

THE URGENCY OF THE FIRST LINK: CANADA'S SUPPLY CHAIN AT BREAKING POINT, A NATIONAL SECURITY ISSUE

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Alain Dudoit is a Visiting Fellow at CIRANO and Chairman of the Executive Committee of its Alliance of Ambassadors.

Since his retirement 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 Innovation Partnerships) 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.

He has also held lectureships on North American business management and international competitiveness at McGill's Faculty of Management, and as a guest lecturer at ENAP. He is also a strategic advisor to the Milken Institute Santa Monica, a member of the Los Angeles Commission on Foreign Relations and a 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, an innovation supercluster in supply chain and artificial intelligence. He is regularly invited to speak on national and international innovation panels.

During his long and successful career in the federal 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 also 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 acknowledgements

CIRANO identified the theme « [Tackling the challenges of supply chains](#) » to structure part of its scientific activities in 2023. This choice is inspired by the context in which we currently find ourselves as a result of the pandemic and current issues linked to labor shortages, climate challenges, and the economic situation linked to the war in Ukraine.

The choice of this theme is particularly relevant, and follows on from CIRANO's decision in early 2022 to create a CIRANO [Pole on Data Science for Trade and Intermodal Transportation](#). This initiative follows a series of consultations with Transport Canada and a number of relevant stakeholders. It is based on a [cross-sectional, multi-disciplinary analysis](#) previously published by CIRANO on the challenges and opportunities for interoperability and data sharing in the St. Lawrence-Great Lakes (SLGL) trade corridor, and aims to use the latest developments in data science to bridge the gap between trade, transportation and their economic and environmental impacts, to support public and private sector decision-making in the face of major supply chain challenges.

This Bourgogne Report entitled « **The urgency of the first link: Canada's supply chain at breaking point, a national security issue** » is dedicated to CIRANO, to Nathalie de Marcellis-Warin, CIRANO's President and CEO, and to the Pole on Data Science for Trade and Intermodal Transportation team, under the responsibility of Thierry Warin, full professor at HEC Montreal, CIRANO researcher and Fellow. I would like to thank Marcelin Joanis, Robert Lacroix, Jean-François Lépine, Molivann Panot, Luc Pinard, Joelle Zoghbi and Manon Blouet for their comments, suggestions and professional contributions.

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

This Burgundy report was prompted by the urgent call from the [“Final Report of The National Supply Chain Task Force 2022 Action. Collaboration. Transformation.”](#) (“ACT”):

***“The time for bold action is now. The time for intense collaboration is now.
The time for generational transformation is now.
Let us begin.”***

Notes: The translation of the original quotations and references in this report should not be considered as an official translation. The quality of the translation, assisted by 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 document and the translation, only the text of the original document is valid.

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- [Read the full report in english](#)
- [Read the full report in french](#)
- [Read the executive summary in french](#)



ISSUES

- The creation of an intelligent supply chain is now an urgent national security priority that cannot be achieved without the joint mobilisation of governments, private industry, and the various stakeholders in Canada. It is not, however, an end in itself. The achievement of a single, competitive, sustainable, and consumer-focused domestic market should be the ultimate outcome of the national effort required to collaboratively implement the recommendations of three complementary public policy reports released in 2022 on the state of the supply chain in Canada. These three documents are the subject of a cross-cutting analysis in this Burgundy Report.
 - Quebec's geostrategic position is a major asset and gives it a critical role and responsibility in implementing not only the [Final Report of the National Supply Chain Task Force \("ACT"\)](#), but also the recommendations contained in the [Report of Phase 2 of the Pan-Canadian Competitive Trade Corridors Initiative](#) published by the Council of Ministers Responsible for Transportation and Highway Safety (COMT) and those contained in the report of the House of Commons Standing Committee on Transport, Infrastructure and Communities published in Ottawa: ["Improving the Efficiency and Resilience of Canada's Supply Chains"](#).
 - These three policy reports, published in 2022, challenge all stakeholders in Canada's supply chain in different ways but with the same urgency. Their findings and recommendations raise fundamental questions that are at the heart of the critical issues of governance, organisational culture, execution capacity, mobilisation of public and private sectors. These challenges are exacerbated by the under-utilisation of data within the Canadian government machinery, which has been severely tested by years of delay and amplified by recent disruptions against the backdrop of a looming climate catastrophe.
 - The decision to create a supply chain office to unify federal authority and the decision to digitise and create visibility for this essential infrastructure go beyond the mandate of the Transport Canada portfolio for their effective implementation. They call upon the entire government apparatus in Ottawa as well as the active collaboration of provincial and local authorities.
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SYNOPSIS

This Burgundy report offers a four-part analysis:

1. An overview of a background characterised by numerous consultations, strategy announcements, measures, and mixed results.
 2. A cross-analysis of the recommendations of three important and complementary public policy reports at the federal level, as well as the Quebec strategy, [Avantage St. Lawrence](#).
 3. An analysis of the fundamental issues of data mobilisation capacity, execution, and under-utilisation.
 4. Some operational solutions for moving into ["Action, Collaboration and Transformation" \(ACT\)](#) mode.
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METHODOLOGY

- This synthesis extends and updates [the project report](#) published by CIRANO on 15 December 2021. It takes into account and incorporates the most recent significant developments and policy measures since the beginning of 2023:
 - in Ottawa and Quebec (including budget measures)
 - in Washington and Brussels: significant bilateral initiatives with the United States and the EU
 - the work of international organisations, including the important and directly relevant work of the OECD
 - the [GC 2023 Data Conference](#) on February 22 and 23 2023
 - [CIRANO conference](#) on March 30: "Meeting the challenges of supply chains".
- The cross-analysis upon which this Burgundy Report is based lists a total of 93 detailed and interconnected recommendations. The areas of action recommended with the greatest intensity in the three reports are those relevant to public policies and regulation; governance and organisation; multi-partner public/private collaboration; human resources; financing and multimodal transport infrastructure; climate change; and domestic and international trade.
- The analysis offered and the roadmap proposed in this report takes into account the relevant public policy recommendations made by the OECD. It draws upon the experience and precedents established by other initiatives and programmes implemented in Canada, the United States and the European Union.



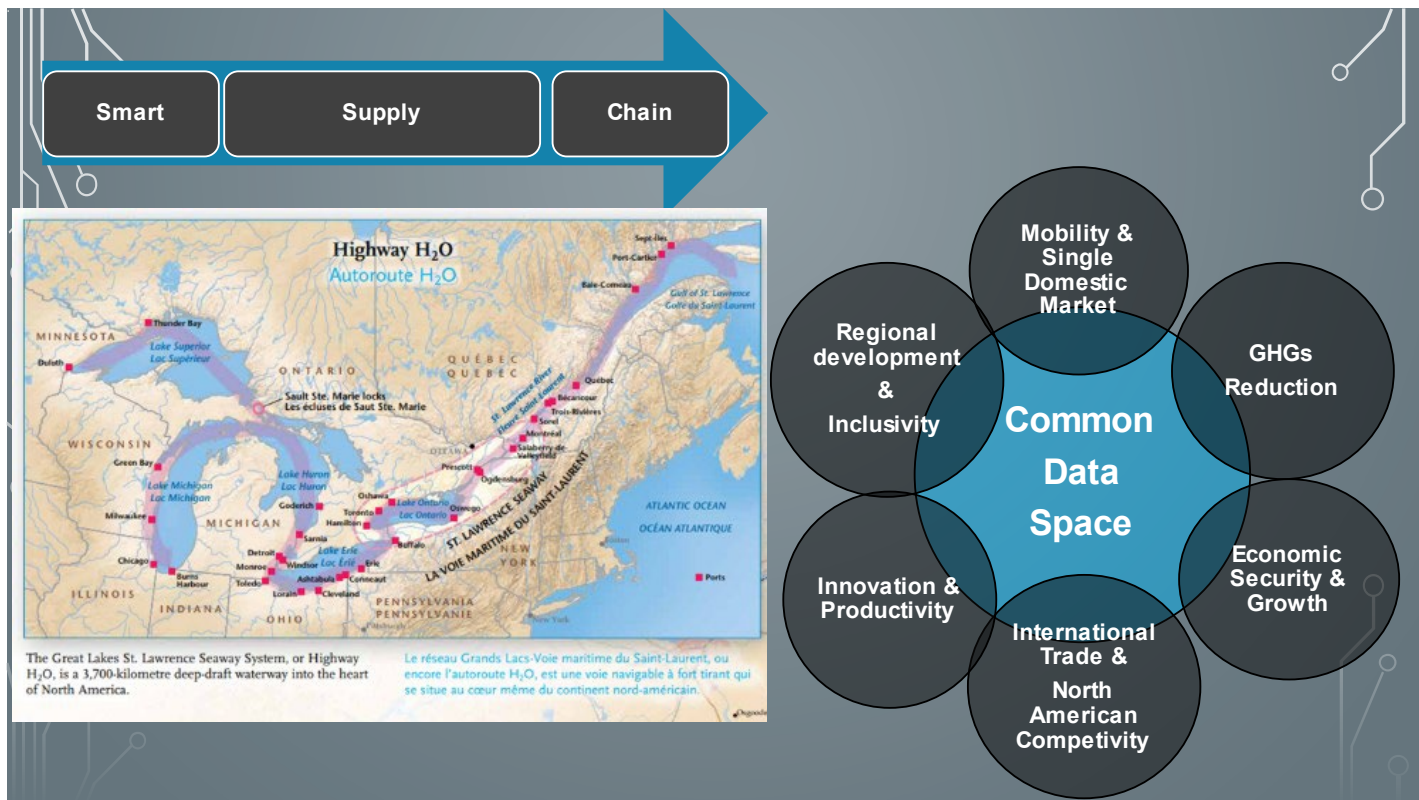
CONCLUSIONS

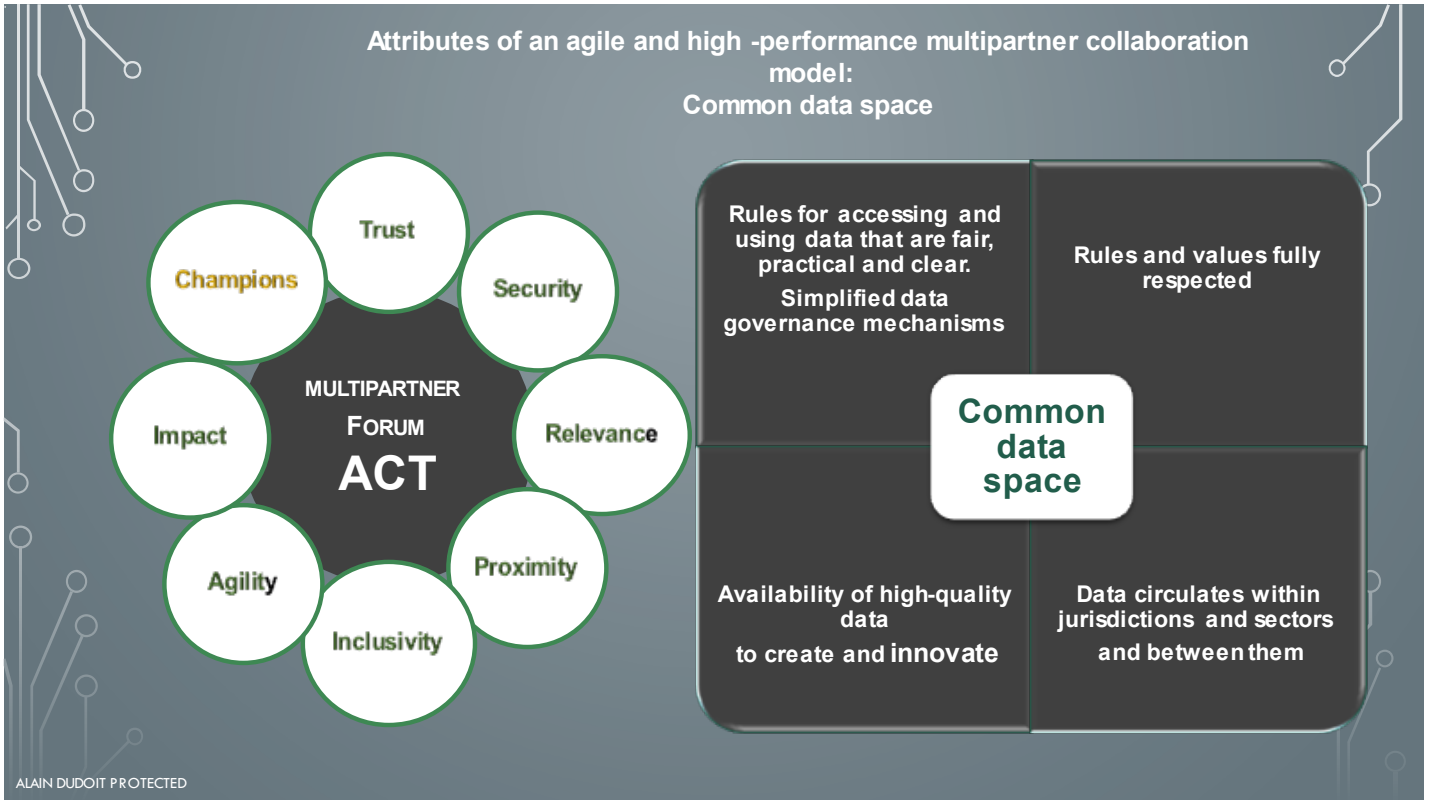
- The supply chain challenge is vast, and it will only become more complex over time. Governments in Canada must **act together** now, in conjunction with the efforts of our allies and partners, notably the United States and the European Union, to ensure the resilience of supply chains in the face of accelerating current and anticipated upheaval, geopolitical conflict and natural disasters.
- The resolution of this challenge is demanding and requires us to:
 - mobilize and pool public/private resources and multidisciplinary scientific expertise needed
 - work together to develop and collaboratively implement the strategies underway and the consolidated recommendations submitted in the three reference reports on the supply chain.
- The strategic St. Lawrence-Great Lakes economic corridor at the heart of North America and its natural extension to Europe cannot achieve its full growth potential without the creation of an intelligent supply chain and the creation of a single domestic market in Canada.
- The mobilizing roadmap towards a common data space for Canada's supply chain is inspired by [Advantage St. Lawrence's](#) forward-looking Smart Economic Corridor vision, builds upon the experience gained from various initiatives and programs implemented in Canada, the United States and Europe, and integrates them as appropriate.
- Its initial implementation in the St. Lawrence Great Lakes trade corridor will make it easier to access and subsequently share data from across the Canadian supply chain in a reliable and secure manner. Businesses, governments and individuals will have control over the data they generate, knowing they can trust how it is used to drive innovation.
- The accelerated joint development of a common data space will be a game-changer not only in terms of resolving critical supply chain challenges, but also in terms of the impetus it will generate in the pursuit of fundamental priorities in Canada, including the energy transition.



RECOMMENDATIONS

1. Clarify the legislative mandate of the Ministry of Transport by formally confirming integrated interdepartmental supply chain management.
2. Assign to one of the two Associate Deputy Ministers the overall responsibility for the national office and interdepartmental secretariat for the supply chain: champion within the federal civil service, chief negotiator at intergovernmental and international levels. The portfolio's various responsibility centres and resources would be consolidated under his/her responsibility.
3. Establish as soon as possible an independent multi-stakeholder "ACT" forum for structured consultation, exchange of expertise, cooperation, and coordination between leading experts from the public (federal, provincial, municipal), the transport and logistics industry and research. **Its dual mission:**
4. The immediate creation of a multi-partner public/private network for sharing data and exchanging knowledge applied to intermodal transport and trade.
5. The achievement by 2030 at the latest of a common data space in the Great Lakes/St. Lawrence Seaway trade corridor as a strategic asset of Canada's essential intermodal transport and supply chain infrastructure.





MAIN CHARACTERISTICS OF A COMMON DATA SPACE

- A secure, privacy-protecting infrastructure for pooling, accessing, sharing, processing and using data.
- A clear and practical structure for accessing and using data in a fair, transparent, proportionate and/or non-discriminatory way, as well as clear and trustworthy data governance mechanisms.
- Rules and values, in particular personal data protection, consumer protection legislation and competition law, are fully respected.
- The possibility for data holders in the data space to grant access to or share certain personal or non-personal data under their control.
- By sharing data, supply chains can become more efficient and products can be developed more quickly and innovatively.
- Incentives for companies to share data include increased access to the data of other contributors in exchange for access to the data they hold, analytical results derived from shared data, availability of services such as predictive maintenance services, and reduced time and cost to market for products.
- Data made available may be re-used in return for compensation, including remuneration, or free of charge.
- Participation of an open number of organisations/individuals.

Source: EU Commission Staff Working Document on Common European Data Spaces Brussels, 23.2.2022 SWD(2022) 45 final