Sidewalk Labs Toronto:

'A Thriving Hub for Innovation' vs. 'A City of Surveillance'

"A vision designed to realize and maximize ambitious quality-of-life goals by integrating innovations into the physical development"
- Sidewalk Labs

"I imagined us creating a Smart City of Privacy, as opposed to a Smart City of Surveillance"
- Ann Cavoukian

JOINT COUNCIL'S EXECUTIVE MONTHLY REPORT
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1. Introduction

This month's Joint Council's Executive Report explores Sidewalk Labs' Toronto Project. The report begins by providing a brief background of Sidewalk Labs and an overview of its Toronto project. In this description, we outline the ways in which the company promises its smart city plans and technology will enhance citizen wellbeing, sustainability, and economic development.

The second half of the report highlights an important and timely debate regarding smart city technology and Sidewalk Labs' Toronto Project. We predominately focus on the privacy and security concerns raised by former Ontario Privacy Commissioner, Dr. Ann Cavoukian. This section introduces Cavoukian's Privacy by Design (PbD) methodology and its promise to be a preventative approach that reduces the risk of privacy infractions and data breaches. This section also highlights the notion of surveillance in smart cities.

The concluding section of the report offers parting thoughts regarding smart city technology and its use in aging cities. We also provide a brief update regarding the status of Sidewalk Labs' Toronto Project and feature an open letter released by Waterfront Toronto Board Chair, Stephen Diamond.

Disclaimer: This article is intended to present different perspectives to provoke thinking and discussion. Any views or opinions raised in this article do not represent the position of Citizen First (Powered by The Institute for Citizen Centred Service).

2. Sidewalk Labs: A Thriving Hub for Innovation

Background

Sidewalk Labs is an urban innovation organization that focuses on "imagining, designing, testing, and building urban innovations to help cities meet their biggest challenges". Sidewalk Labs is owned by Alphabet Inc. The Chief Executive Officer of Alphabet, Larry Page, describes Alphabet as an umbrella organization to a number of companies – Its largest company is Google[1].

In the spring of 2017, Waterfront Toronto issued a Request for Proposals (RFP) seeking an Innovation and Funding Partner to support the City's efforts to establish an urban development model that leveraged emerging technologies to address complex urban challenges. After a global competition, Sidewalk Labs was selected by Waterfront Toronto as the successful candidate[2].

Shortly after this announcement, Sidewalk Labs launched the Toronto project in October 2017. The company quickly began a robust public engagement process across the city. The process lasted more than 18 months and gathered feedback from researchers, government agencies, residents, and community leaders. According to Sidewalk Labs, the findings of the public engagement process informed the Master Innovation and Development Plan (MIDP).

The Master Innovation and Development Plan – Overview

The Master Innovation and Development Plan (MIDP) is Sidewalk Lab's draft proposal submitted to Waterfront Toronto, the City of Toronto, the Government of Ontario, and the Government of Canada for consideration. The MIDP was released in June 2019 and is described by Sidewalk Labs as "a vision designed to realize and maximize ambitious quality-of-life goals by integrating innovations into the physical development". Although the planning efforts of MIDP focuses exclusively on Toronto's eastern waterfront, Sidewalk Labs has stated that the innovations applied to the project will benefit other communities along the

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1 https://abc.xyz/
2 https://www.sidewalktoronto.ca/project-background/

waterfront, throughout the city, and around the world.

According to Sidewalk Labs, the goals identified in the MIDP have been developed in response to the priority outcomes of Waterfront Toronto. These outcomes include: job creation and economic development, sustainability and climate-positive development, housing affordability, new mobility, and urban innovation (including robust data privacy and digital governance).

IDEA District

The MIDP proposes to transform a portion of Toronto's eastern waterfront – an area the Plan identifies as the Innovative Design and Economic Acceleration (IDEA) District. The IDEA District covers 77-hectares (the total eastern waterfront is 300-hectares). The proposed IDEA District will be developed over 20 years and will demonstrate how the private sector can support the public sector to solve the toughest growth challenges[3].

Image taken from Sidewalktoronto.ca

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3 https://www.sidewalktoronto.ca/plans/introduction-to-the-idea-district

The Two Phases of the IDEA District

Phase One: The Quayside Neighbourhood

The initial phase of the MIDP will begin by transforming the Quayside into a complete and vibrant neighbourhood that connects surrounding communities. According to the Plan, the eastern waterfront will become more accessible to Torontonians and improve the quality of life through the use of new innovations.

According to the MIDP, the following innovations will be applied to Quayside to create the conditions necessary to enable "more affordability, more sustainability, and more opportunity for more people than conventional developments"[4]:
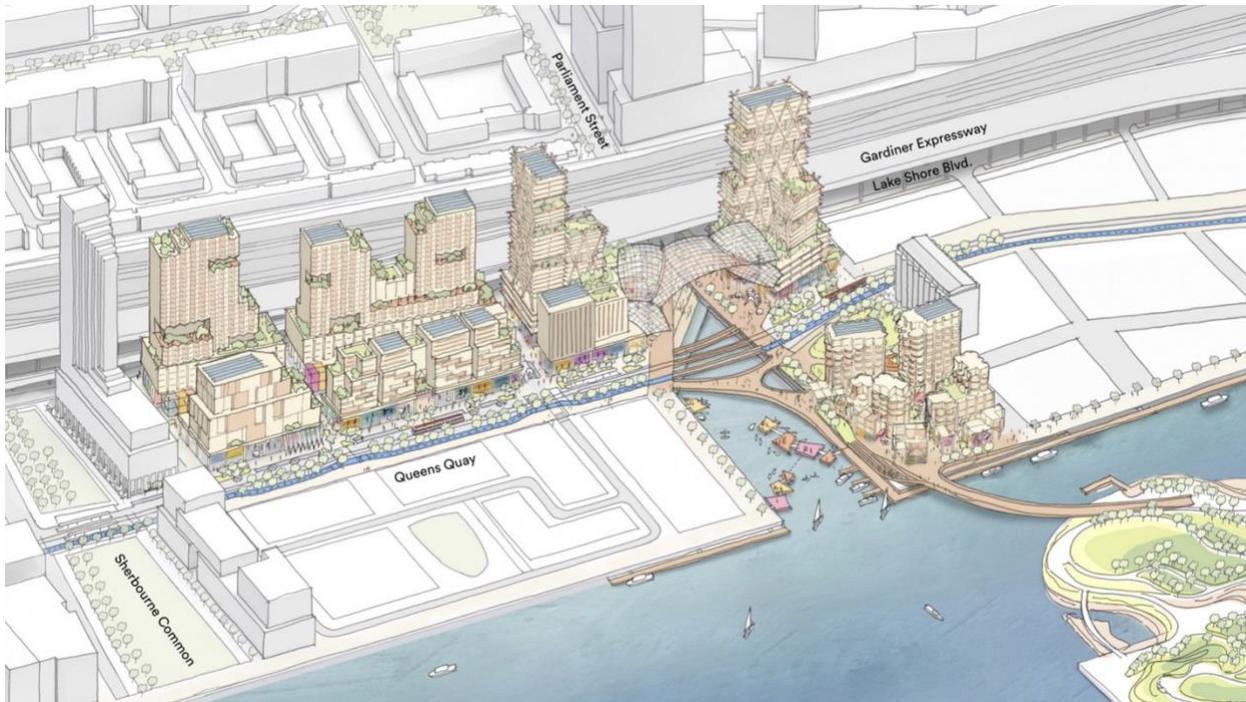
> "Sidewalk Labs believes in a phased approach for testing, refining, and demonstrating the impact of core innovations, beginning with a smaller setting and working up to larger areas along the eastern waterfront as project objectives are achieved"

Mobility	The Quayside Plan is anticipated to make it easier, safer, more convenient and affordable to commute to connecting neighbourhoods and throughout the city. This will be done by introducing: ▪ People-first streets ▪ Walkable street designs ▪ Enhanced cycling options ▪ Accessibility initiatives ▪ New mobility services Easier, safer, more convenient and affordable mobility options is expected to reduce the need to own a vehicle in the neighbourbood.
Public realm	The design of the proposed Quayside public realm is anticipated to encourage people of all ages and abilities to spend more time outdoors, together and interacting. The community will consist of an integrated set of parks, plazas and open spaces.

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4 https://www.sidewalktoronto.ca/plans/quayside

Buildings	All the buildings in Quayside Plan will be developed using sustainable mass timber. An Ontario-based factory will produce the mass timber parts for fast assembly in Quayside. To support the changing needs of the neighbourhood, the buildings will be designed as flexible loft spaces to accommodate residential and non-residential use.
Housing	Quayside's proposed residential program is expected to include 40% below market units to create affordable options for all households. Market and below market units will be available throughout the neighbourhood. Middle income housing options would include a "shared equity" program to create more affordable options for individuals and families that are unable to make a large down payment.

Sustainability	The focus on sustainability in Quayside is anticipated to result in a resilient, low-carbon, and environmentally-friendly neighbourhood. Some of the features Sidewalk Labs proposes to use to ensure buildings are sustainable include:
	■ Low energy building designs;
	■ An innovative bill structure that requires residents and businesses to set monthly budgets for energy costs;
	■ Creating a smart disposal system to increase recycling by offering:
	   ○ three separate disposal chutes on each floor (organics, recyclables, landfill)
	   ○ real-time feedback on common recycling mistakes
	   ○ pay-as-you-throw chutes (accessed through an app or touch screen to charge tenants for what they dispose);
	■ An active stormwater management system; etc.

Social infrastructure	The facilities and services built in the Quayside community is envisioned to help individuals and families meet their social needs and maximize their potential. Examples of facilities include an elementary school co-located with a childcare centre, community space co-located with healthcare and community services, Sidewalk Works Job program, etc.
Digital innovation	Enabling widespread digital infrastructure and connectivity through "a fast and secure fibre optic network and through standardized mounts designed to enable digital innovation by a range of community and entrepreneurs. These tools are designed to support innovation while also adhering to the appropriate guidelines, policies, and protocols to ensure privacy protection and responsible data use".

Click here to download the full Quayside Plan.

Quayside - Image taken from Sidewalktoronto.ca

Phase Two: River District

The River District Plan aims to build on the anticipated success and impact of the Quayside Plan. The proposed River District Plan would consist of five neighbourhoods: Villiers West, Villiers East, Keating East, McCleary, and Polson Quay. According to Sidewalk labs, these neighbourboods will further model the vision for an innovation ecosystem and unlock potential for global impact[5].

Villiers West	A neighbourhood described as an innovation campus that is surrounded by economic prosperity. To catalyze economic development in the area, Alphabet Inc. commits to establish a new Canadian headquarters for Google that aims to create 2,500 jobs. The campus would also include an Urban Innovation Institute – "a new non-profit applied research institute designed to bring together academia, industry, entrepreneurs, advocates, and public agencies to collaborate on tackling urban challenges". Villiers West would be located further west next to a new light rail stop. This strategic location is anticipated to have enough space to attract and accommodate new businesses, start-ups, and institutions to the area. On

5 https://www.sidewalktoronto.ca/plans/the-river-district

	the east of the neighbourhood will be a number of residential buildings, retailers, as well as cultural and community spaces to support a high quality of life for residents and employers.
Villiers East	An additional walkable live-work community that is centred around an inviting new park. This is anticipated to further encourage the community to get together, integrate and spend time outdoors.
Keating East	This neighbourhood is proposed to be developed to following the planned relocation of the Gardiner Expressway. The Keating Channel will be close to the water and showcase the City's art, culture and production. Sidewalk Labs proposes several bike and pedestrian bridges across the channel – similar to those that exist in Amsterdam.
McCleary	The McCleary District is also described to integrate housing and commercial activity. This location will be ideal for individuals who work nearby. The neighbourhood will be strategically located close to a new light rail stop on Commissioners Street, which will enable access to transportation and downtown Toronto.
Polson Quay	The Polson Quay District is envisioned to be a prime location with connections to the rest of the city. It is proposed to have several bridges and enough space to accommodate a light rail extension.

River District - Image taken from Sidewalktoronto.ca

Sidewalk Labs proposes to lead the development of Villiers West and offer support to Waterfront Toronto and the City of Toronto work with other partners in the development of Villiers East, Keating East, McCleary, and Polson Quay.

Click here to download the full River District Plan.

IDEA District – Unlocking Toronto's Eastern Waterfront's Economic Potential

Sidewalk Labs announced a number of estimates that will result from the proposed initiatives within the IDEA District, and contribute to the economic well-being and quality of life in Toronto. According to Sidewalk Labs, the benefits of implementing this vision include:

- More than **44,000** full-time, permanent jobs (and **93,000** total jobs)
- Roughly **$14.2 billion** in annual GDP output beginning in 2040
- Roughly **$4.3 billion** in annual tax revenue (federal, provincial, and municipal) by 2040

- A **global hub for urban innovation**, anchored by a new Google campus, a new applied-research institute, and a new venture fund for Canadian companies.

3. Sidewalk Labs Toronto: A City of Surveillance

A Deeper Look into Sidewalk Labs Toronto Plan

At its surface, Sidewalk labs promises that the MIDP will ensure a safe and secure, easy to get around, environmentally-friendly, and data and tech-driven smart city that will address the toughest urban growth challenges in Toronto. However, data privacy and security experts have raised caution and concern regarding the privacy, ownership and governance in this smart city project. Amongst those raising red flags against Sidewalk Labs' plans is former Ontario Privacy Commissioner, Dr. Ann Cavoukian.

In October of 2018, Dr. Ann Cavoukian announced her resignation from her role as consultant with Sidewalk Labs Toronto. According to Cavoukian, her decision to step down was prompted after learning that while Sidewalk Labs planned to strip all personal identifiers from their data, they could not guarantee other companies involved in the Toronto project would do the

Dr. Ann Cavoukian is the founder and CEO of Global Privacy & Security by Design. She is also currently the expert in residence leading the Privacy in Design Centre of Excellence at Ryerson University.

Dr. Ann Cavoukian formerly served as the Ontario Privacy Commissioner. She is recognized as one of world's leading privacy experts and is a dedicated advocate for the privacy rights of citizens. In October of 2018, Cavoukian resigned from her consulting role with Sidewalk Labs due to her privacy concerns regarding the smart city plan.

same[6]. Cavoukian believes this presents a significant amount of risk to citizens regarding **why** their personal data will be collected and **how** it will be used. Cavoukian stresses that securely de-identifying all data at the source is key to ensuring protection. In the proposed smart city project, there will be a number of devices and sensors that will be collecting and analyzing data and

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6 https://www.cbc.ca/news/canada/toronto/ann-cavoukian-sidewalk-data-privacy-1.4872223

personal information 24/7[7]. According to Cavoukian, people will be stripped of their fundamental right to privacy due to the inability to consent to and control when their data and personal information is being collected by these devices and sensors.

Privacy by Design

At a recent [Information Technology Association of Canada (ITAC)](#) Smart Cities Summit Cavoukian stated, "Concern for privacy is at an all-time high, trust is at an all-time low". Addressing this lack of trust is one of the key elements of Cavoukian's well-known [Privacy by Design](#) (PbD) methodology. PbD focuses on proactively ensuring all necessary measures for privacy and security is embedded into all aspects of a product or design before it is released. Through the implementation of [PbD's Seven Foundational Principals](#), the risk of privacy infractions and data breaches can be prevented significantly[8].

This concept of PbD has recently been implemented into the European Union's new [General Data Protection Regulation](#)

[(GDPR)](#) law[9]. In Canada, however, many experts and privacy advocates stress that the legal and governance structures are not in place to address public concerns about privacy and data security posed by Sidewalk Labs' plans. An article titled [Can smart cities help their residents without hurting their privacy?,](#) draws attention to Canada's current privacy laws that were passed between 1983 and 1990 – before Google, Facebook, Smart City Technology and Big Data. According to the article, the principals of Canadian privacy laws and policies are strong, however, there is need for a significant refresh[10].

Smart Cities of Surveillance

In a recent article, [Smart Cities or Surveillance Cities?](#) mass data collection is described as the foundation of the smart city industry. On one spectrum, the data collected could support cities to become more efficient, safe, and higher functioning. On the opposite spectrum, the data could also potentially be lucrative for Big Tech companies. Privacy advocates and groups

7 https://www.itbusiness.ca/news/data-privacy-experts-flag-smart-cities-of-surveillance-at-itac-smart-cities-technology-summit/109177
8 https://www.ryerson.ca/pbdce/about/

9 https://www.zdnet.com/article/gdpr-an-executive-guide-to-what-you-need-to-know/
10 https://qz.com/1756852/smart-cities-will-always-have-a-data-privacy-problem/

have pushed a narrative that Sidewalk Labs' proposed smart city is essentially a surveillance city, which intends to collect personal data gathered in public places for commercial use. According to advocates, the data collected would be used in a manner similar to Google's use of data collected based on internet searches (i.e. ads that are custom tailored based on an individual's online activity)[11]. Google's commercialized data [accounts for about 85 percent](#) of the corporation's revenue[12].

> " I imagined us creating a Smart City of Privacy, as opposed to a Smart City of Surveillance " - Ann Cavoukian

As modern infrastructure advances, giving citizens the power to control how their data and personal information is collected and used is at the forefront of what Cavoukian is advocating for. Cavoukian believes this notion of control and trust is the difference between smart cities that can create better outcomes for citizens and smart cities of surveillance[13].

4. Moving Forward: Thoughts for the Future

As smart technology continues to evolve, the conversation regarding its use to address current inadequacies in aging cities and infrastructure will increase. A key part of this emerging dialogue will not only be how smart technology can be integrated into the fabric of our cities, but more importantly, how this can be done in a way that demonstrates a real commitment to citizens.

Is there a better way to benefit from smart city technology and innovation in a way that enables citizens to share the complete value? In Toronto, will Sidewalk labs and levels of government be able to explore and present alternative ways to address challenges while keeping the needs of citizens at the centre of the conversation?

11 https://www.planning.org/planning/2019/mar/smartcities/
12 https://www.planning.org/planning/2019/mar/smartcities/
13 https://www.nationalmagazine.ca/en-ca/articles/law/hot-topics-in-law/2019/smart-cities-by-

design?utm_source=ICCS+Insights&utm_campaign=14dd4fa4c5-EMAIL_CAMPAIGN_2019_11_27_01_52&utm_medium=email&utm_term=0_812eed0bf3-14dd4fa4c5-76051657

5. Open Letter from Waterfront Toronto Board Chair

Shortly after Sidewalk Labs released the MIDP in June 2019, an open letter was released by Waterfront Toronto Board Chair, Stephen Diamond. The letter expressed the board's early impressions of the MIDP and highlighted several concerns regarding the Quayside Neighbourhood. Some of these concerns include[14]:

- "Sidewalk Labs proposes the up-front creation of an IDEA District that covers a much larger area than the 12 acres of Quayside. Waterfront Toronto has told Sidewalk Labs that the concept of the IDEA District is premature and that Waterfront Toronto must first see its goals and objectives achieved at Quayside before deciding whether to work together in other areas. Even then, we would only move forward with the full collaboration and support of the City of Toronto, particularly where it pertains to City-owned lands"

- "Sidewalk Labs initial proposals relating to data collection, data use, and digital governance. Waterfront Toronto requires additional information to establish whether they are in compliance with applicable laws and respect Waterfront Toronto's digital governance principles"

Click here to read the full letter.

In October 2019, Waterfront Toronto Board Chair, Stephen Diamond, released a follow-up open letter stating the board has reached agreement regarding the critical issues raised in the June 2019 letter. Diamond also announced the Board of Waterfront Toronto has decided unanimously go forward with conducting a thorough evaluation of the MIDP[15]. The evaluation is expected to be completed in March 2020.

14 https://quaysideto.ca/wp-content/uploads/2019/06/Open-Letter-from-WT-Board-Chair-on-Quayside-June-24-FINAL.pdf

15 https://waterfrontoronto.ca/nbe/portal/waterfront/Home/waterfronthome/newsroom/newsarchive/news/2019/october /open+letter+from+waterfront+toronto+board+chair+-+october+31,+2019

For further reading

Smart cities by design

Are Smart Cities Worth the Investment?

How Data Will Fuel Smart Cities

The New Normal Is Digital Cities - Not Smart Cities

Can smart cities help their residents without hurting their privacy?
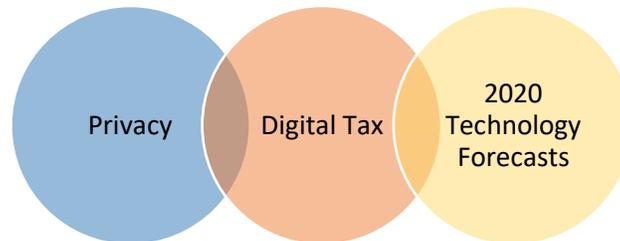
Smart Cities or Surveillance Cities?

A decade of smart city projects: What worked and what didn't

We would love to hear from you!

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6. Outside-in Newsletter: Trends this Month

Key Trends in December 2019:

Privacy

Digital Tax

2020 Technology Forecasts

Privacy

In December 2019, numerous publications highlighted privacy concerns as a result of big tech companies and breakthrough technologies. Some noteworthy articles are highlighted below:

Canada: On December 2 2019, the Edmonton Journal reported Federal Member of Parliament (MP) Michelle Rempel's concerns regarding the Federal Government's lack of regulation of big tech companies. Rempel stated in early December that the Federal Government is overdue on imposing serious data and privacy regulations on big tech companies in Canada. According to the article, Rempel urged that it is time for the country to set the boundaries for the market and protect individuals. Click here to read more.

Canada: On December 10 2019, the Financial Post reported the release of the Federal Privacy Commissioner, Daniel Therrien annual report to Parliament. In the report, Therrien warns of a "crisis of trust" in Canada caused by inadequate regulations to protect Canadians' personal information online. Therrien's annual report to Parliament was the most blistering version to date of a message he's been delivering for years, calling on the government to reform legislation and enact stiffer penalties for companies that abuse the privacy of Canadians. Click here to read more.

United States: According to a recent report issued by Government Technology, a watchdog group is suing the City of San Diego for not releasing data collected through its controversial Smart Street Lights

Program, which have sensors that gather a wide swath of information (including pedestrian and traffic movements, and also record video that police say they have used to solve violent crimes). Critics fear the cameras are intrusive and could be used to spy on citizens. Click here to read more.

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Digital Tax

Canada: On December 9 2019, Reuters reported that Canada will move forward with its plan to tax large, international digital companies. According to the article, Finance Minister, Bill Morneau, issued a statement that plans will proceed despite threats from the United States to impose retaliatory tariffs on France because of a similar tax proposal. Click here to read more.

US: US threatened to impose duties of up to 100% on French imports worth $2.4 billion after it concluded a tax on digital services imposed by Paris would be "unusually burdensome" for U.S. technology companies. However, Paris is not alone among capitals in Europe and beyond in proposing a tax on big tech firms. Click here to read about other countries that plan to do the same.

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2020 Technology Trends

As 2019 came to an end, several publications highlighted technology trends to look out for in the new decade. Some noteworthy publications are highlighted below!

→ According to the International Data Corporation (IDC), 10 predictions for smart cities work in 2020 fall into five main buckets:
- Public safety

- Data use
- Talent issues
- Digital trust
- Macroeconomic impact of technology

Click here to read more details about these predications.

→ The new year promises big changes in Agile methodologies and applications. In 2020, the article states there will be an increased focus on agility at scale, as well as better ways of

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integrating business delivery into engineering teams, predicted Casey Gordon, director of Agile engineering at Liberty Mutual Insurance. Click here to read more on what to look out for.

→ This Forbes article offers 99 artificial intelligence (AI) predictions for 2020. The AI movers and shakers in this article are a lot more confident in what the near future of machine intelligence will look like, from robotic process automation (RPA) to human intelligence augmentation (HIA) to natural language processing (NLP). Click here to read more.

Other noteworthy articles this month:

Canada: Challenge-based RFPs and open data keys to solving Toronto's biggest problems, municipal leaders say

Canada: University of Ottawa to open cybersecurity research hub

Canada: The Ethical Dimension of Artificial Intelligence

Playbook: Government as a Platform

Gain insights from 6 leaders working to transform government service delivery

Research Repository

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