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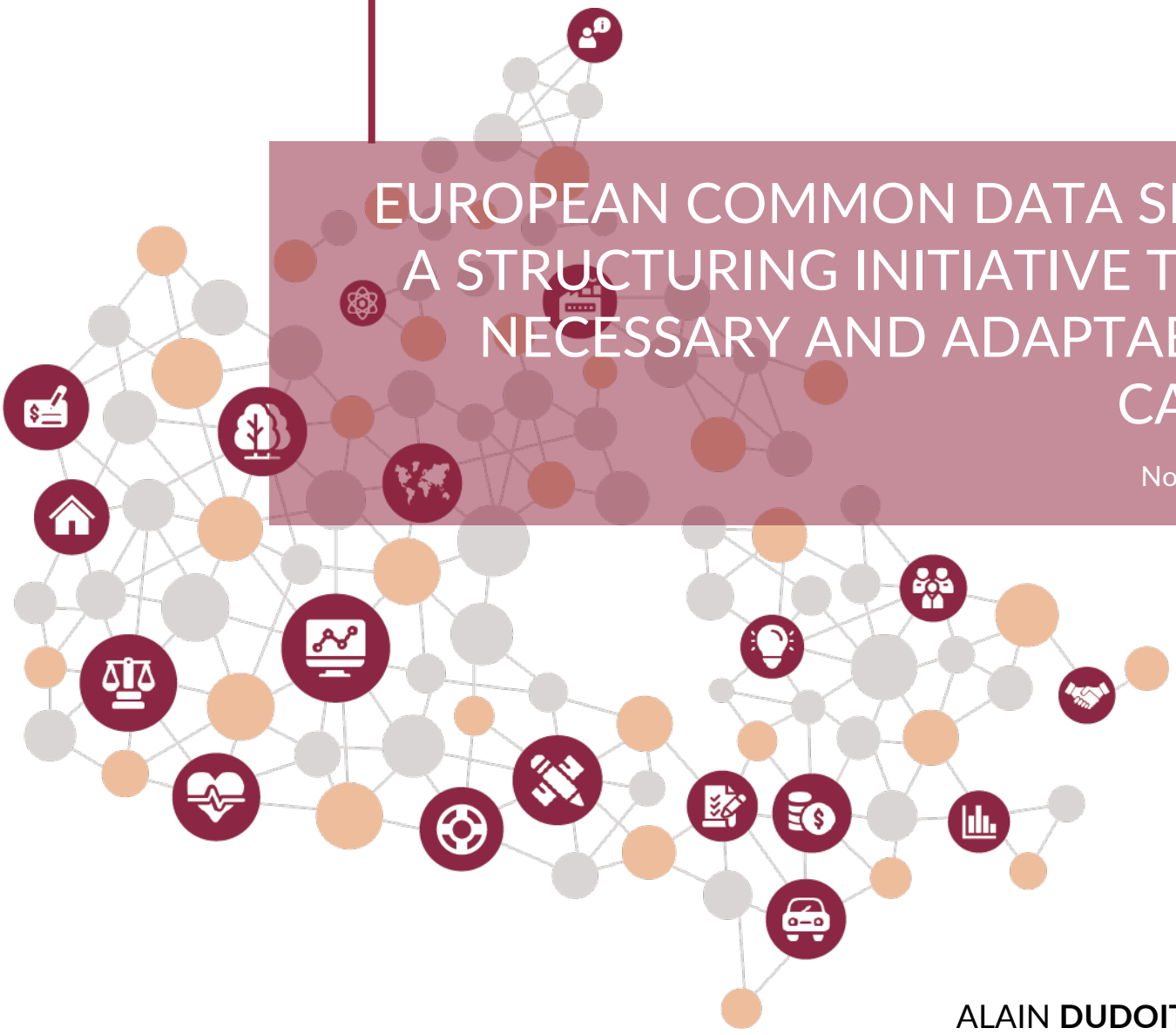
EUROPEAN COMMON DATA SPACES: A STRUCTURING INITIATIVE THAT IS NECESSARY AND ADAPTABLE TO CANADA

November 2023



ALAIN **DUDOIT**

RB

2023RB-06
BURGUNDY REPORT

Les Rapports Bourgogne sont des documents de synthèse portant sur des questions d'intérêt général produits par des chercheurs et des fellows invités du CIRANO. Ils contribuent à alimenter la réflexion et le débat public sur des questions d'actualité.

The Burgundy Reports are synthesis documents written by CIRANO researchers and invited fellows on issues of general interests. Their aim is to encourage discussion and public debate on current issues.

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Since retiring from the Canadian public service in 2008, Alain Dudoit has been applying and sharing his extensive international experience in innovation partnerships, his many professional achievements and an impressive business network in Canada and abroad.

Immediately following his retirement from the Canadian government, he was appointed Associate Vice-Principal (Strategic Partnerships in Innovation) at McGill University. Alain Dudoit has since been active in the private sector as an independent entrepreneur and strategic advisor in international business and innovation network development for several companies and organizations in Canada, California, China, and Europe.

In 2017, Alain Dudoit completed his mandate as senior advisor to the **QG100 Network**, which he has developed and managed since its creation in 2010: a private grouping of Quebec business leaders in support of their global market development strategies. The success of this Network led Alain Dudoit to participate in the creation of a similar organization, OG100, in Ontario.

He has lectured on North American business management and international competitiveness at McGill's Faculty of Management and as a guest lecturer at ENAP. He has also served as strategic advisor to the Milken Institute Santa Monica; member of the Los Angeles Commission on Foreign Relations; and member of the Governance Committee, Center for Accelerated Growth, Quebec Government Office in New York. Alain Dudoit is one of the principal architects of **Scale AI**, a supercluster of innovation in supply chain and artificial intelligence. He is regularly invited to speak on national and international innovation panels.

During his long and fruitful career in the Ottawa public service, Mr. Dudoit held a number of senior positions: at the Privy Council Office; the Canadian International Development Agency; the Department of Finance; and the Department of Foreign Affairs and International Trade. He has served Canada abroad as: Minister-Counsellor (Commercial and Economic Affairs) at the Canadian Embassy in Paris; Ambassador to the Czech Republic and the Slovak Republic, resident in Prague; Ambassador to the Kingdom of Spain and the Principality of Andorra in Madrid; and Consul General in Los Angeles.

FOREWORD AND THANKS

This publication is a follow-up to the Burgundy Report published by CIRANO in July 2023 on the state of the supply chain in Canada. Feedback from public and private stakeholders in Canada reveals a lack of awareness of the scope and impact of the European Common Data Space (ECDS), and the direct relevance of this transformative initiative for Canada.

The primary audience for this discussion is public and private sector decisionmakers. It is intended to serve as an introductory guide and reference for their consideration of the need to establish Common Data Spaces in key areas of public policy in Canada. This document provides an overview of the European Union's structuring initiative to create common data spaces as support mechanisms for data sharing and exchange.

This analysis is also aimed at researchers and experts, as well as the media. It opens the door to a concerted program of multidisciplinary, cross-sector and multi-partner research on the essential operational function of sharing and pooling resources to maximize the social and economic benefits of data.

The publication of this synthesis document is intended to contribute to CIRANO's multisectoral research program as well as to the mandate of its Research Pole on Data Science for Trade and Intermodal Transportation.

I would like to thank Thierry Warin, Molivann Panot, Omer Kaya (Global Advantage), Nathalie de Marcellis-Warin, Manon Blouet and Isabelle Winter for their comments, suggestions, and professional contributions.

This Burgundy Report is dedicated to Michèle, Sandrine and Yolaine.

I am solely responsible for any errors or omissions in this text.

Notes: The quality of the translation assisted by the DeepL Pro software and its consistency with the original text are the sole responsibility of the author. In the event of any discrepancy between the original work and the translation, only the text of the original work shall prevail.

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ABSTRACT/RÉSUMÉ

Summary

With the acceleration of the digital economy, the governance and effective sharing of data have become fundamental public policy issues at all jurisdictional levels and in all areas of human activity. This paper reviews the initiatives and challenges associated with data governance, with a particular focus on the European Common Data Spaces (ECDS) and their relevance to the Canadian context. It explores the inherent complexity of data governance, which must reconcile sectoral specificities with more transversal governance principles. In doing so, it highlights the importance of strategic, coordinated action to maximize the social and economic benefits of data.

The Bourgogne Report, published by CIRANO in July 2023 (Dudoit,2023), calls for the creation of a **common data space** in the Great Lakes-St. Lawrence strategic trade corridor by 2030. In particular, this proposal builds on three separate policy reports released in 2022 by the National Supply Chain Task Force, the Council of Ministers Responsible for Transportation and Highway Safety (COMT) and the House of Commons Standing Committee on Transportation, Infrastructure and Communities.

The findings and recommendations of these reports raise fundamental questions. ~~that~~ They are central to the critical issues of governance, organizational culture, delivery capacity, public and private stakeholder engagement, and the under-utilization of data within the Canadian government machinery. The system is strained by years of delay and exacerbated by Covid 19 and recent disruptions related to anticipated climate disasters[1] . The creation of a common data space is envisioned as a structuring investment in Canada's essential intermodal transportation and supply chain infrastructure.

This working paper on European Common Data Spaces (ECDS) extends the scope of the synthesis and recommendations published last July 2023 by providing an operational analysis of the structuring initiative currently underway within the European Union (EU). This major policy development stems from the 2020 European Data Strategy and aims to establish twelve common data spaces in strategic sectors, including mobility and transport[2] .

The document is divided into three main sections. The first part provides an overview of data-related public policy in Canada and the EU between 2018 and 2023. The second part focuses on the implications and lessons learned from the impact assessment supporting the adoption of data governance legislation by the European institutions.

[1] Source: Dudoit 2023 Bourgogne Report, CIRANO, July 2023, synthesis and recommendations section.

[2] Ibid, section on European Common Data Spaces (ECDS).

This legislation establishes a legal framework for the creation of Common Data Spaces in EU[3] . The third section discusses the current deployment of ECDSs, highlighting key milestones and ongoing processes[4] .

The paper highlights notable similarities between the EU and Canada in identifying issues and formulating public policy goals for data. It also highlights differences in optimizing data sharing between jurisdictions and stakeholders.

A fundamental difference between these two strategic partners is the absence of a sustained and effective pooling of resources within the Canadian intergovernmental machinery to pursue common objectives in the face of major common challenges such as data accessibility and sharing. This systemic gap is in stark contrast with the EU's groundbreaking deployment of ECDS in pursuit of identical goals of positioning itself as a global leader in the data economy.

This lack of consideration, let alone joint action, by Canada's intergovernmental machinery to implement a common data strategy in Canada is damaging. To be effective, Canada's response must not only be agile and results-oriented, it must also be interoperable across jurisdictions[5] .

The rigorous management, responsible use, and organized sharing of data within and across jurisdictions are critical to addressing the complex challenges and major risks facing Canada. Neither the federal nor provincial governments are currently well positioned to treat data as a common strategic asset.

The resolution of regulatory, legal, and technical barriers to data sharing between jurisdictions and organizations requires the creation of a common data space. This can only be achieved by combining the necessary tools and infrastructure needed to do so as well as addressing trust issues particularly through common rules drawn up for this purpose[6] .

"The obstacles to the implementation of robust data sharing systems are not technical, but rather fundamentally political and cultural."[7]

Résumé

Face à l'accélération de l'économie numérique, la gouvernance et le partage efficace des données sont devenus des enjeux fondamentaux pour les politiques publiques à tous les niveaux de juridictions et dans tous domaines de l'activité humaine. Le présent document vise à examiner les initiatives et les défis associés à la gouvernance des données, en mettant particulièrement l'accent sur les Espaces Européens Communs de Données (ECDS) et leur pertinence dans le contexte canadien.

[3] Ibid, section on the proposed Data Governance Act.

[4] Ibid, section on EECD deployment.

[5] Ibid, section on integration and consistency within the various jurisdictions.

[6] Ibid, section on regulatory obstacles and the need for a shared data space.

[7] Source: CAC - Council of Canadian Academies, 2023. Connecting the Dots, Ottawa, ON, The Expert Panel on Health Data Sharing, CAC. Page xviii

Il explore la complexité inhérente à la gouvernance des données, qui doit concilier les spécificités sectorielles avec des principes de gouvernance plus transversaux. Ce faisant, il souligne l'importance d'une action stratégique et coordonnée pour maximiser les avantages sociaux et économiques des données.

Le Rapport bourgogne, publié par le CIRANO en juillet 2023 (Dudoit,2023) préconise la création d'un **espace commun de données** dans le corridor commercial stratégique des Grands Lacs et du Saint-Laurent d'ici 2030. Cette proposition s'appuie notamment sur trois rapports distincts de politiques publiés en 2022 par le groupe de travail national sur la chaîne d'approvisionnement, le Conseil des ministres responsables des transports et de la sécurité routière (COMT) et le Comité permanent de la Chambre des communes sur les transports, l'infrastructure et les collectivités.

Le constat posé et les recommandations qui découlent de ces rapports soulèvent des questions de fond qui sont au centre des enjeux critiques de gouvernance, de culture d'organisation, de capacité d'exécution, de mobilisation des parties prenantes du public et du privé, ainsi que de la sous-utilisation des données au sein de l'appareil gouvernemental canadien mis à rude épreuve par des années de retard et exacerbée par les perturbations récentes liées à des catastrophes climatiques anticipées[8]. La création d'un espace commun de données est envisagée comme un investissement structurant de l'infrastructure essentielle du Canada pour le transport intermodal et la chaîne d'approvisionnement.

Ce document de travail sur les Espaces Européens Communs de Données (EECD**)** étend la portée de la synthèse et les recommandations publiées en juillet 2023 en fournissant une analyse opérationnelle de l'initiative structurante en cours au sein de l'Union européenne (UE). Ce développement majeur de politique découle de la stratégie européenne des données de 2020 et vise à établir douze espaces communs de données dans des secteurs stratégiques, y compris la mobilité et les transports[9].

Le document se divise en trois parties principales. La première partie offre un aperçu des politiques publiques relatives aux données au Canada et dans l'UE entre 2018 et 2023. La deuxième partie se concentre sur les implications et les leçons tirées de l'analyse d'impact qui soutient l'adoption de la législation sur la gouvernance des données par les institutions européennes.

Cette mesure législative établit un cadre réglementaire pour la création des espaces communs de données en Europe[10]. La troisième partie aborde le déploiement actuel des EECD, en soulignant les étapes clés et les processus en cours[11].

[8] Source : Dudoit 2023 Rapport Bourgogne, CIRANO, Juillet 2023, section sur la synthèse et les recommandations.

[9] Ibid., section sur les Espaces Européens Communs de Données (EECD).

[10] Ibid., section sur la proposition de Loi sur la gouvernance des données.

[11] Ibid., section sur le déploiement des EECD.

Le document met en évidence des similitudes notables entre l'UE et le Canada en ce qui concerne l'identification des enjeux et la formulation des objectifs de politique publique en matière de données. Il souligne aussi des différences dans l'optimisation du partage des données entre les juridictions et parties prenantes. Ces deux partenaires stratégiques se distinguent par une différence fondamentale : l'absence d'une mutualisation continue et efficace des ressources au sein de l'appareil intergouvernemental canadien dans la poursuite d'objectifs communs face à des enjeux majeurs communs tel celui des de l'accessibilité et du partage des données.

Cette lacune contraste avec le déploiement innovant des EECD par l'UE dans la poursuite d'objectifs identiques de positionnement comme chef de file mondial l'économie des données.

Cette absence de considération et, encore moins, d'action conjointe par l'appareil intergouvernemental canadien de mise en œuvre d'une stratégie commune des données au Canada est dommageable. Pour être efficace, la réponse canadienne doit non seulement être agile et axée sur les résultats, elle doit aussi être interopérable entre les différentes juridictions[12].

La gestion rigoureuse, l'utilisation responsable et le partage organisé des données au sein et entre les différentes juridictions sont des éléments cruciaux pour faire face aux défis complexes et les risques majeurs auxquels le Canada est confronté. Ni le gouvernement fédéral ni ceux des provinces ne sont actuellement bien positionnés pour traiter ensemble les données comme un actif stratégique commun.La résolution des obstacles réglementaires, juridiques et techniques à l'échange de données entre juridictions et organisations nécessite la création d'un espace commun de données qui à son tour implique une combinaison des outils et des infrastructures requises à cette fin, ainsi qu'un traitement des questions de confiance notamment par des règles communes[13].**« Les obstacles à la mise en place de systèmes solides de partage de données ne sont pas d'ordre technique, mais plutôt fondamentalement d'ordre politique et culturel. »[14]**

Mots-clés / *Keywords:* chaine d'approvisionnement ; espace commun de données ; commerce ; gouvernance / *supply chain ; common data space ; trade ; governance*
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[12] Ibid., section sur l'intégration et la cohérence au sein des différentes juridictions.

[13] Ibid., section sur les obstacles réglementaires et la nécessité d'un espace de données partagé.

[14] Source : CAC — Conseil des académies canadiennes, 2023. Relier les points, Ottawa, ON, Le comité d'experts sur le partage de données sur la santé, CAC. Page xviii

INTRODUCTION

The growing importance of data for the economy and society is increasingly driving public authorities to develop data policies, whether for personal, corporate or government data. Data policy is a fundamental priority for governments seeking to maximize the social and economic benefits of data.

Data protection has long been a priority in data policy. However, more and more policymakers are recognizing that a balance must be struck between protecting data from misuse and using it in an orderly way to innovate and create economic and social value. Many countries are implementing policies to encourage data sharing. Some focus on data-sharing agreements between industry and government, while others focus solely on data sharing with or within government itself. There are significant differences in how countries treat and value data. Some countries use data as an economic asset or as a tool for modernization and development, while others use it to exert control over their citizens.

Data-driven innovation is a key driver of growth and employment in Europe, as it is in Canada. This working paper extends the synthesis and recommendations of the **Bourgogne Report**[15] published in July 2023 on the state of the supply chain in Canada, by providing an operational analysis of the European Common Data Spaces (ECDS) experience underway in the European Union (EU).

The Bourgogne Report highlights the importance of creating a competitive, sustainable, and consumer-centric single domestic market in Canada. This market can only be the result of a collaborative national effort, building in particular on the recommendations of three complementary public policy reports released in 2022, that focus on the state of the supply chain in Canada.

The overarching theme of this report is the systemic difficulty for governments and industry in Canada to act jointly and decisively on the major issues that have been repeatedly highlighted as exacerbating weaknesses in our results-oriented innovation capacity and competitiveness.

With few exceptions, today's large-scale data infrastructures are out of reach for small organizations that cannot handle the complexity of data management and the high costs associated with data infrastructure. Forward thinking organizations must see the provision of digital infrastructure as a shared societal service, on par with water, sanitation, education and healthcare.

[15] See the Executive Summary and Part 3 of the Burgundy Report, which contains an analysis of the fundamental issues of mobilization capacity, execution and under-utilization of intergovernmental data in Canada.

Unlike Canada and the European Union, the United States has yet to adopt a unified national approach to data policy. While there are policies on the accessibility of government digital information, data protection remains fragmented, and largely managed at the state level. A forthcoming study will take a closer look at the US experience in this area.

The Bourgogne Report on the state of the Supply Chain highlighted several critical operational challenges facing Canada. These include issues of governance, organizational culture, execution capability and stakeholder engagement, both public and private. These challenges are exacerbated by the underutilization of data within the Canadian government machinery, strained by years of backlogs and exacerbated by Covid 19 and recent disruptions related to anticipated climate disasters.

This working paper on common data spaces seeks to establish a strong compatibility between the European Union Commission and the Government of Canada in identifying themes, strategic sectors, and categories of high value data. It notes a similarity in the objectives of their respective public data policies. It also highlights some significant differences in implementation methods.

"Canada already lags behind its international peers in modernizing its health data system and harnessing it for health outcomes and innovation. While other countries continue to improve health data sharing at home, failure to do the same in Canada will widen this gap, resulting in an even greater backlog for the country. **Furthermore, in the absence of a truly pan-Canadian approach to data sharing, it is likely that the fragmentation of healthcare systems will increase as provinces and territories continue to move forward individually with their own reforms, in a context where there is little coordination across the country**."[16]

*The EU's vision and impetus are compatible with those expressed by various governments in Canada and resonate particularly well with the specific mandate of the federal Minister of Intergovernmental Affairs:

"Collaborate with provinces, territories and industry partners to accelerate the removal of internal trade barriers and build capacity to produce open and accessible pan-Canadian data on internal trade barriers." [18]

This observation was made by the Expert Panel on Health Data Sharing in the report "Connecting the Dots", just released by the Council of Canadian Academies on October 19, 2023. The issues identified in healthcare are also found in other strategic sectors of society and the economy, such as those facing Canada's supply chain. In the same vein, the special report of the "Waterloo Security Dialogue" stresses the importance and urgency of developing a cybersecurity framework that takes into account Canada's unique characteristics, strengths, and concerns.[17]

[16] Source: CAC - Council of Canadian Academies, 2023. Connecting the Dots, Ottawa, ON, The Expert Panel on Health Data Sharing, CAC. Page xxiv

[17] For more information please consult : Bruce, S., Bruce, J., Shull, A., & Hilt, K. (2023, October 30). *Waterloo Security Dialogue: Fostering Nationwide Cybersecurity Collaboration*. Center for International Governance Innovation. https://www.cigionline.org/publications/waterloo-security-dialogue-fostering-nationwide-cybersecurity-collaboration/

[18] Source: Mandate letter Mandate letter from the Minister of Intergovernmental Affairs, Infrastructure and Communities December 16, 2021

With its European Data Strategy, published on 19 February, 2020, the Commission sets out **a vision for the data economy**: Working with Member States to create a single market for data, where data flows between member countries and sectors, where data is available for use in full respect of European values and rules, and where there are clear rules for data access and use.

The transformative and accelerating European Common Data Spaces (ECDS) initiative provides a concrete operational solution to the Ministerial mandate (insert), and to the expressed desire to "collaborate", "accelerate" and "build capacity to produce open and accessible pan-Canadian data on internal trade barriers".

This vision drives the European Commission's data strategy and its goal of establishing common European data spaces as a mechanism to support data sharing and exchange. We find a similar vision in the statement made when the Digital Charter was released, as well as in the urgent call of the National Supply Chain Task Force 2022: *"Now is the time to act boldly. Now is the **time to collaborate intensely**. The time for historic transformation is now. Let's go! "*

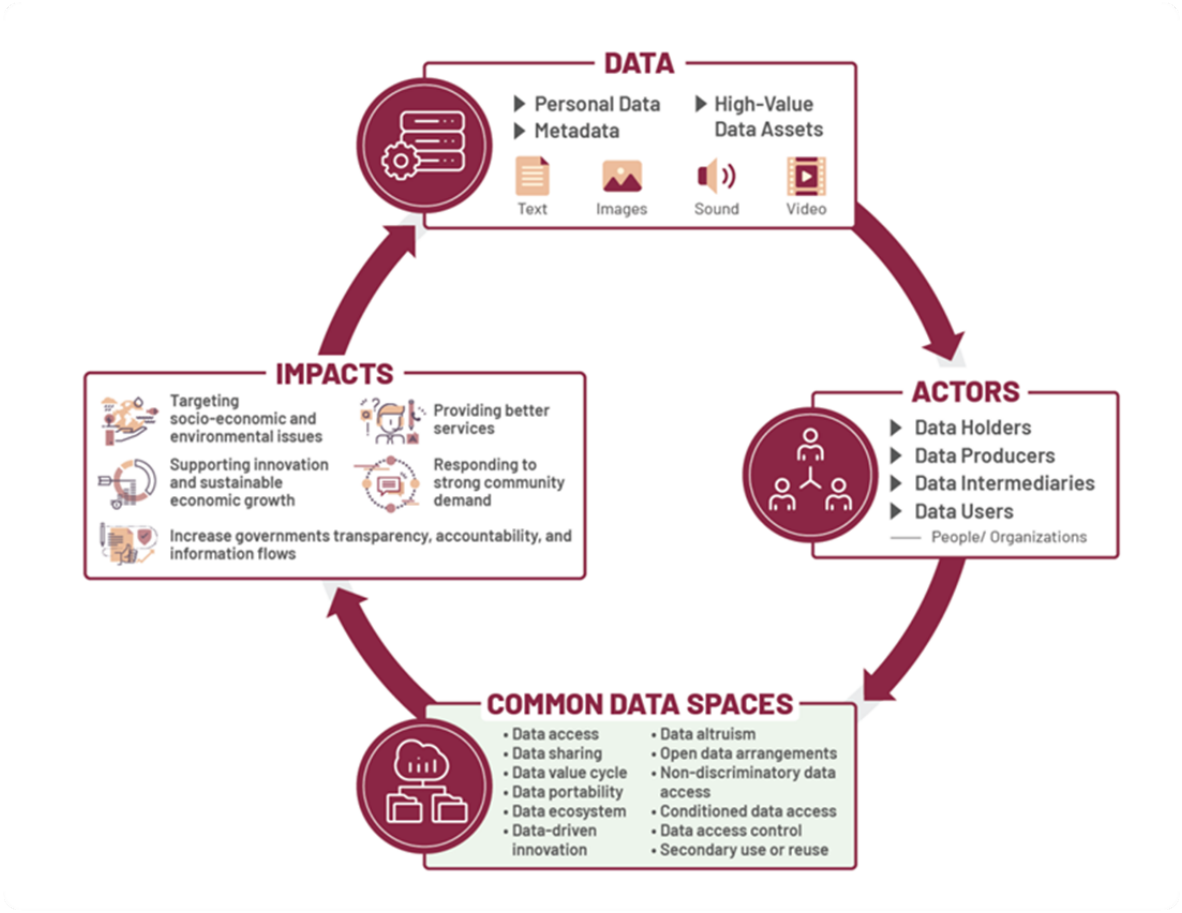
Common data spaces can be defined as federated data ecosystems based on common policies and rules. Users of these data spaces can access data in a secure, transparent, reliable, simple, and consistent manner. Data owners control who can access their data, for what purposes and under which conditions. From a technical point of view, a data space can be seen as a data integration concept that doesn't require common database schemas or physical data integration, but instead relies on distributed data stores and "as-needed" integration.[19]

The impact assessment report prepared by the Commission uses the following definition of a European Common Data Space (ECDS): "An arrangement consisting of an IT environment for the secure processing of data by an open and unlimited number of organizations, and a set of legal, administrative and contractual rules defining g data access and processing rights".

The approach proposed in this synthesis emphasizes the importance of mutual learning and adaptation of international best practices, while taking into account the institutional and regulatory specificities of each jurisdiction. In short, it advocates a concrete, collaborative approach that, while informed by international experience, remains deeply rooted in the national context and specific needs of Canada.

While avoiding prescribing a monolithic approach, this Bourgogne Report suggests that policymakers in Canada could learn valuable lessons from the ongoing experience of the **European Common Data Spaces (ECDS).** This EU initiative offers Canada's intergovernmental machinery a concrete avenue for collaborative solutions in the realization of a competitive, sustainable, and consumer-centric internal market.

[19] Data spaces: Introducing the concept and relevance in today's world' data. Europa academy webinar, 12 May 2023 Daniele Rizzi, Johan Bodenkamp European Commission, Directorate-General for Communications Networks, Content and Technology (DG CNECT) - Unit G1 - Data policy and innovation.



Global Advantage
Consulting Group

This graph illustrates the collaborative dynamic fostered by common data spaces and identifies the main technical terms whose functional definitions are specified in the glossary at the end of this working document.

PART 1

COMPARATIVE NORMATIVE FRAME OF REFERENCE: CANADA-EUROPEAN UNION

Key sectors of the Canadian economy (as in the EU) extend across interprovincial borders, with suppliers, producers and customers located in different member states or provinces/territories. Data flows are an integral part of digital activity, reflecting these Canada-wide (EU-wide) supply chains and collaborations. Any initiative to organize these data flows must take into account the entire internal market.

The importance of economies of scale in the development of data technologies and services requires coordinated action between different levels of government in Canada, as is the case in the EU. This coordinated action to pool resources provides greater value to the economy and society than action by the federal government alone, or by individual provinces (or EU member states).

With the increasing digitization of the economy and society, there is a risk that member states/provinces will increasingly regulate data-related issues in an uncoordinated manner, further fragmenting our internal market. The need for coordinated action is recognized both in Canada by the various governments and in the EU by the European authorities and its member states.

The creation of a single data market represents a major strategic advance in data governance. This market facilitates access to data from a variety of sources, including the public sector, businesses, and citizens, while optimizing its use in an efficient and responsible way. Crucially, in this model, businesses and citizens retain control of the data they generate, while fully respecting the responsibilities of different jurisdictions. Furthermore, investment in data collection is properly recognized and rewarded.

In such an ecosystem, businesses properly benefit from an unprecedented opportunity to market their products and services across all member states or provinces. This not only extends their market reach, but also promotes healthy competition and stimulates innovation.

This single data market is therefore consistent with data governance principles focused on efficiency, accountability, and control, while delivering tangible economic benefits. It provides a robust mechanism for balancing the needs and rights of the different stakeholders involved in the data value chain.

Businesses and research organizations drive forward representative scientific developments and commercialize innovation across the entire internal market, bringing it up to speed with the digital economy we have now entered.

Legislative authority over data in both Canada and the European Union is shared, and form the basis for coordinated action such as the creation of common data spaces:

EUROPEAN UNION	CANADA
Digital policy is a shared competence between the EU and its Member States: Article 114 of the Treaty on the Functioning of the European Union (TFEU) states that the EU shall adopt measures for the approximation of the provisions laid down by law, regulation or administrative action in Member States which have as their object the establishment and functioning of the internal market within the EU. Article 4(2) and (3) of the TFEU provides that the EU may take specific action, in the field of the internal market and technological development, without prejudice to the freedom of action of the Member States in the same fields and with due regard for the division of jurisdictional competencies.	Legislative jurisdiction over digital information in Canada is shared between the federal and provincial governments. This means that there are both federal and provincial laws and regulations that govern the protection of digital information. Provinces also have the authority to legislate data protection in certain circumstances. For example, some provinces, such as Quebec and British Columbia, have enacted their own privacy laws within their provincial jurisdictions, particularly with respect to businesses and provincial agencies.

The 2018-2023 period is marked by the parallel development of major public policy initiatives in both Canada and the European Union that pursue a similar vision of leadership in the data-driven digital economy. The goals to be achieved are similar:

- Increase trust in data sharing.
- Strengthen mechanisms to improve its availability.
- Reduce technical and regulatory barriers to reuse.
- Promote the availability of data that can be used for economic purposes.
- Create new products and services, to improve efficiency and to address societal and economic challenges.

If we are to achieve such ambitious and necessary goals, access to and sharing of data within an incentive-based legal framework is of paramount importance:

- The European Union, with its European Data Strategy, is equipping itself with a cross-sectoral legislative arsenal to frame and promote transformative data sharing initiatives and to support the creation of these data spaces while achieving the decade's objectives of its digital transformation by 2030.
- In June 2022 the federal government introduced legislation to implement the Canada's Digital Charter. This project passed second reading in the House of Commons in June 2023.

The following table summarizes the key legislative measures on both sides:

European Union	Canada
• **GDPR and ePrivacy Directive**: Legal framework for the protection of personal data. • **Data Governance Act** • introduces a series of horizontal measures to stimulate the sharing of reliable data across the EU. • **Data Protection Act** aims to make more corporate data available for re-use by defining rules on who can access and use this data, and for what purposes. • **Application law for high-value data sets** implements the Open Data Directive by specifying a list of datasets that public sector bodies must make available free of charge and under open access licenses and make them accessible in machine-readable formats via application programming interfaces (APIs). • **Law on digital markets** defines certain measures on data access and portability to regulate the "gatekeeper power" of digital companies subject to unfair commercial practices.	**Bill C-27, *the Digital Charter Implementation Act, 2022 (June 2022):*** modernizes the framework for the protection of personal information in the private sector, and establishes rules for the development and implementation of artificial intelligence ***:*** • Part 1 enacts the **Consumer Privacy Protection** Act to govern the protection of the personal information of individuals while taking into account the need of organizations to collect, use or disclose such information in the course of commercial activities. • Part 2 enacts the **Personal Information and Data Protection Tribunal Act**, which establishes an administrative tribunal to hear appeals from certain decisions made by the Privacy Commissioner under the *Consumer Privacy Protection Act*, and to impose penalties for contravention of certain provisions of that Act. • Part 3 enacts the **Artificial Intelligence and Data Act** to regulate international and interprovincial trade and commerce in artificial intelligence systems and require certain persons to adopt measures to mitigate the risks of harm and biased outcomes associated with high-impact artificial intelligence systems. The Act provides for the publication of information and authorizes the Minister to order the provision of documents relating to artificial intelligence systems.

These different legislative measures are not at the same stage of the ratification process in Ottawa and Brussels, but they are all designed to facilitate the responsible sharing of data and the implementation of initiatives such as the creation of common data spaces.

1. WITHIN THE EUROPEAN UNION

This section is dedicated to the main elements of the current implementation of common European Data Spaces. It and the analysis that follows in this working paper are based on the main EU policy documents on the subject, in particular: the European Data Strategy, the Data Governance Regulation, the Commission's Impact Assessment Report and the Commission's Joint Research Centre (JRC) report "European Data Spaces: Scientific perspectives on large-scale data sharing and use".

As part of its Digital Single Market strategy, the Commission has taken important steps in this direction[20]. In January 2017, it published the Communication "Building a European Data-Driven Economy"[21] which was the starting point for an extensive stakeholder consultation, including an online public consultation.

Access to and re-use of public sector data and data collected with public funds are essential elements of a common European data space. In the mid-term review of the Digital Single Market Strategy, the Commission announced in 2017 that it would develop an initiative on the accessibility and re-use of public sector data and data obtained with public funds based on an assessment of existing legislation and subject to an impact assessment.

The Commission staff working paper[22] published in 2022 describes the status of the 12 Common European Data Spaces being developed in different sectors or areas in response to the European Data Strategy: "**The creation of common and interoperable EU-wide data spaces in strategic sectors aims to overcome legal and technical barriers to data sharing by combining the necessary tools and infrastructures and addressing trust issues through common rules. A common European data space brings together the relevant data infrastructures and governance frameworks to facilitate the pooling and sharing of data."** (Informal translation of the definition contained in the working document referred to).[23]

Common Data Spaces are described as entities that bring together data infrastructures and relevant governance frameworks. Their purpose is to facilitate the decentralized pooling and sharing of data. These spaces are designed to overcome a variety of legal, organizational, semantic, and technical barriers, by integrating the necessary tools and infrastructures. They operate within a framework of common rules and standards, while respecting existing legislation.

By consolidating currently fragmented and dispersed data from different ecosystems, these common data spaces support public policy priorities. They create new business opportunities and facilitate the use of data for innovation.

The Commission working document addresses several relevant horizontal issues. It covers the very concept of Common European Data Spaces, the IT infrastructures needed for their implementation, data governance aspects, and legislative measures. It also refers to EU sources of funding in this area. A further report on the development of Common European Data Spaces is expected by the end of 2023, reflecting the importance attached to this initiative.

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[20] To find out more, consult the Commission Communication: "Towards a common European data space" {SWD (2018) 232 final}.

[21] For more information see: Brussels, 10.1.2017 SWD (2017) 2 final Commission staff working document on the free flow of data and emerging issues of the European data economy ~~A~~ accompanying the document: "Communication, Building a European data economy {COM (2017) 9 final}

[22] See Appendix 1 for an overview of the topics covered by this working document.

[23] Brussels, 23.2.2022 SWD (2022) 45 final COMMISSION STAFF WORKING DOCUMENT on Common European Data Spaces

In short, Common Data Spaces are emerging as a sophisticated mechanism for the optimal management and use of data, aligning the interests of different actors and supporting both commercial and political strategic objectives.

1.1 Trust: an essential prerequisite for data sharing

Trust between different jurisdictions, as well as between public and private stakeholders, is an essential prerequisite for the success of this endeavor. Therefore, the first specific objective of Common Data Spaces (CDS) is to create trust in data sharing as such.

These European Common Data Spaces (ECDS) are designed and implemented as environments in which companies and individuals can be sure that the data they exchange, or share is secure and processed in accordance with the applicable laws and the conditions they set for the use of this data.
The success of large-scale data sharing activities depends on the key concept of trust in each of the following five pillars:

- **Organizations** - More organizations (including business, research, and government) need to rethink their strategy to fully embrace a data culture that puts data at the heart of their value proposition, exploring new data-driven business models and tapping into new data value streams.
- **Data** - As Europe's fifth fundamental freedom, the free flow of data relies on organizational data strategies that incorporate data sharing methodologies by design (interoperability) and clear standardized policies that help determine the market value of data assets. A CIGI study examines recent attempts to evaluate both the stock and flow of data in national accounts and attempts to assess the way forward.[24]
- **Technology** - Safer testing environments are needed to catalyze the maturation of the relevant technology that underpins reliable data, data access and algorithms (privacy, interoperability, security, and quality). In addition, standardization activities need to adapt to faster response times to emerging standards and the identification of new ones.
- **People** - Data sharing must guarantee privacy and provide fair value or compensation for shared personal data. For the EU to be able to carry out data sharing activities, the European workforce needs to be adequately restrained and upgraded to meet the changing needs of the labor market.
- **Governance** - An EU-governed data sharing space can build trust by adhering to the most advanced European rules, guidelines, and regulations, and by promoting European values. Participation must also be open to all and subject to transparent and fair rules of conduct.

[24] For more information please consult: Sargent, T., & Denniston, L. (2023). *Valuing Data Where Are We, and Where Do We Go Next?* (280; CIGI Papers). Center for International Governance Innovation. https://www.cigionline.org/static/documents/no.280.pdf

This data sharing value "wheel" illustrates the fundamental principles of the data sharing space that is currently being implemented to create value across all sectors of society.[25]

2. IN CANADA

2.1 Implementation plans and measures.

The Innovation and Skills Plan unveiled in Budget 2017 builds on Canada's strengths and aims to address gaps across the innovation continuum, from building innovation ecosystems to exporting or expanding globally competitive businesses, in all sectors of the economy. The plan is designed as a multi-year strategy that will evolve and expand as needed.

Building on this plan, the federal government released in 2018 Canada's Economic Strategy Tables Report: The Innovation and Competitiveness Imperative and launched the National Digital and Data Consultations, to make Canada an innovative society.

[25] Source: Data Spaces: Design, Deployment, and Future Directions September 2022, Edward Curry, Simon Scerri, Tuomo Tuikka DOI : 10.1007/978-3-030-98636-0_1 ; page 14

Canada's Digital Charter in Action: a plan by Canadians, for Canadians released in 2019 summarizes the insights and information from these consultations, and the steps required to build an innovative, data-driven, people-centric economy.

This Charter emphasizes that the adoption of digital and data-driven technologies offers an opportunity to push the boundaries of what is possible and enhance the collective ability to lead change and create a better quality of life for all. It emphasizes that Canada needs a **coherent vision** for its digital future that builds on the country's strengths, is flexible and reduces barriers to innovation, promotes a thriving and secure innovation-based marketplace, and leads to a new era of Canada's global competitiveness:
"Positioning Canada as a world leader in today's digital and data economy requires a national collaborative effort by all economic sectors and stakeholders."

The vision that emerges from this Charter is one of a competitive, inclusive, digital, and data-driven country in three areas:

1. Skills and Talent: Preparing for the workplace of the future.
2. Unleashing Innovation: Supporting the growth of competitive Canadian businesses.
3. Privacy and Trust: Making Canada a leader in the digital age.

The ten principles set out in the Charter are intended to guide the government's work to break down barriers and build on Canada's unique talents and strengths to harness the power of data and digital transformation. They are directly relevant to, and support, the creation of common data spaces:

The ten principles of the Canadian Digital Charter

1. Universal access
2. Safety and security
3. Control and consent
4. Transparency, portability, and interoperability
5. Open and modern digital government
6. Level playing field
7. Digital data for the common good
8. Solid democracy
9. Free from hatred and violent extremism
10. Rigorous application and real responsibility

The following interactive table summarizes the various programs and initiatives supporting the development of a competitive, data-driven digital economy in Canada:

Strengthening privacy protection	Intellectual property strategy	Protecting democracy	National cybersecurity strategy
Open Government Directive	Letter to the Commissioner of Competition	Modernizing Canada's Privacy Act	High-speed Internet *(archived link)*
CodeCan program	Global skills strategy	Canadian Digital Service	Connecting for innovation
Connected families	Computers for schools and more	Accessible technology development program	Digital literacy exchange program
Action Competences	Future skills	The smart city challenge	Space strategy for Canada
The RADARSAT Constellation mission	Quantum Encryption and Satellite Science	Canadian Statistics Advisory Board	Economic strategy sector tables
Pan-Canadian artificial intelligence strategy	Innovation superclusters	Innovative Solutions Canada	Strategic Innovation Fund
Canadian AI and Data Governance Standards Collective	Artificial Intelligence Advisory Board	Global Partnership on Artificial Intelligence	OECD Digital
Christchurch call to action	Center for the Fourth Industrial Revolution (WEF)	Building a Company Innovative	COMMON DATA SPACES?

Source: Canada's Digital Charter in Action: A Plan by Canadians, for Canadians 2019

This table presents the range of federal government initiatives and policies that address various aspects of digital governance and innovation in Canada. It covers topics ranging from privacy and intellectual property protection to cybersecurity and democracy. It also highlights efforts to modernize infrastructures, such as high-speed Internet, and to develop digital skills through various educational programs. It also highlights the importance of innovation in areas such as artificial intelligence, space technology and cybersecurity.

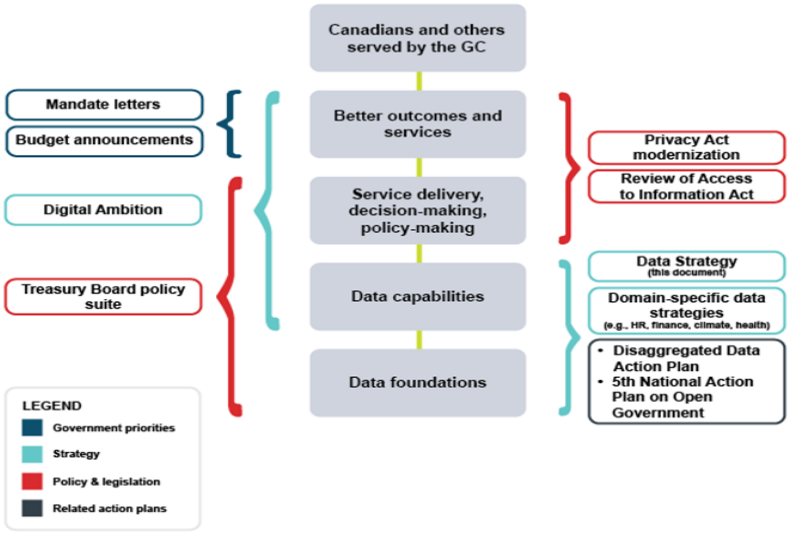
Finally, it calls for international cooperation and standards, particularly in the areas of artificial intelligence and data governance. This chart suggests a holistic, multidimensional approach on the part of the federal government to navigate the complex and ever-changing digital landscape.

For its part, the Federal Public Service Data Strategy Roadmap submitted to the Clerk of the Privy Council in 2018 highlighted the absence of a high-level governance structure or decision-making body responsible for providing strategic direction on data issues and driving cultural change. The strategy served as a guide by laying "the foundation for the Government of Canada to create more value for Canadians from the data it holds", and promoted the use of data to improve the way government interacts with people, businesses, organizations, and other partners.

Five years later, the 2023-2026 Data Strategy for the Federal Public Service sets out new priorities, goals and expectations for the federal public service. The strategy:

- presents the current data policy landscape.
- describes a long-term strategic vision.
- identifies the actions that will enable the Public Service, over the next three years, to move closer to this objective.
- also highlights real-work case studies that demonstrate the value to Canadians of making better use of data.

The strategy supports government-wide priorities and intends to harmonize and shape the landscape of federal, national, and international digital and data initiatives**.** For more information on the relationship between the Data Strategy and other cross-governmental initiatives at the federal level please refer to the following diagram of relationships between selected planned and ongoing initiatives:



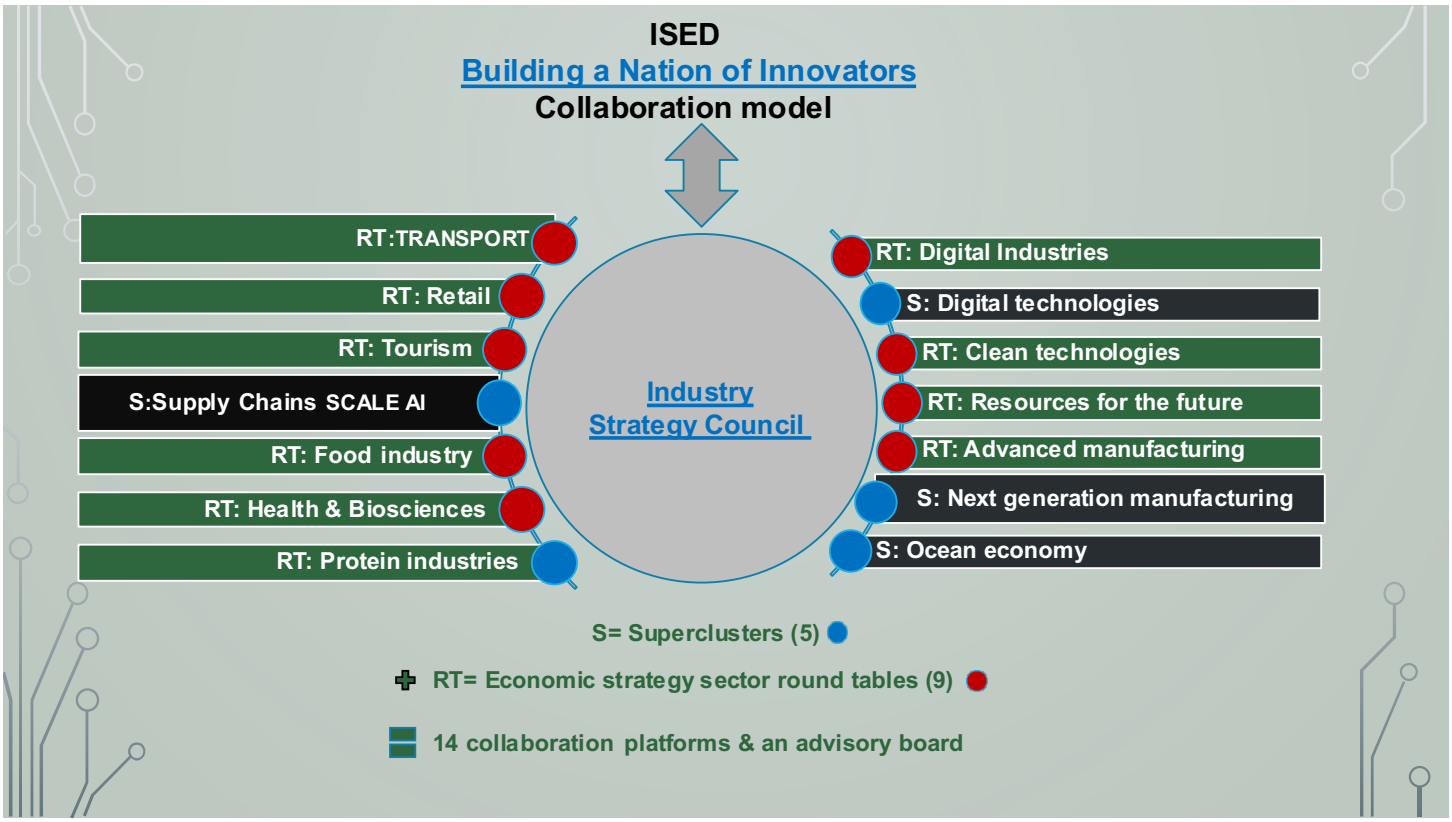
Source: 2023-2026 Data Strategy for the Federal Public Service Appendix 2 - Planned and current Government of Canada initiatives

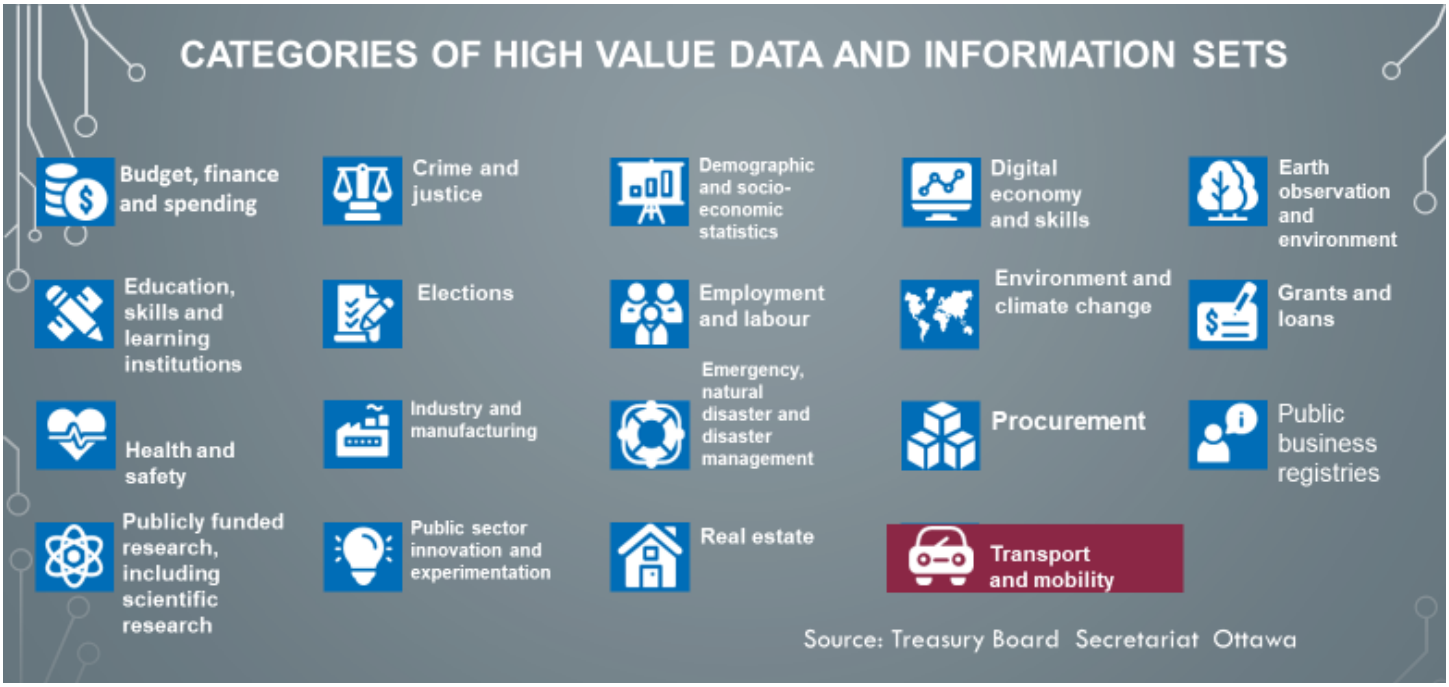
With the exception of the National Action Plan for Open Government, all the proposed measures are essentially focused on the federal level; they are not designed to engage the Canadian intergovernmental machinery in the pursuit of a common data strategy, as is the case with the European Union and its twenty-seven member states.

This landscape includes advancing digital transformation within the Government of Canada (GC) by complementing and enhancing Canada's Digital Ambition 2022 and building on the foundations of the Service and Digital Policy.

The 5th National Action Plan for Open Government is the result of an extensive public consultation and co-creation process with the public. It consists of five themes (climate change and sustainable growth; democracy and civic space; fiscal, financial and corporate transparency; justice; and open data for outcomes) and related commitments to make government more transparent and accountable.

The following two tables show some complementarity between the strategic sectors of "**Building a Nation of Innovators**", the ambitious growth plan to build a digital and sustainable economy, led by Innovation, Science and Economic Development Canada (ISED) and the categories of data and information sets selected by the Treasury Board Secretariat in pursuit of the "Digital Ambition Canada 2022" strategy:





Canada Open Government Working Group uses five criteria to define high-value datasets and provides corresponding examples of data:
High-value data are those that make it possible to:

1. Targeting socio-economic and environmental issues
2. Providing better service
3. Encouraging innovation and sustainable economic growth
4. Increase government transparency, accountability, and information flow.
5. Responding to strong community demand.

However, the most recent findings of the Auditor General of Canada on the modernization of information technology systems are troubling:
"Overall, the Treasury Board of Canada Secretariat and Shared Services Canada had not done enough to lead and support partner departments and agencies in modernizing outdated information technology systems. **Over 24 years ago, the government first identified aging systems as a problem, and the Secretariat still lacks a modernization strategy**. As a result, progress in modernizing applications and data centers has been very slow....
The longer it takes to modernize these systems, the more likely it is that they will fail, and Canadians will not be able to access the services they need. **Better leadership and oversight, as well as a concrete action plan and funding approach, are needed to prioritize critical systems and address issues that may arise in the course of system modernization.**"[26]

[26] Source: Modernizing Information Technology Systems Catalogue No. FA1-27/2023-1-7E-PDF ISBN 978-0-660-67809-2 ISSN 2561-3456 Report No. 7 Auditor General of Canada

2.2 Managing Canada's intergovernmental machinery and internal trade

Our analysis highlights a significant degree of compatibility between the European Union and Canada in terms of identifying data related issues, strategic sectors, and public policy objectives. However, it also underscores a fundamental difference in implementation capacity, in particular the lack of effective pooling of resources within the Canadian intergovernmental machinery. This is particularly significant given the central role of the **Intergovernmental Affairs Secretariat (IAS) of the Privy Council Office** (PCO) in coordinating federal-provincial-territorial (FPT) relations and internal trade.

> "Canada currently faces a variety of obstacles to conducting this type of cross-jurisdictional and cross-sectoral research, in part due to legal and political barriers, as well as difficulties related to data organization and comparability, not to mention cultural challenges in data governance."[27]

One of the key roles of the Minister of Intergovernmental Affairs supported by this secretariat is to work with federal government colleagues to **assess and provide leadership on the implications of policies and programs that have a significant intergovernmental dimension**.

Despite the existence of twenty-four intergovernmental sectoral tables covering a wide range of policy areas, the pooling of resources and efforts remains a major challenge for Canada, which could hinder the effective achievement of common goals. While these sectoral tables have proven effective in identifying common priorities, making progress on them, and finding innovative approaches to bridge differences, consensus-building is difficult.

The federal Minister of Intergovernmental Affairs **leads the government's initiatives to reduce barriers to internal trade** by overseeing the implementation of Canada's commitments under the Canadian Free Trade Agreement. The Prime Minister's mandate letter[28] delivered to the minister on December 16, 2021, asks him to fulfill the following commitments that are directly relevant to the consideration of common data spaces in Canada:

- **Work** with provinces, territories, and industry partners to **accelerate the elimination of internal trade barriers, and to build capacity to produce open and accessible pan-Canadian data on internal trade barriers.**

[27] Source: CAC - Council of Canadian Academies, 2023. Connecting the Dots, Ottawa, ON, Expert Panel on Health Data Sharing, CAC

[28] Letter of mandate from the Minister of Intergovernmental Affairs, Infrastructure and Communities.

- **Support** the Minister of International Trade, Export Promotion, Small Business and Economic Development, the Minister of Innovation, Science and Industry and the Minister of Transport in their work to **strengthen and secure supply chains and reduce and prevent supply chains bottlenecks in Canada's transportation networks.**

For its part, the same Minister's[30] briefing book on internal trade emphasizes the essential nature of domestic trade to the Canadian economy. It enables the economy to remain competitive by creating jobs, helping businesses expand, increasing consumer choice and ensuring overall economic growth in Canada.

Stakeholders continue to urge federal, provincial, and territorial (FPT) governments to do more to remove barriers and strengthen trade in key sectors of the economy, particularly given the impact of the pandemic on the Canadian economy and the rise of protectionist sentiment around the world.

The referenced ministerial document emphasizes that there are few federal levers for unilateral action to advance the internal trade agenda. To make meaningful progress and effectively promote trade liberalization, **it is essential to work with provincial and territorial partners, both through the existing agreement and through new commitments.**

An analysis of the Minister of Intergovernmental Affairs' briefing book[29] and the agendas of the various federal-provincial meetings it contains reveals **the absence of any consideration, let alone joint action, leading to the implementation of a common data strategy between the various jurisdictions in Canada, in** stark contrast to the EU's structuring initiative in pursuit of identical objectives of positioning itself as a world leader in the data economy.

3. THE BILATERAL STRATEGIC PARTNERSHIP BETWEEN CANADA AND THE EUROPEAN UNION

The European Union (EU) is one of the world's largest economies and Canada's second largest trading partner. Canada and the European Union (EU) share a close relationship.

The 2018-2023 period is marked by "**considerable**" progress in EU-Canada bilateral engagement on digital policies since the launch of the EU-Canada Digital Dialogue in 2019, as highlighted in the most recent report[31] from the Joint Cooperation Committee on the state of the EU-Canada relationship.

[29] Minister of Intergovernmental Affairs Briefing Book - 2021

[30] Briefing Book - Internal Trade - 2021

[31] Report of the Joint Cooperation Committee on the State of the EU-Canada Relationship (2020-2022): Section **III. Science, research, innovation and digital technologies**: Cooperation in the digital field.

This collaboration has become more strategic, covering key priorities ranging from emerging technologies such as blockchain technology, quantum and artificial intelligence, COVID-19 tracking applications, ecological and digital transitions, digital identity, and identifiers, to data governance and online security, including misinformation.

To this end, the parties signed on October 30, 2016 a Strategic Partnership Agreement (SPA) which was approved by the European Parliament on February 15, 2017, in parallel with the Comprehensive Economic and Trade Agreement (CETA). Together with CETA the SPA brings Canada-EU relations to a more structured and intense level of engagement.

Two articles of the Strategic Partnership Agreement provide a relevant frame of reference for the establishment of common data spaces in Canada in strategic societal and economic sectors and areas of public interest. ***"These two articles encourage dialogue between experts and the exchange of best practices in areas of mutual interest."***

Article 13 - Dialogue in other areas of mutual interest	**Article 15 - Cooperation in the fields of knowledge, research, innovation, and communications technologies. (extracts)**
Acknowledging their shared determination to deepen and broaden their long-standing commitment, and noting their existing cooperation, **the parties endeavour to encourage, in appropriate bilateral and multilateral fora, dialogue between experts and the exchange of best practices in areas of mutual interest.** These areas include, but are not limited to, agriculture, fisheries, international policies on oceans and maritime affairs, rural development, international transport, employment, and circumpolar issues, including science and technology. Where appropriate, this could also include exchanges on legislative, regulatory, and administrative practices, as well as decision-making processes.	**1**. Aware of the importance of new knowledge in addressing global challenges, the Parties continue to encourage cooperation in science, technology, research, and innovation. **2. Recognizing the importance of information and communication technologies as key elements of modern life and socio-economic development, the Parties shall endeavour to cooperate and exchange views, as appropriate, on national, regional, and international policies in this field.** **5. The Parties shall endeavour to continue their cooperation in the field of statistics, focusing in particular on the active promotion of the exchange of best practices and policies**.

PART 2

IMPACT ANALYSIS OF EUROPEAN COMMON DATA SPACES: RELEVANCE FOR PUBLIC POLICY IN CANADA

In support of the Proposal for a Regulation of the European Parliament and of the Council, the European Commission submitted an impact assessment report in November 2022,[32]. This 100-page impact analysis is based on a rigorous and detailed methodology including: documentary research; stakeholders interviews; case studies; workshops with key actors; analysis of the public consultation launched by the European Commission; targeted questionnaires addressed to legal experts.

The importance of this impact analysis cannot be overstated when considering the creation of common data spaces in Canada, as proposed in the Burgundy Report on the supply chain.

The data collected through these various tools were analyzed using the following analytical methods and processes: legal analysis; triangulation; cost-benefit analysis; multi-criteria analysis[33] . All the consultations showed strong support for the development of common European data spaces and for the people centric approach to data sharing in general, as presented in the European Data Strategy.

The Commission's report includes a market analysis to better understand the business environment and data-based value chains, and to identify the main actors and key market positions. The cost-benefit analysis was carried out separately for each of the actions required by the Data Strategy and its implementing legislation. The evaluation process considered the costs and benefits of each action for the different (key) stakeholders who were divided into the following categories: data holders, data co-producers, data users and data intermediaries. Impacts on society, the environment, economy, and fundamental rights are also taken into account. [34]

[32] SWD (2020) 295 final Commission staff working document impact assessment report accompanying the document Proposal for a Regulation of the European Parliament and of the Council on European data governance (Data Governance Act) {COM (2020) 767 final} - {SEC (2020) 405 final} - {SWD (2020) 296 final}

[33] For further information, see Appendix 4, p. 81 et seq. of the above-mentioned impact assessment report.

[34] For more information, see Appendix 4: Analytical methods p.81 ff. of the above-mentioned report and : European Commission, 2014: Guide to Cost-Benefit Analysis of Investment Projects - Economic appraisal tool for Cohesion Policy 2014 - 2020.

The conclusions and lessons learned from the analysis of the European data strategy are largely applicable to the Canadian context, subject to some specific adaptations. The Canadian intergovernmental dynamic emphasizes data sharing between the public and private sectors, a concern that is also central to the European strategy. [35]

The European Commission supports the creation of sectoral or thematic data spaces that will allow data to be shared and pooled beyond the borders of a single Member State. These spaces are designed as secure IT environments governed by a set of legal, administrative, and contractual rules.

The European strategy is deeply rooted in respect for fundamental values and rights, including the right to the protection of personal data. It will be implemented in full compliance with the General Data Protection Regulation (GDPR), which provides a solid foundation due to its technology-neutral nature. This compliance with the GDPR could serve as a model for Canada, particularly in developing a regulatory framework that effectively balances the social and economic imperatives of data sharing with the protection of individual rights.

This second part of the paper focuses on the implications and lessons learned from the impact assessment supporting the adoption of data governance legislation by the European institutions in four areas: the economic impact; the environmental impact; the added value of the initiative at EU level and its relationship with Member States; the untapped potential in the absence of data sharing.

1. ECONOMIC IMPACT

There is a wealth of literature on the economic benefits of increasing data sharing within and across sectors. An OECD report (November 2019)[36] describes the economic and societal benefits of promoting data sharing and data access.

The OECD report estimates that overall, data access and sharing generates social and economic benefits worth between 0.1% and 1.5% of gross domestic product (GDP), for public sector data, and between 1% and 2.5% of GDP when private sector data is also included. Companies that invest in data-driven innovation and data analytics achieve faster productivity growth than those that don't, in the range of 5-10%.

According to a study conducted by **the International Data Corporation** (IDC) [37] for the European Commission, the value of the data economy, which measures the overall impact of the data market on the economy as a whole, exceeded the €400 billion threshold in 2019 for the European Union of 27 Member States (EU27) plus the United Kingdom, with growth of 7.6% over the previous year.

[35] For more details: see the study in Part 4 "Towards a common data space for Canada's supply chain", p.63 ff. of the above-mentioned Burgundy Report.

[36] For more information, see the Burgundy Report, p40 ff, and the OECD study referred to above.

[37] Source: The European Data Market Monitoring Tool: Key facts and figures, initial findings, data landscape and quantified stories D2.9 Final study report - Executive summary Website

The positive growth trend in the data economy is confirmed by the value of the data market in 2019 for the EU27 plus the UK, which is growing at a faster rate than total IT spending, at 4.9% year-on-year to €75 billion.

The number of data professionals in the EU27 plus the UK reached 76 million in 2019, representing 3.6% of the total workforce, an increase of 5.5% over the previous year. However, the European Data Market Tracker continues to record an imbalance between the supply and demand of data skills in Europe.

The estimated shortfall reached around 459,000 unfilled positions in the EU27 plus the UK, representing 5.7% of total demand. The data skills gap is expected to persist in all forecast scenarios, as demand continues to outstrip supply.

In the reference scenario used in the European Commission's impact assessment, average cumulative GDP growth in the EU27 over the period 2020-2025 (+1.5%) will support investment in the digital economy and consumers spending. As a result, the data market in the EU27 is expected to reach €82.5 billion, with an average annual growth rate of 5.8%. The data economy will grow faster than the data market, due to the positive multiplier effect of data innovation on the economy, reaching a value of 550 billion euros in the EU27, with its impact on the EU rising sharply from 2.8% in 2020 to 4% in 2025.

The preferred set of measures would have a direct impact on the EU's data-driven economy, estimated at between €7.2 and €10.9 billion euros by 2028. In addition, the initiative would act as a catalyst for the creation of more efficient services and new data-driven products, including in the field of artificial intelligence, benefiting not only the data economy, but also the EU economy and society as a whole. This initiative would contribute to a potential productivity gain of €1,300 billion in the manufacturing industry by 2027 thanks to data from the Internet of Things, as well as savings of around €120 billion a year in the EU's healthcare sector.

The ECDS initiative offers significant benefits to economic actors, including small and medium-sized enterprises (SMEs) and start-ups, in the various sectors of activity. The impact assessment underlines that these actors will benefit from measures to facilitate the cross-sectoral use of data at EU level. As data providers, they will also be affected by the rules and restrictions on data sharing. The initiative seeks to establish robust data governance mechanisms, covering organizational, technical, and legal aspects, in order to maximize the potential of data.

One of the key benefits of this initiative is improved technical interoperability and standardization, which reduces the transaction costs associated with data sharing. This cost reduction is particularly beneficial to SMEs, which are often less able to influence standardization priorities. In addition, increased access to public sector data is a boon for SMEs, which generally lack the resources to create their own large databases.

2. SOCIETAL IMPACT

This ECDS initiative will enable faster and more targeted responses to societal challenges by anticipating risks based on more available information; it will bring benefits in terms of governance, through more effective public participation and transparency; and it will also contribute to better decision-making, in both the public and private sectors, through strategic foresight and better information analysis.

The operational framework put in place by the European Data Strategy will provide structures, mechanisms, technical guidance and standards to enable individuals to exercise their rights in a simple and non-burdensome way, and organizations, including research organizations, to create value for society while respecting the privacy of individuals.

The ECDS initiative is expected to bring very significant benefits to individuals, for example by improving mobility, making medicine more personalized, reducing energy consumption, and providing more effective responses to pressing societal challenges such as climate change and the fight against pandemics.

The broader benefits to society are manifested in lower costs, improved quality, and greater consumers choice. Benefits such as reduced healthcare costs, improved levels of care and reduced environmental degradation that result from smarter, more efficient systems benefit society as a whole, not just specific sectors or consumer groups.

Better use of data can lead to improved health and well-being, a better environment, enhanced climate action, more efficient public services, and safer societies. As the COVID-19 crisis demonstrated, data is an essential asset for dealing with emergencies such as pandemics. More generally, in healthcare, data can help develop more effective and personalized treatments.

Common data spaces enable more effective and efficient management of societal risks arising from climate change-related disasters and unsustainable economic activities. The impact of this initiative will be felt in different sectors and areas of the economy and society. In this respect, the envisaged European sectoral data spaces on health, skills, and mobility - to be developed through sectoral actions complementing the horizontal framework - are expected to have significant social impacts in particular, by improving medical care, reducing skills gaps and labor market shortages, and making public and private transport more efficient.

In the mobility sector, in addition to the estimated time savings of more than 27 million hours for public transport users[38] , up to 20 billion euros could be saved annually in labor costs for drivers, through in part real-time navigation, which reduces the time spent in traffic jams. These savings have a positive impact on the fight against climate change by reducing CO2 emissions and air pollution.

[38] Huyer E. (2020). The economic impact of open data: opportunities for value creation in Europe, European Data Portal Study.

The ECDS initiative also offers interesting prospects for engaging individuals in data sharing. The proposed framework facilitates "data altruism", where individuals, especially those with rare or chronic diseases, can voluntarily authorize the use of their data for public good purposes. This could accelerate medical research and help improve treatments.

In addition, the framework offers the possibility for individuals to reuse data for their own, for example, to create personalized dashboards or access specific services. This duality of use - both altruistic and personal - enriches the potential of data as a strategic asset and reinforces the importance of data governance. This is an aspect that may be particularly relevant to discussions of intergovernmental dynamics and data sharing between the public and private sectors in Canada.

3. ENVIRONMENTAL IMPACT

The development of common European data spaces is of great interest for many environmental issues, including the fight against climate change. Improving and broadening access to relevant data will contribute to finding solutions that improve conservation and sustainability. Indirectly, it will have an overall positive impact on the environment through the following specific initiatives:

- The environmental impact of creating a "Green Pact" data space will be significant: reliable, accessible and interoperable data will help to understand and address environmental challenges through better policies to achieve the goal of making Europe the first climate-neutral continent by 2050.
- Targeted initiatives could exploit the additional potential of improved access to non-public data to support priority actions of the Green Pact, for example in relation to climate change impacts, the circular economy, zero pollution, biodiversity, and sustainable development.
- The creation of a common European energy data space will allow to improve energy efficiency, optimize local consumption, and increase the integration of renewable energy sources.
- The creation of a common agricultural data space will increase the possibilities for precision farming capabilities and thus reduce agricultural emissions into the environment.

4. ADDED VALUE OF ACTION AT EU LEVEL AND IN RELATION TO MEMBER STATES [39]

This consideration is particularly relevant in the context of shared legislative powers and federal-provincial dynamics in Canada. In this context, it is interesting to note that the assessment of the barriers to data sharing in the above-mentioned impact assessment concluded that **the objectives, in particular that of global leadership in the digital economy, cannot be sufficiently achieved by the Member States[40] acting alone, for several reasons:**

[39] For further information on this subject, see Appendix 5: Subsidiarity grid in the above-mentioned impact assessment report, p.87 ff.

[40] This reasoning is equally valid for the provinces and the federal government in Canada.

- Big data" and AI require large datasets including data on rare situations that are difficult to find in Member States alone.
- In addition, the development of pan-European data services and products requires data from more than one Member State. Finally, a market for new data intermediaries can only develop on the scale of more than one Member State.
- Member States and their public authorities are supporting this assessment at political level (Council conclusions of June 9, 2020) and through various consultation actions.
- **Member States are unanimous in calling for action to improve data sharing at European level**. The conclusions of the European Council of March 2019 state that: "*The EU must go further in developing a competitive, secure, inclusive and ethical digital world with world-class connectivity. Particular emphasis should be placed on data access, sharing and use, data security and AI, in an environment of trust*."
- In the conclusions of the "Shaping Europe's Digital Future" Council of June 9, 2020, Member States also unanimously called on the Commission to come forward with concrete proposals on data governance and to promote the development of common European data spaces for strategic industry sectors and areas of public interest.

By implementing rules common to all Member States, the creation of common data spaces will:

- Make more data held by the public sector available for research and innovation purposes (development of new products and services, subject to respect for the rights of others (right to protection of personal data, intellectual property rights, including trade secrets, and other commercially confidential data).
- Enable companies to take advantage of the size of the internal market and offer their products and services throughout the EU. Companies and research organizations would be able to access data from different Member States under similar conditions.
- Make more data available for the public good for research and innovation purposes where individuals consent to such use in accordance with EU data protection rules, or where companies voluntarily agree to use the non-personal data, they hold.
- Improve the use of data in society and the economy by reducing transaction costs resulting from technical barriers, from the lack of interoperability and the absence of generic standards for data sharing, but also from the costs associated with setting up data sharing from a legal and technical point of view.

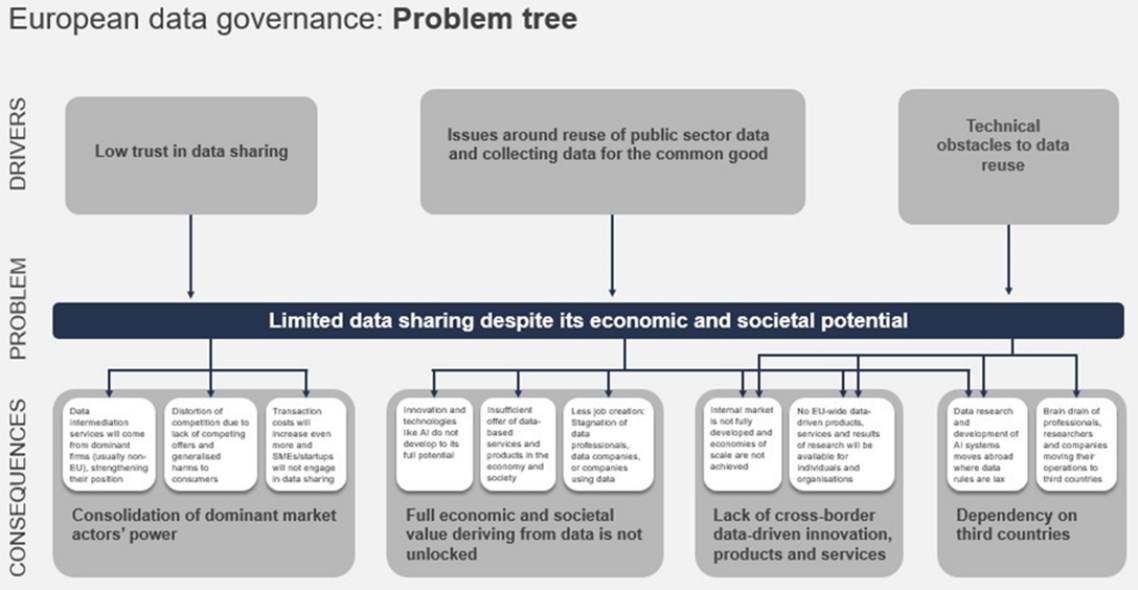
The European Interoperability Framework[42] defines basic guidelines for interoperability in the form of common principles, models, and recommendations. The adoption of such a framework for interoperability between the various public administrations in Canada should attract the joint attention of intergovernmental decision-makers in pursuit of common priorities, including that of halting the deterioration of public services.

Member States also agreed on October 6, 2023[41] a common position on the legislative proposal establishing measures to ensure **a high level of public sector interoperability throughout the EU (Regulation for an interoperable Europe).**

The draft Regulation seeks to establish a new cooperation framework for EU public administrations to ensure the seamless delivery of public services across borders, and to provide support measures to foster innovation and strengthen the exchange of skills and knowledge. This proposed Regulation will establish an interoperability governance structure to create an ecosystem of common interoperability solutions for the EU public sector. In this way, EU public administrations and other stakeholders can contribute to and reuse these solutions, innovate together and create added value.

5. UNTAPPED POTENTIAL

In contrast to the currently predominant business model which is characterized by an unprecedented concentration of data in the hands of a handful of powerful actors, and their ubiquitous tracking of consumers, the European Data Space should serve as an example of transparency, effective accountability and a proper balance between the interests of data subjects and the common interest of society as a whole.



Source European Commission Impact Assessment[43] page 8: Defining the problem.

[41] Source: Regulation for an interoperable Europe

[42] For more information, see: "The New European interoperability framework: Promoting seamless services and data flows for European public administrations".

[43] "Commission staff working document: Impact Assessment Report accompanying the document proposal for a Regulation of the European parliament and of the Council on European data governance (Data Governance Act) .

The difficulty of accessing and using data held by others has been widely reported. According to the referenced OECD study, "individuals, businesses and governments often face barriers to accessing data, which can be compounded by a reluctance to share it".

In the online public consultation on the European Data Strategy, nearly 80% of companies reported problems accessing data. When asked about the nature of these difficulties, 72.1% of these companies cited “technical aspects related to data interoperability and transfer mechanisms" and 43.5% "the inability to find data of the required quality".

Other problems include outright denial of access to data (65%), or prohibitive prices or other conditions (41.7%). This suggests that technical difficulties are a major barrier to data sharing. On the other hand, some 93% of European executives surveyed in a recent McKinsey study for the European Commission believe that better access to data would be important for their organization (with some 40% believing it to be very important). More than 50% would be willing to share their data in exchange for access to similar data from competitors, or for a fee. [44]

The benefits of standardization include reduced technical adaptation costs for a larger number of companies and public authorities, and lower barriers to market entry or to the development of entirely new products or services. These advantages should be of particular benefit to SMEs, which are usually not able to influence the definition of standardization priorities. SMEs would also benefit from the increased availability of public sector data, as they are generally not in a position to create large data pools themselves.

Among other benefits for the European economy, the impact assessment in reference highlights: reduced switching costs for users; lower barriers for companies to enter digital markets; increased personalization of goods and services; and increased innovation thanks to valuable user insights. In addition, access to a wider variety of data to train models and test results could contribute to the ethical and effective use of AI.

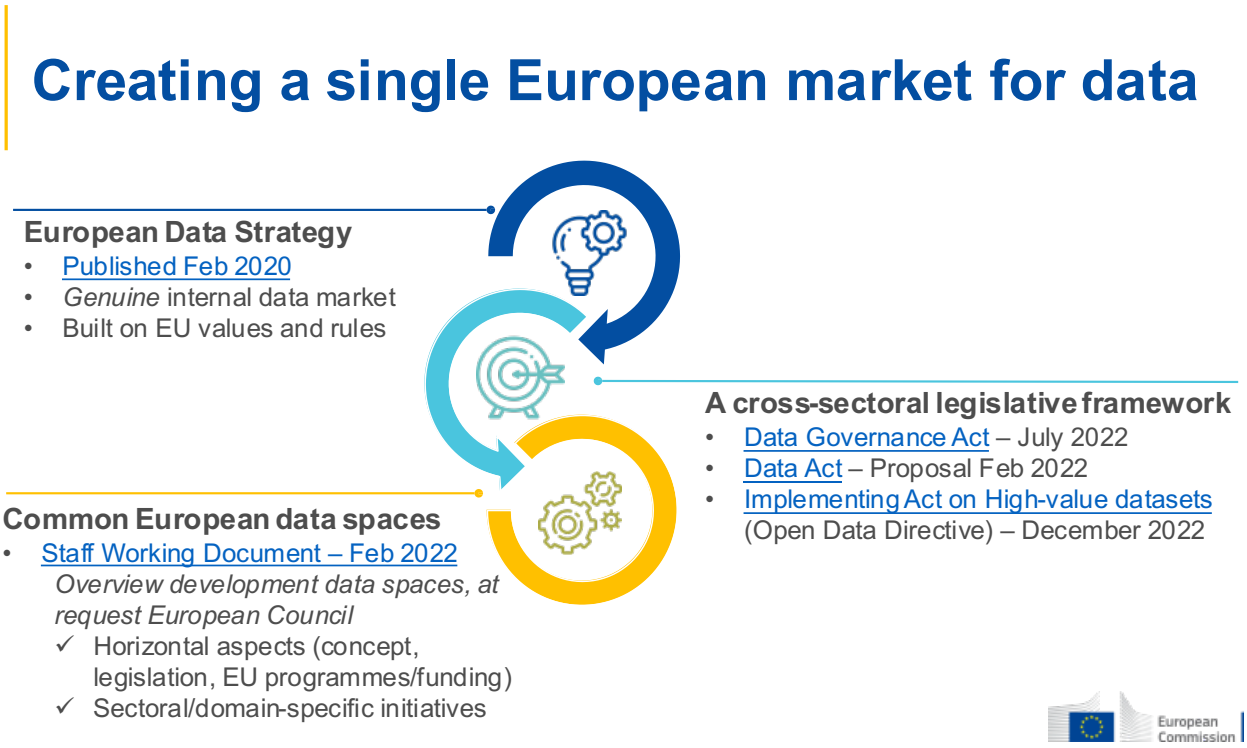
The impact assessment report mentioned above states that the creation of common data spaces should accelerate scientific discovery and innovation by facilitating the reuse of data. It will improve policy implementation and government services, including at local level thanks to better data availability, as well as in public areas with a high societal impact.

[44] The term "data sharing" does not mean that all data will be freely available to all but may include situations where data is exchanged for a fee.

Part 3

DEPLOYING COMMON DATA SPACES

The European Data Strategy intends to make Europe a leader in a data-driven society. If data is not available and easily reusable within and across different jurisdictions and application areas, the digital transformation agenda cannot be successfully implemented.



1. THE FOUR PILLARS OF THE EUROPEAN DATA STRATEGY IMPLEMENTATION [45]

This strategy contributes to the realization of the vision of a single data market. The actions are based on four pillars:

A. A cross-sectoral governance framework: Horizontal legislative measures for data access and use establish the general framework necessary for a data driven economy, avoiding harmful fragmentation of the internal market due to inconsistent action across sectors and Member States. These measures take into account sectoral and national specificities.

B. Catalysts: Investing in data and strengthening European capacities and infrastructures for hosting, processing, and using data, interoperability:

- Over the period 2021-2027, the Commission will invest in the structuring project of the creation of EU-wide interoperable Common Data Spaces in strategic sectors.
- This funding targets infrastructures, data sharing tools, architectures, and governance mechanisms for data sharing and artificial intelligence ecosystems.
- These spaces intend to reduce legal and technical barriers to data exchange between organizations, by bringing together the necessary tools and infrastructures, and addressing trust issues through common rules developed for each space. The spaces will include: (i) the deployment of data sharing tools and platforms; (ii) the creation of data governance frameworks; (iii) the improvement of data accessibility, quality, and interoperability, both in domain-specific situations and across sectors.
- Funding will also support Member State authorities in making high value datasets available for re-use in the different Common Data Spaces.
- Support for data spaces will also cover data processing and computing capabilities that meet essential requirements in terms of environmental performance, security, data protection, interoperability, and scalability.

C. Skills: Empowering people, investing in skills and SMEs:

- Empower people to act on their data.
- Invest in skills and general data literacy.
- Specific capacity building for SMEs.

D. Common European Data Spaces (CEDS) in strategic sectors and areas of public interest:

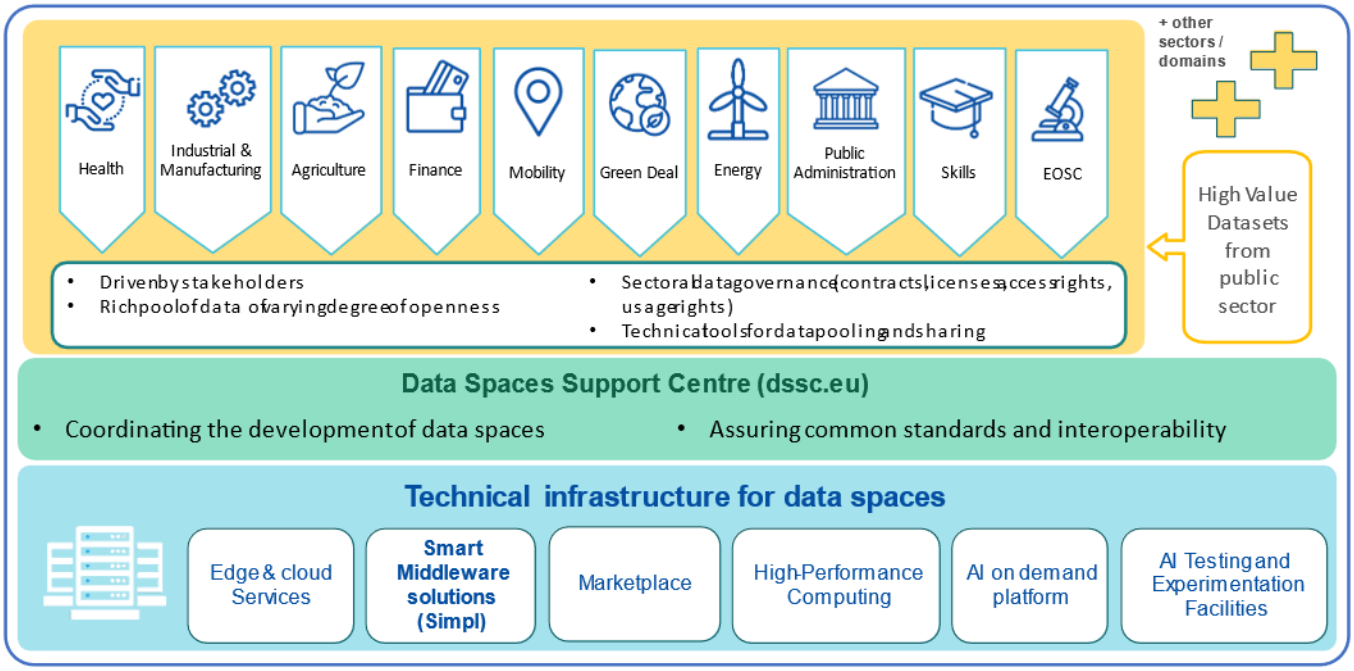
As a complement to the horizontal framework, and to the funding and actions on skills and empowerment referred to in points A, B and C, the Commission encourage the development of common European data spaces in strategic economic sectors and areas of public interest.

These common European data spaces will make data traceable, accessible, interoperable, and reusable (hereinafter referred to as "FAIR data principles"), while ensuring a high level of cybersecurity.

[45] For more information see: "A European Data Strategy" Brussels, 19.2.2020 COM (2020) 66 final pages 14 et seq.

These are sectors or areas where the effective use of large data sets has a systemic impact on the whole ecosystem, but also on citizens:

European Common Data Spaces (ECDS)



Source European Commission

2. THE LEGAL AND OPERATIONAL FRAMEWORK FOR GOVERNANCE

The Regulation on European Data Governance[46] approved on May 30, 2022, by the European Parliament and the Council underlines the need to improve the conditions for data sharing in the internal market, by creating a harmonized framework for data exchanges and defining a set of basic requirements for data governance, with a particular focus on facilitating cooperation between Member States. It intends to further develop the borderless digital single market and a people-centric, trustworthy, and secure data society and economy.

[46] See the text of Regulation (EU) 2022/868

No single organization can establish and operate common data spaces or make top-down decisions that all other players must follow. This observation and this advice are particularly relevant in the Canadian federal-provincial context.

This EU legislative measure authorizes the Commission to proceed with the establishment of domain-specific Common European Data Spaces for data sharing and data pooling. This instrument establishes a general framework that includes horizontal measures relevant to all Common European Data Spaces.

The objective of the initiative is not to create common European data spaces by law, but to encourage their development by building trust in data sharing and in data intermediaries.

The report[47] by the Joint Research Centre (the European Commission's science and knowledge department) rightly points out that **decentralization is a key aspect of the data space effort**. A centralized governance model for data sharing is counterproductive.

Each sector and thematic area have their own specificities in terms of data types, data flows, business models and stakeholders' needs. From a technical perspective, a single architecture or set of technologies and standards cannot be applied universally. At the same time, the risk of multiple stakeholders creating their own data spaces with associated specifications and governance rules must be avoided.

However, the referenced scientific report stresses the need for a minimum set of protocols and specifications that can be used in a decentralized and federated manner, ideally over the Web. An EU-wide, community-based approach through co-creation and co-design of data spaces tailored to the specific context of the domain is the only way to ensure buy-in from a wide range of stakeholders.

With this in mind, a European body/structure is being set up to support experts in the Member States and ensure that expertise is reused in all Member States. This structure will have to organize the participation and representation of the different authorities in the Member States.

[47] Further reading: Farrell, E.; Minghini, M.; Kotsev, A.; Soler-Garrido, J.; Tapsall, B.; Micheli, M.; Posada, M.; Signorelli, S. Tartaro, A.; Bernal, J.; Vespe, M.; Di Leo, M.; Carballa-Smichowski, B.; Smith, R.; Schade, S.; Pogorzelska K.; Gabrielli, L.; De Marchi, D**., European Data Spaces: Scientific insights into data sharing and utilisation at scale,** Publications Office of the European Union, Luxembourg, 2023, doi :10.2760/400188, JRC129900.

3. THE SETTING UP OF THE EUROPEAN DATA INNOVATION BOARD

The Commission has set up a *European* Data *Innovation Board (EDIB)*[48] (or Council) to be operational by the end of 2023. This mechanism will coordinate and steer horizontal governance aspects in the form of an expert group, composed of representatives of the relevant authorities in the Member States and the European institutions. Its mandate is to coordinate efforts in Member States and at the European level to support data-driven innovation, reduce transaction costs and avoid further sectoral fragmentation. It will seek to increase the availability of public sector data. It will take a leading role in standardization and its prioritization for data sharing across sectors.

Technical standardization work should include the definition of priorities for standards development and the creation and updating of a set of technical and legal standards for the transfer of data between two processing environments in order to organize data spaces, in particular by clarifying and distinguishing between standards and practices that are cross-sectoral and those that are sector-specific.

The European Data Innovation Council (Board) shall initially comprise at least the following three subgroups:

1. a subgroup composed of the competent authorities for data intermediation services and the competent authorities for the registration of data altruism organizations.
2. a subgroup responsible for technical discussions on standardization, portability, and interoperability.
3. a stakeholder participation subgroup composed of relevant representatives from industry, in particular from health, environment, agriculture, transport, energy, industrial manufacturing, media, cultural and creative sectors and statistics, as well as from research, academia, civil society, standardization bodies, relevant European Common Data Spaces, and other relevant stakeholders and third parties, including bodies with specific expertise such as national statistical institutes.

The European Data Innovation Council will assist the Commission in coordinating national practices and policies in the areas covered by the above-mentioned Regulation, and in promoting the cross-sectoral use of data, respecting the principles of the European Interoperability Framework, and using European and international standards and specifications. It shall consider standardization work carried out in specific sectors or areas.

[48] For more information, see Regulation (EU) 2022/868 of the European Parliament and of the Council of May 30, 2022 on European data governance and amending Regulation (EU) 2018/1724 (Data Governance Regulation).

4. ROLE OF THE DATA SPACE SUPPORT CENTER

Funded by the European Commission as part of the Digital Europe program, the Data Space Support Center is intended at the public sector and companies wishing to create shared data spaces. The Data Space Support Center (DSSC) supports the European Data Innovation Council mission and contributes to the creation of Common Data Spaces in order to:

- Enable the re-use of data within and across sectors, fully respecting EU values, and supporting the European economy and society.
- Enable the availability of technologies, processes, legal frameworks, standards, and tools (e.g., community of practice, action plan) for the implementation of Common Data Spaces.
- Promote the adoption of the above-mentioned technologies and standards to enable the re-use of data in all sectors by different stakeholders as part of a multidisciplinary approach based on co-creation and interaction.
- Contribute to the creation of sustainable and scalable products and services for the global market by leveraging the use of shared data in the development of business models or in efficient, effective, and replicable policy decisions.
- Ensure that more data is available for use in the economy and society, while allowing those who generate the data to retain control over it.
- Facilitate the sharing of data to have a positive impact on the daily lives of citizens and to build trust among businesses and public administrations.

To facilitate the design and development of common data spaces, the Data Space Support Center (DSSC) has published a practical guide[49] that provides an entry point for individuals or organizations wishing to create or participate in a data space. This includes data space designers, data producers, data consumers, data space intermediaries and providers of data-driven services and business applications.

The guide provides an overview of the different dimensions that enable interoperability, trust, and value creation within a data space, helps designers understand the role of Common European Data Spaces (CEDS) as the scaffolding for the European Data Strategy, and links to a number of resources that can provide further guidance and support.

[49] To find out more: see the Getting Started guide published by the Data Space Support Center.
For a complete list of data space terminology and definitions, please consult the Support Center glossary.

5. ASSESSMENT PROCESS AND MEASUREMENT OF ACTUAL IMPACTS

Due to the dynamic nature of the data economy, monitoring the evolution of impacts and their rigorous evaluation is a key element in the implementation of Common Data Spaces (CDS).

The European Data Innovation Council (Board) intends to collect information on the situation in the Member States and in the different sectors. It will compile examples of good practice based on information provided by Member States on their implementation measures and the relative strengths and weaknesses of these actions.

Member States will be invited to report regularly on the effectiveness and impact of the different action lines on their data markets. This will allow the Commission to closely monitor the uptake of measures in Member States and among stakeholders, including compliance.

Through the Data Sharing Support Center, stakeholders will collect information on market efficiency and the effectiveness of measures taken under this initiative to improve public sector data re-use, data altruism and a data intermediary labelling system.

6. DIRECTORATE GENERAL (DG) CONNECT

The Commission's Directorate-General for Communication Networks, Content and Technology (CONNECT) is responsible for the European Data Strategy and the implementation of Common Data Spaces. One of the key priorities of its 2020-2024 Strategic Plan is to create a single European data market where data can circulate for the benefit of all, and where the rules for access and use are fair, practical and clear.

To achieve this goal DG CONNECT is implementing the different lines of action defined in the European Data Strategy. Some of these actions are summarized here:

- Contribute to the establishment of the legal framework for the governance of Common European Data Spaces (CEDS).
- Adopt an implementation plan for high-value datasets under the Open Data Directive, making them freely available across the EU.
- Explore the need for legislative action on issues affecting data relationships between actors in the agile economy to provide incentives for horizontal data sharing across sectors as part of a possible data law.
- Analyze the importance of data in the digital economy and examine the existing policy framework in the context of the Digital Services Act.

The core of DG CONNECT's action plan is to invest in building Europe's capacity and infrastructure to host, process and use data, as well as in interoperability:

- Invest in the high-impact Common European Data Spaces project and federated cloud infrastructures and services, through sustainable interconnections between existing and distributed cloud infrastructures across the EU.
- Sign memoranda of understanding with Member States on cloud computing federation.
- Establish a European market for online cloud services.
- Create a European (self-regulatory) regulation on cloud services.

CONNECT is involved in the creation of Common European Data Spaces (CEDS) and is preparing the legislative framework for the CEDS governance, to support decisions on what data can be used and in what situations; to facilitate the cross-border use of data; and to prioritize interoperability requirements and standards within and across sectors. These actions will be complemented by an open and proactive international approach, in particular to establish a framework for measuring data flows and estimating their economic value within Europe, and between Europe and the rest of the world.

Now that the EU's policy and legislative initiatives are largely conceptualized, the Commission and Member States are focusing on the implementation aspects of these provisions and "filling" them with concrete substance. This should also be the case within Canada's intergovernmental machinery.

CONCLUSION

The technology-centric nature of global competition requires a reset in the way policymakers in different jurisdictions across Canada engage in defining and achieving common strategic priorities based on the best available and commonly shared data.

This working paper on the European Common Data Spaces (ECD) initiative highlights several similarities f in the parallel development, in Canada and the European Union (EU), of public policies adapted to the digital era the world has entered.

The EU and Canada share common values and challenges, as well as similar goals to lead in the development of a people-centered digital society and economy. The identification of strategic sectors and categories of high value data in the pursuit of an inclusive economy is similar on both sides. The regulatory frameworks in place to promote the responsible stewardship and accessibility of data are comparable. Canada and the EU concluded a Strategic Partnership Agreement in 2016, and considerable progress in bilateral EU-Canada engagement is reported to have been achieved since the launch of the bilateral Digital Dialogue in 2019. [50]

However, the tools for implementing these public policies to harness the benefits of data, and thus avoid harmful fragmentation of the internal market because of inconsistent action across sectors and jurisdictions, differ in one key respect.

The creation of common data spaces in strategic sectors and areas of public interest is at the heart of the European data strategy. In Canada, however, it appears to have been ignored due to the limited willingness of different levels of government to pool resources in pursuit of common strategic goals.

Rigorous management, responsible use and effective sharing of data will be crucial over the coming years. Neither the federal government acting alone, nor the provincial governments are yet well positioned or determined to treat data as a common strategic asset.

To overcome this situation, which is detrimental to Canada's economic development and social cohesion, the relationship between governments must change, particularly through the joint development of common data spaces, pooling of different initiatives and policies, as well as closer cooperation and collaboration between public and private actors.

[50] For further details see p. 14 -15: "The bilateral strategic partnership".

The current mandate of the federal Minister of Intergovernmental Affairs and Internal Trade underscores the critical importance of domestic trade to the Canadian economy. This mandate also recognizes that to make significant progress and effectively promote trade liberalization, it is essential to work with provincial and territorial partners, both through the existing agreement and through new commitments. All that remains is to make full use of it!

The ambitious program set out by the European Data Strategy offers great potential for developing approaches that should lead to a fairer, more open, and more inclusive data market in Europe. Given the complexity and intended impact of the planned initiatives, these developments may serve as inspiration and trigger similar regulatory developments, particularly in Canada.

The Covid 19 epidemic was a detonator, and Russia's aggression in Ukraine a revelation in the acceleration of the European Union's progress in pooling national forces in Europe. As the President of the Robert Schuman Foundation points out:

What has changed is fundamental: it is now the Member States who are calling for common policies to meet the challenges they are unable to overcome on their own. [51]

Overcoming regulatory, legal and technical barriers to data exchange between jurisdictions and organizations cannot be achieved without the creation of a common data space. This can only be achieved by combining the necessary tools and infrastructures, and by addressing trust issues e.g. through common rules developed for this purpose.

We must recognize that the context has also changed, but not in the same direction in Canada, where we are faced with a worrying process of fragmentation in the federal-provincial dynamic and a disturbing deterioration in public services and confidence in political institutions.[52]

In Ottawa, Parliament resumed its session on September 18 for the last round before an election in October 2025, or perhaps earlier in some scenarios. It remains to be seen whether the budgetary imperative can be combined with the growing sense that the public sector needs serious modernization.

As former Clerk of the Privy Council Michael Wernick points out, it has been ten years since the last serious exercise in spending reduction. The central agencies that run these exercises tend to take a very short-term view.

[51] Source: **Europe: A message and a turning point** -editorial by Jean-Dominique Giuliani, President, Robert Schuman Foundation. September 2023

[52] Source : Revue Gestion HEC : Confiance, Méfiance, Défiance...By Jean-François Venne- March 13, 2023

"Nevertheless, it will be worthwhile to try to convince the political parties of what they intend to do to improve the way government works, and to denounce simplistic platitudes and gimmicks on all sides. In my opinion, whatever political platform Canadians choose next time around, **decision-makers have a date with public sector reform."** [55]

The most common response is to remove the very elements that could improve long-term capabilities: training, leadership development, technology, and the recruitment of dynamic new talent.

The same is true for the necessary reform of Canada's intergovernmental machinery, which must be mobilized to address collectively the critical challenges that individual governments will not be able to overcome alone. The proposed joint creation of common data spaces in a joint selection of strategic public policy areas is a good place to start.

The mobilization towards a common supply chain data space and its implementation in the St. Lawrence Great Lakes trade corridor, inspired by, and extending the St. Lawrence Advantage vision, is an excellent first step at a time when the National Supply Chain Office seems to be becoming a reality[54].

The accelerated joint development of a common data space will be a game changer not only in terms of solving critical supply chain and internal market challenges, but also in terms of the impetus it will provide in pursuing fundamental priorities including the energy transition. The same is true for the establishment of a governance structure for data interoperability within the intergovernmental machinery to create an ecosystem of shared solutions and effective collaboration among public administrations in Canada.

In short, data governance is a complex but essential challenge in today's context marked by the increasing digitization of economic and social activities. Initiatives such as ECDS offer promising prospects for reconciling the specific needs of each sector with the imperative of more integrated data governance. The aim is to facilitate data sharing while respecting ethical principles, individual rights, and responsibilities of different jurisdictions.

This dynamic between sector specificity and uniformity in data governance is particularly relevant to discussions of intergovernmental cooperation and data sharing in Canada. This is an area that requires sustained attention and strategic action to maximize the social and economic benefits of data in an increasingly digital age.

[53] Source: Letter from Ottawa: diagnosing the elements of Tired Government Syndrome; Michael Wernick-18/09/2023

[54] For more information, see Maritime Magazine 2023-09-28.

[55] For more information, see: CAC — Council of Canadian Academies, 2023. Connecting the Dots, Ottawa, ON, Expert panel on health data sharing, CAC.

Data plays a crucial role in the development of new digital products and services, as well as in the training of artificial intelligence systems. It is also essential for achieving productivity gains and resource efficiency across all sectors of the economy. By effectively balancing the pressing necessity for data sharing and the fundamental protection of individual rights and respect for intergovernmental responsibilities, the European Common Data Spaces initiative serves as a benchmark model for other jurisdictions, including Canada.

The main obstacles to interoperability are not technical, but cultural and political: systems may be interoperable, but data is not shared because of these obstacles.

The Canada-EU Strategic Partnership Agreement provides the appropriate framework for an in depth and sustained dialogue between experts on both sides. The forthcoming launch of the Digital Partnership will intensify bilateral co-operation in areas such as artificial intelligence, research and innovation on next-generation networks, intergovernmental and international connectivity, and cybersecurity. Cooperation in this area of mutual strategic interest will only be effective if Canada's intergovernmental machinery is fully engaged in its implementation.

GLOSSARY AND FUNCTIONAL DEFINITIONS

This glossary and selection of functional definitions are based on three official sources:
1. OECD, The Recommendation of the Council on Improving Data Access and Sharing, OECD/LEGAL/0463, which was adopted on October 5, 2021, by the Council of Ministers (including Canada)
2. EUROPEAN UNION Directives summarized in Commission Staff Working Paper, Impact Assessment Report, Brussels, 25.11.2020 SWD(2020) 295 final.
3. GOVERNMENT OF CANADA: Canada's Open Government working group :Criteria for high-value data sets.
These definitions have been grouped by the author into four interconnected main categories. (See chart on page 12:) Data— Actors— Common Data Spaces— Impacts

DATA

- **Data**: information recorded in a structured or unstructured format, whether text, images, sound or video.
- **Personal data:** information relating to an identified or identifiable individual (data subject).
- **Metadata**: recorded structural or descriptive information relating to primary data. Metadata can include personal data.
- **High value datasets:** documents whose re-use is associated with significant social, environmental and economic benefits, because they lend themselves to the creation of value-added services, applications and new, decent, high-quality jobs, and because of the number of potential beneficiaries of the value-added services and applications based on these datasets.
- **Internet of Things (IOT)**: A network of physical devices, vehicles, appliances and other objects equipped with connectivity software, enabling them to connect and exchange data.

PLAYERS

- **Data owners**: the organizations or individuals who, under applicable laws and regulations, are entitled to decide whether to authorize access to or share the data under their control, whether such data is managed by said organizations or individuals, or by an agent acting on their behalf.
- **Data producers**: organizations or individuals who create, co-create, generate or co-generate data, including as a by-product of their social and economic activities, and can therefore be considered a source of primary data.
- **Data intermediaries**: service providers facilitating data access and sharing under commercial or non-commercial agreements between data holders, producers and/or users. Data holders and trusted third parties can act as data intermediaries.

COMMON DATA SPACE

Arrangement consisting of an IT environment for the secure processing of data by an open and unlimited number of organizations, and a set of legislative, administrative and contractual rules that determine data access and processing rights.

- **Data access**: the act of querying and retrieving data for possible use, in compliance with applicable technical, financial, legal or organizational requirements.
- **Data sharing:** Act by which the data holder, data producer or data intermediary provides access to a data user for the purpose of joint or individual use of the data, based on voluntary, commercial or non-commercial agreements, or mandatory rules. This is not to be understood as making data available free of charge to an undefined group of users.
- **Data value cycle**: the data-related processes by which value is created from data, including production, collection, validation, verification, storage, curation, enrichment, processing and analysis, access and sharing, or deletion.
- **Data portability**: the ability to transfer data to which a person or entity is specifically linked from one IT (or similar) environment to another, on the basis of legislative rights or contractual agreement.
- **Data ecosystems**: the integration of different stakeholders, including data holders, data producers, data intermediaries and data subjects, who are involved in or affected by data access and sharing arrangements, depending on their roles, responsibilities and rights, technologies and business models, and the interactions between said stakeholders.
- **Data-driven innovation**: Using data and analytics to improve or create new products, services, markets and organizational methods.
- **Provisions for data access and sharing** institutional, regulatory, policy, legal and contractual frameworks for data access and sharing.
- **Data altruism**: The act of granting access to and sharing data held by individuals or companies, without seeking direct reward, for the common good.
- **Provisions relating to open data**: nondiscriminatory arrangements for accessing and sharing data, under conditions where the data is machine-readable, accessible and shareable, free of charge, and usable by anyone for any purpose, subject at most to requirements that preserve integrity, provenance, attribution and openness.
- **Non-discriminatory data access and sharing provisions**: a specific type of access and sharing provision under which data can be accessed and shared, free of charge or against payment, under conditions that are independent of the identity of the data users.
- **Provisions concerning conditional access to and sharing of data:** provisions under which access, and sharing are subject to specific conditions, such as restrictions on the users authorized to access the data (discriminatory provisions), conditions of use of the data, e.g., depending on the intended purpose, or requirements relating to data access control mechanisms governing the granting of such access**.**

- **Data access control mechanisms**: technical and organizational measures ensuring safe and secure access to data by authorized users, including data subjects, within and outside organizational boundaries, protection of stakeholders' rights and interests, and compliance with applicable legal and regulatory frameworks.
- **Secondary use or re-use**: Use by natural or legal persons of documents held by public-sector bodies, for commercial or non-commercial purposes other than the initial purpose within the framework of the public mission for which the documents were produced.

IMPACTS:

- **Four impact categories are distinguished in this working paper**:
  - Economic impact
  - Societal impact
  - Environmental impact
  - Impact on SMEs
  - Impact on public administrations

- Canada's Open Government Task Force provides **common criteria to help identify high-value data sets**. High-value data enables:
  - Focus on socio-economic and environmental issues.
  - Provide better services.
  - Encourage innovation and sustainable economic growth.
  - Increase government transparency, accountability, and information flow.
  - To meet strong community demand**.**

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