



Managing Data in a Large Government Department - ESDC

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CHIEF DATA OFFICE

IT'S TIME TO DO MORE WITH DATA



Attribution
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Employment and Social Development Canada

Raison d'être

The mission of Employment and Social Development Canada (ESDC), including the Labour Program and Service Canada, is to build a stronger and more inclusive Canada, to help Canadians live productive and rewarding lives and to improve Canadians' quality of life.

Mandate and role

ESDC delivers programs and services to each and every Canadian throughout their lives in a significant capacity. ESDC fulfills its mission by:

- developing policies that ensure Canadians can use their talents, skills and resources to participate in learning, work and their community
- delivering programs that help Canadians move through life's transitions, from school to work, from one job to another, from unemployment to employment, from the workforce to retirement
- providing income support to seniors, families with children and those unemployed due to job loss, illness or caregiving responsibilities
- helping Canadians with distinct needs such as Indigenous people, persons with disabilities, homeless people, travelers and recent immigrants
- ensuring labour relations stability through the provision of dispute prevention and resolution services
- promoting fair, safe and healthy workplace conditions, promoting decent work and employment equity, and fostering respect for international labour standards
- delivering programs and services on behalf of other departments and agencies.



Context: Increasing expectations in a complex and rapidly changing environment

ESDC's Data Strategy is key to mitigating the risk that ESDC will not meet Canadians' rising expectations and evolving needs for government services provided in an easy-to-access, timely, accurate and efficient manner.

CHANGING DEMOGRAPHICS

The **working-age population** (persons aged 15 to 64) has never been older. More than 1 in 5 persons (21.8%) in this population is close to retirement, that is, aged 55 to 64.

In 2021, **more than 8.3 million people**, or almost one-quarter (23.0%) of the population, were, or had ever been, a landed immigrant or permanent resident in Canada.

RAPIDLY SHIFTING SOCIO-ECONOMIC CONDITIONS

Economic adjustment after pandemic

Need data "fit for purpose" to measure benefit uptake (e.g. Reaching All Canadians)

Budget 2023 validates key priorities and confirms the need for continued support to address rapidly shifting conditions

RISING COMPLEXITY AND INTERSECTIONAL RISK

War, cyber-threats, climate change and international crises stretch operational capacity and test the **vulnerability of our systems**

Rapidly changing technologies, e.g. Generative artificial intelligence (AI), Machine Learning (ML)

INCREASING EXPECTATIONS

Canadians expect services that meet their **needs** in turn-around times that compare to private sector experiences and meet expectations for privacy and security

Unprecedented level of demand for Departments to **respond to change** and manage increasing mandate commitments and priorities in a **data-informed and transparent** manner



Access to the right information at the right time to identify, implement, and measure policy, program, and service improvements.

Managing data to add value and enhance services

- ☑ Enhancing service delivery and meeting **growing citizen expectations** requires the **evolution of data management** strategies to address key issues and enable the management of ESDC's **data as a strategic asset** to produce the right **client-centric insights at the right time**.
- ☑ This presentation discusses ESDC's work on operationalizing **foundational data management** and **data governance**.



What it takes – From data to insights

ESDC Data Strategy Vision

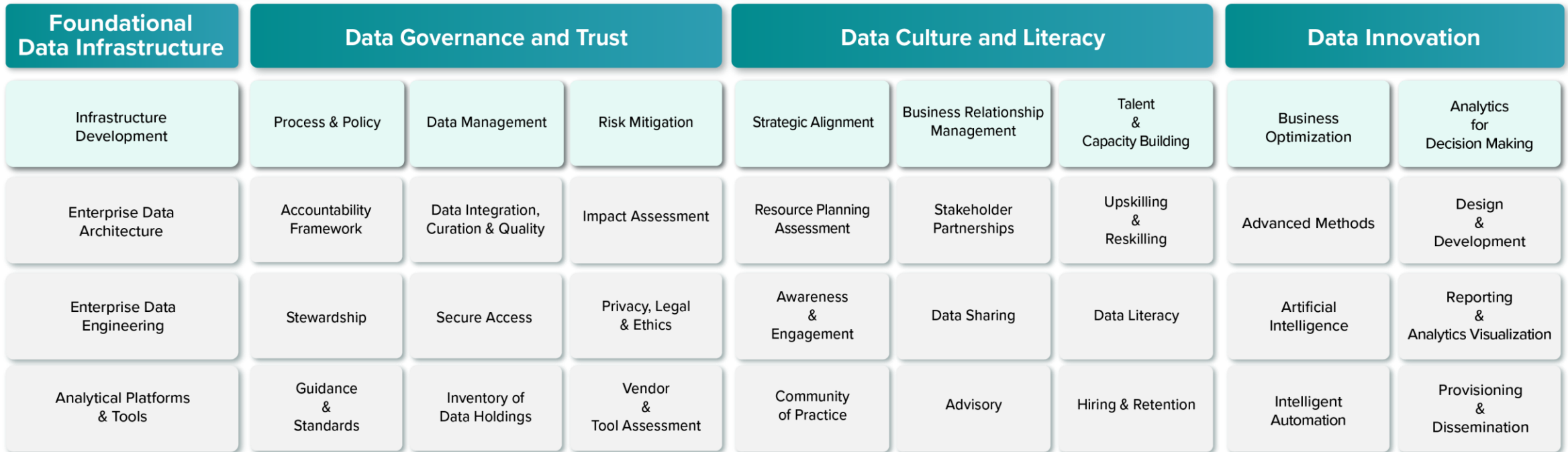
ESDC will drive toward better services and outcomes for all Canadians by empowering departmental employees to treat data as a shared, protected enterprise asset, grounded in a culture of data stewardship and collaboration.

LEGEND

Service Area

Workstream

Functional Grouping



COMMUNICATION - MONITORING - ISSUE MANAGEMENT - REPORTING

Foundational Data Infrastructure: Architectural design, tools and infrastructure support to enable data strategy implementation

Data Governance and Trust: Foundations for sustainable data management

Data Culture and Literacy: Empowering our employees and executives to better understand and use data

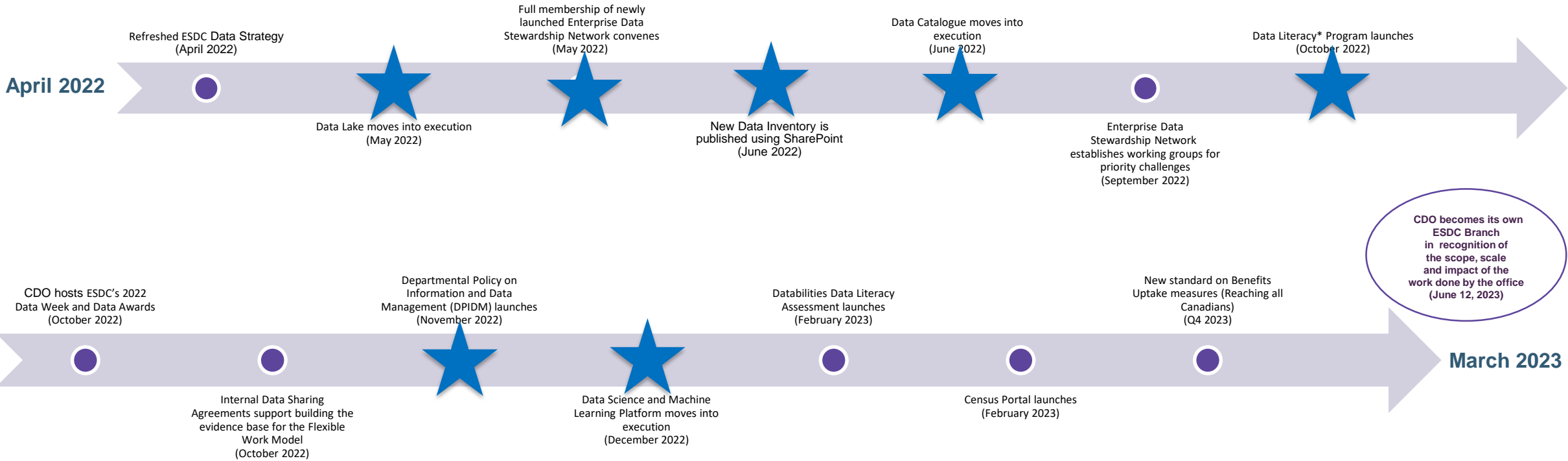
Data Innovation: Advice, methods and data science and analytics capacity to drive innovation and decisions with data

UPDATE: May 10, 2022

Milestones 22-23: Data Strategy in Action

ESDC Data Strategy Vision: ESDC will drive toward better services and outcomes for all Canadians by empowering departmental employees to treat data as a shared, protected enterprise asset, grounded in a culture of data stewardship and collaboration

★ Integrated Transformation Plan Activity



Foundational data infrastructure



DATA INVENTORY

Data discoverability
Data accountability



DATA CATALOGUE

Data access
Metadata



DATA LAKE

Data storage
Data sharing
Fit for Purpose



DATA WAREHOUSE

Data modeling
Reporting and
Analytics

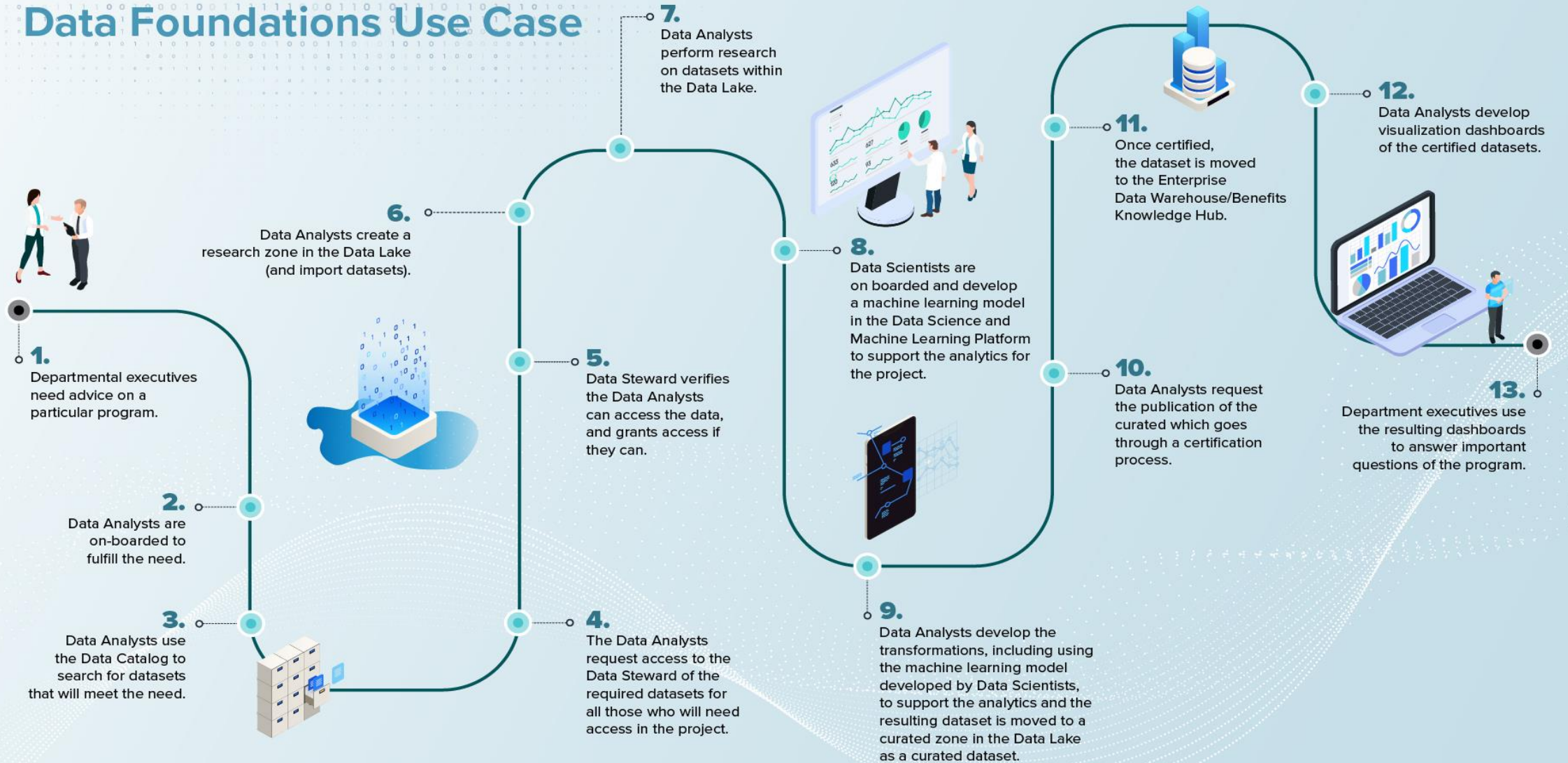


DSMLP*

Responsible and
Ethical AI

DATA FOUNDATIONS PLATFORM

Data Foundations Use Case



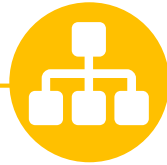
ESDC's Data Governance Charter

The Enterprise Data Governance Charter provides a fundamental outline of an organization's Data Governance program. Defining the vision, mission, roles and responsibilities required to effectively and efficiently manage data assets across the enterprise.



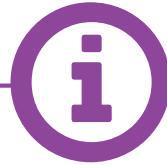
Data Accountability Framework

Sets out specific accountabilities and decision rights for managing data assets across key organizational roles



Data Governance Operating Model

Outlines the hierarchy of organizational components leveraged to manage data accountabilities, set direction, manage risks, and provide oversight



Enterprise Data Governance Office

Develops and delivers stakeholder guidance, coordinates the data governance program efforts, oversight and program success metrics



Enterprise Data Stewardship Network

A forum for data experts to share information and best practices, and collaborate toward solution development for data challenges



Data Tools and Technology

The infrastructure and technology leveraged to support the governance, stewardship and management of data assets

The Enterprise Data Governance Office (EDGO)



GUIDANCE

Tools and Services: Developing and delivering enterprise guidance, data management processes and procedures

Stakeholder Support: Providing on-demand expertise to assist in solving data management problems and developing solutions

Communications: Case studies, success stories, and industry best practices



COORDINATION

Facilitation: Supporting the alignment of data governance and management efforts to ensure consistency, effectiveness and efficiency

Prioritization: Identifying risks and opportunities and providing a path to escalate responses and develop solutions

Connection: Connecting stakeholders across ESDC to coordinate data management decision making (IT, Legal, Privacy, etc.)



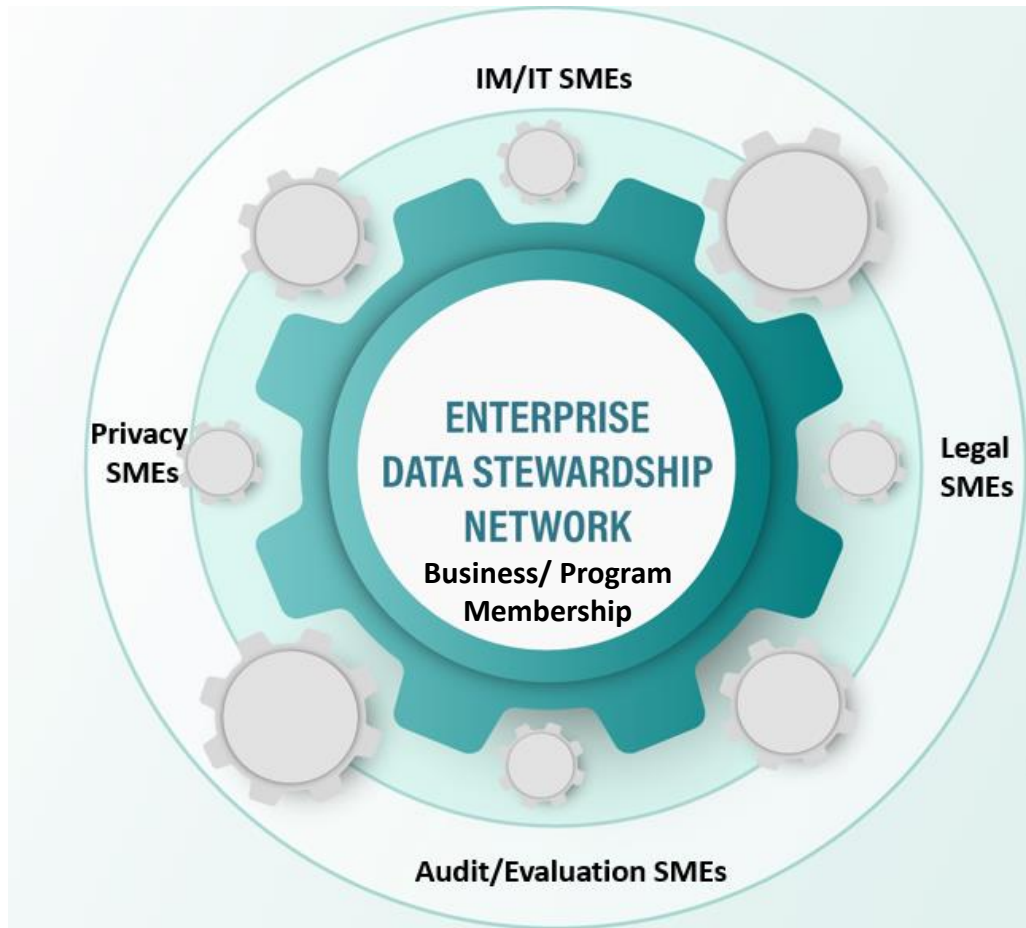
OVERSIGHT

Compliance: Monitoring the application and effectiveness of policy instruments, standards and guidance.

Performance: Developing metrics and measurement tools that track enterprise data governance progress

Reporting: Developing dashboards and reports that provide an overview of ESDC's data governance journey

Enterprise Data Stewardship Network and Working Groups



CDO lead sits on EDSN as member

CDO-Lead Enterprise-Wide Working Groups (determined by CDO)

Information Sharing Agreements (ISAs)

Census Data

WG members are from/sit on EDSN

Enterprise Data Stewardship Network Working Groups (selected by membership based on priorities)

Round 1: Data Inventory – Seeking Approval of Recommendations

Round 1: Accessing Statistics Canada Microdata – Seeking Approval of Recommendations

Round 2: HR Data Sharing Protocol – Launching in June 2023

Round 2: Data Certification Process – Launching in September 2023

Enhancing the Data Culture at ESDC

Data Culture and Literacy at ESDC are about empowering employees and executives to better understand and use our collective data to ensure programs and services meet the evolving needs of our clients and Canadians.

Policy and Guidance

The Departmental Policy on Information and Data Management **requires that Information and data literacy are promoted through IM and data training, awareness initiatives and tools**

Talent and Capacity Building

ESDC has implemented a robust **Data Literacy Program** and is focussed on **upskilling, reskilling and retaining employees with data skills** as well as **recruiting new data talent**

Business Relationship Management

The ESDC Chief Data Office is actively **developing internal and external partnerships for data sharing** and putting effort into **understanding and accessing existing ESDC data expertise**

Strategic Alignment

ESDC Data Strategy and data policy implementation is supported through **Awareness and Engagement** efforts including **Communities of Practice**

Priorities for 2023-24

Deliver on **Core Infrastructure Projects**

Data Foundations Platform

- Data Lake (*modern & secure tools*)
- Data Catalog (*access*)
- Enterprise Data Warehouse (*access*)
- Data Science and Machine Learning Platform (*modern & secure tools*)

Enhance service delivery through the integration of data

Benefits uptake measurement
(Reaching All Canadians initiative)

Generating Horizontal Insights

Invest in employees and enabling supports

Data literacy program

Data governance processes and tools

Guidance on responsible and ethical data and artificial (AI) use

Continue to enable and drive Transformation at ESDC and across the public service (e.g. Benefit Delivery Modernization, Integrated Transformation Plan, GC Digital Ambition)





Thank you !

Any questions, comments or suggestion?

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