



Seven lessons COVID-19 has taught us about data strategy

How Canada can maximize the value of data

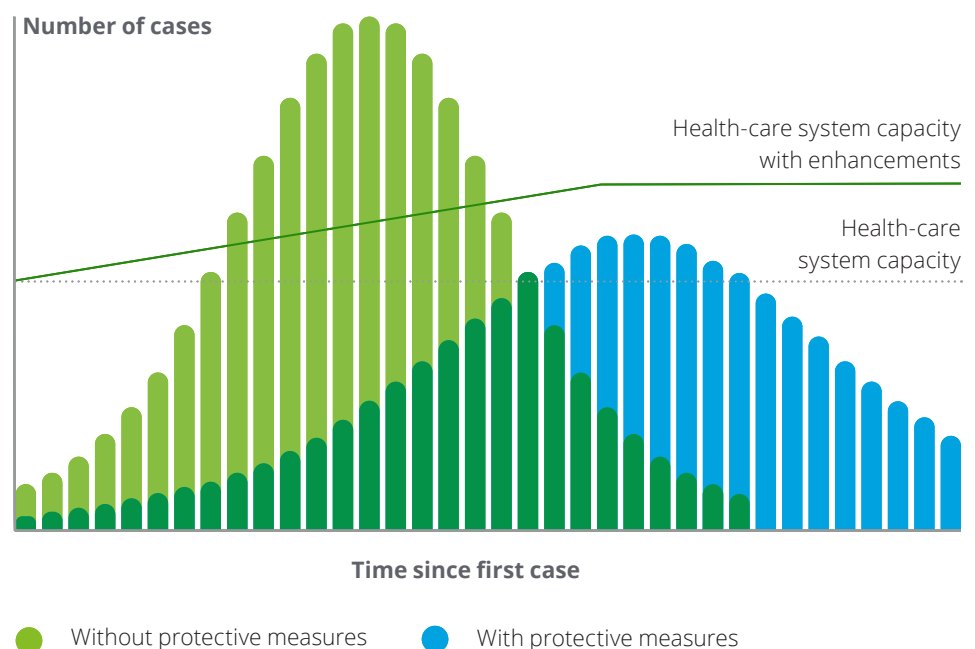
Data has played a significant role in governments' efforts to combat the wide-ranging repercussions of the COVID-19 pandemic. Several key lessons have emerged that can inform data strategy development throughout government departments, including defence.

Background: Data drives better decisions. Governments are not new to data-driven decision-making; their efforts to use data to replace intuition with objectivity are longstanding. During the COVID-19 crisis, defence departments worldwide have used data, analytics, and emerging technologies to inform their decisions about business continuity, force protection, health and safety, and, in Canada, Aid to the Civil Power, in parallel with government policy decisions regarding mitigation measures such as travel bans, quarantine measures, social distancing, school and business closures, and economic aid.

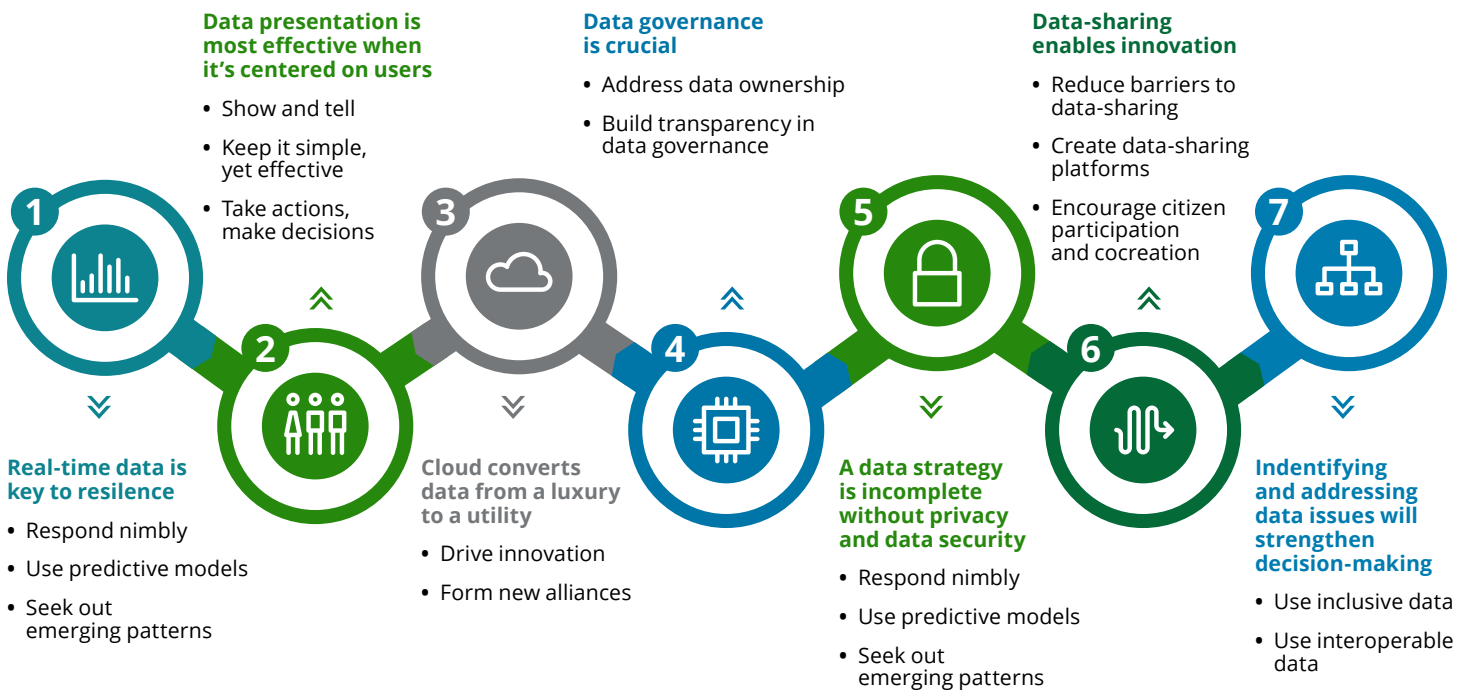
Key insight: The pandemic has highlighted that data is one of government's greatest assets. While abundant data is available, integrated and holistic data strategies are needed to maximize the value of the information and decision-making derived from data.

With regard to the needs of defence departments, the important lessons and insights that follow should be considered in an operational and institutional context: framing and developing biometric policies, maximizing the effectiveness and efficiency of process/exploitation/dissemination of surveillance and reconnaissance feeds, prioritizing capital and infrastructure investments, and managing the supply chain with certainty.

These seven key lessons derived from the COVID-19 response in Canada provide the opportunity for governments to refresh and strengthen their existing data strategies. While the lessons are centred on data in a pandemic context, the same principles apply to dynamic and long-term policymaking situations.



Seven key lessons COVID-19 has taught us about data strategy



1 Real-time data is key to resilience

Because of the pandemic, governments have accelerated the use of real-time, data-intensive approaches to understand and apply available economic and health data to decision- and policymaking. Real-time, or “high-velocity,” data can be used in many ways, such as to:

- Respond nimbly. Consider the objective early, and collect the new data needed to inform agile decision- and policymaking. Focus on the data that’s needed for the task at hand, not just that which is available. It may also necessitate qualitative and professional military judgment data.
- Use predictive models. A host of government, academic, and health-care institutions developed and used models to predict the spread of the virus. In a defence context, modelling provides both situational insight and the ability to test policy and operational options against current and predicted futures.
- Seek patterns. Artificial intelligence (AI)-driven platforms can quickly and continuously assess and identify valuable patterns informing the decision-making processes, both operational and institutional.

2 Data presentation is most effective when it's centred on users

Using the basic principles of data visualization, governments can nudge behaviour. A prime example from COVID-19 is Johns Hopkins’ “Flattening the curve” case tracker, interactive graphics that demonstrate daily infection rates. Top practices observed in this lesson include:

- Show and tell. When determining how to present data, consider the type of decision and how decision-makers and audiences process information.
- Keep it simple, yet effective. Data used should be simple, quick to understand, and clearly convey the message to help inform decisions for both operational and institutional needs
- Make decisions, take actions. The goal of data presentation is to improve decision-making and the ability to take action, which requires understanding what information is required to do so. Dashboards must enable decisions to be reached and resulting actions to be monitored.

3 Cloud converts data from a luxury to a utility

During the pandemic, Government of Canada (GoC) departments shifted to a business-continuity mode, using the cloud for telework. This has led to new forms and norms of distributed collaboration—and a massive increase in the amount of data stored on the cloud. Effective ways to address this are to:

- Drive innovation. When combined with 5G, increasing use of the cloud will enable significant new operational and institutional opportunities for data capture, analysis, and assessment, and will create new collaboration and service-delivery options.
- Form new alliances. Cloud-based tools, the Internet of Things (IoT), and 5G will accelerate the potential for information-sharing among and within GoC departments and with engaged stakeholders. Framing with whom and for what purpose data is collected and used will drive more responsive collaboration and more effective government.

4 Data governance is crucial

The pandemic has highlighted concerns regarding data usage and raised important questions about its governance, creating an understanding of the need for robust data-governance frameworks. What are the key actions to take?

- Address data ownership. Data control and ownership is essential in complying with current GoC and allied privacy and security requirements. Establishing frameworks that address the purpose of the data, who manages it, and when or how it can be captured, stored, and shared can make data usage more ethical and effective, even under the pressure of a pandemic or military operations.
- Build transparency into data governance. Transparency in how data is captured, structured, and used raises trust and increases the likelihood of compliance with rules and security protocols.

5 A data strategy is incomplete without privacy and security

With significant amounts of personal data being collected by governments, there are concerns about data protection, particularly given the risks of data breaches, phishing scams, ransomware attacks, and cyber espionage. Governments must:

- Implement privacy by design. Privacy will protect individuals' information by incorporating the requirement upfront into the design of technologies, security processes, and infrastructure. Privacy measures include anonymizing data, using cyclic keys to protect identity, and requiring explicit user consent for data use.
- Build data-protection coalitions. Proactive collaboration with stakeholders will identify and address legal, ethical, and privacy concerns in planning, operations, regulation, and legislation.



6 Data-sharing enables innovation

The pandemic has pushed governments to evolve existing data-sharing and interoperability norms in order to accelerate cross-sector and cross-border collaboration, ultimately fostering innovation. Best practices in this lesson that we noted are to:

- Reduce barriers to data-sharing. In planning for a response to specific events, identifying and developing special data-sharing frameworks can inform and enable a rapid response to an emerging situation.
- Create data-sharing platforms. Develop platforms with allies and key stakeholders, while respecting regulation, legislation, and information-sharing agreements.
- Encourage citizen participation and creation. When employees and citizens understand the purpose, value, and their role, non-traditional methods of data collection offer enormous potential for effective decision-making and policymaking.

7 Identifying and addressing data issues can strengthen decision-making

Data-driven decisions are only as reliable as the data itself. Analysts and decision-makers should identify and correct data issues that challenge government, such as biases, reporting inconsistency, operational fog/uncertainty, and lack of completeness.

- Use inclusive data. Identify the data needed to ensure the appropriate range of issues and factors related to the decision are included in the analysis, noting and making assumptions when not possible; and
- Use interoperable data. To avoid biases and ensure reliability, data should be collected from multiple sources. Existing and new data standards can also reduce disparities in data.

The COVID-19 pandemic has proven that data is one of government's greatest assets. While it's available in abundance, the Government of Canada—including the defence department—needs integrated, holistic data strategies to maximize the value it can gain from the data. These seven key lessons we noted from the coronavirus response provide an opportunity to refresh and strengthen existing governmental data strategies.



This is a Canadian perspective of a Deloitte Insights article from the best of our global network.

The original article may be found here:

<https://www2.deloitte.com/us/en/insights/economy/covid-19/government-data-management-lessons.html>

Contact**Nihar Dalmia**

Partner, Consulting
nidalmia@deloitte.ca

Acknowledgements**Darren Hawco**

Executive Advisor, Consulting

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