SMART CITIES: PRIVACY RISKS AND IMPLICATIONS

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Information and Privacy Commissioner of Ontario
Commissaire à l'information et à la protection de la vie privée de l'Ontario

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INFORMATION AND PRIVACY COMMISSIONER OF ONTARIO (IPC)

- Provides **independent review** of government decisions and practices on access and privacy
- Commissioner appointed by, reports to, Legislative Assembly to ensure impartiality
- Oversees compliance with three access and privacy laws

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PRIVACY LEGISLATION

- *Municipal Freedom of Information and Protection of Privacy Act* (MFIPPA)
  - 1,200 municipal organizations, including police, school boards, public transit, municipalities
- *Personal Information Protection and Electronic Documents Act* (PIPEDA)
  - private sector organizations
  - overseen by Privacy Commissioner of Canada

WHAT IS A "SMART CITY"?

- A community that uses connected technologies to collect and analyze data to improve services for citizens

- Information collected, used, disclosed by smart cities can, and often does, include personal information

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THE WAY FORWARD

CHIEF TRANSFORMATION OFFICER

MICHAEL KOLM

MAY 2018

TORONTO
Transformation Office

TORONTO IS ALREADY A SMART CITY

TORONTO Transformation Office

PROCESS & RESULT

After months of extensive public, community, academic and private sector consultations, the consensus was to: achieve meaningful outcomes for older high-rise tower communities' residents through the use of data and connected technology.

We will continue to investigate the intersection with various existing City initiatives:

- Tower Renewal Program
- Open Data Master Plan
- Toronto Poverty Reduction Strategy
- Workforce Development Strategy
- Toronto Strong Neighbourhoods Strategy

- Advanced Broadband and Internet Connectivity Report
- Human Services Integration
- Toronto Public Library digital literacy programs and community librarian initiatives

CHALLENGE STATEMENT

We will significantly reduce poverty among children living in older high-rise rental communities by empowering 100% of their families with the digital tools necessary for a more prosperous future: high-speed internet access, the means to increase digital literacy and a smart platform to connect to enhanced economic opportunities.

The Digital Divide

Over 47,000 children are living below the poverty line in these high-rise towers

27 % of Toronto Public Library users do not have internet access at home

Rising internet cost forces low-income households to forego other necessities such as food and rent

Low income residents are forced to choose between cellular data or internet access at home due to cost

"Lack of access to the Internet excludes low-income Canadians from equal opportunities to education, employment, government services and modern civic participation."

- ACORN Canada

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THE SOLUTION

In partnership with the Toronto Public Library and tower communities, we have developed a solution built on the foundations of digital access and literacy so residents have the capacity to fully utilize and benefit from their platform

Affordable Digital Access	Open Privacy-protected Community-Based Digital Platform	Digital Literacy
Close the digital divide, which disproportionately affects the development of our most vulnerable children	Connect high-rise residents with their broader community through an open platform that is jointly governed by the City, Toronto Public Library, residents and their communities	Equip low-income parents and caregivers with fundamental technology skills required in the digital economy

TORONTO Transformation Office

Implementation & Readiness

The Transformation Office is currently developing a senior leader governance structure and will manage the implementation of our Smart Cities Challenge project as well as future multi-divisional, smart cities initiatives which includes but is not limited to:

- The first point of contact for the smart cities challenge engagement
- Develop and maintain a detailed multi-divisional project and program plan
- Steward and facilitate industry partnership engagement
- Develop and support an internal and external advisory panel
- Coordinate with key external stakeholders, including but not limited to, academia, not-for-profit organizations, the private sector, federal and provincial leaders
- Provide support and guidance for adoption of open data
- Steward privacy program for Smart Cities projects

TORONTO Transformation Office

PRIVACY PROGRAM

1. Community-Based Governance
- Transparency
- Intentionality
- Minimization
- Consent

2. Privacy Impact Assessments

3. Policies and Contracting

4. Privacy Team and Roles
- Audit
- Compliance
- Breach response

TORONTO Transformation Office

Who We Are

Transforming the waterfront for the use and enjoyment of the people and visitors of Toronto, Ontario and Canada, to foster economic growth and to redefine how the city, province and country are perceived by the world — a project of national significance.

WATERFRONToronto

Reducing Urban Sprawl

Building Sustainable Communities

WATERFRONToronto
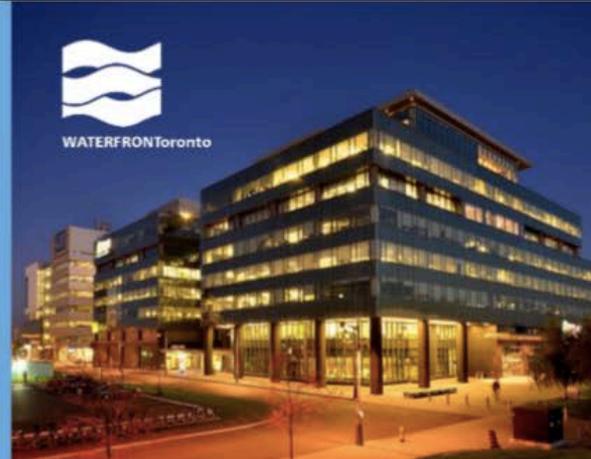
Driving Economic Competitiveness

Increasing Affordable Housing

Creating Parks and Public Spaces

Expanding Public Transit

Quayside

Quayside could become a global hub for urban innovation

The Vision

THE FUTURE Focused on sustainability, resilience, affordable housing, transit, building innovation, and economic opportunity.

Ideas piloted at Quayside could be brought to scale across the waterfront, replicated in neighborhoods throughout Toronto — and, ideally, be adopted by cities around the world.

Quayside

A new type
of mixed-use,
complete
community

SIDEWALK
TORONTO

CENTRAL
BUSINESS
DISTRICT

Bay St

Yonge St

Jarvis St

Parliament St

Union Station

Downtown Toronto

Queens Quay East

Quayside

Finding a
Partner

Bringing this idea to life required a different kind of partner

SIDEWALK TORONTO

What We Looked For

INNOVATION AND FUNDING PARTNER
Demonstrated expertise in the integration of real estate, city-building, and technology.

Ambition to create a new kind of place with global impact — and willingness to invest in the idea.

Objectives

Establish a complete community that improves quality of life for a diverse population of residents, workers, and visitors

Create a destination for people, companies, startups, and local organizations to advance solutions to the challenges facing cities, such as energy use, housing affordability, and transportation

Make Toronto the global hub for urban innovation

Serve as a model for sustainable neighbourhoods throughout Toronto and cities around the world

Core Principles

Not tech for tech's sake

We believe in the power of technology to improve quality of life in cities, but it must drive outcomes.

We respect privacy

It is embedded into everything we do.

We believe in open standards

Our vision is to have Quayside be a platform for innovation for everyone: governments, researchers, developers, and the general public.

Diversity makes us stronger

We are committed to diversity and inclusion. Quayside will only work if it represents the population in the Greater Toronto Area.

We cannot do this alone

This project will only proceed with the support and confidence of our government partners and the public. That's why we have to do this together.

Responsible Data Use Policy Framework
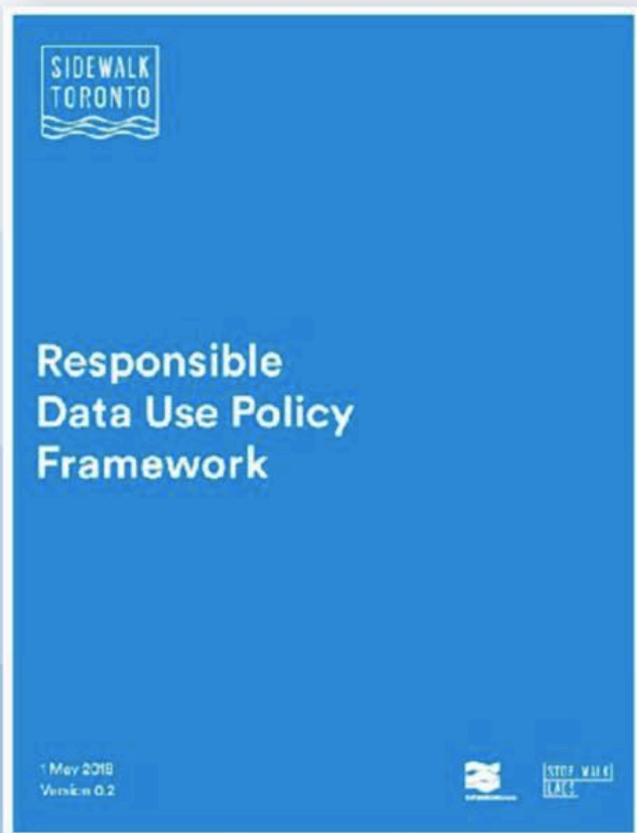
Privacy Commitments

1. We will **always inform individuals** of how and why their personal information is being collected and used, and we will do so in a way that is proactive, clear, and easy to understand.

2. We will embed data privacy into everything we do from the very start, an approach known as **Privacy by design.**

3. If a service to which you opt in requires individual identification, you will have meaningful control over how your information is used. Otherwise, data that includes personal information will be "**de-identified**" **by default**—anonymized and designed not to trace back to any individual.

4. We will seek **meaningful consent** from individuals and honour their choices.

5. We will conduct privacy impact and threat **risk assessments** to help ensure that privacy and security risks are identified and adequately addressed in the design of new technologies and programs.

6. We will publish summaries of the privacy implications of key initiatives in advance, as guided by the **Data Governance Advisory Working Group.**

7. We will **not sell personal information** to third parties, or use it ourselves for advertising purposes.

Public Realm

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Evergreen

Denise Pinto
Courage Co-Lab

Zahra Ebrahim
Doblin

Julian Sleath
Bentway

Dave Harvey
Park People

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Greg Suttor
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Heather Tremain
Options for Homes

LoriAnn Girvan
Artscape

Michelle German
Evergreen

Richard Joy
Urban Land Institute

Hadley Nelles
New Commons

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Metcalf Foundation

Brett Belchetz
Maple Health

Anne Babcock
Woodgreen

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YMCA

Julie Cookson
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Kwame McKenzie
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Lekan Olawoye
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Family Service Toronto

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United Way

Pam Ryan
Toronto Public Library

Rosemarie Powell
Toronto Community Benefits Network

Linda Frempong
METRAC

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- **Dave Dame**, *Agile Leader, Digital Factory, Scotiabank*
- **Charles Finley**, *Global Director of Marketing & Communications, IBI Group, and Co-Founder and Chair of Code for Canada*
- **Dr. Michael Geist**, *Law Professor, Canada Research Chair in Internet and E-commerce Law, University of Ottawa*
- **Darin Graham**, *Head of Canadian AI Operations, Samsung*
- **Kurtis McBride**, *Chief Executive Officer and Co-founder, Moivision Technologies Incorporated, and Co-founder, Catalyst137*
- **Saadia Muzaffar**, *Founder, TechGirls Canada, and Co-founder, Tech Reset Canada*
- **Dr. Carlo Ratti**, *Director, MIT Senseable City Lab, and Founding Partner, Carlo Ratti Associati*
- **Dr. Pamela Robinson**, *MCIP RPP, Associate Professor, School of Urban and Regional Planning and Associate Dean, Graduate Studies and Strategic Initiatives, Faculty of Community Services, Ryerson University*
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- **Jutta Treviranus**, *Director and Professor at Inclusive Design Research Centre, OCAD University*
- **Kevin Tuer**, *Managing Director, Canada's Open Data Exchange*
- **Mark Wilson**, *former IBM Executive and former Chair, Waterfront Toronto*

Sidewalk Toronto Partnership

SEP 2017	OCT 2017	SPAN OF 2018	Early 2019
Award Sidewalk Labs Partnership.	Waterfront Toronto and Sidewalk Labs commit to developing the plan together; Sidewalk Toronto created.	**Planning and public consultation on the Master Innovation and Development Plan (the Plan),** the document describing exactly what we think this place could be. The SWL/WT **Plan Development Agreement** will guide this effort. 2018	Stakeholder approvals (boards & governments). City of Toronto report on Plan.

PRIVACY RISKS

- Surveillance
  - Tracking individuals as they go about their daily activities
  - Netherlands – lamp posts with wifi-trackers, cameras and microphones to detect aggressive behavior

- Scope creep
  - Used for another purpose, unbeknownst to the individuals

- Security risks
  - Cyberattacks, human error, poor maintenance
  - Atlanta ransomware attack

- Lack of meaningful consent

PRIVACY PROTECTIONS AND CONTROLS

- Data minimization
  - define the problem and consider less privacy invasive alternatives

- De-identification
  - at earliest opportunity and guard against re-identification

- Privacy Impact and Threat Risk Assessments

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PRIVACY CONTROLS CONTINUED

- Data governance
  - Contractual protections and accountability
- Consent
- Community engagement and project transparency

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ENGAGEMENT

- IPC working with municipalities and federal government to:
  - Encourage transparency
  - Ensure privacy protections built into smart city initiatives (federal Smart City Challenge)

HOW DID THINGS GO?
(WE REALLY WANT TO KNOW)

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- Thank you!