

80% of public sector organizations have started implementing data sharing initiatives

New report finds that collaborative data ecosystems help governments to craft a response to systemic challenges, but widespread adoption is yet to come

Paris, January 26, 2023 – According to a new report from the Capgemini Research Institute, [‘Connecting the Dots: Data sharing in the public sector’](#), a vast majority (80%) of public sector organizations surveyed across the world have started implementing collaborative data ecosystems¹ initiatives, thus recognizing the need for a joined-up, data-driven approach to tackle the complex challenges they are facing. However, most are at the early stages of implementation, and few have deployed data ecosystems at scale. Besides the challenges of technology, people-based challenges are the main concern – specifically, culture and trust.

Capgemini’s research reveals that those that have deployed collaborative data ecosystems or are in the midst of a deployment phase - are already realizing significant benefits of effective data sharing, including an improved citizen experience, and better data-driven policy making.

Tackling operational and societal challenges with effective data sharing

The report finds that collaborative data ecosystems are helping public sector organizations across key functional areas including administration, security and defense, tax and customs, and welfare. For instance, 81% of local, state and central administrations that have deployed or are deploying data ecosystems say that they improved citizen engagement and 69% their sustainability roadmaps. 93% of respondents also highlight an increase in open government.

In addition, citizens are able to benefit from better government services such as a more targeted delivery of welfare programs for the most vulnerable citizens, and improved public safety, police departments citing notably better juridical implementation and improved response times. 74% of public sector organizations that have deployed or are deploying data ecosystems are also seeing improved resilience against cyberthreats.

"Whether it's the pandemic, societal issues such as youth unemployment, or the climate and biodiversity crises: the challenges we face today require a joined-up response from our governments. That's why they have to share data systematically," comments Marc Reinhardt, Global Industry Leader for Public Sector at Capgemini. *"Creating a culture where decision-making is informed by real-time data is a long-term journey. All players in the data ecosystem must have trust and confidence. But the measurable benefits to citizens' experience and government efficiency show that data sharing improves outcomes."*

Adoption trends and barriers

¹ For the purposes of this research, a public sector data ecosystem is defined as: "A system of data collaboration involving a public sector entity along with other private and/or public organizations and/or citizens. These data collaboration initiatives should benefit the public organizations participating in the ecosystem and/or other target beneficiaries, such as citizens, and help them attain their overall strategic goals and mission."



The report finds that barriers related to trust, culture, and technology are currently impeding wider adoption. For example, 56% of respondents face one or more trust related challenges; it includes challenges such as citizen resistance to sharing data, lack of trust in the quality of the data involved, among others.

The research also highlights the important role of talent. Public sector organizations require the availability of the right skillsets and the presence of a data-driven culture within their organizations, in addition to developing a holistic skilling program to equip employees with the necessary data management and Artificial Intelligence skills, as well as skills related to managing data privacy. Only 55% of organizations have reported having trained employees on the ethical use of citizen data.

Building trust with privacy preservation technology

Embedding security and privacy by design is critical to the success of collaborative data ecosystems to allow public organizations to balance the benefits of data sharing with the need to safeguard data privacy. This also requires developing strong governance structures, data mesh architectures² as well as the use of Privacy-enhancing technologies (PETs) such as differential privacy³, federated learning⁴, and homomorphic encryption⁵.

Read the full report [here](#).

Methodology

The Capgemini Research Institute surveyed, in June 2022, 1,000 senior officials from public sector organizations from 12 countries across North America, Europe and Asia, that are working on or planning to work on data ecosystems. The Capgemini Research Institute team also conducted in-depth interviews with more than 20 senior public sector leaders and academics. The survey covered key functional areas including welfare, tax and customs, security and defense, and local, state and central administrations.

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² **Data mesh architectures** allow for data governance policies to be defined and managed centrally. In the context of data ecosystems, this ensures that security and compliance in the ecosystem are managed according to a common set of standards and policies.

³ **Differential privacy** is a technique that introduces statistical noise when performing a data analysis on a dataset to mask identifiable characteristics of individuals within that dataset.

⁴ **Federated learning** is a decentralized approach to developing machine learning models that allows AI algorithms to be trained using data that is stored locally in multiple, distributed sources. As a result, data does not need to be pooled in a centralized location, which helps protect the privacy of sensitive data.

⁵ **Homomorphic encryption** is a technique that allows mathematical computations to be performed on encrypted data without first decrypting it. The results of the computations remain encrypted and can only be decrypted with the correct decryption key. As such, homomorphic encryption can enable organizations to share sensitive data for processing and analytics, without revealing the original data.