to innovation; it also helped consider how internal bureaucracy and administrative barriers could be moderated.

Box 6.7. "Cutting Internal Red Tape: Building a Service Culture"

From the report by the Blueprint 2020 Internal Red Tape Reduction Tiger Team, September 2016:

Key findings

"Judging from the scope and intensity of the input received, internal red tape is a significant issue for public servants in all departments and in all regions. Public servants broadly recognize that in a large, complex organization such as the federal government, rules help ensure good stewardship, governance and accountability. However, while they recognize the need for rules, public servants noted that the current rules, policies and guidelines are difficult to find and, once found, difficult to understand. This judgement applies to both Treasury Board policies and the vast number of rules created by departments to supplement them.

When asked to describe their experiences with internal red tape, they identified a broad range of things that hinder their ability to perform their jobs. Internal red tape is much more than just the rules; it encompasses the behaviour around the rules. It manifests itself in difficulty getting clear instructions, with siloed information, experiencing poor client service and, ultimately, process overload. It is worth noting that recent technological solutions that had been introduced–such as MyKey, performance management, and the travel portal–were cited as sources of frustration.

Deeper dives into the underlying causes of internal red tape found broad repeating themes. Departmental processes and procedures are often more elaborate than required by Treasury Board policy. Transactions generally follow similar cumbersome processes, irrespective of the level of risk, and existing flexibilities are rarely used. And fear of audit is often cited as a driver for procedures and demands for documentation. This has created an environment where client service takes a back seat to process. And finally, both functional specialists and clients stated that they feel powerless to change the system.

Key recommendations

1. Improve the rules – Use the current Treasury Board Policy Suite "reset" exercise to streamline rules and clarify accountabilities. Departments should then review their internal departmental policies to ensure they are not duplicative or creating unnecessary burden.
2. Focus on the user – Make it easier for public servants to follow the rules by providing information, guidance, training and tools that meet the needs of users, including both functional specialists and their clients. Ensure that any technological solution is designed with the user in mind, is user tested and has a feedback loop for improvement.
3. Improve service performance – Develop robust performance measures that prioritize client service standards to counterbalance the focus on rule-following and compliance. A service strategy for internal services is critical if internal red tape is to be reduced.
4. Change the culture – Resist behaviours and incentives that drive red tape, such as the tendency to react to events by layering controls and processes. Allow for

flexibilities and adaptable practices that respond to the level of risk for a transaction. Reward desired behaviours."

Source: TBS (2016).

Such procedural steps help to ensure that the legitimacy of existing processes is not taken for granted – that innovation is, and should be, a consideration.

In terms of creating demand for processes to be challenged, the Experimentation Commitment provides a structural means to ensure that agencies reflect on how some of their spending is currently dispersed, and ask whether there might be alternative options. This could, in time, provide one of the most important means for ensuring processes are open to challenge, as a continual supply of innovative initiatives pushes up against processes tailored for more conventional approaches.

Another consideration in regard to challenging processes is that as new innovative approaches are tried, new barriers, blockers or hindrances will emerge or be identified. These barriers may not always be easy to articulate (e.g. attempts to exploit sharing economy notions might run into unstated assumptions and working processes). Nor might it always be easy to make the case for change, given that the benefits will be unproven, as opposed to the costs and risks which are more likely to be well defined and articulated. This may be particularly the case for actors outside the public service proper, but who might still have ideas and proposals with significant public benefit. Such actors are unlikely to be familiar with or fluent in the process language of the public sector.

Given these issues, more open and deliberate processes, such as explicit mechanisms of challenge that allow for the identification and consideration of unexpected issues, might be appropriate.

Bottlenecks can be circumvented

Innovative proposals can sometimes be inadvertently or deliberately constrained by approvals processes and management oversight. As identified in Chapter 4, middle management has been flagged as a concern due to its tendency on occasion to avoid engaging with innovation sufficiently. While this behaviour can function as a bottleneck, it will often be unintentional. Many innovative proposals are unlikely to fit neatly with existing projects or areas of defined responsibility, and it may be difficult for a manager to find the time or energy needed to work out what to do with an idea.

Instruments such as agency Dragons' Dens (competitive idea-pitching events) and ideas management approaches (see Box 6.8) can sometimes help address these bottlenecks. Such channels can favour particular styles of presentation, however, and may limit the range of people involved.

Box 6.8. Environment and Climate Change IdeAction Fund

The Environment and Climate Change IdeAction Fund is a departmental innovation fund designed to provide employees with resources such as expert advice, support from senior management and funding to start innovative projects that will improve the department or service to Canadians.

Source: Interviews.

More informal events such as Policy Ignite, which provides a forum for people to flag and pitch ideas, can also be valuable as a means of getting issues and ideas greater exposure and potentially circumventing bottlenecks.

While often valuable, these mechanisms are either less helpful at a whole-of-system level, where issues may arise across agencies, or where issues should be considered from a formal perspective rather than relying on informal channels. The Deputy Minister Task Force on Public Sector Innovation and the GC Entrepreneurs may be better placed to act as a means to surface ideas and issues that may otherwise find it difficult to access the right decision-maker.

Though not explicitly intended as such, the GC platforms (Box 6.9) could be seen as one mechanism for providing open forums, and thereby a potential mechanism by which bottlenecks can be circumvented.

Box 6.9. GC platforms

The Public Service of Canada has established a number of platforms for internal information sharing and collaboration. These include GCconnex and GCcollab.

GCconnex is an internal government platform for networking, sharing information, collaboration and a range of functional matters. GCcollab is an outwards-facing version of the platform that provides a forum for sharing, connecting and collaborating with external stakeholders. The platforms use open source software, and can thus be built upon by other public services if desired.

This review used the GCconnex and GCcollab platforms as part of its information gathering and sharing process, in order to help connect with public servants and hear from a wider range of participants on their views on public sector innovation.

The platforms provide a demonstration of a slow but sure transformation, with small, consistent steps representing a gradual shift towards significant change.

It may be advisable to leverage more existing communities of practice or cross-agency networks to play a formal role in surfacing ideas and issues that might otherwise be likely to encounter bottlenecks.

Allies can be found

The GC platforms are also likely to be instrumental in helping those who have identified an opportunity for innovation to find allies. By being open, such channels can help elements of the broader system self-organise and create pressure or develop the case for change. Similarly, networks, communities of practice and events that encourage interaction, information sharing and the mixing of different perspectives (including those from outside the public sector) can also be valuable. However, such mechanisms are predominantly informal channels or event based, at present (e.g. see Box 6.10).

Box 6.10. Policy Community Conference

The Policy Community Conference is a place for policy makers and shapers from across the federal Public Service and beyond to gather and learn, connect, and explore topics around modern policy making. The 2018 Conference was a two-day event that included topics such as "Experimentation in Action", exploring medium-term policy, developing policy in a digital world and how to listen for unheard voices. The Policy Community provides a forum for information sharing, including around innovative activity occurring across the public sector.

Source: Government of Canada (2018), "Policy Community Conference", https://policomm-commpoli.gccollab.ca/#about.

Further consideration could be given to how to facilitate the building of coalitions around emergent issues, particularly at a cross-agency level. It may be appropriate to have explicitly identified innovation networks or forums where those concerned with such issues are more likely to find like-minded collaborators.

Risk and uncertainty can be navigated

As identified in Chapter 4, risk aversion is an endemic feature of the Public Service of Canada (and probably many others). Risk aversion is therefore likely to be the most powerful factor limiting the consideration of innovative options and, thereby, resulting in a preference for the status quo.

There have been ongoing efforts across the system to help reframe the discussion on risk. These have included messages from senior leaders, as well as more formal mechanisms.

Given the embedded nature of risk aversion and the strength of the feedback systems (e.g. formal oversight and scrutiny mechanisms, the media, political debate) that emphasise risk aversion, it is likely that additional action will be required here. Risk aversion has a number of structural contributors; therefore structural responses (e.g. the experimentation commitment) are unlikely to be sufficient on their own, except in limited areas/particular pockets.

Summary

Some significant efforts have already been made in regard to parity, such as the New Directions in Staffing policy. These should be recognised and learned from. It is likely that some of the options for innovation that have already been opened up or enabled have not yet been fully appreciated or exploited. The Public Service might therefore need to do more to raise awareness of what is now possible, in order to combat legacy perceptions and defaults which presume that something cannot be done. There might also be an opportunity for networks (including the GC Entrepreneurs) to act as channels for sharing and disseminating existing fixes. In other respects, more still needs to be done to help challenge the dominance of the status quo with regard to considerations of what might be possible or appropriate.

Lens 3: Suitability

Are the current capabilities, systems and infrastructure suitable for the available options?

A number of major initiatives relate to the question of suitability:

- The Canadian Digital Service was established specifically to build better digital services and help replicate successful digital solutions across government.
- The Deputy Minister Task Force on Public Sector Innovation has a mandate to look at core systems transformation and disruptive policy solutions.
- GC Entrepreneurs is a group created to provide a testing ground for new roles and skills.
- The operations of various public sector innovation labs provide entry points across the public service for the testing, application and integration of new methods, techniques and ways of relating with stakeholders.
- Talent Cloud is an experimental initiative being tested to shift human resource planning to a more contemporary digital approach.
- Cross-sector partnership initiatives such as the Carrot Rewards App provide potential mechanisms to quickly obtain rich insights into the perspectives of citizens on a wide-range of policy and service issues, and thus their expectations of government.

There are also a number of change initiatives, technology-related activities, or policy-based explorations of emerging issues that will also have bearing on whether or how the Public Service of Canada develops its suitability for a dramatically changing operating environment.

These will all be important steps. Given the scope of the challenge, it is likely too early to say whether these will be sufficient. The Deputy Minister Task Force may be best placed from a system-actor perspective to have regards as to tracking the current portfolio of initiatives and their impact.

Learning from those keeping pace with external change

The Canadian Digital Service (see Box 6.11) is an example of an agency explicitly geared towards engaging with or matching external rates of outside change. While the Canadian Digital Service is relatively new, it could provide a model for how the Public Service can work to keep pace with the outside world (in a manner appropriate to government) in other areas.

Box 6.11. Canadian Digital Service

The Canadian Digital Service works with federal organizations to design, prototype and build better digital services. It has a focus on solving problems using design, agile methods and proven technologies that place the user at the centre of its work. They take successful digital solutions and help replicate them across government.

As change is affecting all aspects of the Public Service, it might be advisable for agencies and organisations to identify peers that they can learn from/with, in order to help them keep

pace. There might also be an opportunity for more central system-wide intervention in this regard to help foster such activity.

Socialising technologies (and their implications)

The Deputy Minister Task Force on Public Sector Innovation (see Box 6.12) and the companion GC Entrepreneurs are important avenues for helping to socialise new technologies. Just as the original Deputy Minister Committee on Social Media and Policy Development helped provide senior leaders with a forum for identifying and considering the ramifications of social media, the Task Force could help provide a means by which new technologies are identified and discussed, and thereby act as a prompt for the ramifications of these technologies to be considered. This will likely have spillovers across the system, as the interest in these technologies becomes seen as validated or legitimate, and will thus spur additional investigation, exploration, or experimentation.

Box 6.12. Deputy Minister Task Force on Public Sector Innovation (TF-PSI)

In November 2017, the Deputy Minister Committee on Policy Innovation (DMCPI) became the Deputy Ministers Task Force on Public Sector Innovation (TF-PSI). The Task Force focuses on realising the government's priorities on policy and programme experimentation and innovation. Its refreshed mandate is driven by two major themes:

- **Core systems transformation:** understanding the nature of barriers public servants face with outdated systems and processes that prevent innovative solutions and experiment with solutions to remove these barriers across the federal Public Service, with emphasis in the areas of Grants and Contributions, Procurement, and Human Resources; and
- **Disruptive policy solutions:** developing an understanding of new-to-government disruptive technologies and encouraging their adoption (e.g. artificial intelligence, Blockchain); crowd sourcing and co-designing solutions with Canadians through public engagement vehicles such as the Impact Canada Initiative and developing interdepartmental solutions to find solutions to identified Results and Delivery Unit deep dive policy priorities.

New skills and increased capacity are required to accelerate progress on core systems transformation and disruptive policy solutions. The Task Force is therefore being paired with Policy and Program (GC) Entrepreneurs, who are being recruited to bridge gaps and help the TF-PSI deliver on its priorities.

The Entrepreneurs initiative aims to provide mid-range level employees with an opportunity to upskill their leadership capacity and gain exposure to cross-cutting policy projects. The projects will focus on initiatives that deliver measureable impacts on policy and programme challenges cutting across departmental mandates. The projects can be linked to Grants and Contributions, Procurement, Human Resources, Disruptive Technology, Public Engagement and/or Deep Dives. Project priorities will be determined by the TF-PSI.

Source: Government of Canada (2018d).

Another initiative working to socialise new technologies is Policy Horizons Canada (Box 6.13), which helps to identify emergent issues and make them tangible through their research projects. Initiatives run with Policy Horizons such as "Canada Beyond 150", which introduced about 80 new public servants to new methods including foresight, play a valuable role in ensuring a broader future orientation. Such initiatives should provide a greater understanding and appreciation of the changes that technologies (and their associated paradigmatic shifts) can bring, and why that matters for the public sector.

Box 6.13. Policy Horizons Canada

Policy Horizons Canada conducts strategic foresight on cross-cutting issues that informs public servants today about the possible public policy implications over the next 10-15 years. Horizons' mandate is to identify emerging policy issues and explore policy challenges and opportunities for Canada, as well as to help build foresight literacy and capacity across the Government of Canada. Horizons' experienced futurists provide expert advice on emerging issues, foresight and scanning through one-on-one discussions, interdepartmental meetings, and facilitated workshops.

Source: Policy Horizons Canada (2018), www.horizons.gc.ca.

This is an area where closer engagement with research institutions and private sector firms (including larger technology players as well as start-ups) is likely to be vital. The review did not examine the extent of engagement in this respect, but indicative signs from discussions suggest that this is an area where further development could be pursued.

In addition, while the activities identified are important and encouraging, given the scope of change, the speed at which technology is changing and the myriad ways in which such change might have implications for the work of the Public Service, it is questionable whether they will be sufficient. While some positive signs have been observed in a number of domains (e.g. in relation to exploring the implications of artificial intelligence, or engaging with Blockchain technology), more might be done, especially given the size and breadth of the Public Service.

Exploring new operational models

Numerous efforts are underway to explore new ways in which the Public Service could operate. These range from the small, to the large and to the in-between (Box 6.3). The most significant, GC Talent Cloud, is still nascent, but is audacious in scope in that it offers a vision for what a truly contemporary system might look like (Box 6.14).

Box 6.14. GC Talent Cloud case study

At the beginning of 2012, Deloitte released its GovCloud concept, which proposed the restructuring of government workforces to meet the changing needs of citizens in complex environments. Drawing inspiration from the concept, Natural Resources Canada (NRCan) with its IN.spire Innovation Hub set out to test a new form of workforce planning – the GC Talent Cloud. The idea was for the GC Talent Cloud to become a new digital platform for pre-qualified talent with a competency validation process and an easy searchable system.

Thus, a vision of a digital repository of pre-qualified talent emerged, where the curation and distribution of talent is optimised for fast placement for project-based work. The GC Talent Cloud project proposal envisioned that talent in the future would be drawn from the repository using a term-hiring mechanism, ensuring the protection of workers' rights. The credentials of those in the GC Talent Cloud would be validated and preserved in a way that reduces duplication, increases credential integrity and vastly increases the scope of the talent available to hiring managers. As talent becomes available more flexibly across the public sector, it would serve to improve the innovation system as a whole.

To test this approach, a research pilot was designed to test the parameters of the GC Talent Cloud concept. The Treasury Board Secretariat of Canada took the lead on this project given its potential impact across the federal public service. At present time, work is underway to build the GC Talent Cloud platform while addressing key issues, such as workers' rights, labour relations, rights and benefits, etc.). Pilot projects with departments to use the GC Talent Cloud are also being created.

As is often the case, the outside partners further away from the context of innovation testing are more supportive. In the case of GC Talent Cloud, Deloitte is interested in seeing a public sector proof of concept case going through. Inside the Public Service, the Government of Ontario has shown support and interest in developing the model further.

Source: Interviews.

It is likely that the commitment to experimentation will spur further questioning of existing business/operating models within government. The core systems transformation mandate of the Deputy Minister Task Force on Public Sector Innovation should also assist in this regard by providing a forum where a whole-of-system view can be taken. However, much of this innovation will be fundamentally challenging, and will clash with well-established structures, processes and associated investment/funding commitments. Exploring new business models will rarely be a comfortable process and will either need high-level sponsorship and protection, or some degree of autonomy for initial shielding as learning occurs.

Keeping track of changing expectations

Tracking changing expectations was one area where the review did not find a great deal of activity, and therefore suggests itself as an area where more attention should be devoted. The Carrot Rewards partnership (see Box 4.1 in Chapter 4) is probably the closest in terms of pointing to a potential pathway ahead. By providing access to a large and diverse population, it provides an example of how digital platforms can quickly provide insights into citizen expectations (or current understandings) of a range of issues. Further investigation of how citizen and stakeholder expectations of government can be understood is warranted. In the absence of this, the Public Service of Canada's suitability to deal with new demands requiring innovative responses is likely to be inhibited, as the need for change will not be understood or sufficiently felt.

Summary

In many ways, the issue of suitability is the area where the least is known about what works, and thus what needs to occur. The activities already underway may be sufficient, but this is an area that will need to be observed and tracked over time to see whether sufficient steps are being taken.

Lens 4: Normality

Is innovation seen as integral rather than as an occasionally accepted deviation from the norm?

As noted in Chapter 4, innovation is not currently perceived as the norm. However, the following range of activities may help to change this perception:

- The Declaration and the Deputy Minister Task Force on Public Sector Innovation provide a sign from leadership that innovation is expected.
- The Free Agents programme and the GC Entrepreneurs demonstrate that innovation is a valued skillset.
- The Clerk's Annual Report to the Prime Minister often recognises and highlights instances of innovation.
- The ongoing PS Renewal work helps to emphasise that renewal (change and innovation) is an ongoing part of the Public Service's story, and the annual Innovation Fair provides a forum for recognising and sharing innovation.
- The development of networks helps share and promote innovation across areas of practice.
- The ongoing Innovative Management Award from the Institute of Public Administration of Canada recognises and promotes innovative activity occurring in the Public Service.

A range of actions occurring in pockets may also help foster normality around innovation, in particular initiatives around skills and hiring.

In practice, it may be difficult to achieve the right balance in the area of normality. Some aspects that function as natural levers for highlighting the value and importance of innovation (e.g. forms of recognition or dedicated roles) may also create a sense of specialness around innovation. In order to normalise innovation, it must be recognised, but by recognising it, there is a risk that innovation is singled out as not normal. This may be an unavoidable tension that resolves itself over time, or it may instead require additional effort to ensure that innovation becomes seen as part of everyone's role.

Behaviours to support innovation

Innovation labs are likely to assist in helping inculcate a broader set of innovation supportive behaviours. Labs will often be at the forefront of exploring new methods and techniques and new forms of engagement, and thus are likely to often need to find ways of working that accommodate them. Labs therefore may be able to function as a test-bed and a source of inspiration for new behaviour sets that are more suited to engaging in innovation.

Another major intervention that could help identify and reflect on the behaviours most suited to supporting a more innovative Public Service is the establishment of the GC Entrepreneurs (Box 6.15). The Entrepreneurs are in a unique position in that they have dedicated time to reflect on innovation, are being exposed to new thinking and issues where innovation is required (e.g. disruptive technology), and are receiving innovation training. This group, then, is an extreme test case in some ways, going beyond the work of the Free Agents or the Impact and Innovation Unit's Fellowships, making them well placed to consider what innovation behaviours may be appropriate for the Public Service of Canada.

At the same time, the Entrepreneurs, as designated innovation "resources", are in a position where they may be viewed as "special" and therefore the antithesis of normality. It is likely that the success of the Entrepreneurs with regard to normality will depend heavily on their ability to act as conduits for learning and to function as nodes within wider networks – to be seen as resources rather than new members of an innovator class.

It may be helpful for there to be explicit reflection about existing behaviours that are preferenced in the work of the Public Service of Canada, and whether or how they might sometimes conflict or compete with behaviours that are more supportive of innovation.

Box 6.15. GC Entrepreneurs

The GC Entrepreneurs (GCEs) are a group of employees from across the Government of Canada with the opportunity to sit on the Deputy Ministers Task Force on Public Sector Innovation for a period of up to 18 months. This cross-departmental committee is mandated to play an action-oriented role in experimenting with emerging tools and approaches and helping provide public servants with the skills and knowledge to achieve better results for Canadians.

With the support of Deputy Ministers and The Privy Council Office's Impact and Innovation Unit, GCEs work to examine broad trends and emerging technologies with the objective of advancing concrete initiatives in two key mandate areas:

- advancing transformation in core systems, including human resources and procurement
- supporting experimentation with disruptive technologies such as artificial intelligence and Blockchain.

The first cohort of GCEs is working across departmental lines to advance a portfolio of action-oriented innovation projects with the ultimate goal of improving the lives of Canadians. They also play the role of ambassadors for innovation and change by seeking to unlock talent and entrepreneurial spirit across the public service.

As part of the GCEs' development process, all 18 members are participating in the Nesta States of Change training. The overall aim of the programme is to support public servants in adopting innovation mindsets and habits that help them become more effective change agents, and to sustain an innovation culture in government.

Linking innovation and regular business

A common means for any system to encourage particular behaviours, practices and activity, is for it to be measured. Innovation, however, is an inherently difficult thing to measure due to its context dependence and the fact that the practice of innovation evolves over time as new things become possible. Given that, softer measures may be appropriate. Encouraging experimentation with the means to assess innovation performance may result in collective benefit (e.g. see Box 6.16).

Box 6.16. Canada Revenue Agency self-assessment on innovation

The Canada Revenue Agency (CRA) is conducting a self-assessment to determine the extent to which it is a world-class tax and benefit administration. One of the CRA's strategic priorities is innovation; therefore, this is one of the areas it is investigating as part of its self-assessment. Given the lack of existing tools to this end, the CRA has developed its own tool to evaluate whether:

- innovation is integrated into strategic planning and decision-making
- innovation is operationalised in the organisational design and practices
- innovation is celebrated and the results of innovation measured and shared.

The self-assessment exercise could provide significant lessons that might be applicable more broadly across the Public Service, and help start a collective discussion about how to gauge the innovation strengths and weaknesses of key players across the system.

Source: Interviews.

Another example of significant work undertaken to highlight innovation as a regular way of doing things is the introduction of the Free Agent programme (Box 6.17). While the programme by its very nature is an exception, as it scales and more actors become involved, it will help to demonstrate that innovation is part of the normal way of doing things. There is a risk that it still contributes to the sense of an "innovator class" rather than innovation being a part of everyone's job. There may thus be a need for ongoing attention to ensure that innovation is understood as an area where everyone has a role to play, but that as with other core practices (procurement, HR, financial management), it is an area where there will be people with particular skillsets and expertise to offer.

Box 6.17. Free Agent programme case study

The Free Agents programme was one of Natural Resources Canada (NRCan) Innovation Hub's earliest pilots to test out the feasibility of a new type of workforce. It was supposed to test the market viability, efficiency savings and psychological stress on workers in the gig economy and start building new competency modelling and screening designs.

Free Agents are people who possess successful innovator and problem-solver attributes, and wish to work in a project-based manner. They are able to choose their work and undertake project-based opportunities across the Public Service. They have the freedom to select work that matches their skills and interests which allows them to make a contribution that they find meaningful.

The first Free Agents programme was launched in 2016 in NRCan as a two-year pilot. As many different types of work could benefit from the model, NRCan's Innovation Hub chose to forego the choice of a specific background or skillset for Free Agents. Instead, the Innovation Hub developed a set of attributes and behaviours that the Public Service innovation community considered valuable for innovation and problem solving in their organisations. These attributes formed the basis for the pilot's screening process. Candidates who successfully demonstrate these core attributes are offered lateral deployments to positions in a special unit of the NRCan Innovation Hub. This lateral deployment model allows for flexibility in the selection process and assessment methodology. Deployments do not need to clear priorities or undergo a traditional

competitive process for appointment. Furthermore, with free agents NRCan has removed the usual hurdles from hiring departments: the free agents are hired and work for NRCan, but are deployed elsewhere. Hiring departments can give two weeks' notice if the agents do not fit the purpose or the team, while the agents themselves enjoy job security with NRCan.

There was some resistance from corporate structures, because the model did not fit into established mechanisms, and also because the Innovation Hub was not well aware of specific rules relating to IT (e.g. using laptops from department in another), human resources, finance and security (e.g. background checks). One of the more major hurdles was the 15% fee NRCan collected from participating organisations in addition to the wage recovery – there was no precedent for this fee and NRCan lacked the authority to collect it. However, a legal option to do so was ultimately found and is awaiting approval. Another barrier was the job classification system: free agents may have to on occasion undertake tasks at higher levels then their own initial level. While many of these administrative issues are not completely resolved, the system is currently working without any major grievances. "The Free Agents model hacks corporate systems, but doesn't challenge them in their entirety."

On a substantive level, the major concern at the initiation of the programme was simple: will there be demand for free agents? The fact that public sector organisations are changing due to digitalisation is a fact, but the Innovation Hub did not know if the pace of change was fast enough to make the need for project-based work visible and targetable in the system. However, word of mouth proved to be effective and knowledge about the programme and its possibilities spread fast. However, deploying agents to projects was not frictionless, especially if the connected tasks were not well defined.

The talent managers of Free Agents found that managers in general do not scope out their needs at the beginning of projects, and do not put a lot of effort in up front in selecting people for specific tasks. "Teams are understaffed in general and managers are just looking for bodies." This does not fit with the Free Agent model, so NRCan needed to put more effort in from their side to define the role of Free Agents and improve project descriptions on the managerial side. While demand in the beginning reflected requests for more general problem-solving skills, needs have become more prescriptive with calls for more specific skills (e.g. in regard to experimentation). The programme has now outgrown the single department in NRCan and is scaling, having identified a partner department to hire the next 30 Free Agents.

The pilot is currently undertaking a formative evaluation, but initial feedback surveys show that both the Free Agents and hiring managers have benefited greatly from the programme's activities. In the first year of the pilot, the programme staffed 42 projects in 20 departments. The projects spanned a broad range of business lines including policy development, communications, science and research, and computer programming. Projects ranged between two and 12 months in length; however, the majority (76%) were between six and 12 months.

When candidates enter the programme, many have frequently acted temporarily in positions above their substantive level for long periods. They are frequently encouraged to be innovative; however, during competitive processes they often feel they cannot demonstrate their innovation capacity and believe that doing so actually reduces their chances of career advancement. Once in the programme, job satisfaction and enjoyment are considerably higher for Free Agents compared to the rest of the Public Service.

Furthermore, the vast majority of Free Agents report new opportunities to apply existing skills and develop new skills, greater access to the innovation community and higher likelihood of remaining in the public service.

Though still higher than the general Public Service, the Free Agents reported relatively lower levels of agreement with questions relating to diversity, balancing work and personal life, and mental health. Data from the Monthly Survey and journals showed that Free Agents felt some pressure to perform at a consistently high level and ensure no downtime between their assignments. The pilot will use the discussions and insights from these workshops to inform the programme's approach to diversity, inclusion, and workplace wellness and mental health. The pilot will also investigate how best to address the unique characteristics and stressors of free agency and put in place safeguards to minimise the potential to overburden Free Agents.

Based on the results from a survey of hiring managers, the speed and convenience of hiring a Free Agent represent the greatest value provided by the programme. Managers' overall satisfaction with the pilot was very high (90%) and the vast majority would hire a Free Agent again (84%).

On the whole, the Free Agent model is a great way to expand the capacities of the existing system within the boundaries of a legacy system. However, as outlined by one of the interviewees: "What is the right scale for Free Agents? I don't know the answer to that. It is growing because of demand, but is it enough or is it just a not-good-enough answer".

Source: Interviews.

Other initiatives, such as the Impact Canada Initiative will be very important in demonstrating that innovation is integral to the work of achieving and delivering on government priorities. However, similar to Free Agents, such initiatives will encounter the tension of both demonstrating that innovation is linked with high-profile projects, but that it is also relevant and expected in the day-to-day workings of the Public Service.

It may be helpful for recognition efforts to ensure that innovation is identified across the whole spectrum of the work of the Public Service, and that the stories of "day-to-day" innovation are accessible and shared, along with instances of innovation being instrumental in high-profile work.

Socialising innovation

How is innovation being showcased and introduced to both public servants and to stakeholders and partners (and even citizens more generally)? Two of the major means by which innovation appears to be socialised are the Clerk's Annual Report to the Prime Minister and the annual Innovation Fair (Box 6.18). Both of these exercises help to highlight instances of innovation and contribute to a broader awareness of how innovation is occurring across the Public Service.

Box 6.18. Innovation Fair

In 2018, the fourth annual Blueprint 2020 Innovation Fair was held. The fair takes place in cities across the country with participants taking part through webcasting. It provides an opportunity and a forum for networking, learning from others and sharing of innovation in action across the Public Service of Canada.

The theme for 2018 was "user experience". It explored how to better understand an end-user's motivation in adopting a service or a product.

Source: Government of Canada (2018e).

Such high-profile measures are important. They can help cut through the day-to-day noise within the system, and provide a sense that innovation is something expected and potentially routine.

However, it will be important to socialise innovation through a range of channels. One instance of how new methods and their use have been socialised at a more functional level is the behavioural insights work of the Impact and Innovation Unit (Box 6.19).

Box 6.19. Behavioural insights in the Public Service of Canada

The work of the Impact and Innovation Unit includes a behavioural insights practice. The work helps government agencies use behavioural insight techniques and methods to better achieve outcomes. As part of this practice, the team supports two networks: a Behavioural Insights Community of Practice and a Behavioural Insights Network. The community has been established to advance the research field of behavioural economics across the Canadian Public Sector. This horizontal community invites practitioners to share information, research methodologies and experimentation results. The network brings together federal, provincial and local governments together to push for innovation in the use of behavioural economics.

In addition to these two channels, a new Impact and Innovation Unit Fellowship has been established with one focusing on behavioural insights. Through the Fellowship, the Impact and Innovation Unit will hire behavioural insight experts to help conduct projects in collaboration with various departments. The fellowship model will allow for distributed learning to occur as the fellows undertake work with agencies, but will also allow for that learning to be connected back to the centre through their link with the Impact and Innovation Unit. This should allow for much faster learning, as well as helping to socialise innovation practice more rapidly across a range of agencies.

Source: Interviews.

Another example is the work of the Innovation and Experimentation team within the Treasury Board Secretariat. The team conducts regular outreach activities to help identify queries and possible areas of confusion, as well as to harness lessons about experimentation occurring across the Public Service. Such regular outreach can provide an important means of helping to socialise processes that may at first seem very technical and different, and help them become part of the norm.

It is an open question as to whether enough is being done to help socialise the innovation occurring within the Public Service to external partners and citizens. Public sector

innovation can often appear or become invisible to citizens. (If it works and does as people expect, then it can quickly fade into the background, whereas if a service is seen as old or insufficiently innovative, it will likely be noticed and remarked.) This may not be a disadvantage. However, there may be a need for proactive outreach about innovative activity to enhance recognition of efforts within the Public Service of Canada, and to ensure that the Public Service is seen as a competitive and interesting employer when competing for skills and capabilities.

Upholding innovation

Upholding innovation is in many ways reactive, as it is impossible to tell whether innovation is really being upheld until it is under duress. In the current phase of the innovation system, innovation is clearly on the ascendant. However, as the history of the Public Service demonstrates (see Chapter 2), challenges do arise. For the Public Service, this is likely to be in the form of a mistake or waste (perceived or otherwise) connected to innovation or experimentation, pushback against an innovation that is (unexpectedly) seen as conflicting with core values, or political criticism. Given that these challenges can be foreseen, even if there is no certainty as to when and what form they will take, it might be valuable to implement a form of proactive war-gaming among the central actors to see how this might play out. This process should reflect the fact that sometimes criticism will be entirely legitimate – mistakes will be made and sometimes those mistakes should not have been made. On other occasions, the criticism may seem unjust, but will still need to be engaged with.

Summary

The issue of normality is an area where central initiatives can set the parameters or provide the license, but much of the responsibility will need to be reinforced across the system, in different agencies and by different actors. The various elements are in place, but their effectiveness will need to be observed over time.

A system needs to be seen over time

There is a lot of different activity occurring across the system. This chapter has examined this activity at a particular moment in time and made assessments about the present state of things, or what might happen in the immediate future. However, many of the developments are quite recent, the system is evolving quite quickly and there is significant uncertainty, as much remains to be learnt about the system and what works. Given this, there are limitations to what an overview of the system can teach about what needs to happen next.

The next chapter presents different scenarios that explore how the system might perform over time. These illustrations examine how system dynamics might play out under different situations, and help provide insights into what might be needed to assist the innovation system reach the desired level of performance.

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Chapter 7. Three scenarios to explore what might happen next

This chapter uses three differing scenarios to examine different pathways that the public sector innovation system could move along. Each scenario is designed to help explore how the system could play out over time.

Systems are difficult to grasp and public sector innovation systems even more so, particularly given the absence on an analytical lens prior to this review. One of the major critiques of innovation systems analyses in the private sector has been the inability to make them operational and actionable. If everything is connected to everything else, where should decision makers start? To help make the model and understandings presented in previous chapters more actionable in the context of the Canadian public service, the review has selected a new approach to help frame systemic interventions for countries: scenario building.

Scenario building is an analytical exercise that constructs narratives of current and historic trends and events within a certain context, in order to consistently describe possible future trajectories. The aim is to identify possible pathways towards a vision of the future. In a systems analysis exercise, scenarios serve the purpose of avoiding linear, reductive solutions and, instead, look at the system as a whole. Scenario building asks the key question: "What possible sets of solutions can be combined and developed to change the functioning of the system?"

At its core, scenarios, first and foremost, provide a critical outlook on the future. This future framework clarifies the main focal issues and strategic decisions that different organisations face within the system, and establishes inter-relationships between critical decisions and their time horizons. As such, scenarios are used to shed light on the drivers of change (see the exploratory model in Chapter 4), which can make even uncertainty more actionable. Therefore, scenarios are especially useful in the context of innovation, where uncertainty – even in the present – is extremely high.

In a state of such uncertainty there is a continuous threat of failure (which is normal during the process of change). This can continuously derail different activities and lower the system's appetite for future innovation strategies and activities. Consequently, the robustness of the system as a whole needs to be taken into account, rather than a focus on discrete activities and interventions. In reality, scenario building should be an evolving and continuous process – preparing for the future, not predicting it – and one that engages with a diverse set of actors. It is hopes that this exercise will be the first step on the long road towards building more robust systems.

Based on the analysis of the Canadian public sector innovation system, the OECD has put together three hypothetical scenarios. The **"Zero" scenario** describes the current functioning of the system through the lens of four different traditional types of futures:

- what is probable (likely to happen)
- what is possible (might happen)
- what is plausible (could happen)
- what is preferable (want to happen).

The zero scenario explores the current ability of the system to correct itself under the existing reality, if nothing additional happens.

Scenario 1 investigates some key policy changes within established functioning areas of government and explores the extent to which they can correct and improve the public sector innovation system.

Scenario 2 builds a narrative around a total system transformation with a radical change process and vision for the future, as well as a potential upgrading of the overall system in terms of public sector innovation.

The aim of this exercise is to provide clues about important drivers of change, early warning indicators and strategies that may be robust enough to deliver in the face of future challenges. None of the scenarios are intended as predictions or prescriptions, but are instead prompts to think about the future direction of the system, designed to challenge existing, often unstated, assumptions about how events will play out.

"Zero" scenario: The system continues "as is"

Box 7.1. Critical recap of the current state of affairs

There have been several attempts to introduce new thinking into the Canadian public sector innovation system since the beginning of 1990 (the current "living memory" of the system). The public sector has experienced periods that were more or less conducive to innovation as a result of changes in the political economy, style of leadership and increased distrust of the civil service at large, which has been a staple of New Public Management-led reforms around the world. As such, there has never been an overarching narrative that has penetrated into the civil service about why change in the sector is needed, though valid attempts to provide the latter have been made (e.g. the Public Service Modernisation Act, canada@150, Blueprint 2020, and the Federal, Provincial and Territorial Declaration on Public Sector Innovation).

Consequently, the developments and innovations in the Canadian public sector can be at best described as "pockets of innovation" – initiatives with good intentions, usually linked to their origin (departmentally bounded initiatives or activities reliant heavily on single individuals), that have remained discrete, disjointed and siloed. Some innovations are driven by a top-down push (e.g. experimental directives, grants and contributions as the major supply-side push), while others emerge from the bottom up due to increasing frustration in the civil service. These frustrations are generally rooted in an awareness of changes happening outside the sector that have no equivalent in the workplace. Bottom-up action is, however, available only to a privileged few due to favourable leadership conditions or personal characteristics, which introduce a level of coincidence and, arguably, elitism into the system. Others in less privileged circumstances bump up against a traditional performance management system that does not equate innovation with good results, thereby hardening the "clay layer" of the Canadian government. As such, innovative ideas are not evaluated by their merit, but by the personal characteristics and social capital involved.

Moreover, it is difficult for innovative initiatives to surpass functional areas within government ("parity"). Consequently, departments within the public sector hold onto traditional strategies and engage with low-level demonstration projects (e.g. micro missions) that do not disrupt the status quo of established structures. The system, thus, has the tendency to deal with the symptoms rather than the illness.

Lacking an overarching narrative ("clarity" within the system), different competing logics for change have emerged in parallel across functional areas of government. Varied narratives that have entered the system include, among others: innovation as efficiency gain (e.g. Red Tape reduction), innovation through tools and methods (e.g. GCpedia, GCconnex, experimentation directives, behavioural insights), organisational solutions for innovation (e.g. proliferation of innovation labs), HR solutions for innovation (e.g. micro missions, tiger teams, Free Agents, New Directions in Staffing), innovation through funding (innovation awards, challenges, Impact Canada Initiative) and impact-led work in various iterations (e.g. Results for Canadians in 2000, results and delivery). It seems that

all the different aspects of the system are addressed; yet, these different interventions and the operational logics carry diverging and sometimes contradictory goals (e.g. efficiency vs. impact; quick wins vs. experimentation).

Different interventions and logics are causing incongruence and misalignment in the system. Resources may be poorly allocated and the successes of these various activities do not feed into each other, but may actually distract from each other.

In the absence of a coherent signal explaining why innovation is needed, the centre has tried to engage with the topic by providing technical solutions. However, efforts to introduce initiatives have not taken into account the capacities and cultural and institutional barriers to absorb them, largely because the system's perspective was absent. This creates situations where it is difficult to predict which initiatives will "win out", because their survival and success is dependent more on fast delivery, positive demonstration (and arguably other arbitrary factors), than their potential to transform the public sector. Many – if not most – of the initiatives have not reached a scale sufficient to challenge the operations of the public sector. The intent is good, but their effects are incremental. In reality, these "technical" signals become a mechanism of selection for innovation in government, likely preventing the most optimal portfolio of innovations in the Canadian public sector from emerging. Many innovations are piloted, but few are scaled up. The system is therefore not "suitable" to sustain a diverse portfolio of innovations – both in terms of allowing radical mission-oriented innovations and bottom-up experimentation. It lacks the feedback mechanisms that allow for these different activities to function at the needed level of scope and scale ("normality" of innovation).

This means that any new, disruptive change the sector faces is also invariably addressed in small "pockets". The sector is unable to ignore challenges that directly confront it (whether in the form of the sharing economy or digital transformation); however, in many cases transformative thinking is delegated to small teams with sunset clauses and little follow-through, as continued high-level involvement is lacking. This process effectively hollows out the potential for long-term change. Due to the abundance of highly skilled people in the sector, the system is able to react to discrete crises when they arise, and re-organise accordingly, but this is highly disruptive to the established structures and functioning of government. Lessons learned from dealing with external pressures do not diffuse well in the system. This is further exacerbated by the lack of links with the external environment – both in terms of linkages to citizens (user perspective) and other sources of potential transformative change (technologists, researchers, etc.).

In light of this critical analysis, the assumption of the Zero scenario is that the system will continue "as is", in the absence of an internal push to significantly change the core elements and functions of government.

The risks of Scenario 0

Based on the aforementioned, there is a high probability that the existing fragmented bottom-up push for innovation will continue. It will find an outlet in initiatives where the interest of street-level innovators' interests coincides with the top-level technical/methodological supply push. "Close-to-the-market" innovations that can use experimentation as a form of legitimacy with directly demonstrable outcomes will survive, while others will perish or have to wait for exceptional windows of opportunity (externally induced crises or high-level innovation champions). Innovation will continue to be associated with the efforts of individuals (their tenacity and confidence) rather than the

underlying merits of the ideas. This will also be the biggest predictor for the survival of public sector innovation labs – those without immediate and directly "demonstrable" impact will be shut down. More long-term oriented, "big idea" labs and task forces will be first to disappear. Others will appear with new hype. Flashes of innovation will appear, technological or otherwise, but the cycle will repeat itself. Only a small minority of innovations will penetrate the system mostly due to coincidental factors (convenient political support, external events, etc.) rather than deliberate design. As the selection mechanisms are highly volatile, organisations will not be able to pick up the ideas with the most potential, and instead will access only the tip of the iceberg.

Box 7.2. Wild card (low probability, very high impact event)

One of the flagship experiments will fail

In this scenario one of the key pilots validated under the experimentation directive will fail to deliver any results and the ethicality of running the experiment will be publicly questioned. High-level political debate will ensue and escalate quickly, and the whole programme and government action around experimentation will be questioned. As there has not been a systematic effort to evaluate the role of experimentation within the public sector, there are few counter arguments that the proponents of the directive can make. Efforts are still made from the centre to justify the experimentation directive, but since no strategic experiments with (provable) successes have been implemented, positive evidence is painted as anecdotal. Seen as a top-down initiative, few departments are willing to join the debate. The initiative is marred and the program re-directed: a small number of existing experiments are allowed to finish, but they are not highly publicised, or they are reframed as traditional policy trials or pilots.

Some top-down technical/methodological supply pushes – in the form of social impact bonds (SIBs) or behavioural insights interventions – will penetrate the system, usually in high-performing departments and agencies where more radical ideas are the subject of experimentation. This will however further enforce lock-in, as existing activities within departmental functions are amplified. Functional areas with stronger capacity will become stronger in their domain and the weaker areas will become weaker. After the low-hanging fruit is picked, the domain of action will narrow and the search for the next new "technical" aid will commence. Some clarity and consensus will grow over time, but efforts to create strategic intent within the system will be crowded out by flashes of interest in new emerging topics.

Similarly to the private sector – and due to the effects of digitisation – more flat organisational hierarchies will emerge in the government. This will bring about a change in tasks for most civil servants, with more responsibility to make decisions but less time and capacity to do so. The result will be a continued dependence on "technical" solutions for innovation. Middle management within the public sector will increasingly feel the squeeze. Innovation will be added to performance reviews, but will bring confusion rather than clarity. The incentives to talk openly about failures will decrease as the system punishes under-delivery. Consequently, the frustration of potential innovators will grow, some will become jaded and others will leave the public sector.

External signals for upcoming crises will be ignored or missed, as the internal feedback mechanisms to help identify and amplify the weak signals are inadequate.

Box 7.3. Wild card

The public sector will face a crisis with systemic effects

Shared Services data centres get hacked, ransom-ware is inserted into the system and a 5-day deadline is given to government to pay for the release of data. There is mass confusion and chaos. Government assembles a crisis team; they shut down the system, but will not be able to find the ransom-ware in time. All the data is destroyed. Digitally dependent services will shut down. Crisis team tries to find a back-up and find re-boot previous data centres, but is unable to do so, because the technology is too old. After months of disarray paper-based analysis of social claims and other service functions will start. Services are extremely slow and public dissatisfaction is incredibly high. Government launches a proposal for alternative solutions. Private sector providers lock government into a cloud arrangement.

Implications of Scenario Zero

Scenario Zero helps to illustrate some of the limits of current settings. Given existing efforts and accommodating for how they might play out over time, the scenario asks the question: "Are existing pathways sufficient for a fast-changing world with continued demand for innovative outcomes?"

The scenario also helps to demonstrate that while the risks involved in fostering innovation as a more reliable resource are real, there are also considerable potential risks in sticking with the existing arrangements. In addition, the scenario helps to consider what some of the necessary options might be if the current arrangements continue.

Strategies to operate within the current structure of the system should be developed across three different fields:

- Core strategies:
  - Develop a common narrative for innovation and shared mental mode within the innovation community. Use the review to do so.
  - Ensure innovation is an explicit component in agency strategic plans.
  - Make innovation explicit in performance management – with a positive failure component – and steward and evaluate the practice rigorously.
- Hedging strategies (balancing or compensating transactions):
  - Diversify innovation selection mechanisms including challenge mechanisms with reallocated funding to the centre to subvert reliance on hierarchy.
  - Mandate at least three to four cross-departmental strategic experiments at any given time.
  - Establish an opportunity-cost assessment measure to build understanding within the system of what the long-term costs of not pursuing transformative innovations in the public sector will be.
- Contingency strategies (resilience against possible future events or circumstances that cannot be predicted with certainty):
  - Create a balancing mechanism to negative feedback to innovation: publish routinely success stories and personal experiences in managing the system.
  - "Buy an umbrella for the storm coming": build enough slack/flexible resources (fix-it squads) within the system to deal with unavoidable crises.

- Crisis monitoring and detection: evaluate resilience of the system periodically as this is the best one can hope for under the current system.

Scenario 1: Gradual improvement in innovation activities within functional areas

Box 7.4. Critical events in the system

A new body ("PSI Canada") is mandated as the primary forum for stewarding and shepherding the public sector innovation system, involving selected senior leaders from across the civil service. Each member of PSI Canada is put in charge of developing a strategy for different functional areas of the system (e.g. human resources/talent development, public safety, infrastructure and economic development). Members are called upon to articulate the specific roles of each functional area as well as the tools and methods utilised (e.g. challenges and behavioural insights). This will include evaluation of the extent to which these different functions impact the system, the scope and scale of their intended effects and identification of the key players (departments, agencies and external stakeholders) within the ecosystem and their specific functions.

PSI Canada collectively reviews and addresses the discrepancies and contradictory logics between the different functioning areas (e.g. human resource development, funding initiatives, etc.). A unified overarching strategy is created to assist PSI Canada members to collectively work through the various areas and address discrepancies and contradictions. Tools, methods and resources (e.g. experimentation directive, Impact Canada Initiative and New Directions in Staffing) will become intertwined with the innovation goals identified in the functional areas. After an understanding of the synergies and roles is reached, members of PSI Canada set up strategies in their respective functioning areas to build programmes and communities of practice – ecosystems – for innovation. Inevitably, existing mandates are reviewed and resources are re-allocated away from areas seen as duplicating efforts in public sector innovation or that are not in line with the functional strategies. Some initiatives developed at the periphery of the system (e.g. Free Agents) will be organisationally consolidated into core functioning areas. Measures are put in place for transition periods to ensure that new organisational structure innovations can survive. This will reduce fragmentation within the system, but will also minimise possible emergence (a considerable trade-off). However, new organisations (communities, teams etc.) will be also created over time as the tasks and missions within functioning areas become clear. Departments, agencies and teams – old and new – within specific functional ecosystems will have to report to PSI Canada leads in their areas of responsibility.

Leads have the freedom to design processes to spur on innovation in their respective areas, but have to report on the practices back to the forum. PSI Canada will concentrate on a gradual upgrade of the functional areas; however, members will also introduce key flagship projects within their domains and report regularly on the success of the initiatives. PSI Canada members have a dual responsibility: to present and share key lessons learned from their responsibility areas with the committee; and to diffuse learning from other areas within their responsibility domain through communities of practice and other measures. Accountability is built into the system to ensure that the knowledge exchange works, and is routinely controlled.

PSI Canada members also have a responsibility to bring cross-cutting issues to the group. Inevitable conflicts between the agendas of functional areas (e.g. human resource management versus digital development) will be brought to and addressed by the

organization, which is granted full decision-making authority by the political leadership. If issues remain, an overarching conflict arbiter consisting of high-level executives and innovation champions independent of PSI Canada will become involved.

The risks of Scenario 1

This scenario builds upon the idea that synergies can be created by consolidating responsibility at the centre and creating clear accountability structures for the development of the system. Flexibility and autonomy of the system is guaranteed by not pre-supposing a common solution for innovation management across different ecosystems within functional areas. Stewardship of the system is centralised and subjugated to the logic of government functions. As such, the scenario does not drastically challenge the current operating structure of the Canadian government, while organisational changes or changes within specific functional domains remain possible for the improvement of public sector innovation. Nevertheless, in some overarching government areas (e.g. HR), incentives, the reporting structure and, therefore, action have the potential for transformation.

It is highly probable that even with a high-level commitment to the PSI Canada and accountability measures in place to ensure performance across functioning areas, the variable speeds and scope of public sector innovation activities will remain mission-specific. The role and capacity of the leads of certain functional areas will determine the impact of their interventions. However, not all PSI Canada members will have the same drive and buy-in to advance public sector innovation in their respective areas. Competition between functional areas within government will remain, as top-down collaboration will not be able to diffuse within the system at high enough rates. Over the medium and long term, frustration within the system will grow as innovators within their specific eco-systems bump up against different areas where progress is either faster or slower.

To an extent, there will be a backlash against the consolidation of agendas from agency and departmental levels, as they will perceive this as a threat to their ability to freely advance innovation in their organisational domains. PSI Canada will have to battle disjointed feelings of ownership of innovations to ensure the emergence of possible synergies – affecting the scale and scope of initiatives – in their functional areas. One of the key tasks will be to build innovation communities in specific ecosystems. In some areas this will be successful, but in others it will not. Traditional organisational barriers (culture, competition, etc.) will largely remain. Task force members will need to actively counter the “Not Invented Here Syndrome” by building knowledge-exchange platforms and peer-to-peer discussion groups across ecosystems, but the problem will remain.

Box 7.5. Wild card

Automation of jobs

Big data and machine learning technologies will go through an exponential growth spurt. They will become accessible to government through companies developing easily interoperable systems for the public sector. This will lead to a large-scale push for the automation of jobs across government's functions more rapidly than ever predicted. Most middle management and analyst jobs will become redundant, as government struggles to reform the system. PSI Canada cannot respond to the challenge, as it has not developed cross-government strategies. The organisation is disbanded and a new "fix-it" team is put in place.

Invariably, at some point the system will be challenged by a crisis that will cross different functional areas. This will possibly happen because of service delivery failures due to unforeseen growth in service demand in two or more functional areas at the same time (e.g. a refugee crisis on a much higher scale). As the system is still fragmented in sub-systems, innovation cannot be called upon to resolve the problem in a timely fashion or provide more than a patchwork response. The system is fragile due to over-specialisation, hindering its overall ability (even with strong co-ordination from the top). In the long term, the functioning of specialisation areas will need to change.

Box 7.6. Wild card

Radical system challenger

Under the radar, a small 18F-type (government digital agency) organisation will emerge in one functional area that will radically challenge the operational practices of the whole of government. One or many members of the senior management cadre will provide coverage for their activities, but due to their radical nature and implication in other functional areas, conflict will soon ensue. The battle soon escalates to the senior management where previously built up trust will be damaged. During the debate, the specialisation of the organization will hold, consensus will be reached and the new radical challenger will be burnt by the exchange. Possible improvements proposed for the public sector will be lost in the conflict.

Implications of Scenario 1

This scenario shows that the creation of a centralised forum to steward the system will lead to a significant expectation about public sector innovation – possibly too much. The value of a high-level group is that it can provide heft and influence. Over time, if PSI Canada was successful, it is likely that more responsibility would be placed upon it, and the natural tendency of public sector bureaucracies to look to the centre will continue. However, in a setting where increased emphasis is placed on public sector innovation, efforts will need to be distributed, and there will need to be deep engagement across the system, not just in particular nodes. There will also need to be collaboration, as well as co-ordination. If the system is to respond to the need for innovation across the breadth of the Public Service, there needs to be a diversity of structures and networks that allow for this to happen. The structural tendency will be to place responsibility on particular structures or a few actors, whereas it is likely that accountability for innovation will need to cut across the system.

If such an approach were to play out, strategies should be developed across three different fields:

- Core strategies:
  - Assign clear functional responsibilities to the senior leadership members of PSI Canada and clarify how other parts of the system are expected to support or link into the broader innovation agenda.
  - Build up accountability mechanisms to assess advancement within different functional areas.
  - Make negotiated alignment between transversal mission statements and evaluation of results part of the core mandate, and provide members with the right to renegotiate under appropriate terms.
  - Address capacity issues across government functions to engage with innovation, experimentation and so on in specific functional area plans.
  - Build in a rotational leadership structure and continually rejuvenate membership to challenge informal power structures and group think.
- Hedging strategies (balancing or compensating transactions):
  - Mandate the discussion of failures in core functional areas by PSI Canada.
  - Build in strategies to counter "Not Invented Here" biases (peer-to-peer platforms across functions, comparative evaluations across functions, etc.).
- Contingency strategies (resilience against possible future events or circumstances that cannot be predicted with certainty):
  - Every functional lead has to advance at least one cross-departmental, radical, paradigm-shifting experiment.
  - Consider mechanisms to ensure that more radical ideas will not get lost in the system.

Scenario 2: Radical transformation of the system

Box 7.7. Critical events in the system

At the executive level, a common understanding emerges that a substantially new level of commitment to public sector innovation is needed. This leads to the Clerk committing to a purpose-driven vision for public sector innovation. For example, in order for the Public Service of Canada to become the most responsive and competitive civil service in the world, it needs to become the leader in public sector innovation.

A task force is set up to establish a common vision for public sector innovation across the civil service. The vision connects the aims of public sector innovation with core public sector reform. A purpose-driven review of the whole public sector innovation system is carried out to clarify all roles and actions in line with this end goal. Functional and topical areas (as well as open data, digital transformation, etc.) are re-arranged under the overarching vision.

Substantial engagement efforts (workshops, panels, focus groups, etc.) are implemented to create buy-in for the vision. Organisations claim their roles and expertise within the vision or they are restructured to fit the vision and its overarching goals. By the end, everyone has a personal connection to innovation and why it is needed, and everyone

understands their roles and responsibilities with regard to the latter. All new measures have to justify their role within the current vision of the public sector.

A new structure to steward public sector innovation is put into place. This will be based on a two-track system: the centre signals needed innovation activities with missions derived from the vision; and the service creates an autonomous structure for more radical innovations that is funded, managed and evaluated under a different structure (this could take a range of possible forms). This ensures that immediate, goal-specific actions do not crowd out emergent, radical innovations that can be simultaneously tested and explored. Ambidexterity of the system is guaranteed. Both activities in their own right serve the overall vision for public sector innovation. Funding is re-organised accordingly. Different evaluator methods for different tracks are developed. Deliberate undermining of the status quo for better long term performance and robustness is guaranteed.

A portfolio perspective for public sector innovation is developed across the system, balancing immediate returns, mid-term goals and more experimental designs. Horizon-scanning activities are internalised and foresight becomes an integrated part of portfolio tasks. The public sector innovation portfolio does not track administrative functions, but instead follows the overall goals of the vision. Ideas can come from anywhere and will be considered on an equal footing. It is easy and seamless for multi-disciplinary teams to come together. This includes not only the public sector, but also the private and third sector, both as sources of ideas and innovation collaborators. The government uses anticipatory regulation (sandbox regulations) to steer critical innovations. In addition, radical experimentation through select partnerships (with key technology developers) is advanced to address potential disruptive innovation. Canada enters into international partnerships to experiment with major transformative technologies for government (e.g. blockchain, AI).

A shift from compliance to enabling collaborative innovation is made. Experimentation across governmental areas is licensed and new business models are adopted at scale (e.g. Talent Cloud, GCcollab).

Real-time feedback mechanism of public sector innovation implementation is developed, and a real-time public sector innovation dashboard is put in place that is defined by end outcomes, not functional areas. The dashboard covers the new innovation portfolio, which is open to speedup learning, collaboration and knowledge exchange. The innovation implementation feedback loop is now functioning.

The risks of Scenario 2

Scenario 2 represents a transformation of the entire system and is thus the broadest scenario with the greatest amount of uncertainty. It is difficult to predict what structures would look like after a full systems transformation because this will invariably depend on the concrete vision that is chosen. This also points to the first issue with this transformative scenario: the public sector may lock itself into a path of transformation that will prove ineffective in the long run. This might occur because opposition is too broad, institutions are too inflexible or there is simply not enough capacity within the system to carry out the process. By the time the signals from emerging practice (and the gaps within them) arrive, the stability of the prior practice could be irreparable damaged. Thus, this route to public sector transformation will require the most flexibility and reflexivity, including continuous and

timely feedback mechanisms and working institutional arrangements that can unearth failures fast.

This scenario will also create the most opposition and pushback from the existing system. Without a high-level coalition and alignment of interests and championship from the top, this scenario will be doomed from the start. Coalitions of this kind can be created, in practice, if there is an awareness (refer back to Scenario Zero) of the understanding and urgency, and the need for change has been internalised by key individuals. Nevertheless, these coalitions can be highly dependent on the existence of key alliances and individual interests, especially in the early stages of the process. In the politically cyclical environment of the public sector, these key individuals may disappear or change positions at crucial moments. Thus, the scenario becomes time-dependent – it is crucial to find the right "window of opportunity" to launch the process and to embed the innovations within the system, so that they are not leadership dependent.

Understanding (buy-in) and operating in a new reality are two different things: a large part of the workforce will acknowledge the need for change, but may feel alienated by the new reality as core tasks (and also the demand for innovation) have changed. Public sector turnover will increase substantially for a period, while some core capacities and capabilities will be lost.

While the portfolio approach to public sector innovation helps to diminish potential lock-in, it is also difficult to maintain in practice and over the short term. It will also cost more than any other alternative. Parallel exploration (emergent, radical experimentation) and the exploitation of capabilities within the system will require very different types of funding, accountability and risk governance models. The traditional tendency will be for the immediate concerns and interests of the current user-base to dominate over the concerns of potential future users. Thus, maintaining public sector innovation portfolios will rely heavily upon the ability of the visionary steward to separate and shield the two different processes – at least while establishing the new practice.

Box 7.8. Wild card

Movement against AI

The Government of Canada develops the first ever-functioning low-level general artificial intelligence in the world and adopts it in government. The decision-making process within the public sector speeds up tremendously, and hyper-personalised services become a possibility overnight. With it, a lot of existing analytical tasks disappear and pressure to re-imagine and deliver personalised services becomes the norm. The civil service cannot adapt as fast and an anti-AI campaign originating from the public sector starts and spreads quickly to other sectors fearful of the impending loss of jobs and increased technical demands. Due to mounting public pressure, the government has to shut down its AI application. However, different providers emerge from the private sector where adoption will continue. People adapt to the new reality over time, and after five years, the government tries to reboot its AI, but it has lost some of its capacity over time and the algorithms behind the original technology have aged. As a result, the government has to make considerable investments to re-build or in-source the capabilities.

Radical experimentation across government with emerging technologies will also require a substantial tolerance of failure. Invariably, some of these initiatives will fail – this is expected – but the capabilities and capacities they develop within the system will produce ripple effects throughout the public and also potentially the private sector. However, in the absence of communication strategies to engage the public with a coherent narrative about the need to fail (the "glory of failure"), government involvement in exploratory activities will not continue for long.

Implications of Scenario 2

The implication of the third scenario is that there is no innovation utopia. The harder the push for innovation, the harder the reaction against it will likely be from existing structures, powers and processes. Innovation may be needed, but it must be managed to some extent, and too great a transformation too quickly will likely become unmanageable and lead to significant risks for government. A portfolio approach to innovation is required when viewed from a system level, but there are real challenges involved in this approach.

Again, strategies across three different fields can be identified that would aid system robustness with such a scenario:

- Core strategies:
  - Merge different agendas connected to innovation (e.g. innovation, experimentation, impact and digitalisation) into a common dynamic purpose-driven vision.
  - Build system-wide buy-in for the new vision among staff.
  - Develop a two-track innovation exploration and exploitation model within the system that crosses all administrative bounds.
  - Develop a portfolio perspective to public sector innovation and ensure stewardship from the centre.
  - Establish a real-time public sector innovation dashboard based on the new vision.

- Hedging strategies (balancing or compensating transactions)
  - Recognise different types of uncertainty and build capacity accordingly.
  - Build cross-sector partnerships (e.g. technology commons) with key tech developers.
- Contingency strategies (resilience against possible future events or circumstances that cannot be predicted with certainty)
  - Recognise different types of uncertainty and collect information accordingly.

Possible futures

There are any number of possible futures for the public sector innovation system, depending in part on the decisions and actions taken by actors across the Public Service of Canada and beyond. This chapter has attempted to highlight some of the different pathways – to continue as is, to build on and extend, or to pursue radical transformation – and to reflect on the considerations that might accompany each option.

As noted throughout this report, there is no one right path for the Public Service of Canada as it proceeds along its innovation journey. What is needed will depend upon where it wants to go. This chapter seeks to aid reflection about that destination, prompt thinking about how events might play out and why, and to help provoke a more explicit articulation of what the Public Service of Canada wants from its innovation journey.

Chapter 8. Conclusion: Moving innovation from the sporadic to the systemic

This chapter builds on the identified underlying determinants of public sector innovation system performance, the assessment of the Canadian system using those determinants as lenses, and the three scenarios for future pathways, to consider which options might help build an innovation system that is more consistent, reliable and systematic in producing innovative outcomes that deliver value for Canadian citizens.

The practice of innovation often encourages "a bias to action", a recognition that in situations of high uncertainty, sometimes the best thing to do is to just do something. In addition, while often perceived as masters of inaction, public sector bureaucracies can actually be very reactive in practice, quick to respond to (politically potent) problems in some way (although this does not guarantee the sufficiency or efficacy of the responses). The public sector can also be an environment where "busy work" proliferates – where doing things is validated, as activity is equated to effectiveness (this is perhaps part of the reason why many governments have encouraged a shift from looking at outputs, to looking at outcomes).

In short, there can be a number of biases within the realm of public sector innovation that encourage action when problems are identified.

However, this bias to action can sometimes favour a reactive approach. A problem is identified, and the problem as it presents itself suggests one or more possible solutions, which can then be chosen from and enacted. Then the next problem is moved onto.

This review has hopefully helped to illustrate the limitations of such an approach. In a dynamic innovation system, there will always be new "problems" or factors impacting the ability to consistently and reliably draw on innovation as a resource. As soon as one problem is tackled, another weakness with the innovation system will reveal itself or unintended side effects will emerge, as the performance of the system will always be limited by its weakest link(s). Given this, a traditional central command and control approach of identifying and responding to each problem in turn is both unsustainable and infeasible.

Rather, the underlying drivers and factors for innovation need to be understood, and this act of understanding needs to involve a wide range of actors within the system, so that as and when issues arise, they can be collaboratively responded to in a more decentralised but still collective fashion. Not everything will need to be signed-off on from the "top" – a true bias to action can only be enabled if there is a collective sense of what is needed.

The ability for this to happen however will be limited by the extent to which there is a collective vision and purpose for the system, and one that has wide buy-in. In the absence of such a vision, the system will continually fragment, as sub-parts of the system, organisations or individuals respond to its more immediate needs. Individual and organisational priorities, which by definition will be divergent, will dominate over system-wide priorities.

Given this dynamic, it is not the aim of this review to provide discrete static recommendations that may (or may not) be enacted, and that would regardless soon be overtaken by events and thus no longer reflective of the context, or suitable. There is no single prescribed state for the innovation system of the Public Service of Canada; therefore, there is no one set of answers for what needs to be done. There can only be guidance.

To be effective, this guidance must be grounded in the reality that Public Service innovation is characterised by a high level of uncertainty. This uncertainty reflects in part the Canadian context and the desire for innovation. While it has been established that the Public Service of Canada's ability to consistently and reliably innovate includes unmet ambitions, there is uncertainty as to what such innovation might actually look like and mean for how the Public Service sees itself. There is also significant uncertainty around what constitutes a public sector innovation system.

As the first of its kind, this review is an initial attempt on the part of the OECD to assess a country's public sector innovation system. It is, therefore, something of an experiment, which again increases the associated uncertainty. Thus, any guidance must be tempered with a degree of humility and recognition that there is still much to be learned.

Having noted these caveats, this review has provided an extensive in-depth exploration of the context of the Public Service of Canada. It has considered what can be learned from theory and practice around the world, and it has introduced a new model and framework to equip and empower actors to navigate the innovation journey and to adjust as the context changes and the system evolves.

This rest of this chapter seeks to recap the major points from each of the preceding chapters, and to pull together the collective implications. These should not be seen as formal recommendations, but rather suggestions that can be acted upon by actors from across the system.

The story so far

How can the Public Service of Canada realise its ambition to be able to consistently and reliably draw on innovation in order to achieve government priorities and deliver on citizen expectations? Each of the chapters in this review has explored a different aspect of this question.

Chapter 2 explored the historical innovation journey of the Public Service of Canada, and established the following points:

- There has been a long history of innovation, but this has not always been comfortable, and finding the right balance between innovation and delivery, and between control and empowerment, has not been easy.
- Innovation is hard, or it likely would have already been mastered. The Public Service of Canada has been engaging with innovation and renewal for a considerable time, which suggests that additional, consistent effort is required.
- It is not enough to do the obvious. Much of the apparent "low hanging fruit" of possible actions to encourage, foster or support innovation have been picked, and found to be insufficient. New approaches are therefore needed.
- Beware innovation theatre. Whenever leadership emphasise innovation, there will naturally be activity that seeks to reflect this stated desire. Some of this activity will, either through intent or lack of understanding, be superficial, rather than engaging with the difficult work of questioning current assumptions and practices, and truly considering how and why things might need to be different.
- The informal is as important as the formal. Informal networks can be useful avenues, to spread learning and allow groups to converge (and disperse) around particular issues or practices.
- There are repeating patterns and path dependencies that highlight the need to understand history. Innovation provides a means of sharing lessons across specific domains that might otherwise be only seen through functional (e.g. procurement) or policy area (e.g. health) lenses. However, this can only occur if there is a collective innovation history; otherwise, the same issues are likely to recur over time.

The implications of Chapter 2 include the need to:

1. Both codify and keep alive the history of innovation. Past steps along the innovation journey should be recognised and recorded. However, these steps should be viewed

not just as part of the past, but also as lessons to be remembered and learned from, so that history can be built upon rather than repeated.

2. Foster a system of informal and formal initiatives. A robust innovation system will be one that has informal as well as formal initiatives.
3. Connect innovation efforts with explicit aims and strategic interests. This will help avoid, or at least minimise, innovation theatre. While innovation efforts may not always be definitive or set in stone, as innovation will sometimes be very exploratory, there should still be an articulation of what purpose they are intended to fulfil. In some areas, that purpose may be just to advance curiosity-driven activity and the adoption of new methods and tools or ways of doing things.

Chapter 3 investigated the factors driving a need for a more sophisticated and systemic approach to innovation by governments. It outlined some of the nuances of public sector innovation and their implications for attempting a systemic approach to public sector innovation. While identifying that existing knowledge is insufficient for guiding a systemic approach, the chapter also identified three core concerns governments need to pay attention to – using innovation to deliver on the priorities of today, for delivering on the challenges of tomorrow, and ensuring innovation readiness – if they are going to be effective.

The implications of Chapter 3 include the need to:

1. Take a systemic approach to public sector innovation, so that innovation can be changed from something that is often a sporadic, ad hoc activity, to one that can be drawn on consistently and reliably to deal with current, emergent and future demands.
2. Provide stewardship for the system. A robust and sophisticated innovation system will involve ongoing discovery, multiple streams of activity, and collective input. The various elements of the system will require some degree of stewardship – not control or hard guidance – that can help pull the different threads together.
3. Ensure a diverse portfolio of initiatives to allow for and encourage different forms of innovation. Some activities (e.g. the experimentation commitment) will foster all types of innovation, whereas other types will need to be targeted specifically (e.g. providing some degree of autonomy and resources to areas undertaking longer term exploratory and potentially disruptive innovation, such as around AI).

Given the absence of clear existing guidance about understanding public sector innovation systems, **Chapter 4** then explored the current lived experience of innovation in the Public Service of Canada. This experience was used to provide insight into the underlying nature of innovation, and the fundamental determinants of innovation performance at a system level.

The implications of Chapter 4 include the need to:

1. Ensure an ongoing sense of the lived experience of innovation. As innovation frequently relies on individuals going above and beyond, or stems from organisations responding to crises or priorities, innovation performance is particularly vulnerable to shifts in what the practice of innovation "feels like". Seemingly unrelated events can quickly affect individual, and even organisational, appetites for innovation; thus understanding the lived experience on an ongoing basis will be important. This may be aided by quantitative data, but it is likely that qualitative data from design-led approaches will be most effective in this respect.

2. Support, build on and learn from areas of strength within the system. It is clear that there are, and have been, significant pockets of innovation activity. Some of these have led to significant developments (e.g. the Carrot Rewards partnership, the Free Agents programme/GC Talent Cloud work, behavioural insights practice and the GC platforms), which offer great potential. While it will be important to foster and direct innovation towards mission-led work (e.g. such as through the Impact Canada Initiative), these other pockets may be the source of transformative thinking.

Drawing on the insights from lived experience, **Chapter 5** introduces a model for public sector innovation built on the four underlying drivers of innovation: reason for, possibility of, capability for and experience of innovation. It suggests three different analytical lenses – individual, organisational, and systemic – and identifies how the underlying drivers manifest differently at each level. It examines the tensions involved with each of the system-level manifestations, and the need for balance in each of them. The model is then used to introduce a framework of possible action areas that could help achieve the right balance. The chapter also suggests a possible maturity model for what differing levels of sophistication for a public sector innovation system might look like.

The implications of Chapter 5 include the need to:

1. Take a system-wide view of public sector innovation, across the multiple initiatives, activities, ambitions and actors, including those outside of the Public Service itself. This could align with the earlier identified need for stewardship of the system.
2. Engage with the ongoing work of the OECD's Observatory of Public Sector Innovation to monitor how, or if, the model and associated framework evolve.
3. Further develop international networks to learn from the experiences of other national governments. The particular strengths (and weaknesses) of other systems will help illustrate different system dynamics, and highlight what types of interventions may be best suited for supporting different aspects of a public sector innovation system.

Applying this model and framework to the context of the Public Service of Canada, **Chapter 6** examines the aggregate impacts of existing initiatives and activity and how they satisfy the need for clarity, parity, suitability and normality. It notes that many of the initiatives are relatively recent, and therefore their impact cannot really be assessed as yet, while many of the issues identified may resolve themselves over time.

The implications of Chapter 6 include the need to:

1. Ensure there is clarity about innovation. Current initiatives have done a lot to establish this, but further attention is warranted in the following respects:
    - Provide public servants with greater opportunities to actually engage in the practice of innovation
    - Consider how the innovation agenda, and its intersection with other existing agendas of the Public Service of Canada, can be better communicated, including to external actors
    - Formally identify or map how different actors fulfil different functional roles and/or the capabilities that they are best placed to offer in the innovation

system. This should include some indication of what might be expected, and what can be offered, by private and third sector actors

- Undertake an exercise to develop a renewed narrative of how the Public Service of Canada sees itself and its innovation journey. This should help to emphasise the preceding efforts (and challenges), and long history of engagement with innovation, and articulate how innovation is integral to the identity of the Public Service.

2. Ensure there is parity between innovation and business-as-usual in the consideration of options. A number of initiatives have helped, or promise, to demonstrate that the status quo can be challenged, but further attention is warranted in the following respects:
   - Investigate of more open and deliberate processes, such as explicit mechanisms of challenge, that allow for unexpected issues to be identified and considered as appropriate
   - Leverage existing communities of practice or cross-agency networks to have a formal role in surfacing ideas and issues that might otherwise be likely to encounter bottlenecks
   - Facilitate the finding of allies/building of coalitions around emergent issues, particularly at a cross-agency level. This could be aided by creating or explicitly identifying innovation-specific networks or forums (e.g. across the innovation labs and hubs)
   - Give consideration to further structural drivers, such as the experimentation commitment, to mediate or mitigate the structural drivers that exist for risk aversion.
3. Ensure system suitability to be able to respond to or take advantage of the upcoming innovation opportunities. While existing initiatives may go some way to addressing this, further attention is warranted in the following respects:
   - Centrally encourage agencies to identify peers that they can learn from/with, in order to help them keep pace with external changes
   - Examine, and consider introducing additional ways by which new technologies (and their implications) can be better socialised within the Public Service of Canada
   - Formally identify and make explicit the different mechanisms by which significantly new projects can be undertaken (e.g. have a pipeline for designated projects with potentially disruptive effects)
   - Building on existing initiatives and work, give consideration to how the changing expectations of citizens can be better understood, and how those insights can be made meaningfully tangible in order to be used as drivers for change.
4. Ensure that innovation becomes part of the normality of the Public Service of Canada. Some action is already underway in this regard; however, further attention is warranted in the following respects:
   - Undertake an exercise to explicitly reflect on existing behaviours that are preferenced in the work of the Public Service of Canada, and consider whether

or how they might sometimes conflict or compete with behaviours that are more supportive of innovation

- Ensure that recognition efforts make stories of "day-to-day" innovation accessible and shared, along with instances of innovation being instrumental in high-profile work
- Engage in proactive communication regarding the innovative work of the Public Service of Canada, to help contribute to citizen trust in the public sector, and ensure that the Public Service is seen as a competitive and interesting employer when competing for skills and capabilities
- Undertake proactive war-gaming by central actors on how an inevitable innovation-related "failure" or scandal might play out.

Given the recent nature of many of the relevant initiatives, a longer-term view will need to be taken to gauge their effectiveness and impact upon the overall performance of the public sector innovation system. As an aid to this, **Chapter 7** considers three different possible futures in the form of scenarios – what might happen if things continue as is, what might happen if additional efforts were undertaken, and what might happen if a radical transformation that placed innovation at the centre was to be pursued. These three scenarios help explore the different system dynamics at play, and reflect upon how events might unfold.

The implications of Chapter 7 include the need to:

1. Develop a common narrative for innovation and a shared mental mode within the innovation community. The review could provide a starting point for this.
2. Ensure innovation is explicit in agency strategic plans.
3. Make innovation explicit in performance management – with a positive failure component – and steward and evaluate the practice rigorously.
4. Assign clear functional responsibilities to the Task Force on Public Sector Innovation, and clarify how other parts of the system are expected to support or link into the broader innovation agenda.
5. Build in a rotational basis for the leadership of the Task Force and rejuvenate the membership to challenge informal power structures and group think.
6. Develop a collective purpose-driven vision for the innovation system.

Key areas of opportunity

Taken together, these implications from previous chapters offer ways for the Public Service of Canada to better enhance its evolving public sector innovation system. The following section outlines suggestions for roles that different parts of the system could play to assist this process. These are not intended as prescriptions, but rather as starting points for discussion about how to best support the evolution of the system to help deliver on the expectations of the Government (and citizens) of Canada.

Central agencies as stewards

As previously noted, an innovation system left to its own devices will likely fragment. A robust system that contributes towards collective goals will thus involve a degree of

stewardship. While many will play a role, it will be easy for any individual actor to lose sight of the collective picture. Stewardship may involve having a sense of how things are tracking, where things should be heading, who is doing what and who is good at what, and what is working and what is not. Given the high level of uncertainty, stewardship may also involve ensuring there is ongoing reflection, monitoring and learning.

Such stewardship will require influence that will need to come from the centre, albeit with the support of other areas.

In this regard, the review suggests the following particular stewardship roles or tasks:

1. Develop a living history of innovation in the Public Service of Canada. This would be a collective resource outlining important developments and milestones in the innovation journey of the public service, and including key examples. Such a history should help provide a better sense of how innovation "fits" with the journey, history and traditions of the Public Service of Canada.
2. Formally identify, map or otherwise make explicit the various roles the actors involved play or can/could fulfil in the innovation system, and the different capabilities they are best placed to offer. These roles should not be prescriptive, particularly as more is learned about the capabilities of different actors, but neither should they be without responsibility or accountability.
3. Develop a collective purpose-driven vision for the innovation system, building on the work presented in this review. Such a vision should provide a compelling narrative about why innovation matters to the Public Service of Canada.
4. Develop mechanisms (including reporting instruments potentially through a dashboard approach) of key innovation projects and initiatives, to help ensure a balanced portfolio of innovation. While agencies will have their own interests and priorities, there will need for a collective understanding of where efforts and resources are being expended, and whether or how this fits with collective needs for experimentation, exploration and emergent innovation.
5. In conjunction with existing events and activities (e.g. the Innovation Fair, Policy Community Conference, etc.), undertake short exercises to gather a sense of the lived experience of innovation in order to help identify emergent issues or trends in the practice of innovation that might require intervention or monitoring. Such exercises, which may be informal (e.g. occasional design-led engagements with public servants), should provide an ongoing means to gauge how the innovation system is performing.
6. Encourage, support, build on and learn from the areas of strength and positive deviance within the system. This may be aided by a mix of recognition, validation and legitimation, studied indifference or careful "not noticing", depending upon the nature and stage of the initiatives. Such fostering of positive deviance should aim to help public servants understand what is already possible within the system.
7. Recognise and make accessible "day-to-day" stories of innovation to ensure a balance between innovations contributing to high-level government priorities, and recognition of the contributions of public servants from across the entire spectrum of government operations.

8. Engage with the ongoing work of the OECD's Observatory of Public Sector Innovation and the National Contact Points working group to aid learning about the international practice of public sector innovation.
9. Building on initiatives such as *Canada Beyond 150*, continue to find ways to provide public servants with greater opportunities to engage in the practice of innovation. In particular, consideration could be given to initiatives that can be more easily scaled or run autonomously.

Central agencies as administrators

Central agencies also play an important role in their more directive capacities as rule setters, signal senders and compliance owners. This administrative role includes considering what signal is being sent to agencies and staff by policies and processes, in particular, finding and maintaining an appropriate balance between ensuring appropriate controls and providing sufficient empowerment for new approaches to be tried and tested. It also involves tackling misperceptions and removing blocks when appropriate, but being careful not to let areas run too far ahead of emerging competency. Additionally, central agencies play an important role in defending those taking good risks, and ensuring resources are allocated appropriately (including removing resources from approaches that are no longer suited or are obsolete).

In this capacity, central agencies can:

10. Encourage agencies to incorporate innovation as an explicit element in agency strategic plans. This should ensure that innovation is more than a rhetorical inclusion, and that it addresses innovation as a core competency for agencies.
11. Investigate and introduce further structural drivers, similar to the experimentation commitment, which can help mediate or mitigate the structural forces that promote (unnecessary) risk aversion. This work might identify options for finding ways to ensure that the risk of not innovating is given equal procedural weight as the risk of innovating.
12. Encourage agencies to explicitly identify peer organisations they can learn from/with about keeping pace with external changes.
13. Undertake war-gaming to explore potential responses to an inevitable high-profile innovation-related failure or scandal (perceived or otherwise), so as to help ensure that unavoidable learning points/incidents do not jeopardise the wider agenda.
14. Engage in proactive communication of the work of the Public Service of Canada to help contribute to citizen trust in the public sector, and to ensure that the Public Service is seen as a competitive and interesting employer when competing for skills and capabilities.

Cross-agency leadership

It is suggested that cross-agency leadership could assist with the following areas:

15. Formally identify and make explicit the different mechanisms or avenues by which significantly new projects can be undertaken within the Public Service. This work should identify a workflow and pipeline for how potentially significantly disruptive projects can be begun and supported. This would help both send a signal, and also

reveal potential limits in current approaches that may be inhibiting more exploratory projects.

16. Consider how the changing expectations of citizens can be better understood, and how those insights can be made meaningfully tangible in order to be used as drivers for change. This could draw on existing initiatives and work, and should pay particular attention to ways to convert relatively weak signals (feedback or noticed changes in citizen engagement with government) into something sufficient to register as a driver for change.
17. Assign clear functional responsibilities to the Deputy Minister Task Force on Public Sector Innovation, and identify how other parts of the system are expected to support or link into the group and the broader innovation agenda.
18. Build in a rotational basis for the leadership of the Deputy Minister Task Force on Public Sector Innovation and rejuvenate the membership to challenge informal power structures and group think.

GC Entrepreneurs

The GC Entrepreneurs are a new group, thus it is too early to be precise about their role in the broader system. However, it is suggested that in addition to their emerging work programme, the GC Entrepreneurs could play two additional roles:

19. Act as ambassadors for the innovation system review to help socialise its findings, and use that experience to feed in to certain stewardship responsibilities (e.g. mapping of actors and responsibilities).
20. Examine additional possible ways to better socialise new technologies (and their implications) within the Public Service of Canada.

Other agencies

Given that the public sector innovation system is a collective system, responsibilities should be shared. Other agencies can play a number of roles, either individually or collectively, depending on their interest, ability and opportunity. In particular, other agencies could perform the following suggested roles:

21. Undertake a joint exercise to develop a renewed narrative of how the Public Service of Canada sees itself and its innovation journey. Such a narrative should recognise the preceding efforts (and challenges), and long history of engagement with innovation, and articulate how innovation is now integral to the identity of the Public Service. The narrative should be explicit about how innovation fits with the role of public servants and their organisations, and what it means to be an innovative public service/public servant.
22. Identify how the innovation agenda, and its intersection with other existing agendas of the Public Service of Canada, can be better communicated, including to external actors. Such consideration should provide clear guidance to any actor about how innovation fits with other priorities, and how to reconcile instances of tension or competition.
23. Investigate the potential for more open and deliberate processes, such as explicit mechanisms of challenge, which would allow for unexpected issues to be identified and considered. These mechanisms might be used both for internal processes

(where there are identified blockers to promising innovation) and externally (when outside actors identify, flag or nominate potential blocks).

24. Encourage existing communities of practice or cross-agency networks to identify their role, if any, in surfacing ideas and issues that might otherwise be likely to encounter bottlenecks. A core part of this encouragement would be ensuring that relevant staff feel empowered to participate and contribute.
25. Facilitate the finding of allies/building of coalitions around emergent issues, particularly at a cross-agency level. In particular, this could be aided by creating or explicitly identifying innovation-specific networks or forums, such as one for the innovation labs and hubs.

Individual organisations

Individual organisations can also contribute to the effective functioning of the public sector innovation system, in regard to their own operations. To do this well, agencies may wish to consider their relative innovation strengths and resources and their own innovation investment and portfolio. In particular, they could take the following suggested actions:

26. Concretely connect innovation efforts with explicit aims and strategic interests, in part to try and avoid unnecessary innovation theatre, including through agency planning and prioritisation. This might identify areas where innovation is needed (perhaps in part drawing on the Results and Delivery agenda and areas of identified shortfall).
27. Identify the organisation's relationship with the broader innovation system and consider what roles are wanted in the system (e.g. acting as a source of excellence in a particular methodology, engaging with particular disruptive technologies, exploring particular methods of delivery), then reflect on whether existing decisions and priorities align with them.
28. Make innovation explicit in performance management, with a positive failure component, and steward and evaluate the practice.
29. Assess whether existing practices and processes contribute to responsibility for innovation residing at the individual level, or whether the organisation helps contribute to a collective innovation process that is informed by more than immediate organisational priorities.

Senior leaders

Senior leaders play a range of important roles in the innovation system, not least in relation to clarity (What signal is being sent to staff? Are they being given the opportunity to engage with innovation?), parity (What ideas are seen as acceptable? What room is provided for new thinking?), suitability (What is being invested in? Is a portfolio approach being taken?) and normality (What is encouraged? What is reinforced?). Senior leaders can consider their own contribution to the system, and how or whether they are fostering an environment where others feel willing to explore and test new ways of doing things in order to achieve better results. Senior leaders have a range of demands placed upon them, and their ability to get "hands on" with innovation is often likely to be limited, but there are some suggested areas of opportunity for an interested leader:

30. Ask to be surprised – encourage staff, through whatever means deemed most appropriate, to provide briefings or advice about new things that are either being

done in the agency or that have been identified as potentially impacting the work of the agency, and that you would not be expected to know about.

31. Invite in esteemed external stakeholders or experts to share leading edge developments in other sectors or similar organisations, and then ask for specific proposals from staff about how such experiences might be relevant to the agency.

Middle managers

As discussed in Chapter 4, middle managers can sometimes be perceived as a problem when it comes to innovation; however they can also be key enablers. Middle managers seeking to better engage with and enable innovation may want to consider the following:

32. Ensure that your appetite for risk is clearly communicated and clarify what can be done without the need for permission. The novelty of innovation usually implies a lack of precedents by which to gauge what is allowed/not allowed, and the system usually defaults to a preference for the latter. Therefore, middle managers can help by ensuring that their staff have a clear sense of when permission is not required.
33. Request staff to test and workshop innovative ideas and proposals with their peers, so that scarce decision-making time is limited to concrete and tangible proposals.
34. Identify and communicate the priority business areas where change is needed and new approaches are sought.

Other interested individuals

Other interested individuals, no matter where they are in the system, can also contribute in a variety of ways. Suggested areas of opportunity include the following:

35. Reflect on what innovation means to you and to your work. How do you relate to the innovation system, if at all? If not, why not? If change is going to occur, consider what that might mean for how you see your role and how you can best contribute.
36. Look for opportunities, small or otherwise, to engage in new practices, to use new methods or tools, or to try different things in your current role.
37. Consider how to best access and share learning about innovation.

An ongoing learning journey

As noted earlier, there is still much to be learnt about the functioning of public sector innovation systems, and what interventions might be the most effective in ensuring that a civil service can draw on innovation as a consistent and reliable resource for achieving government priorities. In part, this is due to the fact that public sector innovation systems are, in general, still fragmented and emergent; thus, they are systems where it is possible to miss things, misunderstand things or where circumstances will change quickly. As such, the present review may not have gotten everything right, or may have only got it right for "right now".

The review has attempted to mitigate this risk by providing an underlying model which describes the major forces of relevance, rather than elaborating too much on specific structural or process matters that can easily change. The review has also taken the step of providing significant in-depth information about how OECD arrived at the model and the

findings, so as to allow for potential "reverse engineering" of the underlying thinking if/when needed. If any element of the "diagnosis" should later be found to be wanting, the rest of the identified "symptoms" are still available for review.

It is also hoped that by sharing this level of detail the review will aid others who are investigating public sector innovation, whether they take the form of other countries, institutions or research bodies attempting to better understand what makes for a high-performing innovation system.

The next chapter quickly examines how other countries or (potentially sub-national) governments might use this report.

Chapter 9. Beyond Canada

This chapter outlines how the model may be of relevance to the governments of other countries.

Applying the insights beyond Canada

This development of this review is tied to the past, present and future innovation journey of the Public Service of Canada. It has used a grounded theory (inductive) approach to identify the characteristics and concerns relevant to thinking about a public sector innovation system, and is thus inherently built upon the experience of the Canadian context.

However, as has been highlighted throughout the review, public sector innovation is an issue that all governments are grappling with to some extent. All countries are facing a changing environment with similar drivers, constraints, and structural and systemic issues. While every country's public sector innovation system will be different in its own way, it is likely that every country will resonate to some extent with the issues and the innovation model outlined in this report.

Noting that every country will have its own priorities, concerns, ambitions and history, the innovation systems model introduced in this report has been developed to help governments navigate their way, rather than to tell them their destination. Each innovation journey will be, and must be, different, reflecting a specific, though changing, context. There cannot then be one prescription for what an innovation system should look like or how it should operate. This model is intended, however, to provide core considerations that are likely to be relevant across contexts.

It is suggested that governments seeking to better understand their innovation systems, and thereby have a better chance of being able to draw on innovation as a consistent and reliable resource, will be able to make the most use of the systems model if they reflect on the following:

- **Understanding the past**: What have been the major developments, trends in innovation practice, and successes and failures during the historical journey? How has innovation fit with previous reform agendas? How has the story of and about the civil service included innovation? Without an appreciation of the history, it will be difficult for any innovation "push" to succeed, as it will come up against cultural traditions and legacies that have shaped the current innovation system.
- **Exploring the present**: what is the current lived experience of innovation within the public sector? How does innovation currently occur? Where is innovation happening in spite of, or because of, the existing system elements? A thorough knowledge of the current context will provide insights into the functioning of the system, its strengths and its weaknesses.
- **Considering the possible (futures)**: What might happen if things continue on the current path? What if additional efforts were made? What if a radical transformation was set in motion to realise a truly innovative state? Contemplating each of these possible pathways may help to provoke thorough reflection on what it is that is being sought, and whether the proposed options will be sufficient to reach the intended goal.

The OECD, through its Observatory of Public Sector Innovation (the Observatory), will work with other countries to test and further develop the model and associated framework. This will help to ensure that, over time, they adequately account for the nuances that might come from different country contexts, and are able to offer more sophisticated guidance.

Annex A. Terms of reference for the review

The objectives of the project were that it was to:

- provide an assessment of the current state of the public sector innovation system in the Public Service of Canada, including (but not limited to) a framework for understanding the public sector innovation system in-depth, the role of the different components and the actors operating within it, its strengths and weaknesses, and its ability to deliver change
- propose a set of priority areas for action for the Canadian government to reinforce its capacity to innovate and thereby deliver better outcomes for citizens and the government
- demonstrate the role that innovation can play in public sector governance and concrete steps that can be taken to advance this, contribute to the growing body of data on public sector reform which can inform approaches to public sector innovation, both within Canada and among other countries, in support of good governance (including for donor and developing countries seeking to support good governance).

Annex B. Participants for this review

The following people were interviewed for this review or participated in workshops during the review process. Many more people contributed either through the GC platforms, through open meetings/focus groups, or through informal discussions.

Kent Aitken, Jennifer Ali, Chris Allison, Phillipe Andrecheck, Richard Arbeiter, Matthieu Audet, Christopher Baird, Brigitte Belanger, Chantal Bemeur, Amanda Bloom, Sean Boots, Sandford Borins, Jaimie Boyd, Francoise Brisebois, David Brook, Nadine Boudreau-Brown, Alan Bulley, Christine Burton, Glenn Campbell, Victoria Carlan, Christiana Cavazzoni, Denis Chabot, Sarah Chan, Erin Chapman, Amanda Clarke, Louise Côté, Michelle d'Auray, Allan-Paul Dane, Suesan Danesh, Helen Daniels, Mitch Davies, Dave Donovan, Jason Dorey, Salman Dostmohammad, Roger Scott Douglas, Sarah Doyle, Pascale Elvas, Mireille Éthier, Ioana Finichiu, Graham Flack, France Fortier, Natalie Frank, Cyndi Fuss, Nicola Gaye, Rodney Ghali, Jeam-Marc Gionet, John Giraldez, Elissa Golberg, Julie Greene, Abe Greenspoon, Daphne Guerrero, Katie Van Den Berg Gunn, Elizabeth Hardy, Hope Harris, Jennifer Harju, Chad Hartnell, Gord Hawkes, Blaise Hébert, Lauren Hunter, Dhurata Ikonomi, Paula Isaak, Mark Jarvis, Saskia Jarvis, Cedric Jean-Marie, Jack Jensen, Blenda Jong, Craig Joyce, John Kehoe, John Kenney, Haris Khan, Rosita Kwok, Natalie Lalonde, Myra Latendresse, Chris Laverdure, Andrew Lawrence, Pierre Lecours, Suzanne Léger, Kaili Levesque, Stephen Lucas, Wendy Luciani, Tammy Maker, Kathryn McDade, Samantha McDonald, Margaux McDonald, Marcie McLean-McKay, Sarah McMaster, Scott McNaughton, Frances McRae, Matthew Mendelsohn, Xenia Menzies, Sylvie Michaud, Mike Milito, Jennifer Miller, Dan Monafu, Hernán Moraga Müller, Cory Mulvihill, Courtney Mulvihill, Alan Neeff, Fiona Nelson, Heather Nimmo, Christina Norris, Allison O'Beirve, Gray O'Byrne, Michael O'Neil, Jeffrey Outram, Holly Palen, Anatole Papadopoulos, Denis Parent, Jason Pearman, Gerard Peets, Stephanie Percival, Christin Petelski, Tim Pettipas, Pierre-Luc Pilon, Francis Nolan-Poupart, Carsten Quell, Bruce Radburn, David Reid, Julia Riendeau, Thomas Owen Ripley, Isabelle Roy, Michelle Segger, Loree Semeluk, Amanda Simourd, Walter Sokyrko, Andreas Souvaliotis, Greg Spence, Jeremiah Stanghini, Klara Steele, Kathryn Stevenson, Supriya Syal, Amy Taylor, Steve Trites, Supriya Trivedi, Carl Trottier, Jean-Pierre Voyer, Laura Wesley, Greg White, Tushara Williams, Amanda Wilson, Richard Winder, Robin Wisener, Pamela Wolfe-Roberge.

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The Innovation System of the Public Service of Canada

Governments today are confronted with a complex array of interconnected problems, increased citizen expectations, and fiscal constraints. Furthermore, they must operate in a context of fast-paced technological, geopolitical, economic, social, and environmental change. Existing policies and programmes may not be suitable for tackling the challenges of today, let alone those of tomorrow. Governments therefore require a systemic approach to public sector innovation to develop and deliver novel solutions that meet the existing and emergent needs of citizens. This report looks at the experience and context of the Public Service of Canada, where significant emphasis has been placed on innovation, and proposes a new public sector innovation system model to assist Canada and other countries.

Consult this publication on line at ***https://doi.org/10.1787/9789264307735-en***.

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