

Case studies on digital transformation of social security administration and services

Reference Project: CHN/18/01/EUR - Improving China's Institutional Capacity towards Universal Social Protection

CASE STUDY
CANADA

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For further information please contact:

ILO Country Office for China and Mongolia

1-10 Tayuan Diplomatic Office Building
Beijing, 100600
China

<https://www.ilo.org/beijing/>
beijing@ilo.org

UNU-EGOV

Campus de Couros
Rua Vila Flor 166
4810-445 Guimarães
Portugal

<https://egov.unu.edu/>
egovl@unu.edu

1. INTRODUCTION

This case study on digital transformation of social security administration and services in Canada consists of seven parts:

- The context of Canada, digitisation and social security.
- Governance, intergovernmental collaboration and coordination in relation to technology in the digital transformation of social security and social assistance.
- Legal and regulatory framework, standards relating to digital transformation of social security and social assistance.
- Front-end service delivery ecosystem for social security administration and services in Canada.
- Back-end service production ecosystem for social security administration and services in Canada.
- Skills and capacities within social security entities, and for social security customers.
- Expanding inclusion and coverage.

The case concludes by summarising lessons learned from the Canadian experience.

The specific aim links to core research questions and draft questions to guide the case survey and/or interviews are outlined for each section of the case study.

2. CASE CONTEXT

Canada is geographically the largest country in the Americas and is the world's second-largest country in terms of territory and landmass. The population of nearly 38 million lives in the country's south, with 81.7% living in urban areas (CIA - Central Intelligence Agency 2021).

Population (July 2021 est.)	37,943,231
Territory (km ²)	9,984,670
Population density (2020) ¹	4
Official language	English and French
Life expectancy / median age (2021 est.)	83.62 / 41.8
Urbanisation (%) of total population (2021)	81.7%
GDP (PPP) (USD, 2020 est.)	1,742 trillion
GDP per capita (PPP) (USD, 2020 est.)	45,900
GDP growth rate (%) (2019 est.)	1.66%
Unemployment (2019 est.)	5.67%
Imports (billion USD (2020 est.))	510.29 billion
Exports (billion USD (2020 est.))	477.31 billion

Table 1: Socio-economic data (CIA - Central Intelligence Agency 2021)

Social assistance and social security started in the 1930s, and the welfare state emerged progressively, leading to implementation of several social programmes in the 1960s that are still in use today, encompassing education and healthcare. Programmes are funded and delivered by the federal, provincial and municipal governments. "It is the largest Program of Service Canada, the Public Pension plan alone has 25,000 employees, 170 billion per year and 640 regional agencies" (CA1). It manages more than 900,000 members².

Most welfare programmes are typically funded through the federal government's general tax revenues. Eligibility to social assistance in Canada is linked to citizenship and permanent residency. It also includes indigenous First Nation peoples, refugees and people claiming refugee status (*and asylum-seekers*). Then, each province and territory has different eligibility criteria, programmes and administrative rules, benefit levels, and provisions concerning special types of assistance. However, even though the specifics vary, the basic structure of social assistance in Canada is the same across the country. In every jurisdiction, eligibility for social assistance is determined on the basis of a needs test, which takes a household's financial assets and income into account.

¹ The World Bank (2021). Accessed 1-15 November 2021:

https://data.worldbank.org/indicator/EN.POP.DNST?end=2020&locations=AU-CA-DK-FR&name_desc=false&start=1961&view=chart

²<https://www.canada.ca/en/treasury-board-secretariat/services/pension-plan/pension-publications/reports/report-public-sector-pension-plans/report-public-sector-pension-plans-march-31-2020.html>

Digital transformation of the social security and social assistance delivery service requires essential pre-conditions such as Internet access and a minimum level of digital literacy and competencies (Meyerhoff Nielsen 2017). Canada is among the most connected countries in the world, with high rates of Internet use and high-speed infrastructure availability.

Population covered by a mobile-cellular network (2020)	100%
Population covered by at least a 3G mobile network (2020)	100%
Population covered by at least 4G mobile network (2020)	99%
Households with Internet access at home (2019)	91%
Mobile-cellular subscriptions per 100 inhabitants (2020)	96%
Active mobile broadband subscriptions per 100 inhabitants (2020)	84
Fixed broadband subscriptions per 100 inhabitants (2020)	42
Individuals using the Internet (% of the population) (2018)	95%

Table 2: Connectivity and use of the Internet by households and Individuals (ITU 2021)

Digital transformation of social security in Canada has evolved over time, at times with great difficulty but with significant willingness to move forward and with a number of successes (CA1). ICT skills are considered an important challenge in social security in Canada. Social security and social assistance would like more people to learn these skills, as a large part of the beneficiaries receiving them are among the most vulnerable in society. Although other statistics (for example, [i-DESI](#)) show Canadian citizens possess significant levels of ICT skills, official statistics on ITU do not contain official data on Canada. According to the World Economic Forum (WEF), more than 32% of adults were below Level 1 or elementary proficiency level, encompassing the most vulnerable in society and seniors in the country, who require assistance with digital literacy. Stakeholders emphasise that one of the most important aspects relating to digital transformation is to remember that not all beneficiaries, or even social security staff are digitally literate (CA2). In this regard, the SST (Social Security Tribunal) has been trying to improve access to social security justice by providing citizens with multiple options, meaning citizens' needs are based on the level of digital literacy they have acquired (CA2).

Basic ICT skills (Level 1 and below)	32%
Standard ICT skills (Level 2)	30%
Proficient ICT skills (Level 3)	30%
Advanced skills (Level 4)	8%

Table 3: Basic, Standard, and Advanced ICT skills 2019 (WEF, 2017)³

Canada is among the leaders in providing government services and information on the Internet, according to the 2003-2020 E-Government Development Index (EGDI) surveys (UNDESA 2020), with a stable and consistent score. It constantly ranked among the Top-10 countries in the period 2003-2010.

³ <https://www.weforum.org/agenda/2017/02/a-quarter-of-adults-can-t-use-a-computer/>

The Canadian government was among the first administrations to utilize technology and develop the “digital welfare state”. Digital tools in social service and social insurance were adopted for multiple purposes:

- Increased efficiency.
- Improved transparency.
- Saving money for taxpayers.
- Increased overall well-being.

The start of the onset of the digital transformation in Canada, and of social security, coincided with a period of austerity. A political and administrative objective to increase social assistance control and a reduction of federal social and health expenditure were key drivers. Several reforms relating to childcare benefits, access to housing and other service were adopted. Furthermore, a strategy to reduce the size of government, empower citizens and cut unemployment by encouraging women to stay at home with their children was established. In this context, several digital transformation measures were adopted to support the austerity policies:

- Accelerating the design and online delivery of the most commonly used services for social services and social insurance in the country, including: Employment (EI), Canadian Pension Plan (CPP), Old Age Security (OAS), Guaranteed Income Supplement (GIS), Social Insurance Numbers (SIN), Veterans Affairs Canada Assistance Services (VAC).
- Rethinking how they used the electronic channel to provide information and services to citizens, more specifically to the most vulnerable.
- Collaboration to offer “no wrong door” access to government services.
- Shared experiences, approaches, learning and tools among the agencies.
- Becoming more citizen-centric.
- Building a secure and robust electronic infrastructure capable of expansion, to support more sophisticated online transactions steadily in future (Government of Canada, 2006).

In 2005, to improve the quality of social services provision, most of the services were integrated into the multi-channel Service Canada, with a mandate to be a single point of access for multiple government services. Notably, over the years, Service Canada evolved from a simple tool for providing information into a “one-stop-shop” transactional portal that integrates most federal and provincial government social protection services. The number of online social insurance and healthcare services increased rapidly, integrating progressively more and more technology such as artificial intelligence (AI), automation, robotics, blockchain and algorithmic decision making, allowing the collection and production of significant amounts of data. These developments offer governments immense opportunities to deliver more efficient and effective services and policies. These could prove crucial for the state's response to mounting social initiatives such as for ageing societies, that already highlight limits to the capabilities of governments' policies, and the continuously increasing poverty and social challenges society faces today as a result of 40 years of social reduction policies.

The social security and assurance services were integrated into the current Strategic Plan for Information Management and Information Technology 2017 to 2021, Digital Operations Strategic Plan: 2021–2024, and Canada’s Digital Government Strategy, aiming to deliver programmes and services to people in simple, modern and effective ways that are optimized for digital uses and are available anytime, anywhere and from any device (Treasury Board of Canada Secretariat 2021). Therefore, multiple policies and standards have been adopted to guide public servants to develop open and user-focused digital services and establish conditions for better service delivery, information management, technology and improved integration of cybersecurity.

Despite significant efforts to cope during the Covid period, benefits thousands of Canadian citizens today face significant delays for social insurance.

3. GOVERNANCE

Canada has a complex federal system and governance model. The decision making power is distributed across the federal government, ten provincial and three territorial governments. Each province has its own legislation, legislature, executive, and judiciary structure. The federal government administered the three territories, while territorial councils had jurisdiction in local matters. Each province and territory is sovereign in organising its local government, resulting in a complex and fragmented practice across the country. Provinces are mainly responsible for social security and social assistance such as health care, employment and social protection and insurance matters (i.e. Table 2) (Commonwealth Governance 2021; Parliament of Canada 2021).

Social Programs	Governance	Programmes and service departments
Healthcare	Provinces and territories	Health care programmes
Education	Provinces and territories	Apprenticeship grants
Social Housing	Federal government (Canadian Mortgage and Housing Corporation), Provinces and territories (Ministries)	CMHC Federal Government program Investment and affordable housing
Unemployment benefits	Federal government, Provinces and territories	Employment Employment insurance Wage Earner Protection Program (WEPP)
Low-income support	Federal government (50%), Provinces and territories (50%)	Guaranteed Income Supplement (GIS) Self-employed benefits
Seniors	Federal Government (+Provincial pension plan management for Quebec only)	Allowance for the Survivor program Allowance for people aged 60 to 64 Canada Pension Plan International benefits Old age security pension Retirement planning
Children and families	Provinces and territories, Federal government for the Universal Child Care Benefits	Canada Child Benefit Minister of Families, Children and Social Development
Disabilities	Federal government, Provinces and territories	Adults with disabilities Federal disabilities support Children and youth supports
Regional aid	Federal government	

Table 4. Social Programmes Governance

Governance was one of the most critical challenges in the Canadian Government's digital transformation. It is considered an important factor for slowing down digital transformation and lowering the [EGDI ranking](#) over the last decade, after ranking among the [top leaders in 2010](#) in Digital Government. Canada invested around CA\$ 6 billion a year in technology. However, the lack of a holistic nationwide strategy is considered the most significant problem⁴. Interviewees also commented, saying: *“It’s a no-brainer. You may have an approach at federal level, and may then find that provinces have their own system that has evolved. At some point, you must bring these things together. But people are sceptical. It is the same issue, as with the same silos, but a different version of silos”*. [CA1]. *“There has a*

⁴ Government of Canada Strategic plan for IM-IT 2017-2021 <https://www.canada.ca/en/treasury-board-secretariat/services/information-technology/strategic-plan-2017-2021.html>

been a consensus for benefits, access, interoperability. In terms of autonomy, you start with complete autonomy, and then you discover that there is an advantage in handing over a little bit of autonomy, to save a lot and gain a lot” (CA1).

This inconsistency with respect to the governance model impacted the social security and assurance service. For instance, due to the lack of data held by federal government ministries. Despite the national government [data strategy](#), there was no coherent governance. So this caused citizens to navigate and register for each assurance security benefits provider separately.

- There is an ongoing redundancy situation with the same citizen data in each Ministry.
- Data collection issue. The Government of Canada invests a tremendous amounts of time, resources for a data governance strategy in the upcoming [strategy for 2021-2022](#) to improve data collection for improved decision making.
- The security aspect is also lacking with respect to data held.
- Difficulty in sharing data between social security agencies and service providers. Multiple layer service (federal, province and territories, and municipality). One of the problems is that each of these layers collects the necessary data from citizens separately, but is still unable to share services or data.

Since the 2018–2022 [Digital Operation Strategic Plan](#) (DOSP), the Government of Canada introduced changes to digital governance and management practices to set the foundations for a digital government across all ministries. They are planning to launch the OneGC platform, which will allow individuals and businesses to use a single identity and password to access federal government services through a single window on [canada.ca](#):

- The Government of Canada adopted a whole-of-government or “enterprise” approach and created a common IM-IT foundation.⁵
- Sharing infrastructure and information, when appropriate, and using common IM-IT solutions to meet common needs and address requirements for security, privacy, interoperability, accessibility and open information.
- The government also fosters prioritization and authoritative governance to make enterprise decisions on IM-IT investments.

The table below summarizes the effort realized since 2017 at the Governance level for solving the challenges faced by the Government of Canada, with specific highlights for the social security and social service assistance through the SSC (Shared Service Canada).

Entity	Objectives	Description
Treasury Board Of Canada Secretariat	Reviewing and updating governance committees for the Government of Canada to ensure that the	<ul style="list-style-type: none"> • TBS reviewed and updated enterprise governance, including committee mandates and memberships. • Establishment of an integrated approach to governance at the DM level in Treasury Board policy on Service and Digital

⁵ Government of Canada Strategic Plan for IM-IT 2017-2021. <https://www.canada.ca/en/treasury-board-secretariat/services/information-technology/strategic-plan-2017-2021.html#toc8-2-1>

(TBS) & Deputy Minister (DM)	<p>“whole-of-government” governance approach is appropriate for the needs of a digital government.</p>	<ul style="list-style-type: none"> • Inception and chairing of a senior-level body responsible for providing advice and recommendations, in support of the GC’s priorities and the Government of Canada Digital Standards, regarding strategic direction for the management of external and internal enterprise services, information, data, information technology (IT), and cybersecurity prioritization of GC demand for IT shared services and assets • The DM Committee on Service and Digital Government has established a new committee to support this policy requirement. TBS will review the underlying committees and update the terms of reference to align with and support the new DM Committee.
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Table 5. Canadian eGovernance and coordination model in 2020

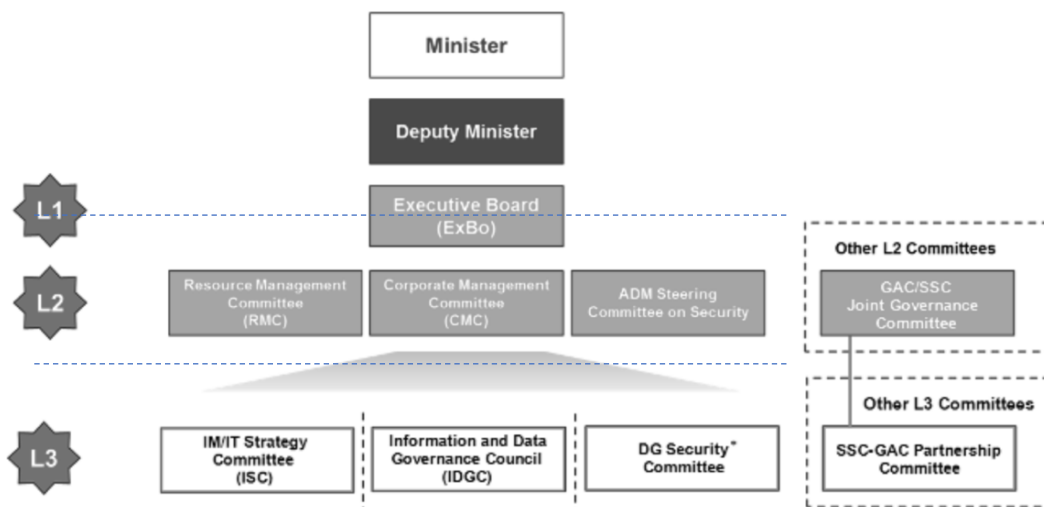


Figure 1. Digital Governance Structure

The Deputy Minister (DM) and Assistant Deputy Minister Committees on Enterprise Priorities and Planning (CEPP) lead governance, priority setting and oversight bodies for all federal IM-IT investments. CEPP will also provide oversight for [Shared Service Canada](#) (SSC) service delivery. In support of the enterprise approach, a new GC Enterprise Architecture Review Board (EARB) has been established, to further the “whole of government as one enterprise” vision. It is integrated into the larger Government of Canada governance structure. It looks at the alignment of initiatives, system and solution gaps and overlaps, development of new digital capabilities and innovation opportunities, setting technology standards and providing IM-IT investment direction.

The following table identifies key government organisations in relation to this digital governance transformation of the Government of Canada.

Organisations	Roles and responsibilities
Secretary of the Treasury Board of Canada (TBS)	Establishing and chairing a senior-level body that is responsible for providing advice and recommendations, in support of the Government of Canada’s priorities and the Government of Canada Digital Standards, regarding: <ul style="list-style-type: none"> • Strategic direction for the management of external and internal enterprise services, information, data, information technology (IT) and cyber security;

	<ul style="list-style-type: none"> • Prioritization of Government of Canada’s demand for IT shared services and assets.
The Chief Information Officer (CIO)	<p>Providing advice to the Secretary of the Treasury Board of Canada and President of the Treasury Board of Canada about Governing and managing enterprise-wide information, data, IT, cyber security, and service design and delivery; Prioritizing the Government of Canada’s demand for IT shared services and assets; and using emerging technologies and implications and opportunities of doing so for the Government of Canada:</p> <ul style="list-style-type: none"> • Providing direction for the enterprise-wide transition to digital government, including regularly reviewing and updating the Government of Canada Digital Standards; managing information, data, IT, and cyber security; and advising on enterprise-wide service design and delivery. • Prescribing expectations about enterprise architecture. • Establishing and chairing an Enterprise Architecture Review Board mandated with defining current and target architecture standards for the Government of Canada and reviewing departmental proposals for alignment. • Establishing priorities for IT investments (including cyber security investments) that are enterprise-wide in nature or that require support from Shared Services Canada (SSC). • Facilitating innovation and experimentation in service design and delivery, information, data, IT and cyber security. • Approving an annual, forward-looking three-year enterprise-wide plan establishing the strategic direction for integrated management of services, information, data, IT, and cyber security. It ensures the plan includes a progress report on how it was implemented in the previous year.
Deputy Minister Committees (DMC)	<p>Make policies more coherent government-wide and promote a whole-of-government approach to management, human resources and policy planning. These committees include committees on digitization of services; enterprise priorities and planning; core services; and governance in a digital age, which focuses on issues such as privacy and data use, and strategic procurement for complex programmes</p>
Government of Canada Enterprise Architecture Review Board (GC EARB)	<p>It is mandated with setting out to “define current and target architecture standards for the GC and review departmental proposals for alignment” in the <i>Policy on Service and Digital</i>.</p>
Shared Services Canada (SSC)	<p>Providing services related to email, data centres, networks and end-user technology devices. SSC is responsible for delivering these services in a consolidated and standardized manner. Minister responsible for SSC can personally authorize a department to provide otherwise mandatory services.</p>
Public Services and Procurement Canada	<p>Providing services for federal departments and agencies to support them in achieving their mandated objectives as their central purchasing agent, linguistic authority, real property manager, treasurer, accountant, integrity adviser, and pay and pension administrator.</p>
The Communications Security Establishment	<p>CSE is the lead technical authority for information and IT security, including providing leadership, advice and guidance for technical matters related to IT security. It helps protect electronic information and information infrastructures important to the Government of Canada. It fulfils government-wide functions by identifying emerging cyber threats, monitoring government networks and systems, and helping protect against and mitigate potential impacts of cyber security events.</p>
Public Safety Canada	<p>Heading coordination and strategic policymaking on national cyber security matters.</p>

Table 6. Canada eGovernance roles of government organisations

Delivering IT services to core departments is now shared between central providers such as SSC and PSPC. Cybersecurity is the shared responsibility of SSC, Communications Security Establishment Canada, and TBS, in partnership with departments. The Treasury Board of Canada Secretariat’s (TBS’s) Chief Information Officer Branch (CIOB) supports the Treasury Board by developing strategy, setting government-wide policy, and providing implementation guidance for IM-IT, service, access to information, privacy and security; and establishing technology standards for the GC.

Year	Co-ordination of strategy implementation	Wider co-ordination for the development of information society
Vision	TBS and DMC	CIOB with IM/IT committee facilitated consultation
Strategy	TBS and DMC	CIOB facilitated consultation
Implementation of action plans	CIO for DMC	TBS and the DMC
Implementation of individual initiatives	CMC committees Individual Ministries and authorities	CIO
Monitoring and measurements	CIOB of TBS	TBS and DMC

Table 7. Canada eGovernance and coordination model since 2017

Two key factors foster the political drive for digital transformation of social insurance administration and services in Canada:

- An increasingly ageing population with the retirement en masse of baby boomers.
- The Government efficiency policy in the public sector, including social security.

Social security and social assistance by and large are still managed at the provincial level. The provinces are responsible for the well-being of the majority of the society and, specifically, the most vulnerable. It is important to note that the country's average social assistance reciprocity rate has declined. While the reciprocity rate was more than 12% in 1995, this was less than 6% in 2021, representing and illustrating dramatic changes in the approach to and degree of social assistance in Canadian provinces and territories.

Various benefits fall under the umbrella of "social security and social assistance", including welfare disability, support payments, old age security and employment insurance. As each province and territory regulates social assistance coordination, this results in variations in procedures across the nation. At the same time, indigenous peoples have a separate, federally administered social assistance program.

Five different ministries are involved in the management of social security and assistance: the Canada Revenue Agency, the Minister of employment, workforce development and disability inclusion; the Minister of families, children and social development; the Minister of Labor and the Minister of Seniors. Service Canada primarily provides these services as online offerings. These ministers report to parliament through Canada's Employment and Social Development.

Year	Coordination of social security implementation	Wider co-ordination for developing f information society
Vision	The Corporate Secretary (CS). The CS supports the Department by providing portfolio coordination, executive and ministerial services, cabinet and parliamentary affairs coordination, and management. of <i>Access to Information and Privacy Act</i> requests.	For the department Employment and Social Development Canada (ESDC).
Strategy	Strategic and Service Policy Branch (SSPB).	Corporate secretary.

Implementation of action plans	<p>Program Operations Branch (POB). The Program Operations branch handles the operation and coordination of Grant and Contributions programmes across the Department.</p> <p>Canada Revenue Agency, Minister of Employment, Workforce Development and Disability inclusion; Minister of Families, Children and Social Development, Minister of Labor and the Minister of Seniors.</p>	<p>ESDC. Innovation, Information and Technology Branch.</p> <p>The Innovation, Information and Technology branch provides information and technology services to the Department. This includes business applications that support and streamline work processes, for accessing data, and processing millions of benefit-related transactions, to address Canadian citizens' needs.</p>
Implementation of individual initiatives	<p>Social service agencies and other organisations. Service Canada regional operations.</p>	<p>ESDC through Service Canada.</p>

Table 8. The Canadian approach to social security and social assistance since 2020

Social assistance is highly correlated with the employment rate. Canada recently set up [Opportunity for All: Canada's First Poverty Reduction Strategy](#). This strategy changed Canada's social security and social assistance tremendously, renewing Canada Child Care Benefit services, guaranteeing income supplements to most seniors, renewing the Canadian worker's benefits, and other services. This is a federal programme integrated into the "whole-of-government" strategy that will be implemented in close collaboration with provinces, territories and municipalities.

4. LEGAL AND REGULATORY FRAMEWORK, STANDARDS

Digitalization has government-wide relevance and cannot be not covered fully under a single federal regulatory framework. Furthermore, in Canada, every Canadian province and territory has its social assistance system, that is, its legislation, its regulations and its policies.

The legal framework was a challenge to integrating services on a federal level. Legal processes tend to lag behind other processes when it comes to digitalisation. It is part of the inherent conservatism aspect in legal culture (CA2). Current legislative frameworks do not enable effective sharing of information across departments, and the government's current IT environment needs updating to support an accurate "one-stop-shop" service approach.⁶

Despite the lack of a single regulatory framework in this area, a number of broader Government of Canada initiatives aim to deliver a more open and collaborative digital government, providing improved digital-first, user-centred services and programmes. The GC is also taking steps to modernize its regulatory frameworks to streamline processes, foster innovation, and unlock growth and investment.

In 2018, Government of Canada published the Digital Standards, co-created with the public and key stakeholder groups. These Standards were set up to support the work of federal departments and agencies in becoming more agile, open, and user-focused in designing and delivering digital services. The release following this in 2019 of the Treasury Board Secretariat Policy on Service and Digital, which introduced an integrated set of rules for how public sector organisations should manage service delivery, information, data, IT, and cybersecurity in the digital era. This policy took effect on 1 April 2020. The primary objective of this policy is to improve client service experience and government operations, including regulatory administration, through digital transformation approaches.

Ontario is implementing the Digital ID

After the increasing use of Online Service during this Covid-19 Pandemic, the Government of Ontario responded favourably to the request from its citizens to have a secure and privacy-enhancing digital ID, permitting citizens to safely carry out transactions online.

Digital identity is developed in collaboration between the Governments and the private sector, to create the pan-Canadian digital-ID.

The Government of Ontario is adopting following standards: W3C for the Data model, the key management, data format and DID method. It is adopting the OIDEC Standard Open ID Foundation for the identity standard.

The Ontario government has noted on its website that Ontario's digital ID will be based on tech standards from the World Wide Web Consortium (W3C), the Decentralized Identity Foundation (DIF), Trust Over IP Foundation, and OpenID connect.

Some of the tech standards that the provincial government is currently considering includes the Verifiable Credentials Data Model 1.0 for data modelling, Decentralized Identifiers (DIDs), v1.0 for key management, JSON-LD 1.1 for data formatting, OpenID Connect as identity standard, BBS+ Signatures 2020 and Ed25519 Signature 2020 for signature format, Self-Issued OpenID Provider v2 and more for interoperability.

Source: <https://www.ontario.ca/page/ontarios-digital-id-technology-and-standards>

⁶ <https://www.tbs-sct.gc.ca/report-on-service/report-on-service/digital-services-en.html>

Furthermore, the suite of policies devised since DOSP 2018-2022 allowed us to accelerate federal government services accessible through a single window on canada.ca. Since the Covid-19 pandemic, Government of Canada has worked on eliminating long-standing institutional barriers to digital services and the urgent need to maintain services. They announced that standards ensure that the users and their needs are at the heart of the social services to citizens. The digital services are leveraged to meet Canadian citizens' expectations. As one interviewee stated, this was not always the case, particularly in the judicial part of social protection, but *"The point is that SST is paid to serve Canadians, not just to make their own life easier. So it is this shift of mentality which is critical. If you don't have this shift, all that you can do when you digitalise is to transform an inaccessible system into an accessible electronic system."* (CA2).



Figure 2. Government of Canada Digital Standards

	Name of acts, regulations or standards	Description
Digital Standards ⁷	Canada Digital Standards	<p>There is no general eGovernment legislation. However, the Digital standards are introduced to provide guidance for public servants to develop open, agile and user-focused digital services and the new Digital Operations strategic plan. These digital standards were co-created by the government, the public and key stakeholder groups. They are living standards and evolve with practice. They encompass:</p> <ul style="list-style-type: none"> • Design with users. • Iteration. • Open by default. • Open standards and solutions. • Security and privacy risks. • Empower staff to deliver better services. • Good data stewards. • Ethical services. • Collaborations.
Policy on Service and Digital		The Policy on Service and Digital and supporting instruments serve as an integrated set of rules that articulate how Government of Canada organisations manage service delivery, information and data, information technology, and cyber security in the digital era. Other requirements, including but not limited to requirements for privacy, official languages and accessibility, also apply to the management of service delivery, information and data, information management and cyber security.
Digital Governance	CAN/CIOSC 100:2020	Data protection of digital assets. Third-party access to data. Specification for Scalable Remote Access Infrastructure.

⁷ <https://www.cspc-efpc.gc.ca/tools/jobajds/pdfs/digital-standards-eng.pdf>

		The responsible use of digital contact tracing, monitoring data in the workplace.
Open standards and solutions		Leveraging open standards and embracing leading practices, including using open source software where appropriate. Design of services and platforms that are seamless for Canadians to use, no matter what device or channel they are using.
Accessibility standards		Services should meet or exceed accessibility standards. Users with distinct needs should be engaged from the outset, to ensure what is delivered will work for everyone.
Service standards		Departments must aim to have meaningful service standards and real-time performance reporting in place for priority services as soon as possible and should consider establishing different service standards to monitor access, accuracy and timeliness for their full range of services.

Table 9. Canada eGovernment related legal acts

	yes/no	Solution	Description
Electronic ID	yes	CAN/CIOSC Digital trust and Identity	This Standard specifies minimum requirements and a set of controls for creating and maintaining trust in digital systems and services that, as part of an organisation's mandate, assert and or consume Identity and Credentials in data pertaining to people and Organisations. This Standard may be applied to either digital systems and services used within an identity context or to those used and applied across identity contexts, i.e. in credential and/or identity federation. Digital ID is managed at the Provincial level.
Public Key Infrastructure (PKI)	yes		The PKI Policy was established to implement the position of GC, that public key technology would be the preferred means for GC to electronically authenticate the identity of entities or persons, and enhance the integrity and confidentiality of documents.
Single Sign-On (SSO)	no		
National data exchange platform	yes	Open Data 150/ODX	Establishment of an open data institute in Canada (the Canadian Open Data Exchange, or ODX) as a national marketplace that includes an online community for those engaged in the commercialization of open data.
Once-only principle	yes		Inspired by the "once only" principle, i.e. collect the same data only once. A Data Strategy Roadmap for the Government of Canada was set up to collect data from users only once and reuse it wherever possible. Ensure that data is collected and held securely for reuse by others, for easy provision of services
Digital post	yes	ePost Connect	The government departments and agencies that require secure electronic delivery of Protected B level documents, use electronic post Connect to securely share confidential messages, documents and files outside the corporate firewall with one or many citizens, colleagues, partners and suppliers.
Usability service standards	yes	User-experience working group (UXWG) guide to usability and testing	Describes the usability requirements for Government of Canada websites, including requirements for domain names, terms, conditions and archiving of online web content, as well as common webpage layouts and visual design elements.
Personalized and proactive services	yes	Policy on service and digital	The Policy on Service and Digital focuses on the client, ensuring proactive consideration at the design stage of key requirements of these functions in developing operations and services.

Table 10. Availability of the significant key enablers and standards in Canada

5. BACK-END SERVICE PRODUCTION ECOSYSTEM

Social services are offered in Government of Canada federal departments, provinces, territories, and municipalities

- 40% of these public service organisations are facing readiness challenges for digital transformation.⁸
- Digital transformation occurs in silos.
- Duplication across the GC makes it inefficient.

Canadians navigating multiple levels of government are likely to experience even more critical challenges obtaining the information and services they need⁹.

The Government of Canada comprises more than 100 organisations that deliver a broad range of programmes and services to individuals and businesses in Canada and abroad. Information management (IM) and information technology (IT) support the government in providing these programmes and services. In each federal department, IM-IT is operated separately and focuses on fulfilling the individual mandate of the department. This approach has led to complex, time-consuming and costly client interactions with the government. *“There is a difference in culture. If you talk to lawyers, they have their own culture. If you talk to service delivery people, they have a certain way. If you talk to IT people, they have another culture and so on. So all these have to collaborate, and it has to be forced”*. (CA1). To solve the difference and facilitate the collaboration, *“the citizen must be at the centre. Adopting a citizen-centric approach helped to resolve these difficulties. Instead of focusing on what is good for the lawyer, let’s focus on what is good for the citizen”*(CA1).

This siloed approach leads to inefficiencies through duplication of platforms, incompatibility of systems and data models, inconsistent service delivery and standards, lack of information sharing, inability to find information and other factors.

Alberta and British Columbia issued digital identities (MyAlberta Digital IDentity and BC Services Card) and integrated them with CRA and Service Canada, giving holders of these digital identities rapid access to federal government programs of Employment Insurance and the Canadian Emergency Response Benefit.

A digital identity pilot project launched in the summer of 2019 enabled people in Alberta to log in to Government of Canada online services using their MyAlberta Digital Identity

Another project, launched in February 2020, saw the British Columbia government and the Canada Revenue Agency enable accessing CRA’s My Account and the CERB using the BC Services Card

Source: (<https://www.canada.ca/en/government/system/digital-government/digital-government-strategy/working-with-provinces-territories.html>)

⁸ Cukier ²⁰¹⁹, Public sector summit Ottawa (Amazon Web service), Develop a Digital Ready Public Service

⁹ <https://www.canada.ca/en/government/system/digital-government/digital-government-strategy.html>

The Government of Canada currently plans to set up “OneGC” as a long-term vision to provide a service through a diversity of platforms, devices, or partners. The Government of Canada is incorporating a wide range of approaches to achieve OneGC by developing common services such as digital identity or using emerging technologies, whether digital by design or not. My Service Canada Account is an example of this. There are also efforts to link the (CRA) or Canada Revenue Agency’s My Account and Employment Social Development Canada’s (ESDC), even though GC still faces challenges integrating the services through different layers, levels and organisations.

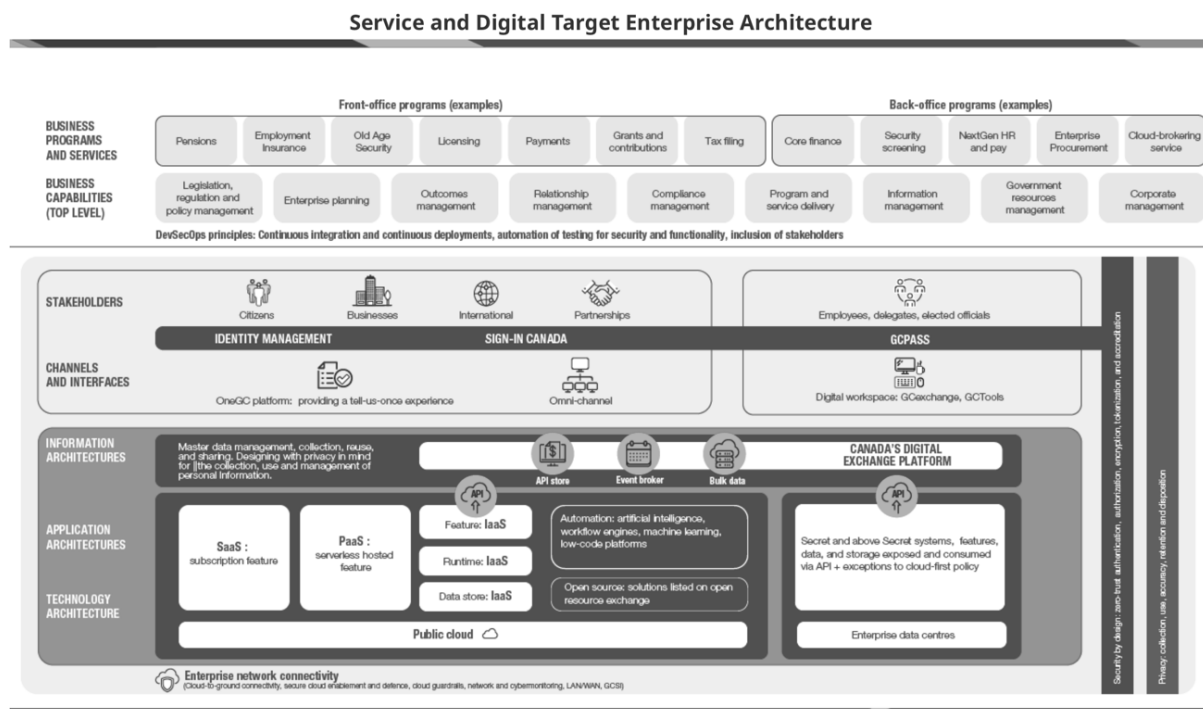


Figure 3. Service and Digital Enterprise Architecture of the Government of Canada

- 1) Social security programmes and services are part of the front-office programmes: Pensions, Employment Insurance, Licensing, Payments, Grants and contributions and Tax filing.
- 2) Social security programmes are supported by legislation, regulation and policy management, enterprise planning, outcomes management, relationship management, compliance management, programme and service delivery, information management, government resources management and by corporate management.
- 3) DevSecOps principles include continuous integration and continuous deployments, automation of testing for security and functionality, or stakeholder inclusion.
- 4) External stakeholders include citizens, businesses, and international partnerships with two types of user authentication Identity management and Sign-in Canada (GCPass is user authentication for internal stakeholders).

- 5) Interfaces such as the OneGC platform: providing a tell-us-once experience and Omni-channel, Digital workspace, GCexchange, GCTools and tools for internal users.

The architecture includes, in addition to application architecture, technology architecture and two overarching principles:

- Security by design: zero-trust authentication, authorization, encryption, tokenization and accreditation.
- Privacy: collection, use, accuracy, retention, and disposition.

6. FRONT-END SERVICE DELIVERY ECOSYSTEM

The digital transformation of social security and social service assistance at the provincial level remains in silos with little inter-organisational coordination. It led to confusion, created inconsistencies for Canadian citizens who must understand and navigate these multiple levels and services; and navigation through various levels of government are likely to experience even more critical challenges in obtaining the information and services they need.¹⁰

The front-end service social security and social service assistance provided by the Federal Government are more integrated:

- It is realized through a multi-channel strategy, to ensure inclusiveness among the population.
- It is managed by the CRA and the ESDC, who are responsible for providing information to the public on programmes of the Government of Canada and other Government departments.

Service Canada integrates most social services together in one portal, assistance and portal for pension and benefits. *"We work with Service Canada in the sense that almost all the information SST receives is transmitted to Tribunals electronically. SST has information sharing agreements with Service Canada and a seamless interface from which SST can get data needed for the deals" (CA2). "Currently, documentation is obtained from Service Canada through an interface" (CA2). "They are moving towards greater use of the portal they have, which enables citizens basically to access Canadian federal benefits. Service Canada is working towards a single portal that gives citizens access to any issues with respect to Canada Pension Plan, Old Age Security Pension, Guaranteed Income Supplement, etc. so all of the federal benefits would be accessible through the portal" (CA2).*

Since October 2016, CRA and ESDC linked key services for Canadians to also allow citizens access through the new single sign-in

- "My Account" service will enable people to track their refunds, review or change their returns, and choose whether to receive a refund by cheque or by direct deposit.
- "My Service Canada" account allows Canadian citizens, and residents of Canada to update personal information for some of ESDC's benefits, including employment insurance, the Canada Pension Plan (CPP) and other benefits.
- "Tell us once" experience is adopted in order for CPP recipients to be able to update their direct deposit information with either the CRA or ESDC and, with their consent, have this information updated automatically.

Furthermore, to scale down the administrative burden, Service Canada opened centres in rural areas to facilitate access to social security and social service assistance. The Canada Revenue Agency (CRA), which manages family benefits, created an Automated Benefits Application for beneficiaries. It collaborates with the Vital Statistics Agency, which securely sends birth registration information to the CRA after the birth registration process. (Canada

¹⁰ <https://www.canada.ca/en/government/system/digital-government/digital-government-strategy.html>

Revenue Agency, 2017). Some social services are improving accessibility to the service for citizens, to ensure they do not leave any citizens behind. For example, as one interviewee highlighted, *“the SST prospective is to use human-centred design to accommodate people who are not digitally literate or where there is a physical obstacle while using digital means”* (CA2). They also have made a significant effort to translate the complex technical legal language to serve Canadian citizens better and support them in their procedures using the “Navigator” (CA2).

The service delivery programme is described in the table below:

Service and programs access	Description
Service Network Supporting Government Departments	<ul style="list-style-type: none"> • Supports Government of Canada programs, including social security and social service assistance, by ensuring access to the information necessary to make informed choices about available programmes and services, and the tools for accessing them. • Supports migration to preferred service channels. • Access information about ESDC and other social security and social service assistance programs and services by the most convenient means. • Program delivered through the Internet, customized telephone services, as well as through an in-person service delivery network.
Government of Canada Telephone General Inquiries Services	<ul style="list-style-type: none"> • Supports Canadians and provides customized information services. • first point of contact for general information on all Government of Canada programs, services and initiatives. • Supports key government priorities and messaging, including those outlined in the Budget and Speech from the Throne. • Supports the Government's communication needs in times of crisis. • Customized information services provide support for programmes and services that require a service delivery partner to meet their communication needs to Canadians and other clients, including ongoing requirements, targeted campaigns and temporary needs in crises.
Government of Canada Internet Presence	<p>The Government of Canada's Internet presence supports Canadians by providing online access to information and services. Through Service Canada, ESDC is the principal publisher of single Government of Canada website, canada.ca.</p> <p>Canadians can locate information on the programmes and services through ESDC and general information on all Government of Canada programmes and services. Through Service Canada, ESDC also provides a simple and secure online portal for Canadians to bring together a number of services and allowing clients, among other things, to view and update their personal information and conduct transactions securely with ESDC.</p>
In-Person Service Delivery Network	<p>An in-person service delivery network supports services and information for the Government of Canada. They provide information on self-service, client authentication and identification, and services for clients who require one-on-one assistance. Canadians who require specialized or client-specific information for programmes such as Employment Insurance, the Canada Pension Plan or Old Age Security are directed to appropriate online resources and programme call centres.</p>
Delivery of Services for other Government of Canada Programs	<p>This programme provides service delivery, oversight, and monitoring of other government department programs through service delivery agreements. It provides Canadians access to a range of Government of Canada programs, benefits and services in person, by phone, by mail and through the Internet by providing basic and detailed programme and service information; application intake and review for completeness; client authentication and validation of identity documents; quick and direct access to specialist agents in other departments; and provision of space in the service delivery network for other departments. It enables a shift from department and programme silos to achieve a seamless service delivery network, resulting in timelier, accurate and cost-effective service delivery for Canadians.</p>

Other Government Department Programs	Services provided on behalf of other Governments of Canada such as assistance to Canadians; provision of basic service information; application intake and review for completeness; client authentication and validation of identity documents; (i.e. Service Canada Compliance Verification).
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Table 11. Canadian eGovernance and coordination model in 2020

The table below presents examples of Federal and Provincial portals providing social security and assistance services. The interviewees cited some of these examples. *“There are some specific other systems, really effective examples. In Canada, in British Columbia – there is a [Civil Resolution Tribunal](#) which is almost 100% online, for dispute resolutions. If you look at their website, it’s a fabulous, incredible and very accessible system, very well designed, 100% user-focus. It is an example that with great technology you can get there”* (CA2).

	yes/no	Federal Portal	Provincial Portal (examples)
Social security and social assistance portals	yes	<ul style="list-style-type: none"> https://www.canada.ca https://eservices.cic.gc.ca 	<ul style="list-style-type: none"> https://mybenefits.mcass.gov.on.ca (Ontario) https://www.retraitequebec.gouv.qc.ca/fr/Pages/accueil.aspx
Education	yes	<ul style="list-style-type: none"> https://www.canada.ca/en/education-canada/services/ https://eservices.cic.gc.ca 	<ul style="list-style-type: none"> https://www.quebec.ca/education
Health	yes	<ul style="list-style-type: none"> https://www.canada.ca/en/health-canada/services/ 	<ul style="list-style-type: none"> https://portal3.clicsante.ca https://www.alberta.ca/ahcip.aspx https://www.ontario.ca/page/health-care-ontario
Employment	yes	<ul style="list-style-type: none"> https://www.canada.ca/en/services/jobs/opportunities/government.html 	<ul style="list-style-type: none"> Quebec Online Employment Service https://www.emploi.quebec.gouv.qc.ca
Legal repository, consultation, government gazette	yes	<ul style="list-style-type: none"> https://laws-lois.justice.gc.ca/eng/acts/ https://www.loc.gov/item/guide-to-law-online/canada/ 	<ul style="list-style-type: none"> https://sst-tss.gc.ca/en https://www.justice.gouv.qc.ca/ Civil Resolution Tribunal (British Columbia)
Participation, engagement	yes	<ul style="list-style-type: none"> https://open.canada.ca/en/proactive-disclosure 	<ul style="list-style-type: none"> https://www.ontario.ca/page/public-engagement https://www.mamh.gouv.qc.ca/organisation-municipale/democratie-municipale/participation-des-citoyens/

Table 12. Specialised portal Social security and social assistance service ecosystem in Canada

Assessing citizen satisfaction levels from online and digital services remains an issue from a regulatory perspective. Service Canada is currently taking initiatives to evaluate and assess citizen satisfaction. Some organisations regularly measure and monitor satisfaction. The SST has an ongoing survey. *“This is what our client surveys look like: [Client survey results \(sst-tss.gc.ca\)](#). At the SST, appellants are asked about their experience of using the appeal process. The surveys help us understand where we need to improve. We publish the feedback because we believe in being transparent about how we work for Canadians. We publish our survey results quarterly. The results period could be seen on the same page. They offer a detailed breakdown of results and comments from appellants”* (CA2).

7. SKILLS AND CAPABILITTIES

Over the last two decades, the Government of Canada has struggled to recruit and retain digital talent with an adequate skills base to design and deliver the type of services people expect in the digital age (CA1, CA2). However, by focusing on transformational change, user experience, and agile methods of working, public services have been attracting tech employees with digital skills interested in working on short-term projects through the Interchange Canada program, as well as offering more varied opportunities for upskilling and digital skills training for public servants and officials.

Digital, IM and IT workforces of the Government of Canada are recruited and managed separately and in silos, leading to an inconsistent and sometimes limited professional development, greater outsourcing weak integration of roles and functions that fit closely together. The table below summaries the key initiatives the Government of Canada has and is currently undertaking.

Activities	Description
Enable career development	Enabling IM-IT professionals to evolve into new roles and functions and addressing competency gaps in strategic thinking, influencing, innovation, collaboration, and agility requires employee investment. To support IM-IT professionals, retain talent, and re-skill or up-skill the workforce, emphasis will be placed on:
Promoting digital literacy and collaboration	<p>Making the most of investments in the IM-IT environment, devices and tools to ensure that IM-IT supports workforce productivity, rather than hindering it.</p> <p>TBS will develop partnerships to leverage and design an engagement and awareness programme for all public servants to enable them to:</p> <ul style="list-style-type: none"> • Become more data-literate. • Leverage evidence-based decision-making. • Engage internally and externally as digital citizens. <p>Use GCTools such as GCpedia, GCconnex and GCintranet to share information and build the professional networks needed to respond to shifting priorities and problems. Collaborating digitally involves “working out loud,” where others can see, benefit from and help improve how employees work.</p> <p>To promote a culture of openness and collaboration, departments will nurture these skills throughout the public service by:</p> <ul style="list-style-type: none"> • Adopting and using GCTools for everyday work. • Deploying targeted and general learning and community outreach activities. • Promoting the use of self-directed learning tools and materials. <p>Senior management’s adoption of GCTools will be critical to successfully integrating digital collaboration into their departments and demonstrating the full benefits of these collaborative tools. Leaders will adopt an “open first” approach toward content creation and encourage their employees to participate in shared knowledge and collaborative digital spaces, other than where security requirements prohibit such an approach.</p>
Modernizing information and data management professions	<p>Revitalizing the information and data management profession is necessary to ensure that it keeps pace with current and emerging business needs in a digital, open and service-oriented environment. Furthermore, information and data professionals should become more involved early in the development process, whilst designing or renewing programmes and systems to ensure that issues associated with information and data management and sharing receive proactive consideration. Realigning the roles and responsibilities of information and data management professionals and other key stakeholders could help improve collaboration and overall coherence.</p> <p>TBS will lead the development of new, standardized:</p>

	<ul style="list-style-type: none"> • Generic workstreams and job descriptions. • Generic competency profiles. • Organisational structures.
Strengthening leadership development	<p>There is a need to invest in current and aspiring leaders across the enterprise to:</p> <ul style="list-style-type: none"> • Address talent retention issues. • Increase the capacity for developing leadership competencies. <p>Emphasis will be placed on:</p> <ul style="list-style-type: none"> • Talent management and succession planning. • Learning provider solutions completed. <p>Specific leadership development efforts include:</p> <ul style="list-style-type: none"> • Talent reviews. • Promoting leadership development programmes at Canada School of Public Service (CSPS). • Tracking and facilitating the movement of IM-IT leadership across the enterprise. <p>TBS will lead the work in these areas.</p>
Expanding open government training and outreach	<p>Training and awareness sessions are being provided to public servants across federal government to enhance knowledge and skills for open government.</p> <p>TBS will continue its work to expand open government training and outreach in coming years, in partnership with CSPS. In addition to hosting public webinars on open government issues and developing dedicated open government training and learning activities for public servants, the Government of Canada will create and publish open government learning materials for teachers and post-secondary instructors. This will help Canadians to find out about our open government work and more actively participate in it, increasing Canada's ability to harness open government's social and economic potential.</p>
Assessing public service skills and analysing future needs	<p>Technological disruption, changing approaches and the digital government will require public servants to possess new skills and competencies. To help public servants and the public service adapt to this evolving digital environment, TBS will work with partners such as CSPS to identify competencies for the digital age, in order to better understand how the current skills profile of the government needs to evolve.</p>
Digital Academy	<p>The Government of Canada is launching a Digital Academy to increase the offerings available to public servants who wish to increase their digital literacy and understanding of key areas such as service design, data analytics, and new technologies as these apply to their work. Informed by examples in other jurisdictions, we will build a made-in-Canada model to understand better how digital environments and functionalities can improve government functions and provide better services. CSPS will lead delivery of the Digital Academy in partnership with TBS, the Canadian Digital Service, Statistics Canada, other government departments and partners from the non-profit, academic or private sectors.</p> <p>The development of the Digital Academy will be guided in particular by principles of open by default, collaborating wisely and iterative development. Initial courses were piloted in September 2018, and the government will aim for this service to be available starting in 2019.</p>

Table 13. Digital skills and capabilities program in the Government of Canada

Despite the efforts in digital skills development as well as to improve recruitment conditions and become an employer of choice, Olivia Neal, Executive Director for Digital Change, highlights the fact that Government of Canada is at present struggling to attract and upskill its digital workforce, – in particular among women, who remain underrepresented in technology roles in the civil service.

Dr Wendy Cukier, Professor at Ted Rogers School of Management & Academic Director of the Diversity Institute in Ontario, outlines the importance of:

- Rethinking digital skills at the level of expertise from Basic digital literacy, Technology skills and deep technical and content creation.
- Reviewing the traditional definition of digital skills by the public sector and Government organisations as being computer science will attract a larger pool of candidates and upskilling and alternative pathways.
- Introducing Diversity in Digital skills as a competitive advantage and key to talent creation.
- Adopting accountability and metrics to support more flexibility for creating worthwhile working arrangements, to attract and retain diverse digital talents.

8. EXPANDING INCLUSION AND COVERAGE

While Canada by and large has universal coverage, challenges persist at federal and provincial levels. Reduced social spending is leading to an increased number of social challenges in Canada, such as an increase of homelessness and an increase in poverty.

The ageing population requires both long-term help along with short-term assistance and care. Consequently, there is an increased need to expand Old Age Security and Guaranteed Income Supplement as well as deferred savings plans like the Registered Retirement Savings Plan.

The Covid-19 pandemic situation adds complexities and challenges to the current social security and social service assistance, with increased unemployment, housing difficulties, an increase of reduced and lower incomes, and with access to healthcare and access to online educational support.

The digitalization of social services and assistance during the Covid-19 particularly exacerbated these social inequities, increasing the consequences of the situation due to the digital gap among Canadians' abilities to access digital technologies.

The Covid-19 period showed that internal employees or citizens have an important duty and ability to learn fast. As interviewees highlighted, *“COVID has done more to change mentality and acceptance of digitalization than anything else”* *“The recent COVID situation has demonstrated clearly that the vast majority of people can adapt. But you must ensure that no one is left behind, especially by the programme targeting the vulnerable, that is super important. Tremendous progress has been made here, there is so much technology nowadays, so much easier for use by the elder people”* (CA1).

Four elements are considered critical for improving digital inclusion for social assistance, education support and healthcare systems. There is an important gap between the majority of Canadian and specific demographic groups, that are lagging behind as illustrated in the table below.¹¹

	Situation in Canada
Digital access	<p>18.7% fewer households in the lower-income quartile have access.</p> <p>34.5% fewer people in the 65+ age group from the lowest income quartile had access to the Internet at home.</p> <p>52% fewer households residing in First Nations reserves have basic broadband services available and, on average, are more expansive (same for rural Canada).</p>
Digital skills	<p>37% of Canadians are proficient in digital technology</p> <p>23% fewer people from the 55-75 age group are able to use online services (e.g. government, banking, commerce) in comparison to 25-54 year-olds.</p>

¹¹ Statistics collected from different sources including Deloitte reports, <https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/fcc/ca-digital-equity-spotlighting-canadas-divide-deloitte-canada-en.pdf>

	<p>20% fewer people between 45-55 years of age are able to solve issues in technological environments in comparison to 25-35 year-olds.</p> <p>8% fewer First Nations, or minorities are most likely to invest in digital skills or online capabilities.</p>
Ecosystem	<p>Policy and regularity environment on accessibility infrastructure, Canada ranks highly (16th), but is falling behind in creating regulations that support Digital inclusion and equity.</p> <p>Canada provides a good level of Digital accessibility (top 25%) but lacks policies on key education, employment and independent living.</p> <p>Protection of personal data and privacy: Canadians feel that they have no control over how the Government uses their data and personal information.</p>

Table 14. Digital skills and capabilities situation in Canada

Government and social security experts highlighted the importance of innovating the health coverage system. It is considered as problematic as it is currently, and innovation could foster improvements. *“In healthcare, what you want from the future of technology is to enable people to age in place, to live in their community. The health system is too health-centric. It should sooner be the case, that the gateway to health is through the hospital. This should not necessarily be so; it should be in your own place, where you live. Now with remote sensors, you can stay on, remain in your home, as we can monitor the situation remotely”* (CA1).

The Government of Canada continues to strive toward its objective of becoming a world leader in inclusive digital service provision and is taking a number of relevant steps to ensure this, e.g. :

- Federal new income called Canadian Emergency Response Benefits (CERB) to support people's basic needs during the Covid-19 pandemic.
- Reducing the digital health divide magnified during Covid-19 for vulnerable communities and others at risk of experiencing health disparities, such as immigrants.
- Government-led initiatives, the Connecting Families programme that offers internet access for CA\$ 10 a month, for those people receiving the maximum Canada Child Benefit.

However, rather than tailoring such social security initiatives, the Government of Canada is still generalising these initiatives by applying them to all low-income Canadians. Indeed, the government's reliable Internet access, adequate digital literacy skills, and data privacy and protection should be available to all of the most vulnerable residents, such as the elders, lower-income, new immigrants and indigenous First Nations peoples.

Moreover, rural and remote broadband services provision are critical to expanded coverage of digital social assistance services and electronic health and care services, in order to reach communities in need and leave no one behind.

Digital Health system in Ontario

The Province of Ontario started their Digital health strategy in 2021-22, which allows citizens to book appointments online, control their health record better and use video visits to healthcare professionals, as well as providing better access to professional patient information. A core part of a new care coordination system, it will allow professionals to collect, share and use information, but at the same to protect patients' personal health information.

However, at the same time as this, digital health technologies are noting considerable access among new immigrants and immigrant communities. The Canadian government commits to accepting over 400,000 new immigrants per year from 2021 to 2023 to assist with economic recovery, so it is especially important for the country to create inclusive, accessible, and robust digital health services. Expanding understanding of digital health accessibility can strengthen health service delivery in Ontario and build trust in an increasingly common form of health-care communication. Inclusive digital health technologies and services for new immigrants should be a social and public health priority and will assist in achieving the pillars of universal health coverage that promote equity and equality, improve health care for immigrants, and reduce health risks.

Source: Global News, November 13, 2019; Allison A., Mohammed AlKhaldi, Sara Ahmed, Canada's New Immigrants and the Path to Digital Health Dividends <https://www.thinkglobalhealth.org/article/canadas-new-immigrants-and-path-digital-health-dividends>

As the Government of Canada strives to become a leader in digital inclusion and equity, it is important to better understand people's relationship with technology in order to reduce the risk of disconnecting users more than expanding coverage. However, the Government of Canada is currently failing to collect data and lacks visibility of how specific groups perform for digital equity. Canada lacks a view of how it compares to other countries, in reducing the digital divide and fostering digital equality.

9. LESSONS LEARNED

To summarise the Canadian experience and current state of affairs of digital transformation for public sector services, and social security in particular, this case study finds that:

- The Government of Canada is a pioneer of digital transformation.
- Central Government remains an important component of service delivery. Canada is a federal country where most social service delivery is realised at the Provincial level. Some service delivery is covered by the Federal Government.
- Digital transformation for social assistance and social security is driven by cost reduction and productivity.
- Early adoption and integration of a citizen-centric perspective that has been reviewed and improved progressively helped Canada to reach the level of success it enjoys today.
- Social security services in Canada face several challenges that trigger digital transformation as a survival need for the Canadian Government:
 - An ageing population and immigration increase demand for social services and security.
 - Increasingly diminished level of resources, due to Federal and Provincial Government policies.
 - Covid-19 impacted Canadian society, increasing poverty and social assistance requests.
- Digital transformation of social security and social assistance services faces the greatest challenges due to Governance and integration. The interviewee confirmed and insisted on prioritizing Governance, and considered it one of the most important lessons to be learned in digital transformation (CA1, CA2). *“The most important lesson to be learned is Governance. If you don’t get governance right, you are building a sand castle that will not stay standing. Governance is something for the long-term”* (CA1).
- Canada has been moving to a consolidated vision at the federal level, supported by strategies and action plans. Social security digitalisation is fully integrated into the National Digital Strategy, based on strong Provincial models with Service Canada.
- Canada has developed its policies under the strong influence of UN charters and international standards, consideration of EU standards and regulations. Canada has designed several collaborations and partnerships with Estonia to align its standards and policies.
- Canada also adopted voluntary opt-in approaches to eID/eSignature, digital post, and use of e-Service, but managed these independently at the provincial level and therefore with different speeds of progress and advancement.

- Important focus on IOP and data exchange within social assistance and social security to link different levels, which helped manage the pandemic period and the difficulties it presented.
- Government of Canada recently migrated to an integrated whole-of-Government approach. This new vision and its supporting architecture integrate social assurance and security services to facilitate improvement and create value for citizens.
- At the front-end service level, the Government of Canada modernised multi-channel offerings and invested in technology to improve access for a diversity of citizens and improve inclusiveness.
- Skills and capacities were considered one of the important challenges for the Government of Canada, as it was difficult to attract ICT and innovation skills. An important training and capabilities development programme for public services involves partnering and collaborating with different stakeholders to foster motivation, continuous development, and innovation in the public sector and public services.
- Furthermore, strong leadership involvement, a consensus toward a citizen-centric perspective on the digital definition of the social security service.

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