

**Engagement within the Federal Government and Beyond for Designing Digital Services**

**Master of Design in Strategic Foresight and Innovation**

Submitted to OCAD University in partial fulfillment for the partial requirements for the degree  
of Master of Design in Strategic Foresight and Innovation

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Abstract:

“Engagement within the Federal Government and Beyond for Designing Digital Services” explores the current efforts of the Federal Government to engage public servants internally as well as various sectors externally in order to transform service delivery to Canadians. Current federal government engagement focuses predominantly on engaging in order to problem frame around how we might improve service delivery. This MRP explores how this has led to a growing recognition that the Government of Canada believes digital services will improve services to Canadians. This MRP argues that in order for federal governments to begin transforming service delivery and producing digital services, it may want to consider utilizing engagement as a means of co-designing and prototyping better digital services with the wider public service and Canadians. In order to better understand engagement within the federal government, this Major Research Project observed federal innovation labs and online platforms. As well as attending various conferences on Digital Government between 2016-2018. This MRP finds that alongside the growing need to design digital services, there is also growing consideration on how we might make digital services accessible to all Canadians.

## Acknowledgement:

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Table of Contents	Page
Chapter 1: Current State of the Problem .....	6
Chapter 2: Literature Review .....	15
Chapter 3: Methodology .....	22
Chapter 4: Engagement & Federal Innovation Labs.....	28
Chapter 5: What could Innovation Labs do differently?.....	41
Chapter 6: Internal and External Perspectives on Engagement & Transforming Service Delivery...	44
Chapter 7: What’s next for Engagement within the Federal Government? .....	51
Chapter 8: Engagement & Challenges .....	66
Chapter 9: A Way Forward .....	78

Figures:

- I. Figure 1: Policy to Delivery: Above is a graphic of the policy cycle and the various steps that go into delivering a solution. Policy is like the macro strategy that drives governance and researchers to engage the wider public to deliver an outcome. Pp 4
- II. Figure 2: Public Sector Engagement: Above is a graphic depicting the means for fostering engagement in the public sector. Currently there are in-person and online means of fostering collaboration. These two means of fostering collaboration are leading. Pp 6
- III. Figure 3: The Evolution of Innovation Labs: The above graphic depicts how federal innovation labs have evolved over the years from policy horizons, which exclusively focuses on policies and foresight, to the most recent innovation lab Canadian Digital Services, which exclusively focuses on designing digital services. Pp 20
- IV. Figure 6. Open Participation: The above graphic reveals the various types of open participation from open data to open source. Pp 56
- V. Figure 7. Digital Government Conferences: This figure reveals conferences and overarching conferences attended between 2016 to 2018. Pp 68
- VI. Figure 8: A strategy and way forward for implementing in-person or online public engagement in the federal government. Pp 76

This Major Research Project examines the potential outcomes of a federal government mandate to digitize service delivery to Canadians, based on the research question: what does the federal government currently do to transform service delivery (in an increasingly digital world)? This paper evaluates the federal government's recent efforts to engage the public and public services to improve service delivery to Canadians. It also highlights the federal innovation labs and online platforms that are currently emerging within the federal government as a means of engaging the wider public service, other sectors, and citizens (themselves) to transform service delivery to other Canadians. While the main contribution of this project is to map the transformation of service delivery within the federal government, it also explores the emergence of these federal innovation labs and of a centralized digital platform; what they are tasked to do; and the discourse within which they are evolving. The overarching research question stems from a desire to better understand the purpose of engagement and of transforming service delivery within the federal government. It is a result of over two years of observation of both the federal government, through working in front-line departments, and of efforts to innovate within the functional digital community. This paper proposes that federal innovation labs and online platforms, both of which are important in order to successfully engage users in designing new services, may want to consider the following:

- Build consensus horizontally versus via top-management
- Allow for open participation
- Design for emergence and discover solutions already emerging
- Empower participants to co-design
- Upskill
- Prepare for online open-source

- Utilize online analytics

The unique insight that this major research project provides is the exploration of how the federal government might move away from merely problem-framing or policy analysis towards actually building new service delivery models alongside public servants, other sectors, and citizens. It proposes that in order to ensure federally funded innovation labs and online platforms remain effective, they must utilize engagement as a means of producing solutions to policy challenges. This entails exploring opportunities to co-design digital services using methods such as open participatory design, civic analytics, or online open source. If the federal government attempts to co-design services, they may discover the wide array of expertise and insights within the public service and beyond that is available to produce digital services.

his MRP will also highlight the challenges ahead for the public service to succeed in engagement of the wider public service and of Canadians at large to design digital services. These challenges include a siloed and hierarchical bureaucracy; an inability to disband from antiquated service delivery approaches; and difficulties aligning the interests of various sectors within and beyond governance. These issues may be resolved through an online engagement strategy, however online engagement comes with other challenges, such as accessibility, cybersecurity, rising prices due to monopolization by certain digital service providers, and low digital literacy.

**Chapters:**

- Chapter 1: Current State of the Problem
- Chapter 2: Literature Review
- Chapter 3: Methodology



- Chapter 4: Engagement & Federal Innovation Labs
- Chapter 5: What could Innovation Labs do Differently?
- Chapter 6: Internal and External Perspectives on Engagement & Transforming Service Delivery
- Chapter 7: What's next for Engagement within the Federal Government?
- Chapter 8: Engagement & Challenges
- Chapter 9: A Way Forward

**Chapter 1: Current State of the Problem:**

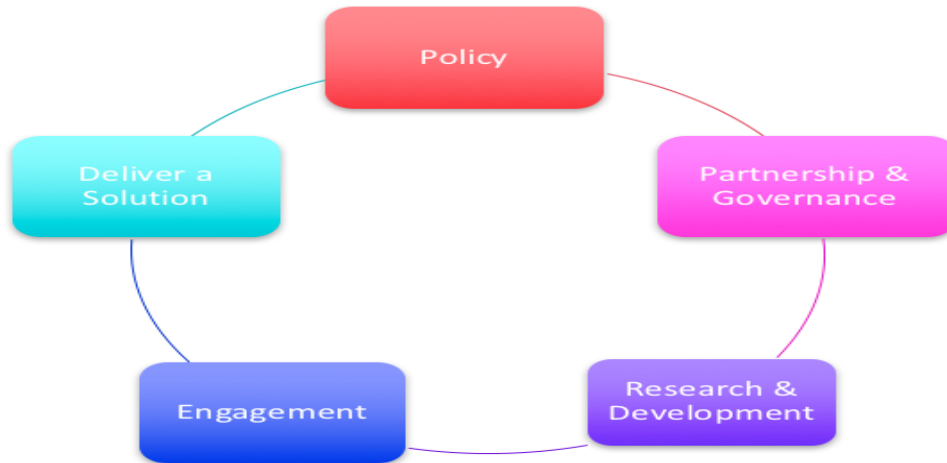


Figure 1: Policy to Delivery: Above is a graphic of the policy cycle and the various steps that go into delivering a solution. Policy is like the macro strategy that drives governance and researchers to engage the wider public to deliver an outcome.

Federal innovation labs are known for taking a collaborative process towards the transformation of service delivery. Understanding the needs of Canadians and collaborating more openly is a key feature of the federal government’s efforts. Alongside in-person engagement unfolding through innovation labs, there is also a growing support towards taking a digital engagement approach on a centralized platform in order to engage a vast network of external partners outside of the public service.

Primary evidence, captured through the attendance of 6 conferences in 2017-2018, reveals the perspective of certain federal public servants, sectors, jurisdictions, and Canadians on the future of service delivery in Canada. This Major Research Project has captured and synthesized over 15 presentations from these in-person sessions. The research and primary evidence reveals that collaborative in-person or online processes provide an opportunity for new streams of unprecedented data, evidence, or partnerships to guide service delivery strategies in the digital age (Lindquist, 2017).

As a result of working in the public service and 3 innovation labs between 2016 – 2018, this research is also a first-hand observation of how the public sector is utilizing innovation labs and digital platforms as a means of being more open and collaborative; both internally across siloed units of government, and externally between different levels of government and citizen (organizations).

Ultimately this major research project proposes lessons learned and best practices for executing engagement. It lays the groundwork for balancing the primary two means (in-person and online), while proposing the importance of producing solutions to improve digital services.

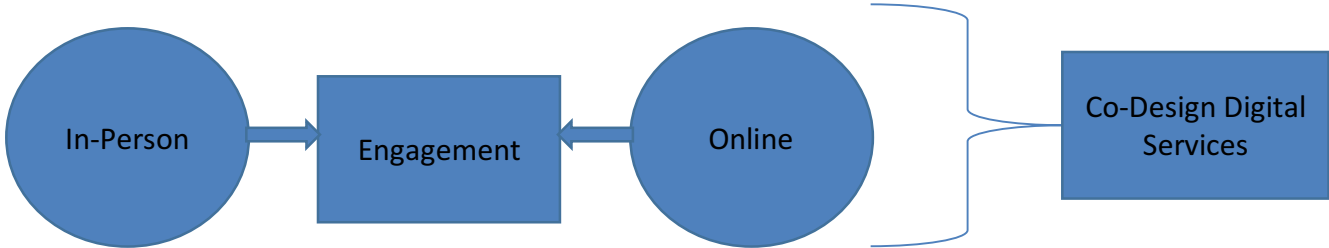


Figure 2: Public Sector Engagement: Above is a graphic depicting the means for fostering engagement in the public sector. Currently there are in-person and online means of fostering collaboration. These two means of fostering collaboration are leading

## **The Future of Service Delivery is Digital**

At an event titled “The Future of Digital Government” hosted at Employment and Social Development Canada’s head offices by the Strategic Services and Policy Branch, policy analysts were provided a better understanding of the implications involved in ensuring service delivery becomes digitally enabled. The speakers, who were in Ottawa for (talks hosted by) Deputy Ministers at the Federal, Provincial and Territorial levels, collectively agreed that the future of service delivery will be digital. Speakers included: Casper Klynge and Lars Frelle-Peterson, representatives from Denmark’s national government; Sunil Johal, Director of the Canadian public policy think tank at the Mowatt Centre; and Hillary Hartley, Chief Digital Officer for the Ontario Government.

(A major takeaway from these talks is that) digital technology will increasingly be a key component of global diplomacy, and has the potential to effectively change the balance of global power. The representatives from Denmark argue that, where formerly nuclear weapons were the key determinant of global power, today machine learning and artificial intelligence are emerging as key influencers. They highlighted that Apple’s value, measured in asset stocks, is comparable to that of Denmark’s entire GDP. On one hand, the increasing influence of technological economic powers calls for tightening international regulations around data protection. On the other hand, many nations are forging an approach towards regulating technology companies

and instead focusing on competing more effectively in this emerging market, which in turn calls for greater diplomacy.

It was shared during the talks that the rise of the influence of technology has led to an increasingly digital-centric approach to service delivery. In Denmark, for example, 90% of all citizens receive letters from the government. In 2005, the government decided to make it mandatory that all invoices be digital. All payments from the government are now required to be on a digital account. The delegates from Denmark also emphasized that technology can empower citizens. It allows for a personalization of digital services by being transparent and providing citizens with choices.

As a result, one might argue that it is high time for the Canadian government to take a digital approach to service delivery. Sunil Johal, Policy Director of the Mowatt Center, agrees. He argues there is a growing divide in how the government is functioning and how other sectors are functioning. He adds there is a responsibility for the government to utilize technology as a means of designing and building services that benefit all. He used Bangladesh as an example, as it is one of the most densely populated places on earth and is currently rolling out a digital payment system for 100 million individuals. Johal argues that if Canada doesn't catch up, it will be losing credibility for not delivering digital services.

There is growing evidence that the global competition is focusing more and more on data analysis. The Canadian government is up against working in a digital world. As a nation, Canada has an opportunity to redesign digital services. Meanwhile, Ontario's provincial government is

well on its way to leading an era of moving from manual to digital service delivery. Hillary Hartley, Chief Digital Officer for the Ontario Government, brought a Canadian governance perspective to the conversation, pointing out that the Ontario digital government is already designing faster and simpler digital services for the province.

In particular, Hartley highlighted the importance of engagement to achieve the mandate of digital service delivery. She believes the future of governance requires becoming a platform that brings people together to build digital services. In particular, she shared her interest in producing open-source teams that work (publicly) to collaborate on and experiment with different ways of designing better digital services. This endeavour will require building more empowered teams. She shared that digital inclusion needs to be at the heart of the mandate. Creating a society where everyone can participate as we enter the digital age of service delivery is essential.

## **What is Lacking?**

### **Define Blueprint 2020 and Public Service Renewal**

The necessity for transformation of service delivery is reflected in the Blueprint 2020 policy. It outlines that the federal government is in the midst of national transformation, both economically and socially. The Blueprint 2020 policy outlines increasing globalization, changing demographics, and accelerated technological change, all of which have led to global interconnectedness even while divergences between interests, values, and demands have

accelerated. For example, the Internet and mobile communications are revolutionizing how people carry out their work and conduct their daily lives, and how businesses operate.

In the Blueprint 2020, the Government of Canada outlines the growing demand for openness and transparency ([Blueprint 2020](#)). In order to transform the public service's approach to providing services, the public service is encouraged to collaborate across regions, functions, hierarchies, departments, and agencies to make a difference in the lives of citizens and the future of the country ([Blueprint 2020](#)). The policy also encourages the public service to take advantage of networks and partnerships for meaningful policy advice, effective program design, and to develop responsive tech-savvy services ([Blueprint 2020](#)).

### **Service Policy**

The federal government has also launched the (ESDC Service Policy), a strategy for how the government might provide high-quality, easy-to-access, simple and secure services and programming online ([ESDC Service Policy, 2017](#)). Employment and Social Development Canada is playing an important role in the implementation of the government-wide service delivery transformation strategy. For example, for the first time in Canadian history, the department is providing the Canadian Pension Plan submission options online. ESDC is also collaborating with internal and external partners to achieve key aspects of the strategy's transformation agenda.

Another facet of the policy is that it encourages the federal government to collaborate interdepartmentally and with other jurisdictions in order to achieve department-wide

modernization ([ESDC Service Policy, 2017](#)). This involves working cooperatively and drawing on a collective of expertise across the federal government, provinces, territories, and external stakeholders. Vast collaboration has been encouraged internally and externally in order to discover new tech competencies and talent.

The service policy highlights the importance of user engagement in the design of digital services. The government has shared that it will ensure users are engaged and involved in the design and development of digital services. This involves collecting and analyzing client and employee feedback as services are provided, and ensuring the best feedback and ideas inform implementation ([ESDC Service Policy, 2017](#)).

### **Objective:**

### **Engagement for Transforming Service Delivery**

In this paper, I put forward the claim that there is ample and growing support for the process of transforming service delivery and meeting the needs of Canadians online, and that we must mobilize all sectors of academia, the private sector, and even individual users, to be a part of this process. In the words of the Clerk of the Canadian Public Service, “The renewal of the Public Service (...) belongs to every one of us.” ([Wernick, 9, 2017](#)). This study shows that the federal government aspires to mobilize various sectors to collaborate together, with the goal of paving a way forward that is beneficial across all industry and user needs.



As transformational strategies become forefront in the federal government's budget and agenda, innovation labs emerge within the Canadian public sector to allow public servants to work more collaboratively--within their own department, interdepartmentally, and with public partners--in transforming services. Innovation labs are safe spaces for creative thinking and prototyping within a low-risk environment. At the heart of innovation within certain federal government innovation labs is the transition of the public service into the digital age of service delivery.

In this paper, I argue that engagement is essential for producing new services, programs, and policies. There is growing support for this claim among academics including, for example, Harvard Business School Professor Karim Lakhani, who argues innovation labs must explore new approaches for engagement in order to produce new services. Along similar lines, the City of Toronto encourages analysts to think about the amazing products and services that regular civilians have been able to build ([City of Toronto, 2017](#)). Public Policy Forum also agrees that vast multi-sectoral collaboration is important for service design and policy implementation.

The government alone cannot direct outcomes. It requires collaboration and joint action across sectors. As well, engagement is important for improving service delivery because it allows for interdepartmental engagement in executing projects, as well as working with external stakeholders and end-users to understand challenges. As a result, public servants become better equipped to co-design and prototype new service delivery models.

This paper seeks to highlight a growing need in the public sector to either improve service performance by more effectively utilizing various engagement tools (such as in-person or

online) to gather information, or to either improve their performance or redesign their services altogether. Evidence of the federal government's interest in engagement is revealed through its focus on developing innovation labs. In an innovation lab, creative outputs are achieved through group workshops, which explore different tools for brainstorming, evaluating, and generating new ideas to be implemented. For example, in an innovation lab, a project might encourage engagement with end-users to explore and test a new service design. A lot is learned from collaborating more openly with academics, the private sector, and users.

A challenge that innovation labs may face with engagement is the sustained impact of bringing together idea generators, facilitators and information sharers. This is important when trying to design services, for these things take many months and in certain cases years to implement. Therefore, there is also a need for in-person or online engagement to ensure long-term engagement.

This paper finds that in order to mobilize and sustain a network of collaborators as vast as the political system and beyond, the federal government is exploring strategic engagement via innovation labs and online platforms.

## **Chapter 2: Literature Review:**

### **Define Public Service**

One of the reports that has shaped this major research project is the “Twenty-Fourth Annual Report To The Prime Minister on the Public Service of Canada,” written by Michael Wernick Clerk of the Privy Council and Secretary to the Cabinet. It outlines the history, current mission and vision of the (federal) public service.

The public service was created in 1908 under the Laurier government as the “Civil Service Commission” (Wernik, 2017). The public service is a non-partisan bureaucracy that provides evidence-based advice to government, implements laws, policies, and programs determined by the elected government of Parliament, and overall strives to deliver quality services to Canadians (Wernik, 2017).

Public servants have helped tackle significant challenges for Canada over the years. The creation of major social programs such as universal health care and the Canadian Pension Plan (CPP) are examples of this (Wernick, 2017). Nevertheless, modernizing and renewing the public service has come with a set of challenges. To set the context for the challenges that the public service is facing, Michael Wernick, Clerk of the Privy Council Office, said recently:

“With public servants working in close to 300 organizations with widely varying mandates and business lines, making change can and should take time if we are to do it

well, and we have to persevere. I have seen our shared Public Service values come shining through as we do our best to innovate and add value for Canadians and government. We do so notwithstanding some barriers due to outdated internal systems and processes, and tools that are not always as modern as we would like.” ([Micheal Wernick, 9, 2017](#))

Wernick also recognizes there is a need for refreshing internal skills and knowledge around designing and modernizing services, in order to adapt to a new organizational culture and remain connected, creative, and engaged within and outside the public service (Wernick, 2017). However, this is no small feat; the public service is Canada’s largest employer, with more than 259,000 employees.

As the country grows in both population and diversity, the public service is adapting to serve changing needs and demographics in Canada. In order to improve and modernize services to Canadians, the public service would like to ensure individuals with different experiences, capabilities and perspectives are at the table designing programs and policies (Wernick, 2017).

### **Digital Service Delivery**

In order to better understand the relevance of digital service delivery, this paper has evaluated key mandates in policy and in the budget published by the government of Canada, as well as in review publications by the Harvard Business Review on digital disruption.

Making service delivery digital for Canadians is an essential aspect of Blueprint 2020.s is pointing out that the global economy is driven by digital technology. Digital technology is therefore at the forefront of economic return, advancement, and the ways Canadians and customers across the world want to receive services ([Innovation Budget, 2017](#)). More and more Canadians are using the Internet, and by 2021 it is estimated that 4.5 billion individuals will have web access (Budget 2017). By 2020, 25 billion Internet-based devices will be in use ([Budget 2017](#)). This is all evidence of a worldwide shift to a digital reality.

The Government of Canada has already begun to design online services. In 2017, over 197 million visits were made to a Canada.ca website. In 2016, 84 percent of Canadians filed their taxes online. The Global Affairs Travel Smart App, which provides travel advice and information, was installed by over 40,000 users. The Can Border App, launched in May 2016, provides real-time border wait-time information for travelers. It has been downloaded 20,000 times and is utilized 60,000 times every month ([Wernick, 2017](#)). As of June 2015, Canadians can apply online for the Canadian Pension Plan (CPP) retirement benefit, and as of January 2017, 106,606 people have done so. (Overall,) the Government of Canada has made a significant investment in shifting service delivery online, though there remains to be more work to be done.

Internationally, other governments are also busy implementing digital service delivery. Estonia, with a population of 1.3 million, (recently) adopted a uniform digital identity system. The UK Government Digital Services team has created a digital academy to train and upskill staff in order to be more adept in delivering digital services. New Zealand has engaged digital startups to

co-design services. In Bangladesh, one of the most densely populated places on earth with a population of 100 million, the government has executed a digital payment system.

The federal government is competing against a rapidly innovative social and economic ecosystem, both domestically and internationally. Larry Downes of the Harvard Business Review published “Big Bang Disruption,” where he argues that the private sector is playing a significant role in designing digital platforms that have inspired consumers to embrace new technology as a means of acquiring services ([Downes, 2013](#)). Many of these digital platforms are capturing the market by providing products for free ([Downes, 2013](#)). These innovative disruptions are capturing low-end customers and then gradually moving upmarket to pick off higher-end customers as well. Examples of such innovative disrupters include Google, Facebook, AirBnB and Uber. The first two platforms have aggregated data and have developed a monetary model of acquiring financial returns by selling the aggregated data to a third party. The latter two digital platforms allow users to produce and exchange services with one another.

## **Innovation Lab**

In order to understand the purpose of innovation labs, this major research project has reviewed publications by the United Nations, the federal government of Canada, and local media publications. The Ottawa Citizen published that innovation labs are dedicated to creating or evaluating new service delivery for Canadian citizens ([Ottawa Citizen, 2015](#)). This is supported by evidence found by the UN that innovation labs tend to improve services for the public by co-designing with stakeholders, departments, and other levels of government ([UNDP](#)). The United Nations argues that innovation labs achieve this both by providing physical space for discourse,

and by bringing in outsiders (including the most marginalized) to prototype services. This comes as a welcome alternative to the departmental model of a hundred bureaucrats working on policy ([UNDP](#)).

Teresa Bellefontaine, an innovation analyst for the public service, claims that innovation labs are committed to utilizing community engagement in order to get the right people together to understand complex problems, and in turn design new approaches and solutions ([Bellefontaine, 2012](#)). The available evidence from Bellefontaine's study seems to suggest that innovation labs are looking at how to integrate citizens' views into the design and delivery of services, while also breaking down departmental, interdepartmental, and external hierarchies through collaborative sessions ([Bellefontaine, 2012](#)).

One of the ways Innovation labs engage a wider community is through technology that allows for virtual engagement. The Privy Council Office has shared that innovation labs also allow for the utilization of technology such as video conferencing or wifi in order to collaborate with other regions and stakeholders across the country ([Privy Council Office](#)).

## **Digital Platforms**

In order to better understand the relevance of digital platforms for engagement, this major research project reviewed publications by London School of Economics and Canadian think-tank Canada 2020, the latter of which does research on digital platforms, data, and digital disruption. The London School of Economics has published that the digital era is defined by online platforms which are centered around data as the raw material. These online platforms are digital spaces where multi-sector networks emerge and influence one another. The business model for

these platforms consists of a digital infrastructure that acts as the intermediate between different users and the data they produce or exchange (Srnicsek, Platform Capitalism, 2016). This data is collected and, at times, analyzed.

Canada 2020 emphasizes that digital platforms require experts who are highly qualified in analysis of data, and that there is the rising need for data analysts and data management experts (in public policy). Canada 2020 argues that online data analysis is predicted to deliver cures to policy problems, describing the process as civil analytics (Lenihan, 2017). Canada 2020 suggests that online data could be analysed to have a better understanding of the policy landscape that is being evaluated. If led by a research-planning exercise with defined priorities, platforms could be utilized to report on the state of affairs nationally.

### **Open by Design**

The understanding of the open by design model in this major research project is the result of reading publications by the Government of Canada and the City of Toronto, as well as a publication by IBM on open by design. There is a rising interest within the federal government's public service for open by design, which means placing citizens at the centre of development and transformation of services. This was initially a core tenet within the Privy Council Office (PCO), and an innovation lab was planned that would put the end-user at the center of a process that affects them. This would have consisted of taking up ethnographic research at client service centers, exploring how current governments design products through testing, and prototyping



public-facing websites to enhance user friendliness (PCO, 2017). This mandate was never carried through to fruition.

Nevertheless, the principle of open by design is quite interesting and in favor of a participatory democracy (City of Toronto, 2017). As we try to make government collaborative and digitally innovative, one sees an interest of increasing interdepartmental and external engagement. If open by design was achieved, the public sector would reframe what meaningful citizen or employee engagement looks like, shifting the focus toward co-designing digital services. This also challenges the public service to design in collaboration with the very citizens they seek to serve (Connected 150 Conference, Oct 2017). Open by design flourishes through transparency, participation, accountability, and accessibility. In an open by design process, there is less ownership of information and execution. Instead, management takes on a role closer to that of stewardship (Ozma, 2017).

Open by design experts claim that maintaining ongoing engagement opportunities with external stakeholders throughout the process is difficult, and requires both public access to information and public consultation. It also relies on making business plans more open and accessible (Davis, 2015). Altogether, open by design questions ownership and suggests open-source decision-making. It is a philosophy built on meritocracy, where technical developments are enabled by both commercial and non-commercial participation and contribution (Davis, 2015).

### Chapter 3: Methodology:



Figure 3: Research, Policy and Digital Services: The graphic above depicts that in order to design digital services there is two components. There is policy which shapes the strategy and course of action a federal government takes. There is also research which gathers insights and data to either validate or reveal gaps in the strategy.

### **Grounded Theory**

This MRP uses grounded theory, a qualitative method that uses empirical data to build and develop conceptual theory. The process is best described as a qualitative method. It consists of generating data which is organized into concepts or categories. These categories may be related to one another in order to explore the main concerns identified in the in-person observations, literature, and participant reflections (Glaser, 2014).

The data collection process includes observations, published literature, and insights shared. This data was put through a process of analysis, which determined categories for the data that was collected. The main contribution of this research is mapping the internal process of the federal government to foster engagement in order to transform service delivery. It also explores what the federal government has been tasked to achieve, and the discourse within which it is evolving.

- A. What are some core variables?
- B. How should this data be categorized?
- C. What does this data indicate?
- D. What is actually happening in the data?

**Data Generation:** Preliminary data collection and analysis

As a result of a few predetermined ideas from existing literature and theory that I had explored during the Master in Strategic Foresight Program, I had prior knowledge and experience as a researcher before I took on a role as an observer. As a researcher, I was immersed in the data and was able to observe what participants see as being significant and important.

**Theoretical sampling:** Upon collecting information, as a researcher one will analyse the data, decide how to categorize it, and determine what data to collect next. This further data is collected to confirm or refute categories that have been identified. The (existing) literature can be used as data and is compared with the emerging categories.

**Theoretical Coding:** conceptualizes how the categories may relate to one another as hypotheses to be integrated into theory. This is also known as open coding, which is generating initial concepts and linking data into conceptual families. Categories are not fixed. They are analytic thoughts that may alter as thinking changes.

**Create Categories:** Grounded theory allows a researcher to identify categories, to make links between the categories, and to refine and integrate the categories that have been identified. This is done by grouping together events, occurrences, and central features or characteristics identified in the data (Glaser, 2014).

**Identify a Theory:** The data collected then enables one to develop a theory. It offers an explanation of the main concern of the area of interest, and of how that concern is resolved or processed. Grounded theory allows for the discovery of emerging patterns in the data, enabling one to discover latent social patterns and structures in your area of interest (Glaser, 2014). This method of discovering theory is (designed to) uncover the basic social processes at work and get to the core of what is going on. It is ideal for identifying integral social relationships and the behavior of groups where there has been little study of the contextual factors (Glaser, 2014).

The main contribution of this study has been to map the internal process and treatment of innovations labs by the federal government, including how they are seen, what they are tasked to do, and the discourse within which they are evolving.

### **Research Questions:**

The key questions this research addresses are:

1. What does the federal government currently do to transform service delivery?
2. Why might federal innovation labs and centralized digital platforms engage the public service and various sectors to design digital services?
3. How can the current federal government practice of transforming service delivery be critiqued and improved?

### **Process**

Alongside secondary research, my perspective on innovation and service delivery within the federal government has been stimulated through participatory insights captured through

conferences attended. This allowed for the discovery of new knowledge and perspective absent in the discussions within the bureaucracy regarding the digitization of service delivery.

1. A literature review was conducted to provide the necessary context to frame the project
2. An analysis of existing innovation labs and of a centralized digital platform was conducted in order to understand the federal government's approach to engagement
3. Conferences were attended and steered to better understand the opportunities, challenges, and perspective of thought leaders from various sectors
4. Primary data on engagement was compared to secondary data and theories on taking a collaborative approach to designing digital services
5. Best practices for co-creating and executing engagement for designing digital services

As a result of the research, it was clear that engagement was a key feature of the federal government's strategy for transforming service delivery. So I began to explore how engagement within the federal government compares to existing models and theories in the literature.

- Observations of federal innovation labs
- Attendance of conferences
- Reports by third party organizations
- Evaluation of theorists

I reviewed mandates, policies, and reports that the federal government publically references and has published, and attended a number of relevant conferences. I also visited and worked within a few of the innovation spaces to engage the interdependencies between the labs.

In parallel with my own personal experiences, I also utilized innovation theories and reports that were shared within the OCAD U SFI program to provide theoretical observations on the practice of innovation.

In order to ground my understanding with in-field perspectives, I attended conferences where public servants, academics, the non-profit sector and the private sector defined innovation in service delivery. These various perspectives were often focused on digital service delivery. These perspectives were captured as written notes and later summarized. The collection of findings can be found in Chapter 6 of this paper.

After reviewing these perspectives, I synthesized the key concepts into two models that are emerging within the public sector to facilitate engagement and improve digital services: namely, innovation labs and a centralized digital platform. While I began with a focus on innovation labs, I began to focus on a federal, government-funded, centralized digital platforms after I observed the need for such a model, highlighted by the literature and during the conferences attended. These two models are together seen as tools for engagement.

## **Systems Thinking**

Literature by famous systems thinkers such as Donella Meadows and C.S. Holling has driven this paper's methodology as well. Systems thinking encourages a researcher to contextualize data within the larger system of which the subject of interest is a part, whether it be social, political, or economic in nature. This means collecting data to understand the subject of interest (i.e. the public service and service delivery) in the context of the network of stakeholders within which it is embedded. Systems thinkers acquire empirical data by evaluating a complex network that the organization is a part of and by thinking about who the key stakeholders are, i.e., what their interests are, what variables they control, and which ones they influence (Meadows, 2008). System thinkers thereby reveal the interdependencies between various actors, identifying how they complement one another and, in certain cases, how they might conflict with one another.

Systems thinkers engage a vast network of an organization in order to identify empirical data, which in turn reveals the potential of the area of study to adapt and evolve. Systems-thinking finds that all organizations are in an adaptive cycle which is evolutionary in nature and destined to change. In an inter-organizational way, systems-thinkers will look at the nature of the greater whole of society and collect data to explore how it might impact the internal nature of a siloed organization. Systems thinking encourages researchers to better understand how the collective nature of an entire global, social, or economic system may lead to the transformation of a single organization. In systems thinking, one might better understand the importance of designing digital services by interacting with a vast network, and thereby both defining service delivery challenges and creating solutions (Holling, 2001).

## Chapter 4: Engagement & Federal Innovation Labs :

### Innovation Labs

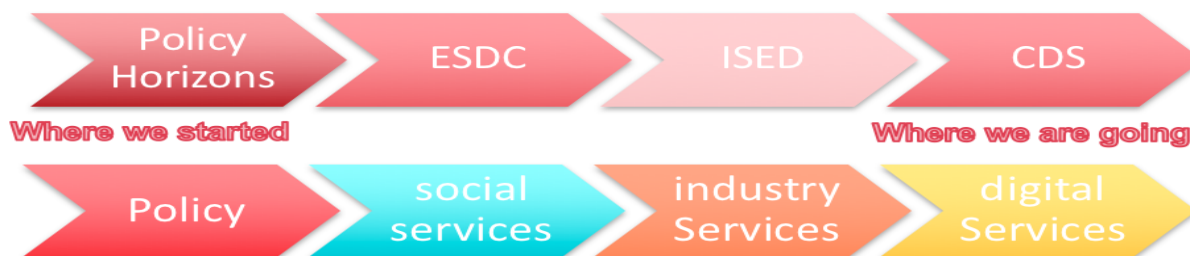


Figure 3: The Evolution of Innovation Labs: The above graphic depicts how federal innovation labs have evolved over the years from policy horizons, which exclusively focuses on policies and foresight, to the most recent innovation lab Canadian Digital Services, which exclusively focuses on designing digital services.

Over the past two years, innovation labs have begun to unfold in various federal departments in order to improve the transmission grid between research, policy, and service delivery. One might argue that innovation labs exist to expedite a function that has existed within the federal government for quite awhile. As well, innovation labs are safe spaces to try new things and allow for creative thinking and prototyping to unfold in a confined space. This allows the federal government to manage risk. The unique feature that innovation labs provide is an increased engagement of everyday citizens in producing evidence-based analysis of services, and infinding creative solutions to improve a citizen's experience of services. These spaces allow for the management of risk by prototyping and planning new ideas in a confined and safe space.



Delivering digital services is an emerging function of the federal public service. In order to do this, the federal government produces policies, which are strategies that lead to programs and services. As transforming service delivery has increased in importance, so has designing new policies. Innovation labs have been designed as collaborative workspaces for the public service to play a significant role in bringing together various partners from different sectors to think through new government services, policies, or programs. Prior to innovation labs, consultation of external stakeholders has existed as a means of complimenting programs, services, or policies that a department is creating. These consultations have often existed as one-day events or as a steering committee that consults the minister and policy analysts of various federal departments.

Federal innovation labs are known for rapidly forging engagement and partnerships across various government jurisdictions, non-profits, academics, and private sector partners. As first-hand observations reveal, innovation labs allow innovation analysts to quickly engage multiple stakeholders to respond to the changing needs of government, society, and the market. Previously, these relationships may have only been forged by senior executives.

The federal government is attempting through innovation labs to produce an alternative to a hierarchical means of deliberation. The Prime Minister's Advisory Committee on the public service has suggested that innovation labs cultivate closer linkages between internal and external partners, allowing public servants to more easily meet and engage with Canadians and representatives of various organizations. Innovation labs assist public servants within federal departments to better diagnose the problems faced by society at large, while also generating

creative solutions to provide the best digital services possible for Canadians ([Tellier and Emerson, 2012, p. 4](#)).

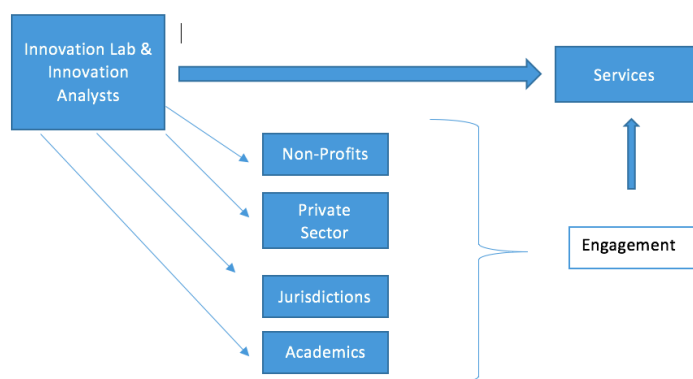


Figure 4: The graphic above depicts what drives projects within innovation labs, which is policies. It also reveals the types of stakeholders it engages. And finally it reveals the outcome it works towards; designing digital services.

Innovation labs allow for the public sector's bureaucracy to move towards mobilized networks, teamwork, and multi-skilling, as it is argued that the established ways of managing and organizing are not adequate for transforming service delivery (Kimbell, 2011, 288). Teresa Bellefontaine, an innovation analyst who works with Canadian federal innovation labs, claims that innovation spaces empower participants to think disruptively about plausible alternative future scenarios. They also seek to create solutions by co-creating with those most affected by such alternative futures ([Bellefontaine, 2012](#)). Finally, innovation spaces provide a creative space to think outside the box about what could be done to resolve challenges identified in existing or new service delivery models.

Within federal innovation labs, innovation doesn't happen in isolation. Great ideas come alive when groups of passionate people come together to inspire, support, and collaborate. Innovation involves working collaboratively with a larger ecosystem that supports it.

Currently, innovation labs thrive as physical space to meet and collaborate. Public Works and Government Services Canada are at the heart of developing modern workplaces for collaboration. Their goal is to enable the public service to find innovative and responsive means of responding to national issues for Canadians as they arise through engaging internal and external partners (Keith, p. 18, 2011).

Primary evidence reveals that collaboration is inspired through a redesign of a physical environment. The space must provide the technology necessary for virtual and regional engagement, as well as facilitators to ensure connectivity unfolds horizontally or vertically via internal or external organizational engagement ([Birdi, 2009](#)). Kamal Birdi, Senior Lecturer at the Institute of Work Psychology, University of Sheffield, looks at an Innovation Lab based in the United Kingdom called Futures Lab. She argues that labs are made up of:

1. Physical environments where teams and groups engage with one another in order to think or extend creative thinking beyond normal boundaries. The environment is stimulating, non-threatening architecturally, and unique to facilitate individual or group creative thinking. The physical space eliminates traditional layouts and provides either more meeting rooms or open space to facilitate a larger number of individuals.

2. Technology plays a component in the collaboration. Often innovation labs include high-low tech support tools as to allow for the engagement of external stakeholders. Video-conferencing may be utilized to engage regional partners across the nation ([Birdi, 2009](#)).

3. The space allows neutral facilitators to host workshops or participatory research methods to engage external participants. Large space is provided for facilitators to work with participants through the problem-solving and idea-generating process. Facilitators tailor sessions to the needs of clients, facilitating group discussions and post-session recommendations ([Birdi, 2009](#)).

### **Innovation Labs & The Federal Government**

Primary observations reveal that within the federal government, there has been a higher uptake within federal departments to allocate space and human capital towards innovation labs. Below, one will find examples of different innovation labs within the public sector, and what they do to facilitate engagement in order to transform services. Federal departments seek to design solutions for sector-specific-challenges. A number of federal departments have opened their own labs, such as Policy Horizons, Employment and Social Development Canada (ESDC), Innovation Science and Economic Development (ISED) and the Treasury Board Secretariat's Canadian Digital Services (CDS). Over the years, these labs have transitioned from focusing on policy to service delivery, and most recently toward the production of digital services ([Ottawa Citizen, 2015](#)).

Policy Horizons	ESDC	ISED	CDS
<ul style="list-style-type: none"> <li>• Focuses on Foresight &amp; Policy Analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Focuses on Social Services</li> </ul>	<ul style="list-style-type: none"> <li>• Focuses on Services for Businesses</li> </ul>	<ul style="list-style-type: none"> <li>• Designs digital services</li> </ul>
<ul style="list-style-type: none"> <li>• Explores Emerging Trends</li> </ul>	<ul style="list-style-type: none"> <li>• Collaborative, Technology Enabled Space</li> </ul>	<ul style="list-style-type: none"> <li>• Member of Bayview Yards</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies and engages external talent</li> </ul>
<ul style="list-style-type: none"> <li>• Amplifies design thinking</li> </ul>	<ul style="list-style-type: none"> <li>• Engages the end-user in the process</li> </ul>	<ul style="list-style-type: none"> <li>• Exploring prototyping of digital services</li> </ul>	<ul style="list-style-type: none"> <li>• Engages across all departments</li> </ul>

Figure 5: The above graphic reveals the various innovation labs in the federal government and what distinguishes them from one another.

## Policy Horizons

Policy Horizons, as a foresight lab, helps the public service set an overarching direction for the future of policy and service delivery. As one of the oldest innovation spaces within the federal government, it takes a collaborative team-based approach to co-creating knowledge. It is made up of futurists and foresight experts, behavioral experts, and design thinkers who are paid to analyze disruptions happening in society and the economy that may lead to transforming policies or service delivery far into the future ([Ditchburn, 2017](#)).

Policy Horizons utilizes engagement of interdepartmental and external partnerships to gather insights. Recently, analysts traveled abroad to Myanmar and Washington DC, and hosted an international foresight expert from the United Kingdom. They also engaged with various

stakeholders, including Deloitte and the intergovernmental Organisation for Economic Co-operation and Development(OECD), by speaking at events or hosting them at their offices.

They have a team of design thinkers and futurists who are devoted to working with public servants in other departments and experts outside of government. Utilizing foresight methods, Policy Horizons has been bridging people, perspectives, data, and evidence in an open and constructive environment in order to explore emerging challenges and opportunities for the transformation of policies and service delivery (Ditchburn, 2017).

Policy Horizons is known for hosting a weekly ‘scan club,’ as they refer to it, where stakeholders are strategically invited from various sectors and departments to attend and provide interesting ‘weak signals’ they have discovered that might change the direction of policy or service delivery. The work involves challenging deeply embedded policy assumptions (Ditchburn, 2017). As well, Policy Horizons’ innovation lab hosts a program called Canada Beyond 150, in which a team of 4-5 design thinkers meet to design bi-weekly workshops for public servants. Canada Beyond 150 engages interdepartmental analysts to amplify foresight, systems thinking, and design thinking expertise among 90 policy analysts. The program encourages public servants to contemplate a range of future possibilities and disruptions in public policy and service delivery.

Policy Horizons applies design thinking, which is a new concept among public servants within the federal government. Foresight, which is Policy Horizon’s expertise, is a creative process that forecasts into the future the relevance of the public service of today. However, Policy Horizons could be criticized for having no tangible impact on digital services. Unlike other departments,

Policy Horizons does not need to actually produce policies or services that go on to impact the lives of Canadians. Rather, they play a consultation role of doing research on emerging trends that may impact the future of service delivery. In particular, they have produced a great deal of literature on artificial intelligence.

### **ESDC Innovation Lab**

ESDC's Innovation Lab identifies innovative solutions to service delivery challenges that Canadians may face using a human-centered design approach. The lab has an appetite for engaging external experts and Canadian citizens to better understand the impact services have on the lives of Canadians. The lab mobilizes tools such as design thinking and behavioral insights. Employment and Social Development Canada, as one of the largest departments in the federal government, is the face of the federal government in Canada with over 300 Service Canada centers across the country.

Engagement is an important part of ESDC's work. ESDC's former innovation lab director Urvashi Dhawan Biswal shares an interest in breaking down silos within government and with other sectors. The innovation lab has brought together internal and external actors together in dialogue. It has connected with regions and breaks down hierarchical barriers of engagement within a department ([Urvashi Biswal, 2017](#)).

The ESDC Innovation Lab also practices user engagement to understand service delivery challenges. For example, the lab conducted interviews with seniors to evaluate the digitization of

the Canadian Pension Plan. The innovation lab has also been tasked with conducting (analyzing?) stakeholder and user engagement of high-profile novel service delivery options. For example, in 2016 they were working on the Youth Service Initiative, which was looking at designing a new platform for vulnerable youth. The project was publicly announced in January 2017 as a Canadian Service Corps opportunity, which would instill a culture of service as a new national youth initiative ([Wherry, 2018](#)). The department for the first time conducted over 100 intercepts across Canada where they personally spoke to young Canadians. Over 100 stakeholders from the non-profit sector were also engaged and consulted, as were two other departments: Global Affairs and the Privy Council Office.

ESDC innovation lab has a physical layout designated for collaboration and has the technological capacity for digital engagement. For example, it is one of the few places in the department that has access to Wi-Fi and can use new tools like Skype or Google Hangouts to engage external partners. Further, within the ESDC innovation lab there are three meeting rooms, and one boardroom, with video conferencing to engage other regions or external partners. The collaborative space seats around 50 participants. Easily movable seats turn the open space into a theatre-style space for discussion, and monitors and mics are available for presentations.

The challenge with engagement, however, is integrating the insights captured through vast participation into digital services. As the former director of ESDC's innovation lab has said, the biggest barrier the innovation lab currently faces is discovering how best to integrate Canadian viewpoints into how it designs and improves service delivery. Therefore, there is an issue with co-creating with Canadians ([Dhawan Biswal, 2017](#)). Engagement encourages participants to



share several different perspectives. In order to build a solution, it requires a means of analyzing everything that is shared to produce either a trend analysis or a means of identifying certain competencies.

### **Innovation Lab - Innovation Science and Economic Development**

Innovation Science and Economic Development Canada, formally known as Industry Canada, is tasked with working with federally incorporated industries through Corporations Canada. It works with public servants and external stakeholders in collaborative workshops to co-design solutions that improve service delivery for businesses and Canadians ([ISED,2017](#)). It offers a safe space to co-create solutions with citizens, civil servants, and stakeholders alike ([ISED,2017](#)). The ISED innovation lab believes collaboration is necessary to make the public service more modern and user-friendly ([ISED,2017](#)). ISED's innovation lab is built to increase capacity to create a more user-centric public service. And to lead innovative research methods to engage the department and solve service delivery for businesses.

An example of the importance of engagement is a hackathon the lab hosted on homelessness. The hackathon ran over a weekend and was open to the public. Participants ranged from the private sector, public servants, and citizens. It was so open that during the hackathon on homelessness, homeless youth popped in to engage in the sessions. This reveals the lab's integrity when it proposes that it seeks to integrate the perspective of those most impacted by the services they seek to design. The Hackathon on Homelessness sought to build a service for those

who are homeless, and by being open to engaging the homeless it revealed it was able to create space to probe clients.

In order to foster more multi-sector collaboration, Innovation Science and Economic Development Canada moved the innovation lab from its office downtown to a new center called Bayview Yards. The new center had public servants sitting in common with local small to medium-sized businesses. Navdeep Bains, Minister of Innovation, Science, and Economic Development and Michel Tremblay, President of Bayview Yards and Invest Ottawa, announced that the innovation lab would be relocated closer to the rest of the National Capital Region's innovation ecosystem. Unlike any other innovation lab in the federal government, it was intended to be more closely located to meet the needs of Canadian entrepreneurs and innovators ([Nov, 2017](#)).

Primary observations reveal that as of April 2018 the management of the ISED innovation lab have decided to integrate the lab under the Digital Transformation Service Sector in the Digital Design Branch to work more closely with the Chief Information Office, which is made up of solution architects, web developers, software developers and user experience designers. Merging the innovation labs means that they work more closely towards the prototyping of digital services. The innovation lab plays the role of collecting insights into what the end user is looking for, challenges public servants face as they produce digital services, and emerging technology trends.

## **Canadian Digital Services**

As one of the most recent innovation labs to emerge in the federal government, the Canadian Digital Services (CDS) focuses on engagement in order to design digital services and products and replicates them across government. It provides advice to federal organizations grounded in either practical experience or existing global best practices.

Canadian Digital Services focuses on solving problems using design, agile methods, and proven technologies that put the user at the center of their work. The (organization) brings in external experts from various sectors, works with federal organizations, and clearly values multi-sector engagement. When they partner, they work holistically engaging the department or division and service users on discovery and design, before determining the best way to get the right digital solution in place.

The Canadian Digital Service is actively involved in engagement. Analysts can be found at public networking events such as Civic Tech, which is attended by public servants and the public alike. CDS brings in partners identified at these events, who might have complementary skills and tools when in need of help. Canadian Digital Services works as the connector to help departments and divisions connect with the broader #GCDigital community or outside partners. Housed in a central agency, which oversees the management of all federal departments, it has the potential to scale successful solutions to other users within the organization and across government.

Canadian Digital Services engages interdepartmentally with public servants from various federal departments. It understands the importance of interdepartmental engagement for transforming digital service delivery. However, inspiring departments to engage with Canadian Digital Services appears difficult. Canadian Digital Services is located in the Treasury Board Secretariat (TBS), which is a central agency of the federal government. As a central agency, TBS's traditional role is to manage departments and ensure it carries out the TBS-approved policies and mandate. Most departments shy away from collaborating with TBS. For example, if a department is working on a new digital tool it may not seek advice from Canadian Digital Services because its representatives do not feel comfortable revealing inadequacy in their product. Additionally, they might also question whether staff at TBS will truly understand the particular needs and challenges of their department.

### **Innovation Labs & Impactful Achievements**

Innovation Labs are playing a significant role in mobilizing inter-departmental participation and sparking user engagement at a rapid pace never seen before. For example, Policy Horizons is known for hosting the Canada Beyond 150 program, which engages 90 policy analysts in a 10-month-long program to learn design-thinking techniques and foresight. The program inspires policy analysts to design policy as a result of engaging stakeholders outside of government as well as forecasting a future yet to be discovered or experienced. It thus brings in a creative thinking approach to policy analysis, which is rare. On the other hand, innovation labs such as the one at Employment and Social Development Canada during a Major Research Project for the Youth Services Initiative conducted a user engagement across the country, in which it engaged over 100 young Canadians to incorporate their perspective in the design of a new service

delivery option for vulnerable youth. Innovation, Science, and Economic Development Canada's innovation lab works out of an external co-working space titled "Bayview Yards" where analysts work shoulder-to-shoulder with small businesses. This is a unique opportunity for policy analysts to work in the midst of the very clients they serve. Public Servants are encouraged to host workshops, engaging political staffers and small businesses in the process. This is quite a unique approach to collaboration within the public service. Canadian Digital Services has been working with Code for Canada to bring in external talent, such as software and web developers, to assist in designing new digital tools.

## **Chapter 5: What Could Innovation Labs Do Differently?**

### **Co-Design Services**

In order to produce new services through engagement, the public service of the federal government may want to focus on co-designing services openly. Arguably, co-designing and implementing solutions with external partners is one of the critical challenges that change labs face. Evidence reveals that innovation labs situated close to government, with a focus on service delivery, are in need of this. These labs reveal a dependency upon government in order to implement their potential service innovation solutions and to see if they will actually be relevant and impactful ([Public Policy Forum, 2013](#)). Current efforts are often disconnected from and fail to leverage the efforts of civil society, including citizens, nonprofits, and businesses (Public Policy Forum, 2013). Improving the way government involves citizens may require retooling government to engage citizens. The federal government may want to consider engaging citizens

as digital partners. This will require the federal government to reframe what meaningful citizen engagement looks like, which may include finding new means of co-designing services (Connected 150, 2018).

The need to co-design with external partners is evident in efforts to connect public servants to external partners with expertise in digital technology. For example, Gabe Sawhney, Director of Code for Canada, connects external innovators in tech and design to government projects. Code for Canada has created a fellowship to embed digital experts from the private sector in software or UX design within government. The work Code for Canada is doing reveals a need within the public sector for equipping public servants with the employees and tools they need to experiment and design new digital services.

It is important, then, to foster innovation labs that are driven to deliver solutions. This can be achieved if innovation labs allow public servants, newcomers, or external partners to think disruptively, and to lead and implement novel approaches to service delivery. I argue it is important to empower participation and leadership on a project outside of the constraints of an existing organizational hierarchy, allowing for grassroots social change to emerge. This can be ignited and inspired by the collaborative partnerships facilitated between public sector innovation analysts and the public.

Further, the research reveals that by forging partnerships and empowering the private sector, academia, jurisdictions, and the public, (they collectively) contribute to the transformation of service delivery and design digital services. For example, research reveals that if social

innovation is achieved, it provides a facilitated decentralized action and self-organization where silos of society work in a collaborative way to find novel ways of resolving complex social issues ([Mckinsey & Company, 2012](#)). Social innovation unfolds when various sectors from public, private and academia are collaboratively investing, securing support, and implementing novel solutions to social needs and problems ([Westall, 2007](#)).

### **Ignite Shared Value**

The federal government may want to consider that inter-industry partnerships as essential when attempting to bring new value propositions into the market. As a result of Budget 2017, a co-design approach is being explored in the public sector through a new program titled Innovative Solutions Canada. \$100 million in funding from twenty participating federal departments has been set aside to support proposed innovative solutions to service delivery by Canadian small businesses ([ISED, 2018](#)). Participating federal departments propose public challenges based on each department's mission and mandate. These challenges are to be shared with small and medium-sized businesses in order to fuel the development and adoption of technological innovation in Canada ([ISED, 2018](#)).

I argue that once such partnerships are forged it would produce 'shared value' among all sectors and jurisdictions to transform service delivery and deliver digital services. 'Shared value' is a term that Micheal Porter, an economist, proposed to discuss how enterprises might adjust to the production of economic value, while also addressing the needs and challenges that the public faces (Porter, 2011). His proposition is an interesting one for those in the public sector seeking to

partner with the private sector, inspiring their investment and collaboration in the production of public services. Currently, the private sector remains trapped in an outdated approach to value creation. Sectors view value as optimizing short-term financial performance while missing important customer needs and thinking about broader long-term influences for success (Porter, 2011). The federal government may want to consider that if various sectors were to partner with the public sector it might begin to see the means of creating economic value by addressing the needs and challenges of society. Shared value consists of businesses connecting company success with social progress. This might be the next major transformation in business thinking (Porter, 2011). This major research project proposes that partnerships with the private sector would have a significant impact on the ability of the public service to produce and implement new innovative services. Various sectors are well on their way, and well ahead of the federal government, in their efforts to deliver digital services to Canadians.

## **Chapter 6: Analysis: Internal and External Partners Perspective on the future of Engagement and Digital Service Delivery:**

This paper has also gathered perspectives on what trends public servants and external partners think will triumph and take engagement in an absolutely new direction. Foresight practitioners argue that this is an essential feature of predicting where the future might go. In order to predict the future, one may engage in a social process that fosters human interaction, where ‘codified knowledge,’ creative thoughts and insights of those within and beyond the organization are explored in order to predict the direction of the future (Kees van der Heijden, 2017). These insights were captured by attending various conferences that engaged public servants, academics,



non-profits, and the private sector to explore the transformation of service delivery, as well as to explore participant perspective on engagement to improve services ([Leonard, 2017](#)).

Herbert A. Simon, an American political scientist in 'Problem Forming, Problem Finding, and Problem Solving in Design,' suggests that design thinking, appropriately applied, moves beyond analysis and testing dominant mental models to observing novel ways of how the world is changing. One might ask:

- What is an alternative and plausible future?
- What could it mean for their organization?
- What are the challenges?
- What are the opportunities?

Predicting where an organization might go next is best applied with multi-sector participation. One begins to scan the entirety of a socio-economic or a political environment to identify emerging trends, events, and relations in order to assist management to plan the future of an organization. When participants are brought in from various sectors, more elements of possible change are brought forward and the scope of environmental scanning expands.

When assisting an organization as vast as the federal government, one learns that there are several branches, divisions and departments. Vast participation is required in order to understand an organization's overall business strategy and acumen. Nevertheless, there is also merit in engaging external partners in order to identify market-related and unexpected trends.

## **Service Research**

On November 28, 2016, I assisted Employment and Social Development Canada in hosting the first ever Service Research Conference in Gatineau, Quebec. The objective of the conference was to share ESDC research on innovating service delivery and to learn about research undertaken by other service providers in the academic and private sector on the transformation of service delivery. The conference had around 216 individuals. There was representation from a variety of organizations, including twenty federal, provincial, and municipal governments (Quebec, Ontario, Manitoba, and the Region of Peel). The conference also included participation from NGOs, think tanks, the private sector, universities and colleges. Over 40 speakers from a range of organizations were strategically selected and invited to speak at the conference. The conference highlighted not only the opportunities for taking services online, such as using predictive analytics to analyse online data, but also the importance of co-designing with Canadians to produce these new services.

## **Digital Tools & Data**

As this paper argues, designing digital services is growing in importance. Certain speakers at the Service Research Conference agreed on the importance of developing digital services. The speakers suggested designing digital tools that acquire data to substantiate the services that are being designed for Canadians. InWithForward, a non-governmental organization (NGO), introduced ‘*Grounded*,’ a new digital data service for policymakers and organizational leaders.

InWithForward ethnographic research has revealed that some adults are facing barriers acquiring access to social services. The NGO developed *Grounded* as a direct feedback loop from people on the ground to people in government. The NGO considered doing this as a result of feeling as if the government was getting low-quality data on some of its users: the most vulnerable and excluded. The organization decided to create a data service tool that focused on a particular segment of society and their experience of receiving services. Grounded data has gone on to shape innovative service design to inform procurement and service providers.

The Service Research Division at Employment and Social Development Canada also evaluates the merit of online platforms for service delivery. Their team presented on the importance of text and data mining techniques for the future of service delivery in order to analyze feedback from users of online services. My Service Canada Account (MSCA) is an online service, which receives user feedback through a dedicated survey on the website. Some user feedback comes in the form of free text responses (open-ended comments). This presentation detailed the ability to apply predictive analytics to qualitative data from the survey. The ability to quickly analyse text, sort it into groups, and reveal trending insights has allowed for faster processing of comments and understanding the needs of Canadians.

## **User Engagement**

This paper argues the importance of co-designing services with citizens. Philip Oreopoulos, a professor of economics at the University of Toronto, presented at the service research conference. He argued it was crucial that citizens and grassroots partners are involved in the

process of designing new online service delivery. He shared the importance of seeing things from the perspective of users. Further, he highlighted that there is a growing group of citizens who want to help improve services and are willing to provide ideas and time towards that goal. He argued that the government should take advantage of this momentum to better understand citizens' needs as to ensure effective production of digital services. For example, Neo-Insight, a private sector organization also spoke at the conference, shared their recent collaborations with the public sector. Specifically, they highlighted user-research that was conducted on a government website. They shared that one of the weaknesses of a government website design was that it had not consulted users prior to designing the website and had waited until after launching the product to engage users.

This paper reveals evidence of interest among Canadian citizens to engage in civic projects in order to improve digital service delivery. Ontario Public Service (OPS) recently facilitated a discussion entitled "Transforming the Ontario Public Service." It revealed that there is interest among various sectors in being engaged in the policy and service design process that the public service leads. They requested more transparency and engagement. The session identified four core principles: empowering Ontarians by developing public policy with them; delivering evidence-based, outcome-focused policy; using rigorous evidence to inform decisions; and promoting open delivery systems that provide stakeholder access to more services, creating a more open and inclusive public service.

Participants agreed that the public isn't adequately informed about what the public service is working on to improve service delivery. The participants reflected that it was important that the

public service engage the public. As experts from think tanks or academia shared, they wanted to contribute. They expressed frustration with a perceived lack of transparency in how to contribute their expertise.

It was suggested that the government of Ontario must reimagine its role in delivering public services. It encouraged the public service shift from a “government knows best” approach towards a more collaborative model that designs and delivers public services from the perspective of end users. Rather than performing as the sole actor, it will be one of many actors alongside stakeholders such as non-profits and the private sector.

Participants shared wanting to work with the OPS to co-deliver services in a more flexible manner. In order to do so, there was a strong desire for more open access to public sector data that adheres to privacy and security standards, and for greater access to allow civic-minded third parties such as non-profit organizations to use the data in an innovative manner towards public sector goals. They see opportunities for the public service to use its capacity as funders and customers to develop a broader network of organizations, which can deliver services that make value out of the resources and clients available to the Government of Ontario.

## **Digital Engagement**

The interest in producing digital services is surfacing another discussion around utilizing digital engagement to engage the public. At the session that OPS hosted, participants encouraged digital engagement as a means of sharing with citizens. Participants argued that the OPS would gain

access to a broad network of external experts to address public policy problems. They expressed that experts are interested in engaging on a longer-term basis in order to effectively contribute to and navigate through the policy/program development process. Digital engagement could be one of the means of sustaining a more long-term engagement of citizens which ensures a more strategic role at the level of co-creating service delivery.

The need for digital engagement was highlighted at another session hosted in partnership with Policy Ignite on digital government. There are aspirations within the public sector for digital platforms that incite engagement and open design. Policy Ignite is a non-profit led by a small team of public servants and volunteers. I worked with them to host a one-day pitch challenge at the Aberdeen Pavilion in Ottawa, Ontario.

Digital tools for engagement were highlighted. Nancy Paweleck, a free agent with Natural Resources Canada, proposed a new online consultation tool. She described this new unique tool as allowing platform users to have a profile and long-term account in which to engage in various jurisdictions' public sector consultations. It would also include a "geo-verification technology," which allows for connecting a individual's digital identity to their physical location. She suggests that online consultations with Canadians will allow for going beyond one-off in-person sessions and instead foster long-term engagement over time. Participants sign up with their name, email, and password. This digital tool allows users to choose topics they would like to be consulted on. Through the geo-verification, those leading engagement sessions engage in location-sensitive consultations, e.g. "Does Vancouver need a new city plan?", etc. She argues that engaging on a digital platform is essential as it allows for long-term discussions, polls, and

notice boards. The platform she envisions also shares events and workshops relevant to the consultation. It makes allocating resources and reporting much easier with the geo-verification and centralization of participants.

As the public service is faced with delivering services to meet the evolving needs of citizens, digital engagement is increasing in relevance. Research and federal executives agree that collaborative platforms have the possibility of facilitating crowd-sourced perspectives on policy and service delivery from within and beyond government, providing an opportunity for new streams of unprecedented data and evidence to guide policy and service delivery (Lindquist, 2017). Currently, one might argue, the government is not yet fully equipped to embrace the opportunities of digital technologies to keep pace with an increasingly tech-savvy citizenry. A centralized digital platform provides an open collaborative process, across the silos of government, different levels of government and external actors, that allows for harnessing the latent knowledge and expertise of the greater whole towards assisting the Government of Canada in the future of policy and service design or delivery. A digital platform, invested in engagement, may be the key to unleashing user-centered service design and ensuring digitally-enabled citizen engagement (Lindquist, 2017).

## **Chapter 7: What's next for Engagement within the Federal Government?**

### **A Digital Platform**

There is consideration within the public service to invest in and develop a collaborative software system for digital engagement, as it would provide a centralized hub for communication on services and policies. The federal government has launched GC Collab, a cloud-based professional collaboration platform that connects participants to information and people from across the Government of Canada (GC Collab, 2017). Alongside federal public servants, GC Collab is open to students and academics from all Canadian universities and colleges as well as federal, provincial, and territorial public servants. GC Collab claims that it is being more open and collaborative in order to identify, explore, and potentially co-create policy and research agendas (GC Collab, 2017).

GC Collab has been designed to create a culture change where emerging research, technologies and communication approaches can be shared more openly and rapidly in order to inform policy, program and research development processes (GC Collab, 2017). It suggests its existence will increase the depth and breadth of data and information-sharing between other sectors such as academia or the private sector and the public sector to support improved deliberation on policy issues and ensure a more connected, relevant, and responsive cohort of public servants, students and academics.



The public service has a lot to discover in regards to new digital tools. A centralized digital platform allows for developing internal and external networks to predict the future of service delivery. It may allow for the discovery of a handful of visionaries. Every organization has visionaries; partially from genius, and partially from complete immersion in the inner workings of the industry. One might describe them as “truth tellers.” They advance the plot of your organization by revealing big secrets about the future of your organization. These “truth tellers” may be employees who are far below the ranks of senior managers. They may be working the frontlines of your organization. And yet they discover potential evidence of change and competition. Truth tellers are often eccentric and can easily be mistaken for arrogant and stubborn. Innovation Labs act as the physical space where these truth tellers meet and share, revealing expertise and identifying digital literacy within the government. These emerging digital platforms will become the digital landscape in which they may be able to share their intelligence.

Ryan Androsoff, co-founder of Canadian Digital Services, shared at the Connected 150 Conference that internally there is a lack of data around how well we’re doing when it comes to service innovation (Connected 150 Conference, Oct 2017). This means it is difficult to know what all federal departments are producing and building when it comes to new digital service delivery. As the federal government is quite large, a potential solution might be to record or capture information on a centralized digital platform (Connected 150 Conference, Oct 2017).

Digital technologies and the emergence of the internet have pushed governments towards a more networked approach and organizational structure, which renders policy making across silos more possible. At the same time, the digital revolution has made it possible to share, integrate, and

gather data from a wider variety of sources. Interdepartmental engagement of several public servants is far easier if there is more collective engagement on an online platform which all public servants actively utilize and monitor. Platforms such as GC Collab are a step in the direction of mobilizing a vast network. An online platform is a means of engaging internal employees in a vast bureaucracy where meeting face to face may not always be possible but is essential for program design and execution. As Don Lenihan published, on behalf of the Canadian Open Dialogue Forum, in “Policymaking in the Digital Age,” the future of government will be a digital platform where information about the inner and external workings of the system can be easily accessed, rather than a collection of concrete silos (Lenihan, 2017).

An online platform allows for the exchange of information, which is critical in building innovative and informed societies. In the coming years, Don Lenihan predicts that institutions will be coming up with new tools and practices to make it easier to exchange information. He expects citizens to be associated with a Single ID so their personal information can be shared, with their permission, across organizational boundaries (Lenihan, 2017). Online platforms may emerge to engage Canadians and the world to see if they have the information they need to engage meaningfully, to interact and participate in a democracy that is in the midst of a digital age (Lenihan, 2017).

The importance of digital platforms for governance and co-designing services, policy, or programming comes from a place of ensuring everyone has an opportunity for their voice to be heard on government policies. Governance of the future will require public servants who have the skills and leadership to make openness apart of their day-to-day work. Canadians need to

have confidence that a government is moving forward and delivering on commitments, and becoming more open and transparent is important to achieve this (Lenihan, 2017). Transparency increases accountability not only within the federal government from one department to another, but also externally to taxpayers and citizens.

## **Why do Digital Platforms matter for the Federal Government's Engagement of the Public Engagement?**

### **Platforms, Policy and Civic Analytics:**

An online platform will allow the public service to engage the public and aggregate citizen data. By 2020, it is predicted that 50 billion devices will be streaming data onto the internet. As data becomes more abundant we are in need of computing power and the analytics to process it. Big data will provide us the opportunity for enlightened policymaking and informed service design (Lenihan, 2017). Platforms and data analytics provide the public service with a set of processes and tools needed to foster "open dialogue" regarding our services. Big data and analytics will change the debate that surrounds service delivery analysis by making it more inclusive and evidence-based (Lenihan, 2017).

Canada 2020 argues that if citizen data is managed effectively it will lead to civic analytics (Lenihan, 2017). Utilized effectively, it provides public reporting on Canadians' experiences of services. Massive data sources, known as "big data," can be a tool for building better evidence-based policy advice in order to strengthen programming and service delivery (PCO, 2017). It is

believed that “with the right data, civil analytics could become the MRI Scan.” In a democracy, citizens should be considered the experts on our services.

The paper finds that data analytics should not be underestimated. As one will find with online services, data analytics allows the federal government to be iterative with the services that they are designing. Most platforms currently strategically analyze or sell the data that users share for profit. The digital era is defined by online platforms that are centered around the raw material of information that users share openly: data. As the number of users increases on a particular platform, what one may often forget is that what they share is monitored and analyzed to reveal trends (Bollier, 2017).

Currently, public servants act as researchers who evaluate the transformation of service delivery to Canadians, and are thus dependent on accessible national data sets to justify or reveal gaps in service innovation strategies. Online platforms with advanced analytics tools provide an opportunity for public servants to draw insights and knowledge at a larger scale by engaging citizens through online service delivery models.

As a result, there is a rising need for data management planning to ensure a high-performing service delivery ecosystem (Lenihan, 2017). Currently, web analytics allow the public service to monitor online services, collecting data such as how many individuals visit an online platform, how long they spend on it, and whether they successfully acquire the service. Further, it allows the federal government to collect datasets to better understand the public it serves (Connected 150 Conference, Oct 2017).

## Open Source

Digital platforms will allow the public service to engage the public in open source design of services. Alex Benay, Chief Information Officer at the Treasury Board Secretariat, shared at the FWD50 conference the necessity of creating an “Open Innovation Ecosystem” where data, projects, open source, and more collaboration across all sectors might emerge online (FWD 50 Conference, 2017). It is indication that the federal government recognizes that the world is moving towards digital platforms and, therefore, developing architecture to increase interactions on a digital landscape with a focused lense of dialogue on the future of governance but also co-creation of services.

<b>Open by Design</b>	The concept of working in the open with a radical participatory organization unbounded by traditional organizational structure relies on open, collaborative practices and co-development to bring in external knowledge and contributions to products, technologies and operations. The risk with open by design is aligning the perspectives of various sectors to work towards the completion of a collective project.
<b>Open Source</b>	Open source refers to a product or software that is publicly accessible that people can modify and share. The term originated in software development to designate an approach for creating computer programs. Open Source celebrate principles of open exchange, collaborative participation, rapid prototyping and transparency. The risk with open source is finding a mobilized network of developers who have interest in contributing to a project.
<b>Open Data</b>	In 2009 Canada, alongside the USA and UK, announced initiatives to

	open up data. Open Data is structured data that is machine-readable, freely shared, and used and built upon without restrictions. The risk with open data is related to cybersecurity and privacy regulations.
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Figure 6. Open Participation: The above graphic reveals the various types of open participation from open data to open source.

The federal government may want to consider open source design to achieve technological advancement. The Chief Information Officer of the Treasury Board Secretariat Alex Benay agrees. Recently, at a conference attended by public servants and private sector experts in digital governance, Alex Benay said: “we need to be able to design openly with our partners” (FWD 50 Conference, 2017). To ensure that online open by design efforts are secure, there is currently a new IT policy being implemented to ensure a cohesive IT architectural discipline for all projects coming into the federal government. This will include IT security policy on how best to protect information that is exchanged on the cloud that the federal government manages.

Alex Benay shared at the FWD 50 Conference that there is a growing need for technological advancement, which requires a new work culture and talent. He points out that federal services aspire to be competent with the internet of things, 5G cloud, and interconnectivity. They seek to deliver Government of Canada online services across alternative platforms such as Facebook, LinkedIn, and Expedia, while also delivering GC services on all devices: smartphones, TVs, and even cars (FWD 50 Conference, 2017).

Benay notes that current innovations to service delivery have the potential to be born rapidly in low-cost experiments on technology platforms, spaces where entrepreneurs can launch their

ideas (FWD 50 Conference, 2017). He describes them as emerging upstarts that are forming alternatives to existing products and services. We call these game changers “big-bang disruptors.” Their upstart products and services include CampusBookRentals and Khan Academy in education, Pandora and Spotify in radio, and recorded music. (FWD 50 Conference, 2017).

The Treasury Board Secretariat (TBS), which manages all federal departments, desires to encourage the use of open source by all departments. The Canada School of Public Service hosted a discussion entitled “Open Source Software and Security” where the discussion hosted experts from the Treasury Board Secretariat. It brought together Poti Duncan, Director of Strategy Architecture and Cyber Security at the Chief Information Officer Branch; John Obrian, Senior Advisor for Canadian Digital Services, and Ashley Casovan, Lead of Data and Open Architecture.

Director of Strategy Architecture and Cyber Security argued that an open source community will allow the federal government to have a coordinated response to transforming service delivery, as well as allowing for a better understanding of what talent is available to us in our very own network. The Senior Advisor to the Canadian Digital Services agrees that building in the open means everyone in the community keeps an eye on the process and end-product. The Lead of Data and Open Architecture noted that open collaboration is important to prevent departments and various sectors from doing the same thing over and over again. When used effectively, it will allow for getting feedback on the digital service delivery tools we are developing.

Laura Wesley, who is an executive for the Privy Council Office on Public Engagement, envisions a time in which government and external developers work together to create the best websites possible. She proposes a government and developers exchange, where through a public conversation online, the issues that the government is seeking to solve to improve services are shared openly. This public conversation will allow external developers to be able to share insights on how they might solve and design solutions that fit governments' growing need to design digital services. She provides examples of existing co-design platforms such as git.hub, a platform where developers participate in open source projects. She suggests the Government of Canada needs something similar to this.

However, there are risk around an open source project such as ensuring a proper cybersecurity plan. It allows the government to be a part of the process of improving the risk assessment. It will require different layers of security. Open source lets the government think about security before we put it out there. It allows for testing vulnerabilities in proprietary out in the open. Further, it is a tool for a certain job. It does not have to be utilized for everything. It allows developers within government to think through emergency strategies and enable a framework to begin to think about the patches they may come across and ensure the right security measures are taken.

Further, there is the risk that there will be no uptake to take on an open source project. The federal government may find that public servants and the public do not want to engage in designing services on a open source platform, the risk being low interest or sense of responsibility to accomplish an open source project. Thus there remains a question of how the



federal government will inspire participation and sustain that participation until the accomplishment of designing the new digital service.

### **External Perspective**

Nevertheless, there is growing evidence of successful online platforms produced by the private sector that have been created for co-creative and open source design purposes. These platforms have succeeded in inspiring and sustaining engagement in the design of digital services. Platforms like Kaggle for data science, InnoCentive for scientific problems, and TopCoder for software problems (Lakhani, 2017) engage vast networks to produce several solutions and identify the best one.

The potential of mass-creativity unfolding on platforms has yet to be explored within the federal government. When a world of collaborators are brought together under a collective online platform, it requires a method to include people in an open by design process. Hypothetically, it would allow the public service to collaboratively develop and prototype public services, as well as allowing public servants or the public at large to upload their innovative ideas on how to digitize service delivery. Digital platforms that ignite open source design bring together participants with different outlooks and perspectives on the creative process. Creative contribution can be made in an unstructured way and build on different perspectives nationally or internationally.

Examples of platforms that engage networks to produce solutions:

- Kaggle is a public data platform where one can search for open datasets related to everything from government to health and science. The data sets on the platform are organized and can be bookmarked by participants. Users on the platform can then download the data set and utilize an in-browser analytics tool, while also engaging in discussion with other users on the platform if questions arise on how best to analyze the data. There is also a leaderboard tab where one can scope out other teams and see the work they have produced. This gives the user exposure to new tools and techniques that they can utilize.
- InnoCentive gives clients the opportunity to come with a problem and need. It challenges experts to clearly define the problem and IP requirements before posting on the platform. Once it is posted on the platform, solvers attempt to provide solutions. It mobilizes a diverse global network to enable organizations and find solutions to pressing problems and further develop on-demand services.
- TopCoder allows for crowdsourcing mobile application design and development. Topcoder claims to accelerate the process of bringing an APP to the market. It allows for mobilizing the crowd to develop code and design prototypes. Topcoder runs a 10-day process for ideation where they engage a crowd of participants on their platform to discover new business issues and discover new innovative ideas. This process is described as a “live user experience” where they lead participants through a series of

survey questions and engage participation across several countries to discover submission.

## **Platforms and Business Architecture**

To ensure a secure data platform for civic analytics may require the federal government developing a shared data infrastructure. Ultimately, it will require developing a shared data infrastructure for networks identified with the possibility of implementing solutions (Lenihan, 2017). This is well on its way within the federal Government of Canada with the launch and promotion of GC Collab.

To secure a platform it requires a business architecture. A business architecture provides both structure and flexibility (agility) for our businesses to provide a link to business strategy and other major architectures, such as data (information), application, technology and security. Ken Orr, in “Business Architecture: Linking Business, Data, and Technology,” describes business architecture as similar to the building inspector that ensures architectural standards are followed.

Business architecture also provides a strategic vision for the value that is being provided on a digital platform. He warns that it is one thing to install new technologies and new systems. At the same time, the architecture and legacy of digital platforms requires a strategic intention. For example, on GC Collab there is a feature where participants can create groups to engage a vast network. These groups may galvanize around an interesting policy topic and participants are encouraged to share discussion topics or comment on existing discussions.

The platform might consider evolving towards facilitating engagement that begins to co-design, crowd-fund and implement solutions. Ken Orr argues that a business architecture effectively managed can help an organization. On a digital landscape, such as the internet, one can now aggregate large numbers of individuals to support one's vision or mission with hundreds of millions (or billions) of citizens.

Further, we are in a time where we need trustworthy systems to manage digital commons and user-driven markets that create economic value (Bollier, 2017). An example of such a functional secure platform is blockchain technology which keeps a permanent record of a peer network and secures the data in a centralized location. The block chain is a network-based architecture that enables commons-based governance of particular data (Bollier, 2017). In the United States, former Federal Communications Commission Chairman Reed Hundt has proposed using blockchain technology to aggregate the data of distributed networks. The ledger, though anonymous, keeps track of what is being shared and conducted on the platform on one centralized vast technical system (Bollier, 2017).

## **Challenges & Platforms**

Today the management of open source clouds is within the hands of a few massive platforms. This gives these platforms a particular control over the vast digital societies they have built and how they function. David Bollier, in his piece "From Open Access to Digital Commons," says that many of the existing technology platforms are monopolizing and monetizing a certain sector

of online activity. The end result of these basic dynamics is a tendency for platforms to grow big, to grow fast, and to monopolize their core business. It is argued that as our future becomes even more digitally-dependent, we must challenge the economic dynamics that lead to a vast centralization of power within the hands of a few massive platforms (Scholz, 2017). The platforms that a vast majority of citizens are logging on to are owned by a small number of deep-pocketed founders and stockholders (Scholz, 2017).

Users of data platforms are releasing data with few restrictions, often at the expense of their privacy. Data analysts study the routines of customers, their commutes, and even their one-night stands (Scholz, 2017). Personal data, social attitudes, lifestyle behavior, and even our digital identities are the commodity to which platform owners are seeking unrestricted access (Bollier, 2017). Many of these platforms, such as Facebook, Airbnb, and Uber, undermine local competition, unknowingly violating privacy laws (Scholz, 2017). This lack of restriction around data privacy puts the power in the hands of those who control such digital platforms to utilize the data shared with little restrictions.

Further, policy makers within government lack the tools to gather and use the data emerging on online platforms. In order for the government to play a role in managing the current challenges of data management, it will require public servants who are highly qualified individuals in the productive use of data. There is a rising need within the public service for data analysts and data management experts. Lenihan argues in the Harvard Business Review that the responsibility should lie with the Science and Innovation sectors of Industry Canada: to assess the extent it is reaching the federal government's objectives and addressing its priorities (Lenihan, 2017).

## **Chapter 8: Challenges & Engagement:**

the public service and Canadians in order to improve service delivery, it must prepare for a re

### **I. In-Person**

#### **Anti-Collaborative**

If metrics within an organization are not aligned to encourage employees to collaborate, this may cause them to act out in an anti-collaborative way. I argue that by allowing employees to persist within silos, they are led to act out with a lack of inclusion or transparency which may lead to territorial behavior towards designing services. Important information may not be exchanged and there may be a reluctance to help one another to achieve an intended goal.

I argue that in order for meaningful change to occur in an organization, it requires the buy-in of the entire organization. It cannot simply be executed through a top-down mandate. Organizations cannot be dictated to change but must “naturally evolve” (Capra 9). An emergence of novelty can create a lot of “fear, confusion, self-doubt, or pain” that might even amount in an existential crisis (Capra 19). An organization will experience a lot of tension and even crisis before the emergence of something new can truly come to fruition. After being immersed in confusion and doubt the emergence of novelty can be experienced as a magical moment. But that is only after going through a period of tension (Capra 19). Thus, I argue it is important to ensure that the entire organization is informed of why transformation strategies are being implemented.

## **Dominant Paradigm of Execution**

Currently, execution within bureaucratic culture is normally top-down. Such a hierarchical culture may hinder collateral discussion, engagement and collaborative discretion. The strategic apex of a Canadian federal department is made up of top management and middle line management that coordinates what happens through direct supervision of policy analysts, researchers, and service designers. In such an environment, taking a new approach to service delivery is risky, or there is no evidence it has worked before.

Yet, hierarchical execution in the public service can be disadvantageous for a collaborative process of ideation, discovery, and producing new services. In the dominant paradigm of execution, the process is top-down. Tim Brown, CEO of IDEO, in his piece “Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation” claims that design in social or political matters is impeded when mobilized within a managerial framework (Brown, 2009). Design thinking seeks to assist management to discover what might be technically feasible and commercially viable for an organization, in a way that top management may have never initially envisioned as a possibility.

I argue what unfolds in a top-down system is repeatability and consistency, as so much is happening outside of what executives of the public service are exposed to in their day job. Such an organizational model risks setting strategies without acquiring effective evidence and feedback from its wider organization and external stakeholders. Hence, it's important that

innovation labs become a vehicle for the public service to get outside the bubble of the public service.

### **Failure Due to Lack of Feedback**

The federal government may want to consider the ways that a little bit of conflict and disagreement can be healthy for a collaborative processes within innovation labs. Yet, in certain cases there is an absence of the ability to share contrary views. Certain projects may fail as a result of not acquiring feedback from others. Employees must feel that their ideas are taken into account during the decision-making process.

Those who participate in a collaborative process must feel safe to communicate their ideas and opinions. Orla Leonard, a management consultant, published “The Best Senior Teams Thrive on Disagreement” in the Harvard Business review, where he argues that employees and leaders are not truly sharing and building ideas if they are not constructively criticizing and providing feedback on them. “For innovation to happen,” Leonard argues, senior teams need to create a culture where those who are closest to the customer can share, challenge, and feel heard.” ([Leonard, 2017](#)). Communicating and demonstrating diverse perspectives, aptitudes and strategies is a key behavior of collaboration. Innovation Labs should make public servants and the public at large feel comfortable to openly express concerns, fears, and differences of opinion without fear of rejection. Stifled debate can be detrimental and counterproductive to the collaborative process of co-designing services.



## **Internal and External Vision Not Aligned**

A challenge an innovation lab may face in executing engagement is aligning the interests of internal and external partners. Upon bringing together internal and external partners to collaborate, one might discover that they do not share the same foundational values or point of view on the best way forward to produce services for Canadians.

Private sector experts who have partnered with governance to execute new digital service delivery offerings have faced challenges actually implementing novel approaches. John Ramey, founder of Nomadic Mentor, angel investor, and Innovation Advisor for the Obama Administration, spoke at the FWD50 conference in Ottawa. He noted that the two universes of public (internal) and private (external) partners have been accelerating away from each other since the 1970's and 1980's (FWD 50, 2017). Ramey refers to an American government website on healthcare that didn't go well for the Obama administration. In response, the Obama Administration called upon Facebook and representatives from the website was failing in the first place (FWD 50, 2018). Thus, there is a need to align Silicon Valley to work on the healthcare website. They went to Washington to fix the healthcare website and an additional \$4 million was allegedly spent on the repair effort. When it was put back up, with the help of the private sector, it looked not much different from the first iteration. Clearly, something had happened during the process that had not allowed the designers to truly innovate. Ramey felt that it was a result of the status quo, the very reason why interests with external partners and take into consideration the suggestions that may be proposed to improve service delivery to Canadians. This will take openness to a new and novel approach to producing services.

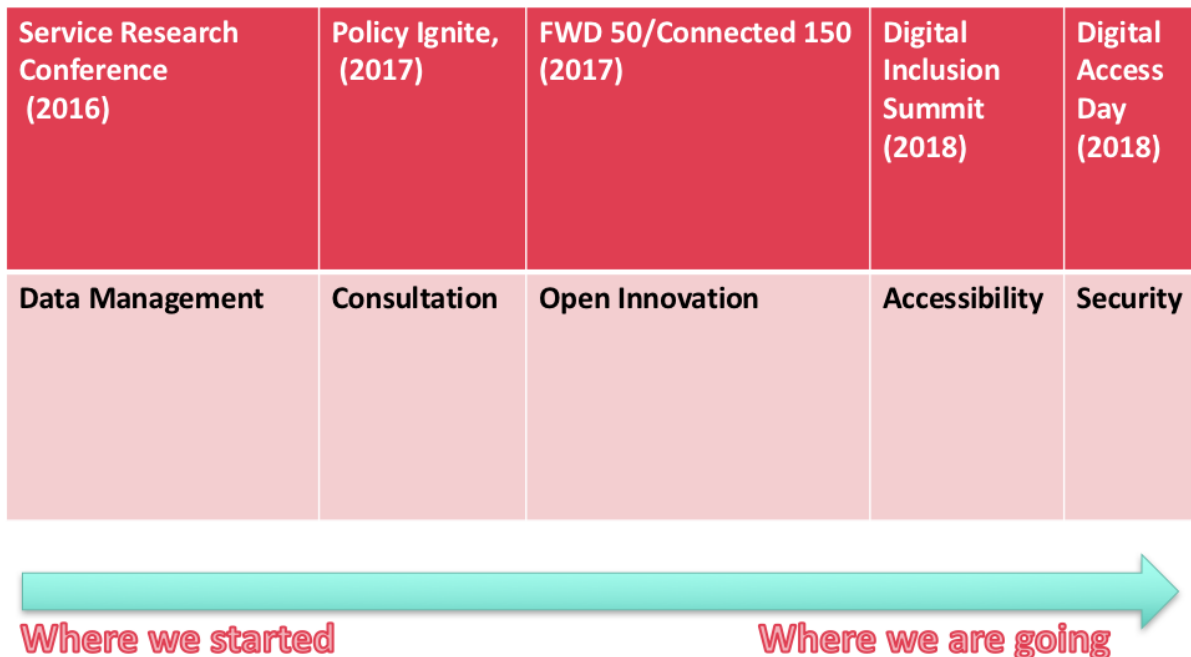


Figure 7. Digital Government Conferences : This figure reveals conferences and overarching conferences attended between 2016 to 2018

## II. Online Engagement

I have discovered that there are weaknesses to taking a primarily digital engagement approach to service delivery. There is evidence to suggest that digital service delivery will not be inclusive and accessible to all Canadians. In 2018, I facilitated a Public Policy Forum and Ontario Digital Government session titled the “Ontario Digital Inclusion Summit” at the YMCA in Toronto, Ontario with presentations and attendance from the provincial and federal government as well as the non-profit sector. That same year I was an advisor for a Canadian Internet Registration Authorities-funded one-day conference entitled “Digital Access Day”. These conferences explored a digital divide where geography, digital literacy, and demographics have led to various applications and adoptions of digital technology. The summits were held as an opportunity to

share insights, identify knowledge gaps, and work toward digital inclusion ([public policy forum, 2018](#)).

As a result, the federal government may want to consider the importance of who they are trying to develop services for and who might be a part of the conversation as the federal government of Canada designs digital services. It is essential that we think through who is invited to the table in the evaluation and design of services. It is important that the people we try to develop services for are a part of the conversation. It is also important to consider who might not be able to express their views and contribute to the discussion about the future of service delivery to Canadians (Digital Inclusion Summit, 2018). This is important because of assumptions policymakers may hold about Canadians as being more digitally enabled than they actually are.

If one were to think about the most marginalized individuals, one may find structural or social barriers that prevent certain Canadians from benefiting from digital services. Byron Holland, Chief Executive Officer of Canadian Internet Registration Authorities (CIRA), highlighted this at the Digital Access Day hosted in Ottawa. He shared a recent study they published entitled “Gap Between Us,” which looks at how best to build a better online experience for all Canadians. They reached out to 70 organizations. The study explored the good and bad of the internet. The study highlighted the challenges that marginalized communities are facing to access the internet.

As I have suggested in this paper, there is a need for partnerships to resolve this issue. Technology infrastructures such as Canadian Internet Registration Authorities support an internet ecosystem but struggle to connect with other organizations to ensure current access to the

internet is equally accessible among all Canadians (Digital Access Day, 2018). And yet, partnerships are important in order to address the challenges with affordability, connectivity and competition among telecommunication companies. In order to take digital services online, the issue of universal connectivity needs to be addressed.

### **Rural & Indigenous Connectivity**

In order for digital engagement to improve services, universal connectivity must be resolved. The importance of universal connectivity to the internet can be understood when one looks at the challenges certain rural or indigenous communities face to acquire the internet. There are areas in Canada where, due to the scarcity of cellular towers and limited bandwidth, it is difficult for indigenous Canadians to access online services (Digital Access Day, 2018). As Canadians, everyone should be entitled to receive their services. Thus, as the Government of Canada considers to take their services online, it is important to ensure that all Canadians will be able to access their digital services.

For example, Dan Gillis an associate professor at the School of Computer Science at University of Guelph, presented on “Digital Inclusion in Mobile Networks.” His research evaluates a community in Rigolet, Nunatsiavut, Labrador. His work zeros in on a community whose ability to connect and share information digitally is quite limited. His research brings to light a community that does not have the ability to compete in the digital economy or share data (Digital Inclusion, 2018). This community, he argues, is a prime example of the effects of a digital divide. Alternatively, there is the work of Ken Sanderson, an Executive Director of Broadband

Communications North and a speaker at Digital Access Day. He works with over a dozen areas in Canada that are remote, most of them made up of creeks and challenging terrain to work in. His work predominates in Manitoba where in the southern and northern parts, a digital divide is quite pronounced.

One might argue that a digital approach to service delivery and engagement is a very urbanized approach. As the two presentations highlight, there are many cases across Canada, once you get outside of the city, that one's online connectivity is fractured. As a result, many remote indigenous and rural communities have low connectivity for internet or cellphone access. If this issue is not resolved, it would be unacceptable to take service delivery online as some Canadians would be left behind.

Academics and non-profits working at the grassroots level have begun thinking through solutions to these challenges. For example, the University of Guelph produced a mobile mesh network in Nunnatsiavut, Labrador to resolve the issue of lack of access to internet. The mobile mesh network provided a data exchange from one server to another through mobile phones. Alternatively, the non-profit Internet Society produces community networks where people combine resources to support remote and underserved areas (Digital Access Day, 2018). At the heart of these solutions is an engagement component, whereby community members come together to problem-solve and forge a way forward.

## **Commercialization of Digital Technology**

The commercialization of digital technology is another issue that the Government of Canada will need to resolve as it forges forth in a digital approach to service delivery and engagement. Certain telecommunication companies dominate mobile, internet and data access. As a commercial endeavor, these telecommunication companies are known for increasing the cost, making it less accessible to all income brackets to participate online. The Government of Canada needs to resolve the relationship between users and service providers, as well as recognizing that citizen rights must be protected to include online universal access.

There is also evidence of commercialization impeding the ability for Canadians to access data or the internet, as highlighted at Digital Access Day hosted in Ottawa. Marina Pavlovich, an instructor at the Associate Faculty of Law at the University of Ottawa, shared that there is a need for users to better understand the contracts they are signing with private telecommunication companies. Users are moving through commercial gatekeepers who fail to regulate privacy and provide a range of prices for plans. There appears to be little regulation.

With the increasing importance of smartphone and wireless use for acquiring one's services, the federal government may want to consider the responsibility of the Government and regulators to forge a way forward that is agreeable for all Canadians. They must work together to manage digital infrastructure, networks, and frameworks to ensure that they remain affordable and accessible. In Canada, there may be a need for change in policies and laws. The federal government needs to understand the actors involved and take a lead in diving deeper to address

resolution. This is a growing concern as the Government of Canada seeks to take service delivery online and ensure that it is digitally friendly.

## **Digital Literacy**

Further, I have found that there remains a false assumption that all Canadian citizens have the necessary digital literacy to navigate digital service delivery and engage online. Though the public sector may desire to execute digital engagement and service delivery, evidence reveals that we risk leaving many Canadians behind as we explore opportunities to co-design or utilize digital services (Digital Inclusion Summit, 2018).

Our education system isn't keeping up with a need to equip Canadians with the skills necessary to participate in a digitally mobilized service delivery environment. As Nisa Malli, a senior policy analyst with Brookfield Institute, explores in a presentation titled "Defining, Testing, and Teaching Digital Literacy," there are unique challenges faced by those within the Canadian education system when it comes to digital literacy. Her research looks at students from Grades 10 to 12 in Ontario and reveals that access to digital training varies depending on one's income and locality. Her work suggests that there is a lack of clear definition across jurisdictions on what is necessary to be competitive in a rapidly evolving labor market (Digital Inclusion Summit, 2018).

Alongside a growing chasm in our educational system, there is also a generational gap that leaves certain Canadians more competent in navigating a digital-centric service delivery model

than others. Eric Craven, Project Coordinator of Atwater Library, works with youth and seniors to create programs related to technology advancement. The organization is working at creating a skills exchange an attempt to level the playing field (Digital Access Day, 2018). At the grassroots level, there is a low basic competency in technology among participants, and this was not initially anticipated.

If the Government of Canada would like to take a digitally-enabled approach to producing services, the report finds that it will need to think through the educational piece of ensuring all Canadians have the basic competencies to acquire services online. It should not be assumed that all Canadians maintain the same digital competencies and that they will not need in-person training or support as the Government of Canada transitions services online.

### **Digital Security**

This report finds that another challenge that the federal public service will face as a result of pursuing digital engagement and taking services online is cybersecurity. The public currently utilizes social media with little concern around privacy. Little thought is being put into thinking about the possibility of one's identity being compromised and utilized elsewhere. This report finds that currently when Canadian's computers are under attack, users may not know. Intrusion in many cases is hard to detect, unless we have invested in the right products that provide security (Digital Access Day, 2018).



This report finds that the digital world fits within the context of online international players and competitors. Of the 20 top telecommunication companies in the world, 8 are in the US, and the rest are in China. Faud Khan, Canadian Chair to ISO/IEC SC27 and the International Convener to ISO/IEC 41 on IoT and related technologies, shared that all internet access in Canada is routed through the U.S. and that we need to take this into account when we choose to build internet-based digital network solutions for service delivery (Digital Access Day, 2018). He challenged the audience to think about what might happen if Canadian financial and trade systems were shut down. How do Canadians feel about being under constant surveillance by American digital platforms? He brought to light that microphones on our devices are being used against us.

Digital security is an issue that must be tackled as the Government of Canada produces digital services or tools for digital engagement. Research reveals that the online world has an economic incentive which exploits user data for economic gain. This report argues that it is important to think through the intention behind why the internet and digital platforms for networking are produced. Florencia Herra-Vega is Co-Founder and Chief Technology Officer of Peerio, an encryption tool to protect data from hackers. She argues that the internet is highly complex and little has been done so far to protect user data. She believes that it's important to educate users to better evaluate the risks of current online engagement.

There are very few cloud-based platforms that are safe. Vendors of software providers are under no obligation to ensure security. Taking services online comes with a risk of national security. David Fewer is Director of the Samuelson-Glushko Canadian Internet Policy and Public Interest Clinic at the University of Ottawa, which is Canada's only public interest technology law clinic.

He shared that there is a need to think about the domain and rules we apply to the digital tools we build to ensure security (Digital Access Day, 2018). Hence, if the federal government desires to take services online there is a need for a national cybersecurity plan. A national cybersecurity plan would ensure a collective culture and effort to monitor cybersecurity threats and offer assurance that the digital infrastructure we utilize to deliver our services is secure.

**Chapter 9: A Way Forward:**

**Strategy for Engagement to produce Digital Services**

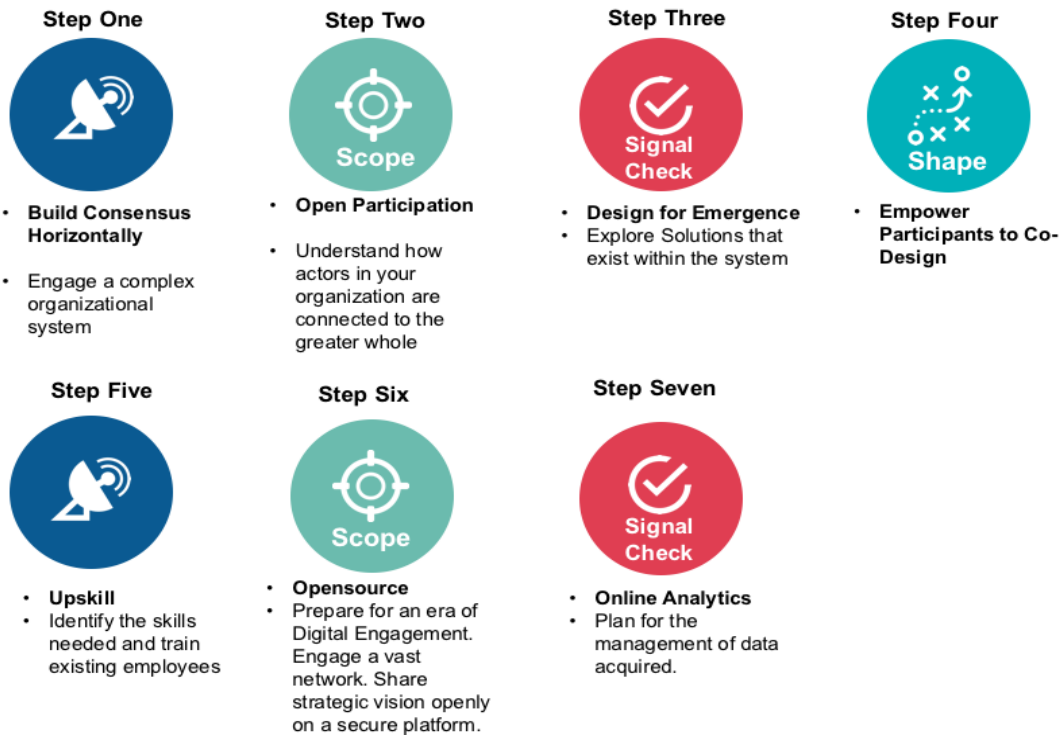


Figure 8. A strategy and way forward for implementing in-person or online public engagement in the federal government

## **Step 1: Build Consensus Horizontally versus Top-Management**

In order to achieve civic engagement in-person or online, I have suggested in this MRP that the federal government must first foster open collaborative approaches within the bureaucracy. For example, public servants are Canadians too and at times know the services better than anyone else. Executives of a vast organization like the federal government alone cannot determine all the possible problems and potential solutions for improving service delivery. However, the knowledge and expertise that each public servant holds is immense and valuable. This must be captured and incorporated in the process of thinking through how the Government of Canada could improve its services to Canadians. Therefore, it is important to mobilize one's internal network to navigate towards a sustainable and dynamic future, rather than take a top-down management approach to designing services. It requires developing departmental and interdepartmental consensus on the direction in which a large organization should go. This entails encouraging individuals, divisions, departments, the entirety of government and beyond to share insights and collaborate with one another in order to design services. This is necessary in order to evaluate expensive policy approaches before implementing them, while also creating a culture of knowledge and skill exchange interdepartmentally.

## **Step 2: Open Participation**

Alongside building consensus by understanding the needs, challenges, and solutions within a department, I argue it is also important to ensure an open participatory process, whether it is in-person or online, in order to engage those outside of the public service to participate in the design of services. An open by design approach, which engages multiple sectors, is advised. I argue the answer of the best way forward will not be found within the four walls of the public service alone; it may also require engaging a vast network of citizens and external stakeholders in order to navigate the economic and social shifts of a world which is becoming more digital.

I reveal in this major research project that such an approach of improving services is well on its way. Through innovation labs and a centralized digital platform that is open to the public, the Government of Canada is approaching the future of service design through an open engagement lens. There is evidence the public service recognizes that the skills, solutions, and insights they seek can be found through the engagement of a vast network. This comes with challenges such as ensuring that innovation labs and online engagement remain accessible to the wider public, as well as ensuring that innovation labs facilitate the public service to remain open to collaborating with other sectors.

## **Step 3: Design for Emergence**

As innovation labs and digital platforms create new service delivery options, I propose they should engage internal or external networks in order to discover change that is already emerging

within an organization. It is not always necessary to inspire participants to create new solutions. Sometimes through engagement, innovation labs and digital platforms may discover disruptions or weak signals of solutions that public servants or citizens have already created within the system. It is then the role of the facilitators of change management to discover these disruptions and predict the future of service delivery. Change cannot be designed, but rather “emerges” as one engages a vast social network (Capra 24). The role of innovation leadership is to balance between design and emergence. This facilitation of discovering emerging solutions consists in engaging with several networks within the organization and beyond (Capra 24).

#### **Step 4: Empower Participants to co-design**

In this major research project, I predict there will be a transition from mere consultation towards mass-mobilization and the empowerment of citizens and external stakeholders to experiment and design services for the social good of the nation. I envision a future where services are co-designed and lead by the public into fruition. I predict a future where power is released from the control of a few experts in the public service towards an approach which facilitates in-person or online mass participation of the greater whole. This would be a future where public servants can work with Canadians to design services that meet their needs. I predict that navigating such a future is the challenge that the public service will face. Innovation labs and online platforms must inspire a collective ownership of the problems the federal public service faces by public servants at large, but also the wider public. This will assist the public service to identify the community values and means forward to design new services.

An effective change lab or online platform for engagement will empower its participants to champion new service delivery models, as it will be built upon the recognition that keeping citizens informed is a means of getting them involved in action. The government is tasked with not only discovering a solution but also putting it into action, and innovation labs and digital platforms that foster engagement will assist by enabling the wider public to be a part of the process.

My work finds that participatory work is growing, as organizations increasingly rely on participatory methods for project management. However, in order to remain effective, I find that must move beyond problem analysis towards engaging partners to produce services. Currently, public consultation is a one-way flow of information from the public to its government. This exchange of knowledge and information needs to transition towards collaboration, which engages citizens as partners in producing services. It empowers citizens to produce the solutions they propose.

- Inform: provide the public with balanced, objective information to understand a problem or solution
- Consult: Seek public feedback on an analysis, set of alternatives, or decision
- Involve: Work directly with the public to ensure their concerns and aspirations are understood and considered
- Collaborate: Partner with the public in decision, development of alternatives, and identification of a preferred solution

- Empower: place the decision-making in the hands of the public

### **Step 5: Upskill**

I have found that co-designing new prototypes in collaboration with academic, private, and public-sector partners requires Canadian workers within and beyond the public service to be equipped with the tools or skills to do so. Reskilling the public service and beyond needs to be prioritized. In order to design digital services, Canadians require the necessary training to carry out this vision. The federal government has addressed this in Budget 2017. The federal government has announced that investments will increase in employment counselling, career planning, and the development of partnerships between provinces and the federal government to improve training and address this skill gap (Budget, 2017). There is a clear interest in increasing digital competencies.

Further, one cannot forecast where the future will go. It is difficult to develop the skills for innovative service design that will enable Canadians to sufficiently adapt to possible emerging digital environments. The next generation of service design has to be ready to learn and detect how the digital designs we develop may not always be the absolute prescription to where the future might go. Current service design has its own assumptions that might not predict accurately how the environment will change. Thus, the next generation of service design will require the expertise to respond to an adaptive and dynamic environment (Holling, 2001). Technological feasibility consists of interactive designers not shying away from active experimentation with new technology.

## **Step 6: Opensource**

Finally, digital engagement has enabled a new era of innovation where open source and partner based innovation have begun to expand. It is predicted, across-industry, that open standards will be the way for doing business domestically and globally (Ozmak, 2017). Open source development is a diverse ecosystem of participatory meritocracy, made up of open governance, culture, community and code. The internet has enabled dispersed groups and unrelated individuals to meet. Open source design is evidence that the next evolution of online network engagement might activate diverse and crowd-sourced prosumers to collectively produce mass creativity and co-create inclusive design (City of Toronto, 2017).

It is important that the public sector recognizes that service design is dependent on a vast ecosystem of innovators and expertise, just as it is important to create a platform to facilitate the exchange of information that is key to profitable operations (Davis, 2015). A digital platform has the potential to mobilize a network of experts with the capabilities to design new solutions and suggestions for the design of new services, programs, or policies that the Government of Canada seeks to create.

Open source design unfolds as a co-creative process but also as the exchange of services created by users. Rajan Kanwar, a former engineering student at University of Toronto, in a presentation titled “Demystifying Digital Transformation” argued that the biggest innovation in the world of work in the last decade has been the rise of online platforms which connect prosumers who produce and share services with one another (Kanwar, 2017).



The challenge will be to know how best to unleash the value latent on online platforms. David Bollier in “From Open Access to Digital Commons” argues that open source platforms, by enabling participants to carry out crowdsourced exchange of either knowledge or services, begin to reveal the expertise or services latent in the vast network that one seeks to engage. He argues this will unleash the enormous value that autonomous production produces. Networks must be organized in ways where anyone can contribute. This means they are open, horizontal, and allow for large-scale cooperation and coordination (Bollier, 2017).

### **Step 7: Civic Analytics**

In this MRP I have highlighted how new online service delivery options provide a unique opportunity for civic analytics to better understand the needs of Canadians. The Government of Canada-produced online platforms allow analysts to utilize web analytics and thereby to observe the uptake of services, as well as to conduct surveys where Canadians can share their experience with services. Accessible online national data sets are needed to justify or reveal gaps in service innovation strategies. Online platforms with advanced analytics tools provide an opportunity for public servants to draw insights and knowledge at a large scale by engaging citizens through online service delivery models.

Online platforms, produced by the federal government, provide an opportunity for managing data to ensure a high-performing service delivery ecosystem (Lenihan, 2017). Currently, web analytics allow the public service to monitor online services, such as how many individuals visit

an online platform, how long they spend on it, and whether they successfully acquire the service. It also allows the federal government to collect qualitative datasets to better understand the public it serves (Connected 150 Conference, Oct 2017).

## **Final Words**

For collaboration to design digital services to succeed, senior leadership within the federal government may want to champion delivering results upon engagement. Junior to Senior Analysts and even middle management might be hesitant to take bold engagement strategies unless top executive leadership encourages them along the way. The research in this major research project reveals that high-performing teams excel as a result of top-management creating circumstances where both risk, experimentation, and day-to-day delivery can peacefully coexist.

I argue, for bottom-up collaborative innovation to occur in an intentional and productive way, executives of the public service should hold teams accountable for fostering innovation through engagement not only within innovation labs but also online. It's up to senior leaders to create the frameworks and focus. There is so much to be learned from individuals within the department or beyond to digitize service delivery. Executives alone cannot champion this change but must mobilize their entire organizations and other sectors to come along for the journey.

I find that innovation labs and digital platforms provide public servants a unique opportunity to explore open participatory or open source engagement in order to co-design services. These spaces put engagement at the heart of designing services. Engagement allows for the wider

public service or Canadians to discover and share current challenges with service delivery, as well as to begin identifying emerging trends that will take service delivery in a completely new direction. Engagement also allows for the identification of potential talent to build the services that are envisioned.

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