

SMART CITIES

BUILDING IN PRIVACY AND ENSURING PUBLIC TRUST

PRIVACY DAY JANUARY 24, 2019



Information and Privacy
Commissioner of Ontario

Commissaire à l'information et à la
protection de la vie privée de l'Ontario

What Smart Cities May Offer



Improved quality of life:

- less congestion and traffic accidents
- increased safety for cyclists and pedestrians
- better environment
- efficient use of public resources
- better informed citizens

Information Collection

- Information collected, used, and disclosed by smart city technologies can, and often does, **include personal information**
- May be collected by municipalities, private companies or as part of public-private partnerships
 - energy consumption patterns
 - video and audio recordings
 - vehicle licence plate numbers
 - mobile device and other identifiers

Privacy Risks

- Privacy is not a barrier to smart cities, but they require robust **privacy protections**
- Without safeguards in place, large amounts of **personal information** may be collected, used, disclosed

Potential hazards:

- tracking individuals as they go about their daily activities (**surveillance**)
- using and disclosing information for other purposes without consent (**function creep**)
- security breaches (**cyberattacks**)

Which Privacy Laws Apply?

Municipal Freedom of Information and Protection of Privacy Act (MFIPPA)

- No **collection** of personal information unless:
 - authorized by statute
 - used for law enforcement
 - when necessary for a lawfully authorized activity
- No **use** or disclosure unless for the same, or a consistent, purpose

Personal Information Protection and Electronic Documents Act (PIPEDA)

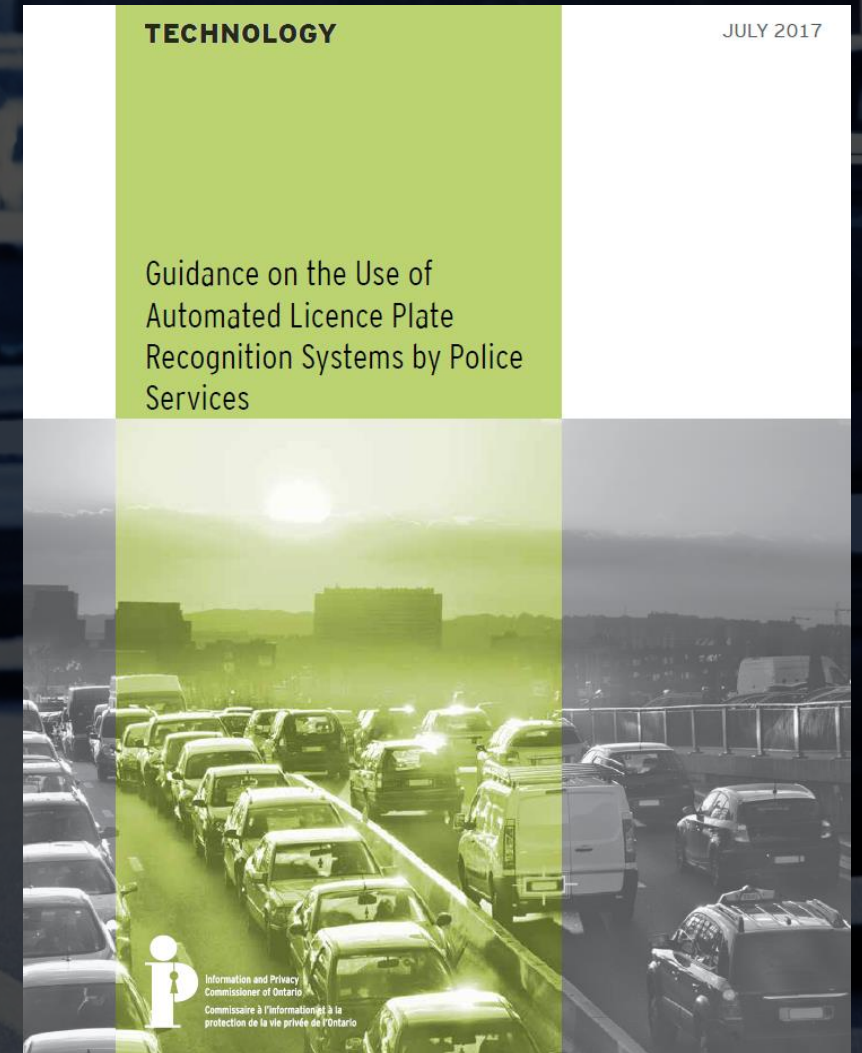
- Data collected by **private sector** for commercial purpose
 - organization must get meaningful consent
 - individuals must be given clear information explaining what organization will do with their information

Automatic License-Plate Recognition (ALPR)

Best practices for implementing an ALPR program include:

- conducting a Privacy Impact Assessment
- ensuring a comprehensive governance framework
- deleting non-hit data
- notifying the public about the program
- de-identify data for planning, analysis

These best practices can be applied
to other smart city initiatives



Cyberattacks

Systems infected by:

- phishing schemes to gain access to passwords/information
- ransomware and other software exploits used to gain control of computer systems

Statement from the Town of Wasaga Beach regarding the ransomware attack on the municipality's servers

Wasaga Beach – The Town of Wasaga Beach computer system was subject to a ransomware attack on Sunday, April 29, 2018.

The attack encrypted the town's servers, locking out access to the data with... These servers contain all the town's data, including financial information... on the town's infrastructure

Ontario police warn of recent cyberattacks targeting local governments

THE CANADIAN PRESS Updated: September 14, 2018

Governance and Privacy Controls

Data governance

- effective and independent oversight
- contracts with third parties clearly defining privacy and accountability

Data minimization

- avoid 'tech for tech's sake'
- define goals or objectives at the outset
- consider **less privacy invasive ways** to achieve them

De-identification

- guard against re-identification of data

Community engagement and project transparency

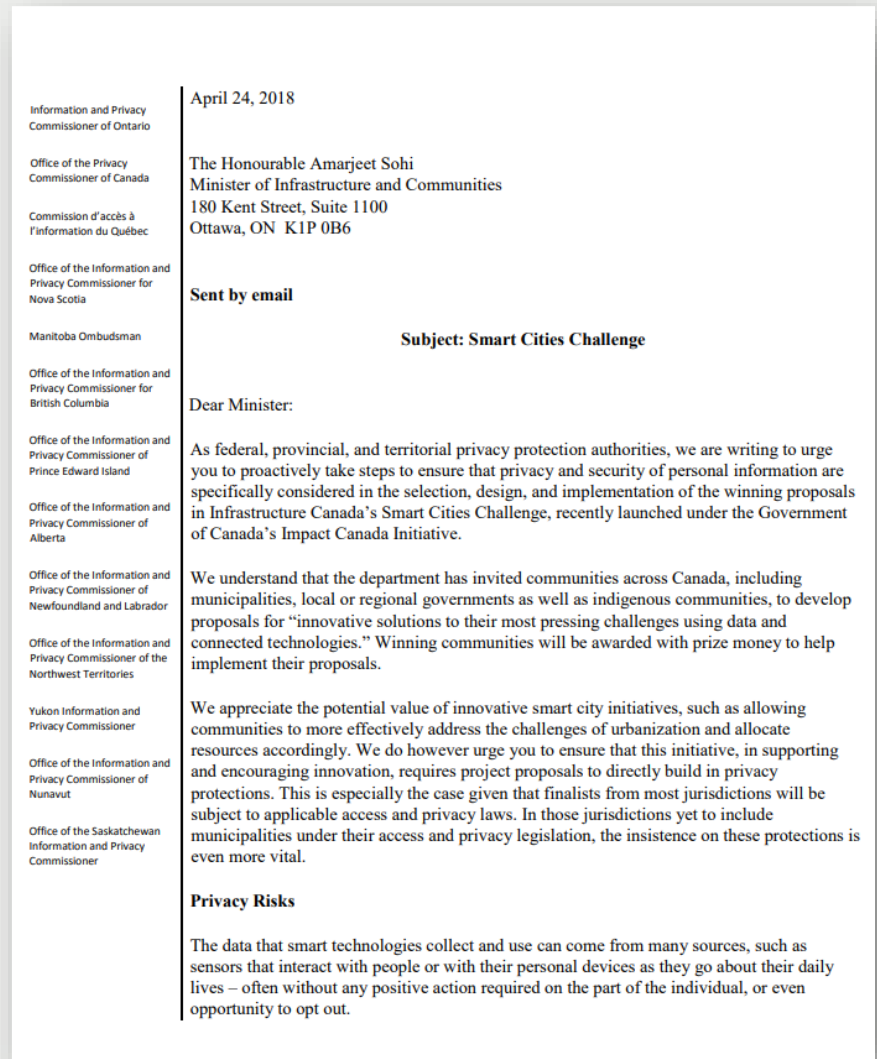
Security Obligations

FIPPA and MFIPPA

- require government institutions to ensure that reasonable measures are defined, documented and put in place, to protect personal information
- reasonable measures include administrative, technical and physical controls

Canada's Smart Cities Challenge

- Strong **privacy protections** must be **built into** smart city projects from the start
- The message of cross-Canada privacy authorities to minister in charge of Canada's Smart Cities Challenge
- As a result finalists are required to consult with the privacy authority in their jurisdiction and complete a privacy impact assessment
- Four finalist communities from Ontario:
 - Biigtigong Nishnaabeg (Pic River First Nation)
 - City of Guelph and Wellington County
 - Mohawk Council of Akwesasne
 - Region of Waterloo



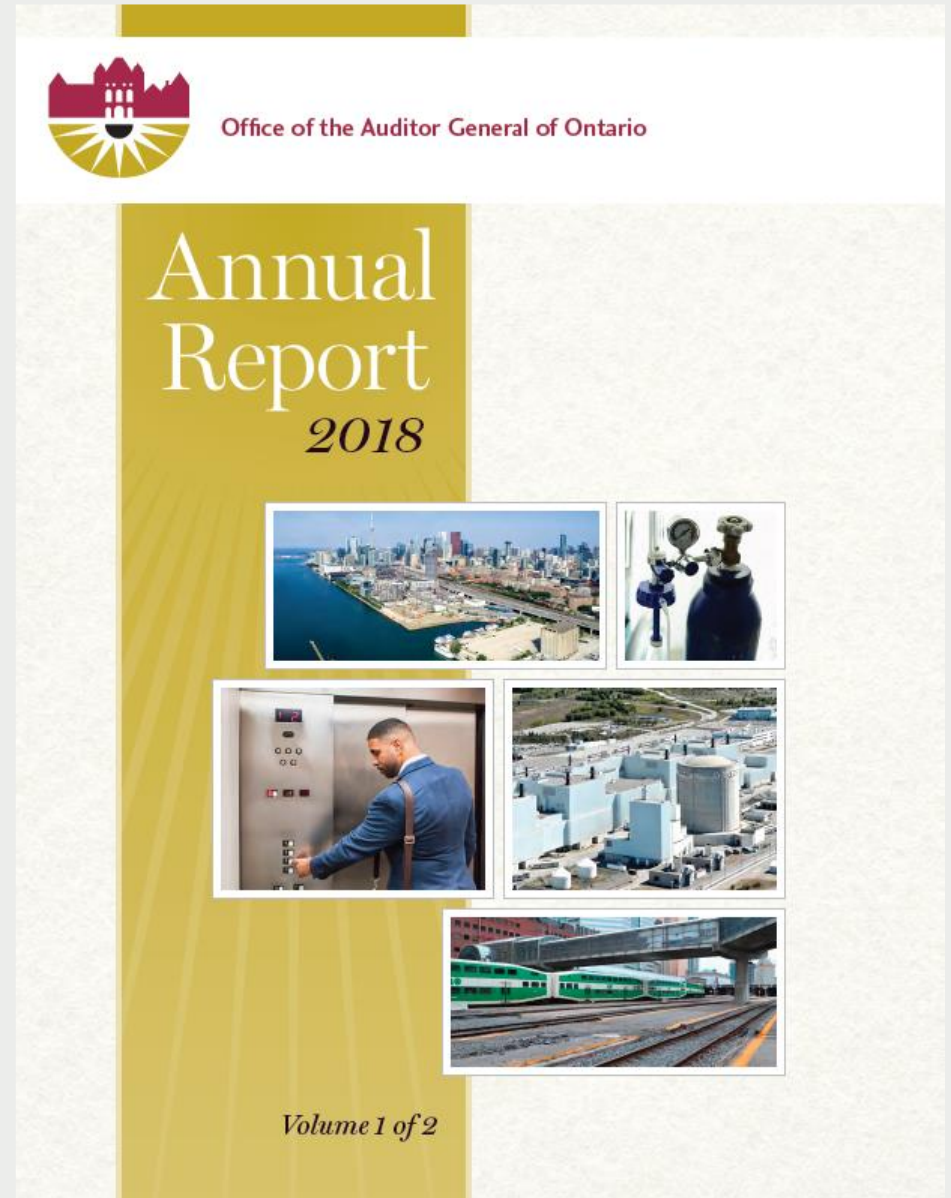
Sidewalk Toronto

- Sidewalk Toronto would represent North America's largest smart city project
- Sidewalk Labs and Waterfront Toronto preparing Master Innovation and Development Plan
- The IPC will support provincial and municipal stakeholders as they review the plan

Role of the IPC

In her 2018 Annual Report, Ontario's Auditor General recommended that in order to protect the public's interest, a policy framework should be established, "*... through legislation, for the development of a smart city in Ontario that addresses intellectual property; data collection, ownership, security and privacy ...*"

— *Annual Report 2018, Vol. 1*, p. 695.
Office of the Auditor General of Ontario



Potential Role of the IPC

Toronto Board of Trade recommended in their report, *BiblioTech*, that the IPC:

- oversee the proposed Data Hub
- be granted the ability to lay fines for misusing data
- have the resources to enforce strict compliance with existing legislation and the Data Hub



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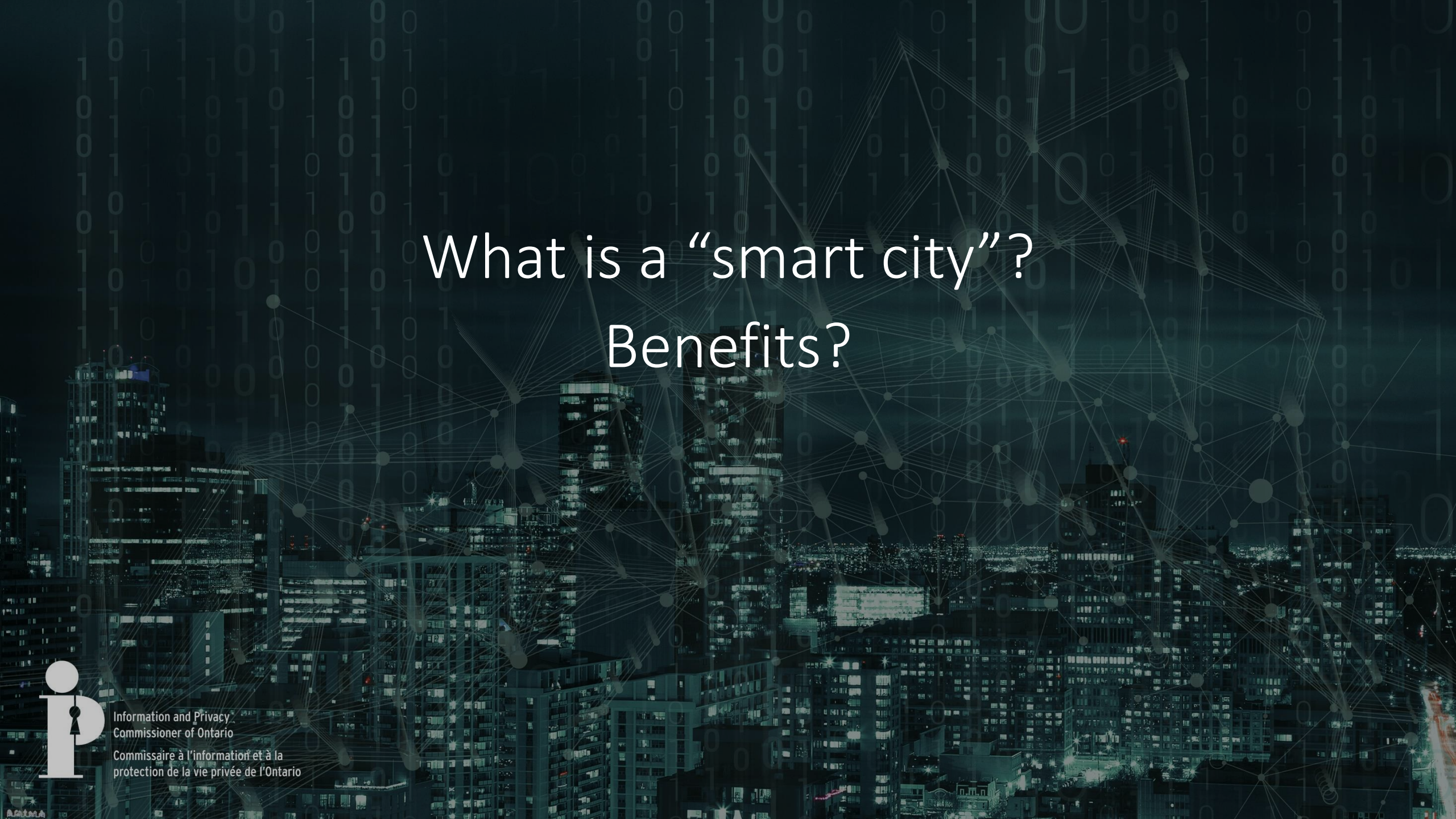
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What is a “smart city”? Benefits?



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Current smart city projects



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Privacy challenges



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INTERMISSION



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How do you protect privacy in a smart city?



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Public-private partnerships



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Data governance models (data trust?)



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“Citizen at the centre”



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