



# Data-fueled government

## Breaking down silos with turbo-charged data

Adita Karkera, Jaimie Boyd, Jean Barroca, and Adam Routh

**G**OVERNMENTS USE INFORMATION technology to improve policy, decision-making, and service delivery by gleaning useful insights from data. But disparate leadership, priorities, and budgets have created a patchwork approach to technology adoption, with no guarantee that systems can easily communicate. Policies governing data-sharing that overlook the power of shared data have routinely hindered collaboration.

However, this situation began changing rapidly as the COVID-19 pandemic began. As policymakers and health experts desperately sought up-to-date information, governments were forced to break down data silos, coordinate with companies and universities, and expand their roster of data talent.<sup>1</sup> This trend toward greater collaboration and transparency appears poised to continue, as

agencies increasingly use shared data to improve outcomes and integrate services.

### Trend drivers

Several drivers are propelling greater data-sharing to improve insights and deliver existing and new services.

- **Accelerated adoption of artificial intelligence (AI) and cloud technologies** as well as policies that make data-sharing easier.
- **The pandemic has created urgent incentives** to use and share more data, requiring new policies and a greater focus on data ethics.
- **Many organizations are creating or expanding the role of the chief data officer (CDO).**

## Trend in action

The pandemic forced governments to forge more connections to share data. Many quickly moved to a virtual-first environment that initially strained their IT capabilities, but ultimately aided collaboration both within government and among government, industry, and academia.<sup>2</sup> Shared data became critical to delivering services effectively and solving pandemic-related challenges. Agencies and departments that had fallen behind on adopting cloud and other data-centric tools rushed to catch up, quickly crafting data policies and hiring—or rethinking the role of—the chief data officer.<sup>3</sup> Now, it’s becoming increasingly common for governments to: 1) Focus on data to improve services and anticipate the need for new ones; 2) break down silos to improve coordination among agencies and; 3) collaborate with industry and academia.

These trends are allowing governments to do more for their constituents, and to do it more efficiently.

### ADOPTION OF DATA-CENTRIC TECHNOLOGIES

Governments’ increasing reliance on digital technologies for day-to-day business generates

huge amounts of data. From emails to spreadsheets to teleconference presentations, organizations create countless megabytes of data that must be filtered and saved. As the volume of data grows, so too does government’s need for technologies and policies that can generate valuable insights from it.

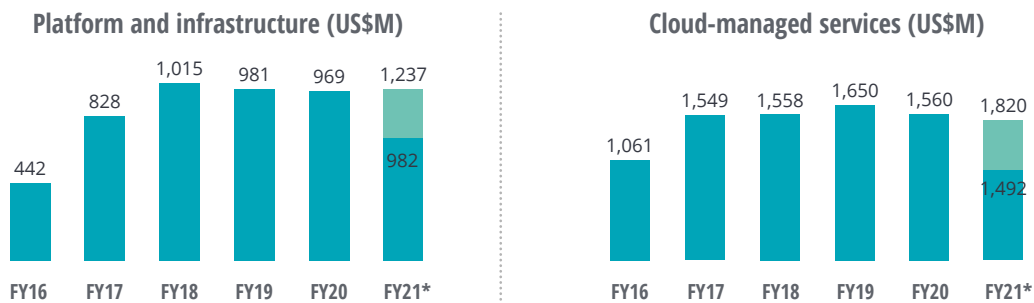
Governments have been adopting data-centric technologies and tools such as AI and cloud, but their adoption is often agency-specific and weighed against other priorities and budgetary considerations, making it difficult for agencies to share and act on data effectively.<sup>4</sup>

The pandemic sharply increased the value of data technologies and tools.<sup>5</sup> For example, the increase in demand for services such as unemployment insurance and the need to administer and deliver them in a virtual-first environment made cloud adoption a major priority.<sup>6</sup> In the US state of Rhode Island, for instance, the adoption of cloud services increased the state’s capacity to handle simultaneous unemployment insurance calls from 75 to 2,000.<sup>7</sup> US federal spending on cloud platforms and services has risen accordingly, although less dramatically than one might expect (figure 1).

FIGURE 1

## The pandemic boosted US federal spending on cloud infrastructure and managed services

■ Actual ■ Estimate



Note: \*Data is available until August 30, 2021. Defense and intel data is delayed by three to six months.  
Source: Deloitte analysis of Federal government contract data from Bloomberg.

With the proper tools, governments can integrate datasets, applications, and devices to facilitate internal and external interactions. The US National Institutes of Health, for example, launched the National COVID Cohort Collaborative (just one of many similar measures) to study COVID-19 and identify possible treatments. This cloud-based data-sharing and analytics platform has helped government experts, researchers, and commercial organizations exchange data and observations, revolutionizing the sharing of clinical research.<sup>8</sup> Organizations have also used AI-powered solutions to improve their services. For example, a machine learning model and open data were used to identify participants for the Johnson & Johnson vaccine trials.<sup>9</sup>

While commercial companies and universities remain ahead of government in their use of data tools, government's response to COVID-19 has helped level the playing field. To further this trend, however, government agencies need to tackle challenges such as organizational silos and inadequate data standards.

### BALANCING DATA-FIRST WITH ETHICS-FIRST

Large, shared datasets can offer valuable information, but their use entails significant risks.<sup>10</sup> COVID-19 contact-tracing applications, quickly developed and implemented around the world, represent one of the most ambitious uses of such datasets to date. This data contains detailed personal information that, if leaked or used inappropriately, could lead to serious invasions of personal privacy—and erosion of public trust.<sup>11</sup>

Beyond privacy issues, however, due diligence is important to avoid drawing incomplete or erroneous conclusions from the data. Large datasets can contain inherent biases or represent only a sliver of a larger and more complex situation. Users drawing insights from them, therefore, need to consider how

data is collected and analyzed, including any inherent bias it may contain, and how the story it tells fits into the larger picture. Maintaining such safeguards requires robust policies.

As COVID-19 spread, governments quickly focused on protecting privacy during data collection. Italy's data protection authority, Garante, adopted a measure outlining how the nation's authorities would balance the European Union's General Data Protection Regulation with the need for tracing data. The Italian government also fostered a discussion with industry and trade representatives to define a protocol for handling sensitive information used in response to COVID-19.<sup>12</sup> Ireland and France adopted similar approaches.<sup>13</sup>

Data-sharing among national jurisdictions became an immediate priority as well; in Australia, for instance, the federal, state, and territorial governments quickly agreed on secure protocols.<sup>14</sup> In the United States, eight states are collaborating with the National Governors Association to enhance their ability to safely link intrastate health data systems.<sup>15</sup>

The pandemic solidified the need for agency leaders to think about data-sharing and protection policies, building on frameworks such as the European Union's General Data Protection Regulation (GDPR) and Canada's Personal Information Protection and Electronic Documents Act. The United Kingdom's secretary of state for digital, Oliver Dowden, has indicated that his government wants the pandemic's high degree of data-sharing to become standard.<sup>16</sup> In Australia, the New South Wales government published a new data-sharing strategy focused on lessons learned from the 2020 bushfires and the pandemic. The strategy aims to ensure that government employees understand the importance of using data to inform decisions affecting constituents and that they have the skills needed to use the data effectively and safely.<sup>17</sup>

## EVOLVING ROLE OF THE CHIEF DATA OFFICER

Increasing reliance on data insights has focused attention on the chief data officer, who is responsible for integrating data and developing best practices.<sup>18</sup> The scope of the CDO role has varied widely among government entities, with differing expectations, responsibilities, and authorities.<sup>19</sup> The pandemic, however, changed the role almost overnight, permitting CDOs to drive closer integration of data within and among governments, academia, and private organizations.<sup>20</sup>

In the United States, many state CDOs created COVID-19 dashboards to keep the public informed on the pandemic's spread. They also leveraged state health information exchanges to provide better insights, published data on the use of stimulus funding, and in some cases, directly led their health department's data efforts. In Arkansas, the CDO joined the state's COVID-19 Technical Advisory Board to review and evaluate new technologies for testing and contact tracing.<sup>21</sup> As governments move toward a postpandemic normal, CDOs are measuring economic impacts and using data to measure progress and assess milestones for reopening.<sup>22</sup>

A key feature of the maturing CDO role is the development of talent to enable data-sharing across government. Estonia's CDO, Ott Velsberg, has appointed experienced data stewards throughout the government, who can ensure the availability of high-quality data and oversee data-sharing.<sup>23</sup> The effort involves close collaboration among the nation's CDO, chief privacy officer, and chief information security officer to ensure that information is used securely and ethically.

The involvement of CDOs in the pandemic response has helped clarify their roles and solidify their importance. In a 2021 Data Foundation survey, about 75% of US federal CDOs said their role was clear, versus just 21% in the previous year. During the same period, the share of CDOs with more than 25 staff members rose from 25% to 40%,

while the number of CDOs reporting directly to the chief executive rather than the chief information officer more than doubled.<sup>24</sup>

The CDO's maturing role leaves governments better positioned to tap into the value of shared data to provide services, gauge performance, and respond to crises. "The data nice-to-haves are now mission-critical," says Arizona CDO Jeff Walkover, "and we should leverage this opportunity to build what we need for the future."<sup>25</sup>

## Moving forward

Governments should focus on three basic areas to ensure that they can use shared data to improve services and be crisis-ready:

- **Maintain the emphasis on data technology and relationships established in response to COVID-19.** The value generated by these technologies and relationships is too great to let them falter. A data-centric approach provides greater value to constituents while improving performance. And when the next crisis comes, data could play a valuable role.
- **Continue to develop proactive policies on data privacy and security.** Rather than waiting until the next crisis or privacy issue, governments should continue to develop policies that enable data-sharing within government and with industry and academic partners while addressing ever-changing privacy concerns. As with economic policy, data policy should constantly evolve, based on the changing ways in which information is used. This will require *continuous* collaboration among CDOs, information security officers, and privacy officers.
- **Increase the CDO's value.** Government leaders should continue to support and develop the role to maintain its ability to drive the power of shared data.

**MY TAKE**

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***The “once-only” principle is one of the flagship elements of the Digital Decade Agenda***

Optimizing the use of data remains a significant opportunity as well as a challenge for governments, as cultural obstacles remain. We have a history of government bodies being separate legal entities with their own specific data holdings collated for specific purposes, usually set out in legislation. Moreover, they also tend to have cultivated their own methods for how they do things and even the technologies they use.

The concept of digital government, of course, is in direct contrast to this, involving a single access portal, intuitive ways of presenting information or services, and most importantly, the “once-only” principle (OOP), in which data is collected from individuals just once and then used many times.

OOP is one of the flagship elements of the European Union’s Digital Decade Agenda. The EU membership understands that its implementation will improve services, reduce costs, improve data protection, and allow public administrations in one member state to use information provided in another.

But this won’t be easy. In addition to cultural challenges, we have legacy systems, legislative barriers, and a small but highly vociferous group who oppose increased data-sharing of any kind. So how do we move forward? The solution is to continue the big conceptual discussion, but simultaneously push to resolve people’s frustrations with “the system” by understanding their journeys and the pain they’ve experienced—and committing to improvements.

The challenge may be great, but the rewards are compelling, and we must seize the opportunity.

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