

**Tech-driven, inclusive,  
and trustworthy**

**Envisioning the future of national census agencies**

Satwinder Rayet, Senior Director, Deloitte UK

# Background

## Who are we

Deloitte is a multinational professional services network. We offer industry-leading audit, consulting, tax, and advisory services to many of the world's most admired brands to organizations—from the Global 500 to private businesses—to build better futures.

## Satwinder Rayet

Transformation leader with 25 years Global experience in £1Bn+ delivery programmes. Worked across England, Wales, Northern Ireland and Scotland for Census 21 & 22. Knowledge expert for the Deloitte Global Census Community of Practice.

## About the Deloitte Center for Government Insights

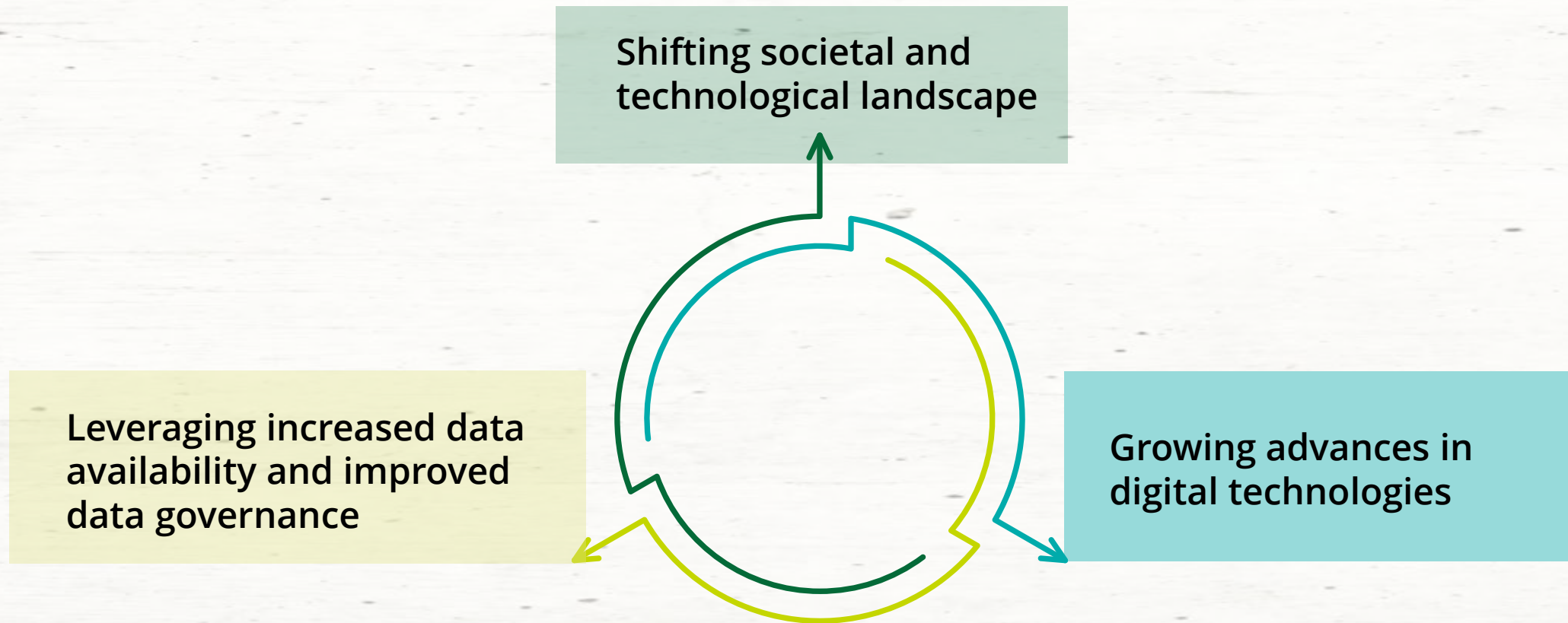
A think tank that shares **inspiring stories of government innovation**, focused on the adoption of **new technologies and management practices**. The center produces **cutting-edge research** that guides public officials with essential insights in an easy-to-absorb format.

## Research Methodology

- **Over 25 subject matter specialists** at Deloitte and senior executives from national statistics agencies in Canada, the US, Scotland, and New Zealand were interviewed
- **Tapped into proprietary survey data** on digital government and citizen experience
- **Extensive secondary research** including academic journals, books by scholars, magazines, databases, and more.

# Change is shaping the future of census agencies

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National census agencies are adapting to these changes while overcoming challenges to remain effective and relevant.

# National census agencies are transforming operations and practices to provide faster, better, and real-time population insights

**Evolving a security-by-design mindset**

**Leading with trust in a fractured public trust environment**

**National population data as a knitwork of administrative datasets**

**Showcasing the value of census**

**An era of tech-infused census**

**Designing for equity**



# Polling Question

**As censuses transform in the future, what do you feel is the most important? Rank the following in order of importance:**

- a. Tech-infused census**
- b. Using admin datasets**
- c. Security-by-design**
- d. Public trust**
- e. Demonstrating value of census**
- f. Designing for equity**



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# An era of tech-infused census

Advances in technology and data analysis will play a key role in transforming census counts in 2030 and beyond

## Technology can upend census operations and improve productivity

Technology	Application areas
Geospatial or geographic information system technology	Ability to create accurate and up-to-date maps of large enumeration areas. Also, analyze and visualize changing spatial patterns like population density, urban sprawl, and changes in physical structures.
Remote sensing, sensors, and satellite	In-situ sensors and satellite technology help improve agriculture census operations by enhancing accuracy and monitoring crop growth, land use, and water usage.
Artificial intelligence and machine learning	Ability to automate data processing, identify data inaccuracies, reduce manual error rates, identify patterns and trends in data, and develop predictive models.
Generative AI	Help democratize census data sets for nontechnical users by improving the ability to retrieve insights through simple natural language questions.

Source: Deloitte analysis



# National population data as a knitwork of administrative datasets

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Today, more countries are considering using administrative data as the starting point for generating national population statistics and not as a replacement for traditional surveys.

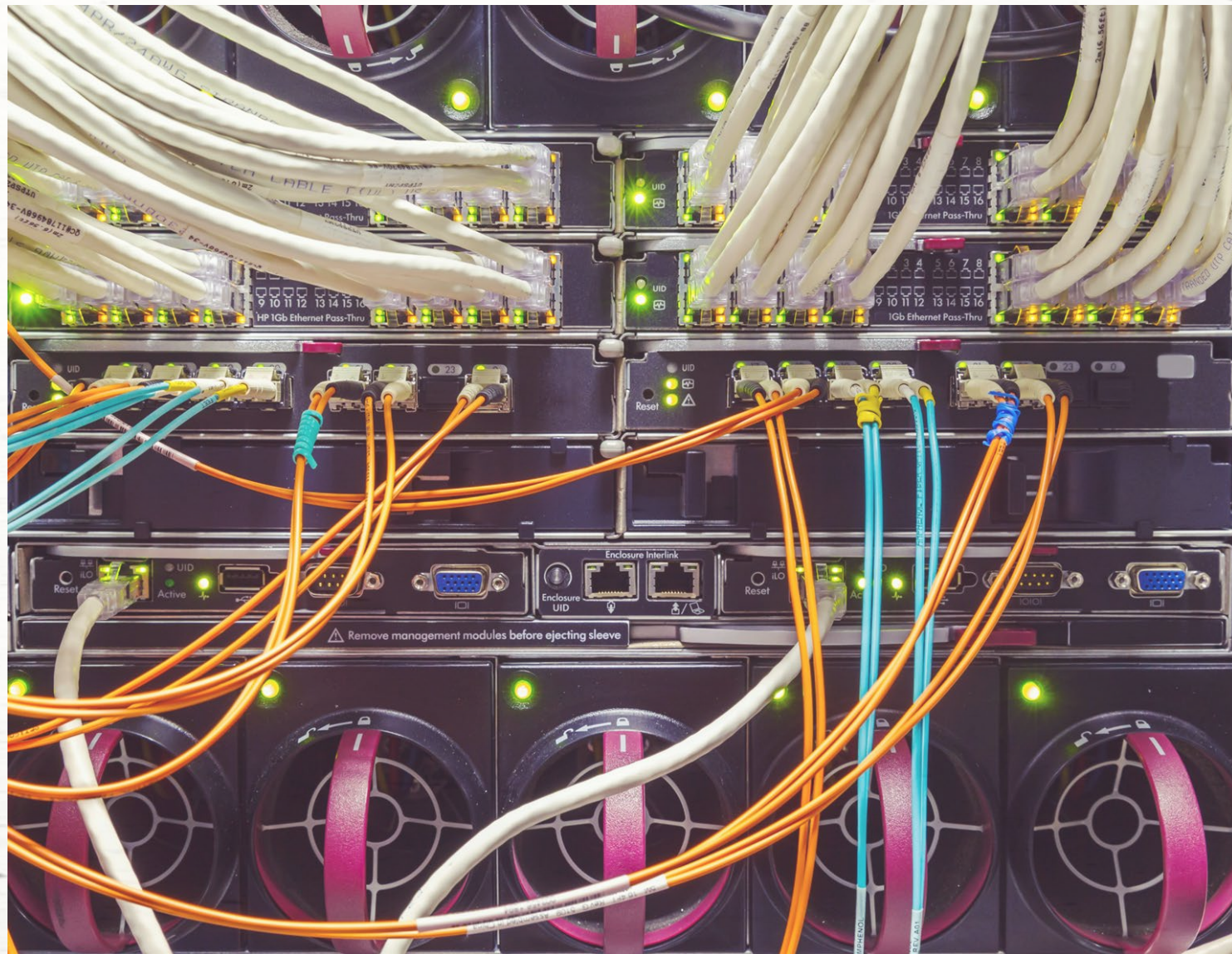
**Nordic countries were pioneers in using data from administrative sources/registers**

(e.g. the population register, building or dwelling register, tax register, social security register, business register, etc.)



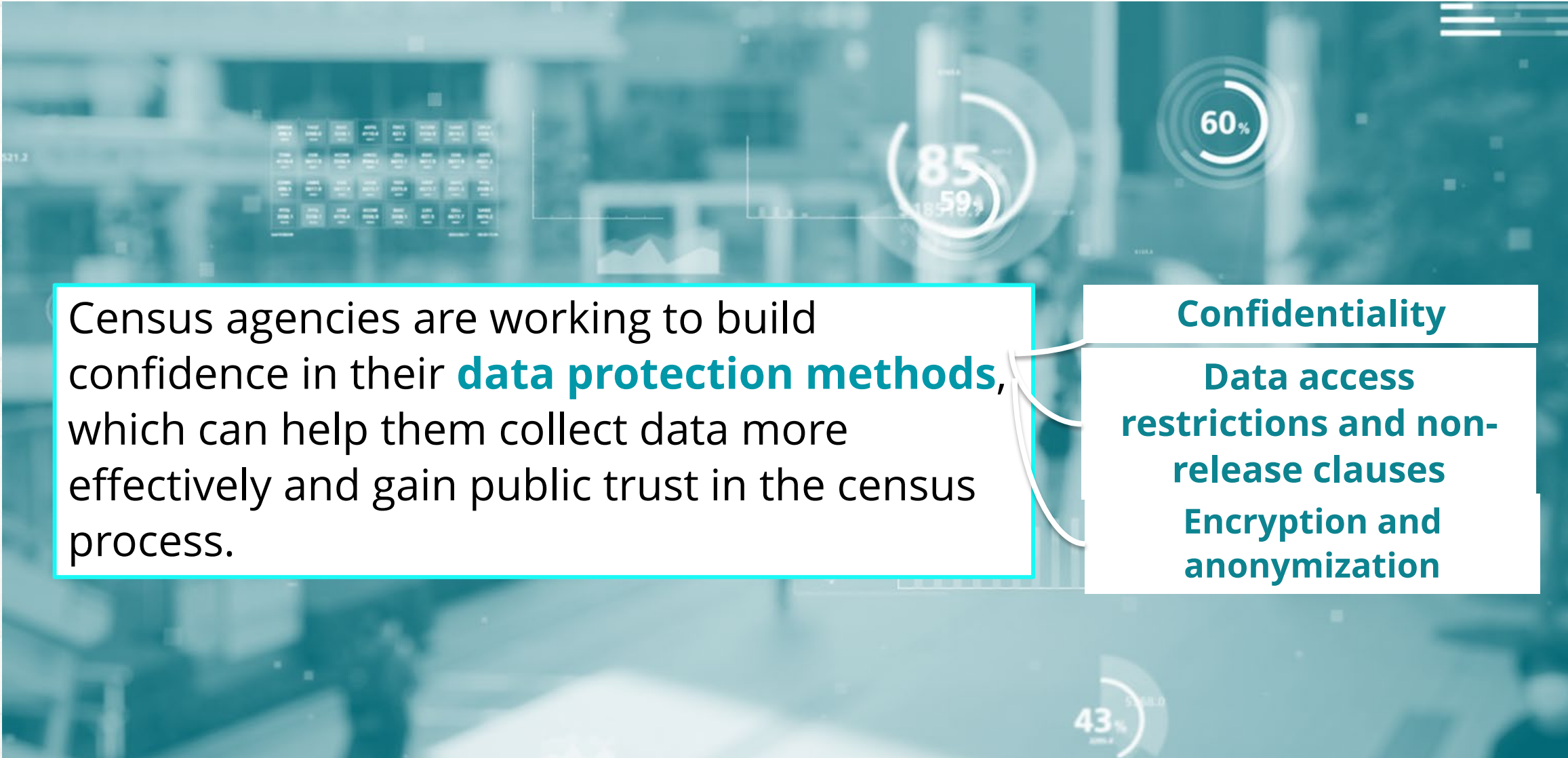


New Zealand is building an **Integrated Data Infrastructure** to bring together data from various government silos into a **single platform**





# Evolving a security-by-design mindset



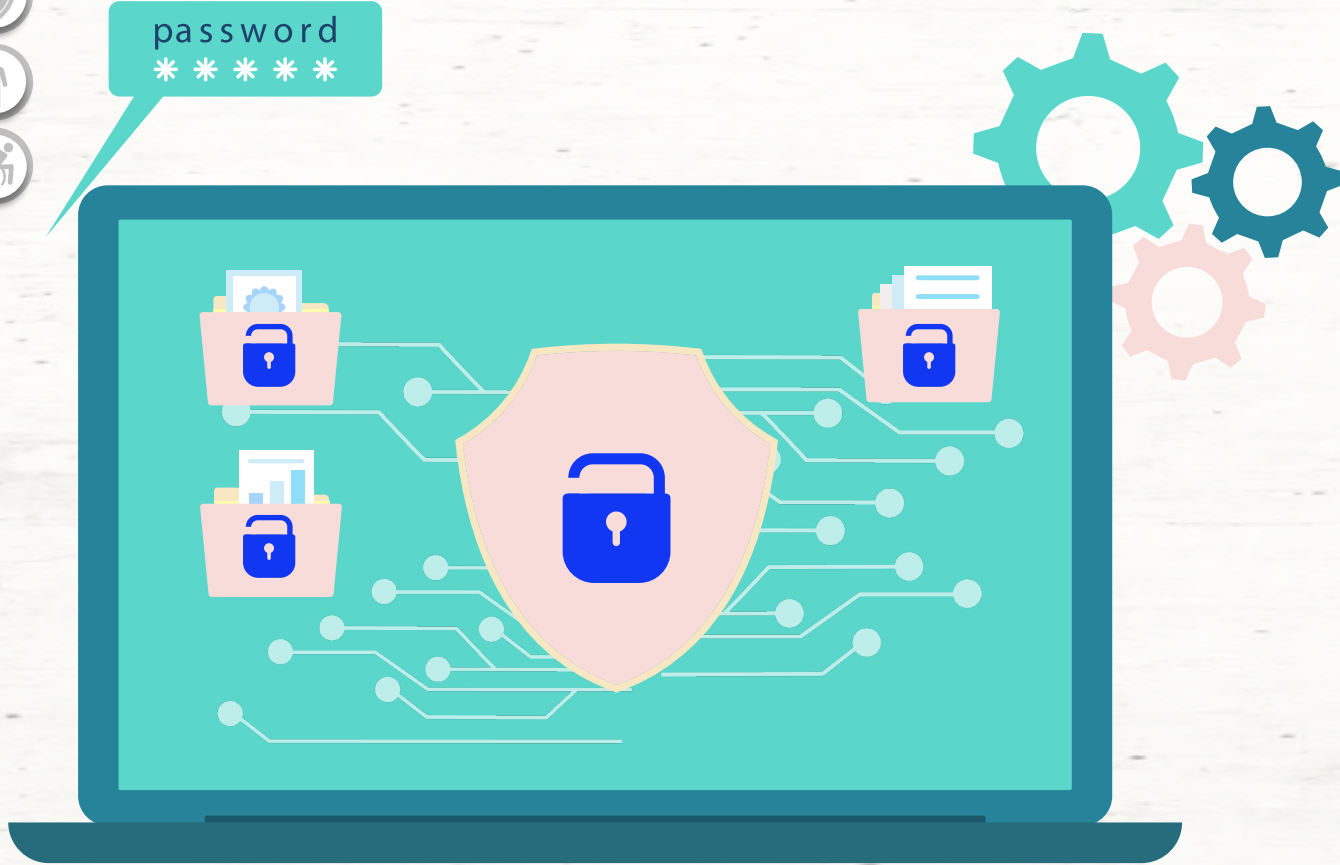
Census agencies are working to build confidence in their **data protection methods**, which can help them collect data more effectively and gain public trust in the census process.

**Confidentiality**  
**Data access restrictions and non-release clauses**  
**Encryption and anonymization**



password

\* \* \* \* \*

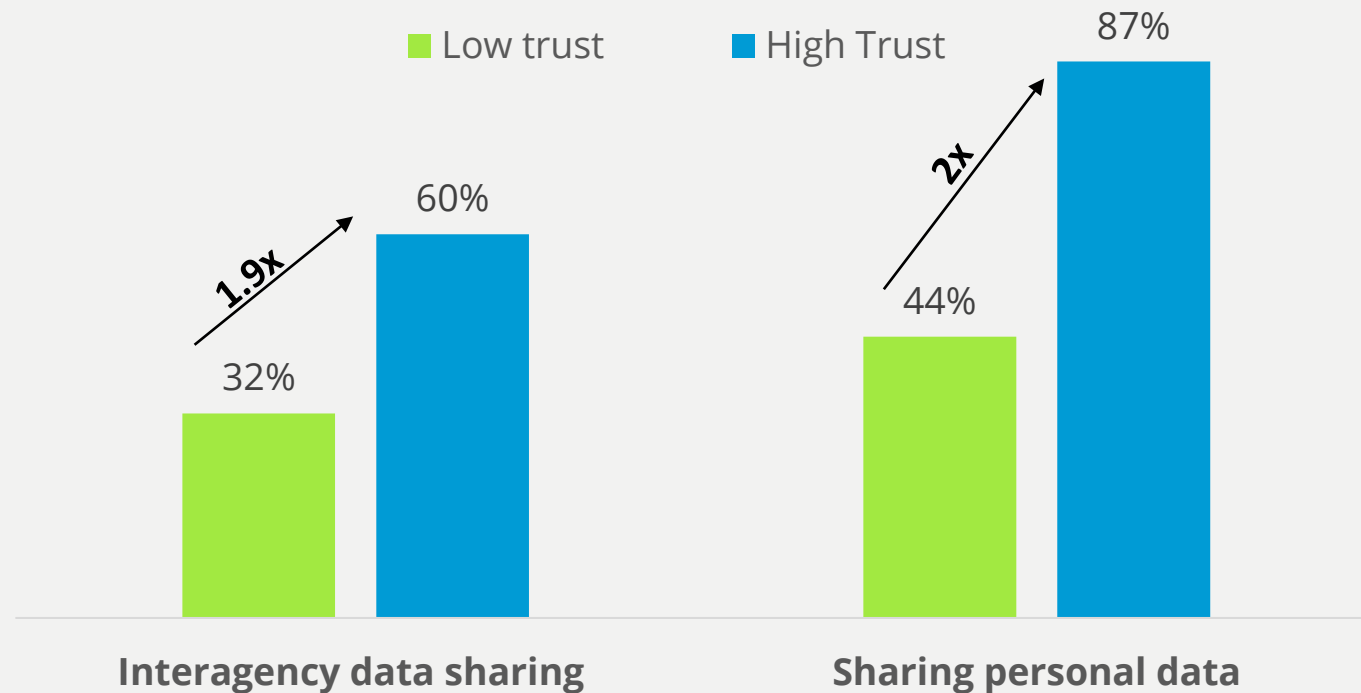


The **US Census Bureau** implemented a **differential privacy approach in 2020** to protect identities and personal information. The technique involves intentionally injecting “noise” into the raw data so that there is a variance from the actual data.

# Leading with trust in a fractured public trust environment

One outcome of declining public trust is that people are less willing to share personal data with the government, including for census surveys.

Results from Deloitte's Digital Government and Citizen Experience Survey suggests Higher trust is linked to higher comfort in the government collecting personal data and sharing it internally



Source: Deloitte's Digital Government and Citizen Experience Survey, 2023

# Tapping into community and network trust

Census agencies are employing various strategies to obtain more diverse and inclusive data to ensure the representation of marginalized communities in policymaking.

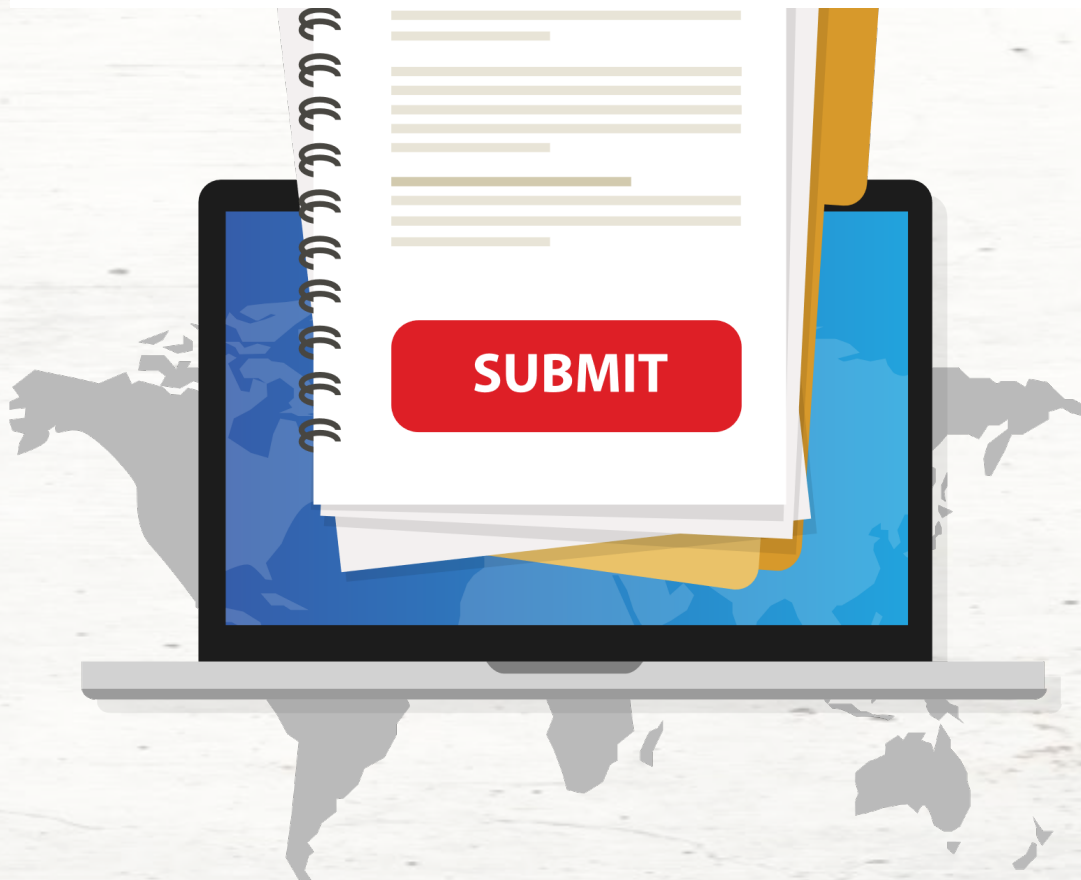
**The US Census Bureau's ecosystem approach** in building trust was important in helping drive participation and achieving a **99.9% response rate in the 2020 count**

The **National Records of Scotland** focused on three core tenets to ensure a high participation in the census exercise: a multifaceted communication strategy, in-person and online support to fill out the survey and tapping into networks of trust.

**Statistics New Zealand** leveraged trust networks to help improve the census experience and participation of Indigenous communities.

# Showcasing the value of census

Government statistical agencies should keep demonstrating and reiterating the value of census data to individuals, communities, businesses, and other government agencies.



Remote island areas such as **Orkney and Shetland** were the **quickest to respond** to the recent census survey in Scotland with the highest response rate since they **understand the value of data is critical** for funding local infrastructure projects and other services like schools and hospitals.

# The count is a first step towards systemic inclusion

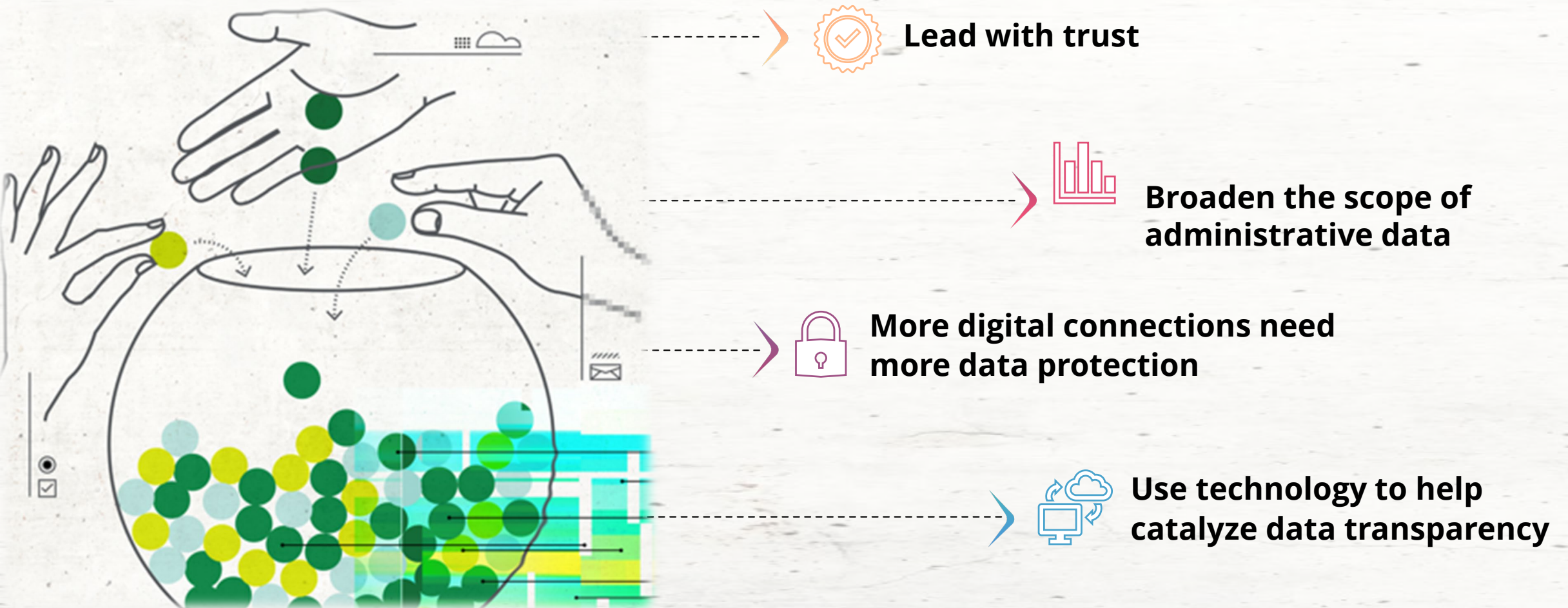
Understanding and acceptance of gender diversity is an important part of the census exercise.

In the 2021 census, the **UK Office of National Statistics** included sexuality and gender identity questions for the first time in the UK.



# Moving forward

Census agencies globally are transforming how they collect, analyze, and share data.



# Polling Question

- 1. What did you take away from the session?**
- 2. What didn't we cover?**
- 3. What would you like to see future research on?**



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# Scan the QR code to learn more about the future of census



## **Tech-driven, inclusive, and trustworthy: Envisioning the future of national census agencies**

*To adapt to technological and societal shifts, national statistics agencies are transforming operations and practices to provide faster, better, and real-time population insights*



# Contacts

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