

Statistics Canada's Role in a Whole of Government Approach to Data Stewardship

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Delivering insight through data for a better Canada



Overview

- 1. Statistics Canada's Mandate
- 2. Our approach to data stewardship
- 3. StatCan's Office of the Chief Data Officer
- 4. Renewal of the Data Strategy Roadmap for the Federal Public Service



Statistics Canada

OUR MISSION

Serving Canada with high-quality statistical information that matters

OUR PILLARS

- User-centric service delivery
- Leading-edge methods and data integration
- Statistical capacity building and leadership
- Sharing and collaboration
- Modern workforce and flexible workplace

Ensuring no one is left behind

OUR VISION

Delivering insight through data for a better Canada

OUR VALUES



TRUSTWORTHY



PURPOSEFUL



CARING AND INCLUSIVE



CURIOUS AND ALWAYS LEARNING

Statistics Canada's Approach to Data Stewardship



Subject Matter Expertise

Leverage our subject matter expertise to help measure social and economic issues and derive insights.



Data Quality

- Prioritize high quality, certified data that maintains trust & transparency
- Reduce the time spent cleaning, verifying & validating data
- Strict adherence to the scientific approach.



Data Standards

- Ensure interoperability, comparability and facilitate data linkage
- Remove the burden of developing and adapting to standards
- Adhere to changing industry standards.



Data Management

- Protect data security, making sure data is used & shared in a fair, safe & equitable way
- Provide transparency of data use & centralized governance of assets based on data ethics, regulations, legislation & policies.



Data Sharing & Access

- · Align to the FAIR principles
- Reduce time spent in data discovery, eliminate common barriers to data sharing & reuse, streamline dissemination
- Steward data safely under the Statistics Act.



Data Strategies

- Implement data strategies to solve problems and provide data-driven answers to policy questions
- Enable the use of data as a strategic asset
- Align to the Data Strategy Roadmap for the Federal Public Service (2018)



Data Science

- Meet evolving, data needs in an increasingly digital society
- Implement a new scale of knowledge work automation
- Review machine learning and artificial intelligence processes



Data Analytics

- Leverage world-leading expertise
- Increase the value of insights/outputs by combining data sources innovatively to produce higher value data assets
- Better understanding of how to use these data assets



Data Governance

- Define clear authorities and responsibilities around ethical data management
- Prioritize the health of national statistical system
- Facilitate access to national and international networks, including models, tools, and expertise.



Data Protection

- Ensure the protection of privacy and confidentiality
- Maintain trust and social acceptance to operate
- Ensure data is protected and shared in a fair, safe and equitable way.



Data Literacy

- Increase skills and competencies needed to understand and use data
- Increase/optimize the use of data for decision and policymaking





Stewardship Capabilities: 4G Model

In order to effectively steward data throughout this lifecycle, Statistics Canada developed the "Four Gs" model of data life-cycle management – gather, guard, grow, and give (Rancourt, 2019).

This system demonstrates a necessary commitment to sound stewardship throughout the data lifecycle, and aligns well with Statistics Canada's conception of the 4 sub-capabilities of data stewardship, including data discovery, digitalization, interoperability, and management (Statistics Canada, 2020).

Data Stewardship Gather Grow Give Guard · Protected repository with diligently · Data discovery according to Corporate repository houses Dissemination of information monitored access rights and data for controlled access and and hosting services needs analysis · Ethical identification. Open government, data Pre-processing, de-identification, Data integration through record negotiation and ingestion centres and labs statistical identification and ethics linkage as well as standards and Analytical insights, · Innovative data collection data science support Metadata standards and classificat dashboards, visualizations methods and partnerships systems are consistently updated Editing, imputation, estimation Ensuring necessity and and flash indicators · Guided by data quality framework as and tabulation · Custom data representations proportionality well as privacy and security · Modelling and simulation for to support decision making regulations forecasting **Data Discovery Digitalization** Interoperability Prioritizing data and insights that Updating, systematizing and Accessing and processing data from multiple sources, then integrating that are already present in the data automating as much as possible to data for mapping, visualization, and ecosystem before other collection adapt to the digital data economy. other forms of representation and methods are used. analysis. **Data Management** Organizing and maintaining of data processes throughout the data life-cycle to meet ongoing information needs.

Strategic Direction: Office of the Chief Data Officer (OCDO)

Mandate: Established in 2020 to position Statistics Canada as trusted data steward and centre of expertise to increase data's contribution to evidence-based policy, informed decision-making and improved service delivery. The OCDO is responsible for providing strategic direction and enabling the optimal use of data assets.

Statistics Canada's OCDO objectives include:

- 1. Supporting an enterprise-wide approach to data management within Statistics Canada and the Government;
- 2. Foster collaborative partnerships with other federal organizations in the context of joint initiatives and strategies;
- 3. Disseminate best practices in the field of data management that can benefit Statistics Canada by promoting synergies across the National Statistical System;
- 4. Establish and update Departmental policies and data management strategies.





External Initiatives

Horizontality by Design:

GC Data Community:

Contribute to content and community-building efforts to support better data, insights and services to citizens.

Senior Committee on Data & Information:

Providing interdepartmental expertise and recommendations on data and information governance.

Data Strategy Roadmap for the Public Service:

Providing expertise and data stewardship leadership to GC's enterprise data strategy.

Interdepartmental data strategies:

Partnering with govt departments to showcase how grassroots partnerships and collaboration can improve data governance and stewardship.

StatCan Data and Information Strategy:

Leading a whole-of-agency approach to strategic use of data and information.

Tangible data stewardship support:

High profile initiatives related to data literacy, data science, data stewardship engagement to further drive horizontality.

Deepening strategic partnerships:

Continue to further drive horizontality by establishing collaborative partnerships with key enablers.

Data and Information Strategy Playbook:

Providing program areas with a framework to develop strategies to better manage and use data and information.

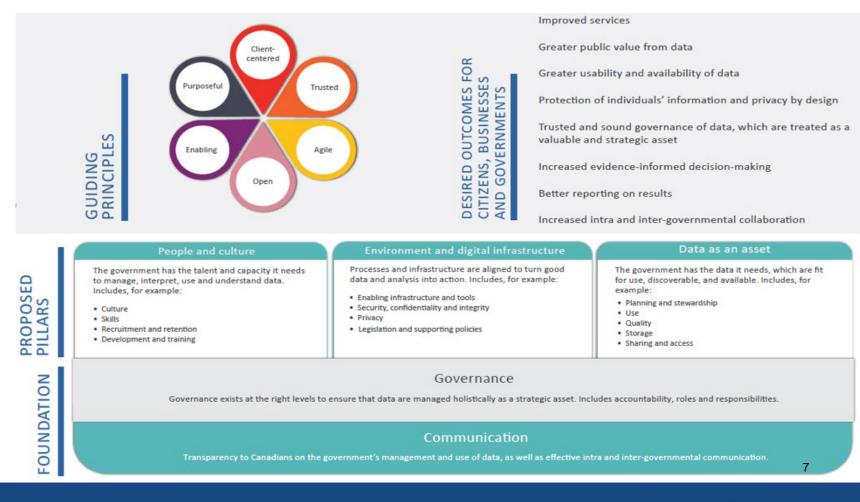
In 2018, StatCan partnered with to central agencies to develop the Data Strategy Roadmap for the Federal Public Service

Developed "to set a foundation so that the Government of Canada creates more value for Canadians from the data we hold", supporting the drive to use data to transform how government interacts with citizens, businesses, organizations and other governments.

<u>Link to the Data Strategy</u>

<u>Roadmap for the Federal Public</u>

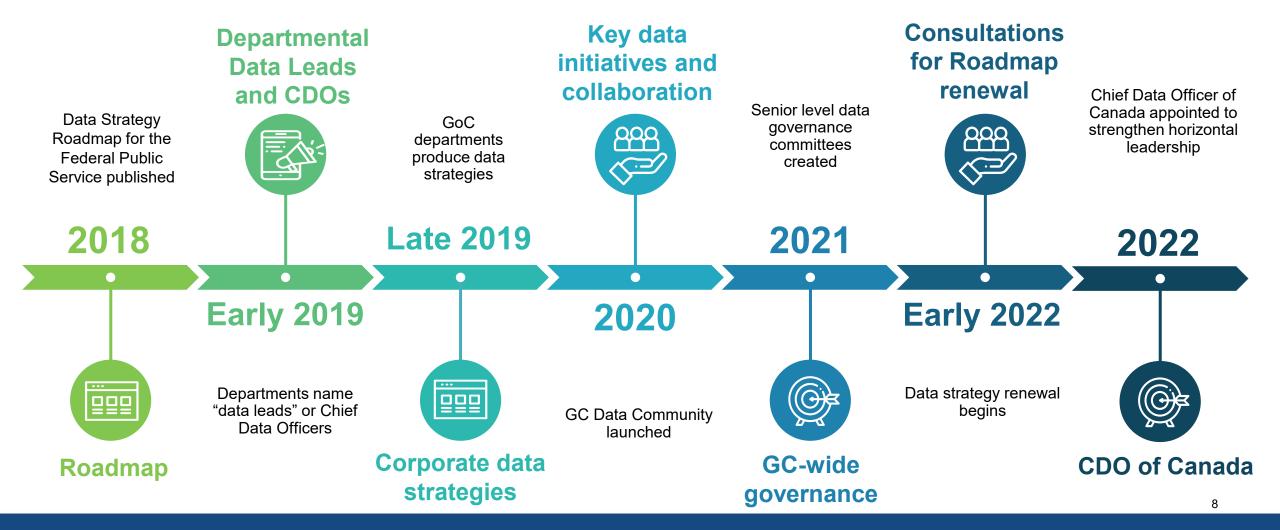
<u>Service</u>







Progress on data strategy objectives since 2018







The 2018 Roadmap resulted in:

- strong leadership
- increased awareness
- foundation for governance

Now is the time to **solidify and scale** the foundations we're building and **leverage our data capabilities** to their fullest

We are again working with our partners to renew the strategy.



We are building off and aligning with ongoing efforts

The renewed strategy will be oriented to complement, build on, and enhance existing work to address public sector needs and challenges

Department or Domain

Enablers/Conveners/Bridgers

GC Enterprise

Vision, expectations and flexible recommendations for department and domain led action

Departmental Data Strategies

Pan-Canadian Health Data Strategy Vision and recommendations to mature domain/department capacity, solidify networks and support alignment between departments and the enterprise

Mapping the GC Data Landscape

GC data advisory bodies, communities and working groups

Vision, recommendations and mechanisms to drive cross-government integration and consistency

Senior
management
Working Group for
Data and
Information
Recommendations

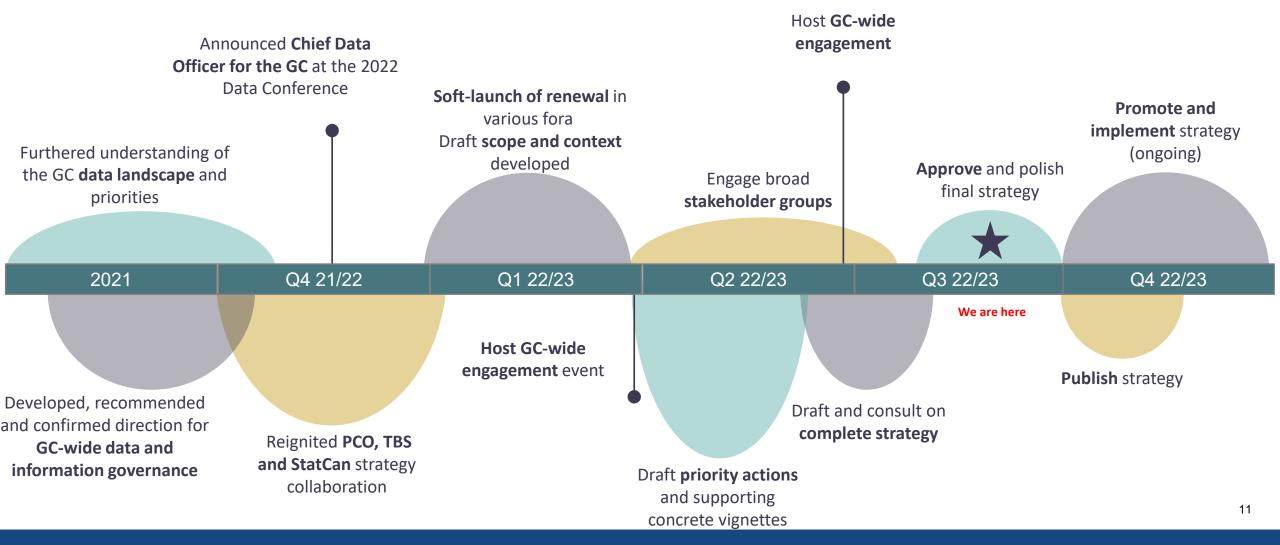
Ambition for Government in the Digital Age

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Roadmap renewal timeline











Questions/discussion



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