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Open Smart City Guide V1.0 Webinar 3

Open Smart Cities Guide V1.0

(http://www.opennorth.ca/open-smart-cities-guide)

Presented by: Jean-Noe Landry (Open North) & Dr. Tracey P. Lauriault (Carleton University) & Rachel Bloom (Open North)

Content Contributors: David Fewer CIPPIC, Mark Fox U. of Toronto, Stephen Letts & Carly Livingstone (RA Carleton U.)

Project Name: Open Smart Cities in Canada

Date: April 17, 2018 at 1230 PM

Project Funder: Natural Resources Canada GeoConnections

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Webinar 3 – Open Smart Cities

Introductory remarks

- Jean-Noe Landry, Executive Director, Open North

Webinar 3 includes:

1. Summary:
   - Webinar 1: E-Scan and Assessment of Smart Cities in Canada (listen at: http://bit.ly/2yp7H8k)
   - Webinar 2: (listen at: https://vimeo.com/247378746)
2. Context in Canada
3. **Open Smart City Guide V1.0**
4. Q & A

Webinar Presenters:

5. Rachel Bloom, Open North
6. Dr Tracey P. Lauriault, School of Journalism and Communication, Carleton University

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- Founded in 2011, OpenNorth is Canada's leading not-for-profit organization specialized in open data and civic technology.
- **Focus:** inclusive, innovative, and dynamic open data ecosystems
- **Expertise:**
  - open smart and resilient cities
  - data standards and life cycle management
  - open data policy, licenses, and governance
  - data user needs identification and stakeholder engagement
  - strategy and planning
- **Approach:** global/local, multi-stakeholder, inter-jurisdictional, capacity building, maturity modeling, applied research
- **Networks:** Open Data Charter, Open Government Partnership, International Open Data Conference, Global Initiative on Fiscal Transparency, Open Contracting Partnership, Canadian Multi-stakeholder Forum

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Open Smart Cities in Canada Project

Funded by: GeoConnections

Lead by: OpenNorth

Project core team:

- Rachel Bloom & Jean-Noe Landry, Open North
- Dr. Tracey P. Lauriault, Carleton University
- David Fewer, LL.M., Canadian Internet Policy and Public Interest Clinic (CIPPIC)
- Dr. Mark Fox, University of Toronto
- Research Assistants Carleton University
  - Carly Livingstone
  - Stephen Letts

Project collaborators:

- Expert Smart City representatives from the cities of:
  1. Edmonton
  2. Guelph
  3. Montréal
  4. Ottawa
- Collaborators include experts from the provinces of:
  1. Ontario
  2. British Columbia

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1. Summary of Webinars 1 & 2

Open Smart Cities Guide V1.0 (http://www.opennorth.ca/open-smart-cities-guide)

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Webinar 1

E-Scan & Assessment of Smart Cities in Canada

- E-scan identified
  - smart city makers
  - smart city components
- Assessment of smart city strategies:
  - Cities of Edmonton, Guelph, Montreal, and Ottawa
    - governance structures
    - practices relate to open data
    - geospatial data
    - Procurement
- Conclusion
  - Listen at: http://bit.ly/2yp7H8k and access the full report here: https://osf.io/preprints/socarxiv/e4fs8/

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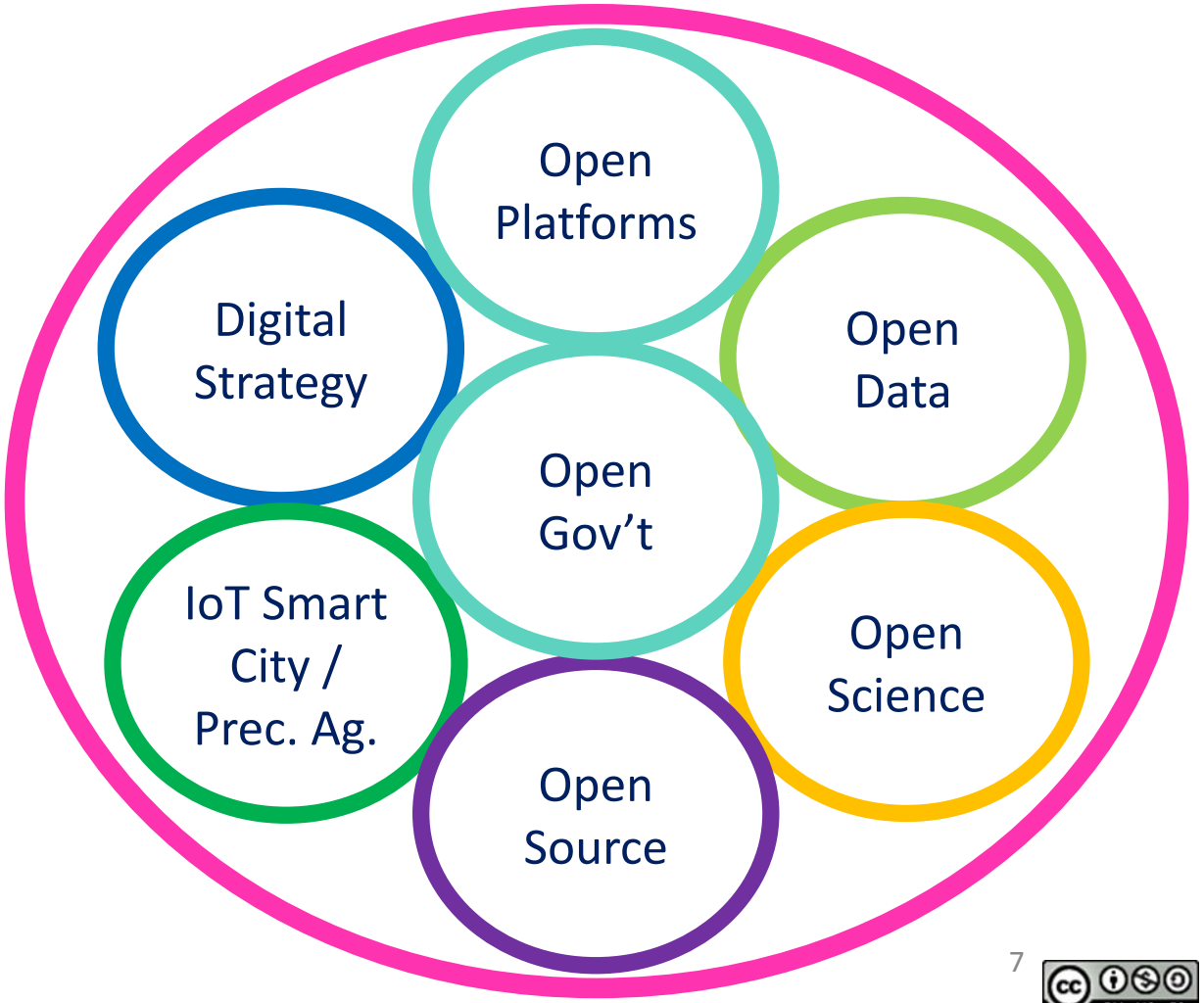
Webinar 2 – Towards Open Smart City Guiding Principles

1. Situating smart cities amongst current digital practices
2. Towards guiding principles for Open Smart Cities
3. Examples of international best practices
4. Observations & Next Steps
5. Listen at: : https://vimeo.com/247378746



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2. Context in Canada

Open Smart Cities Guide V1.0 (http://www.opennorth.ca/open-smart-cities-guide)

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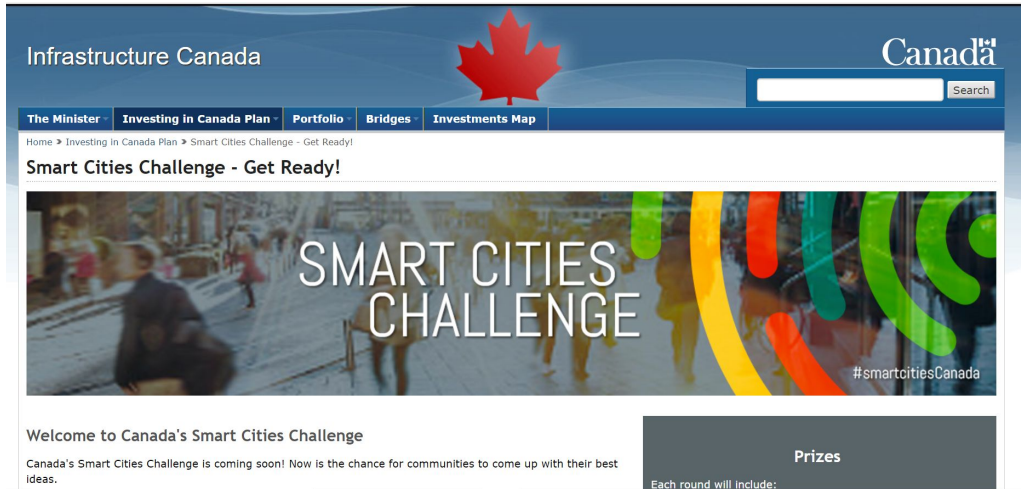
Smart City Challenge



What is a smart cities approach?

A smart cities approach aims to achieve meaningful outcomes for residents by leveraging the fundamental benefits that data and connected technology have to offer:

- **Openness**
  When communities make their data truly accessible, usable and barrier-free, their decision-making processes become transparent, empowering citizens and strengthening the relationship between residents and public organizations.

- Launched November 2017, Submission deadline April 24, 2018
- Municipalities, regional governments, & Indigenous communities
- Community not-for-profit, private sector company, or expert
- $300 million Smart Cities Challenge in 2017 Budget

Image 1: Timeline of Smart Cities Challenge Process

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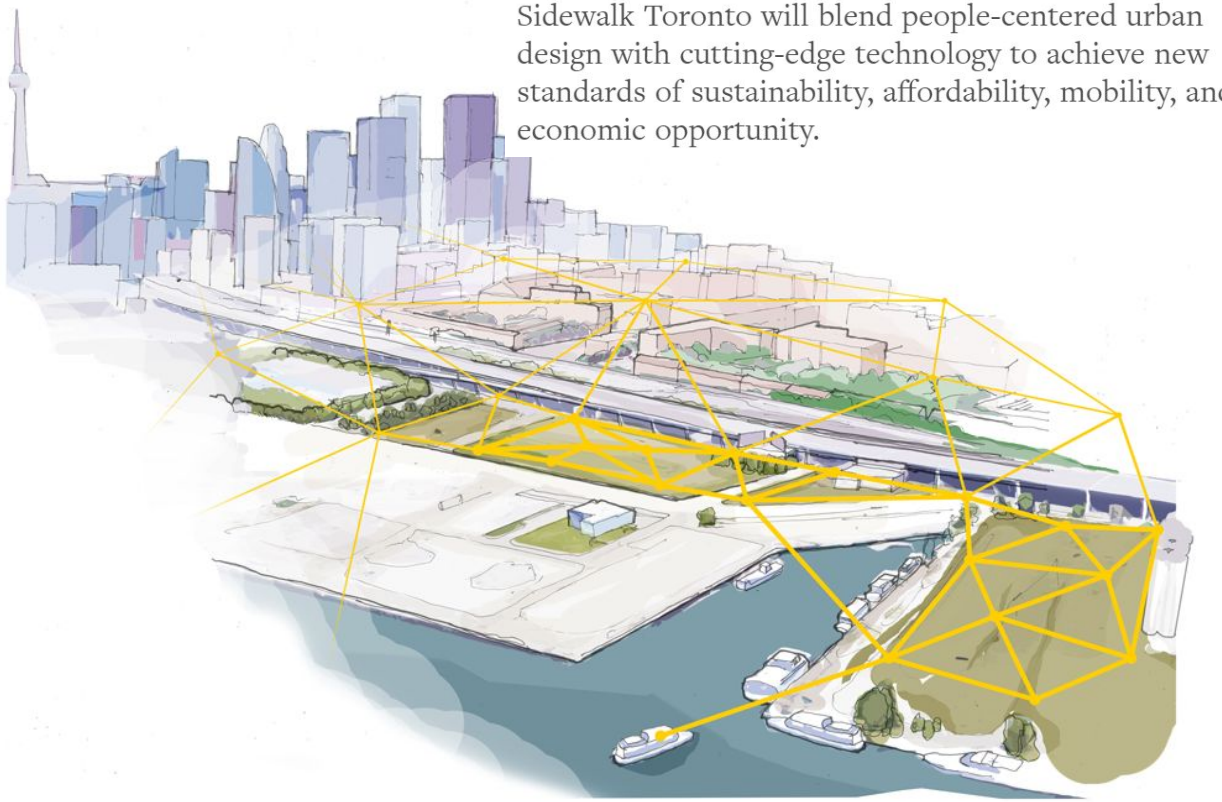
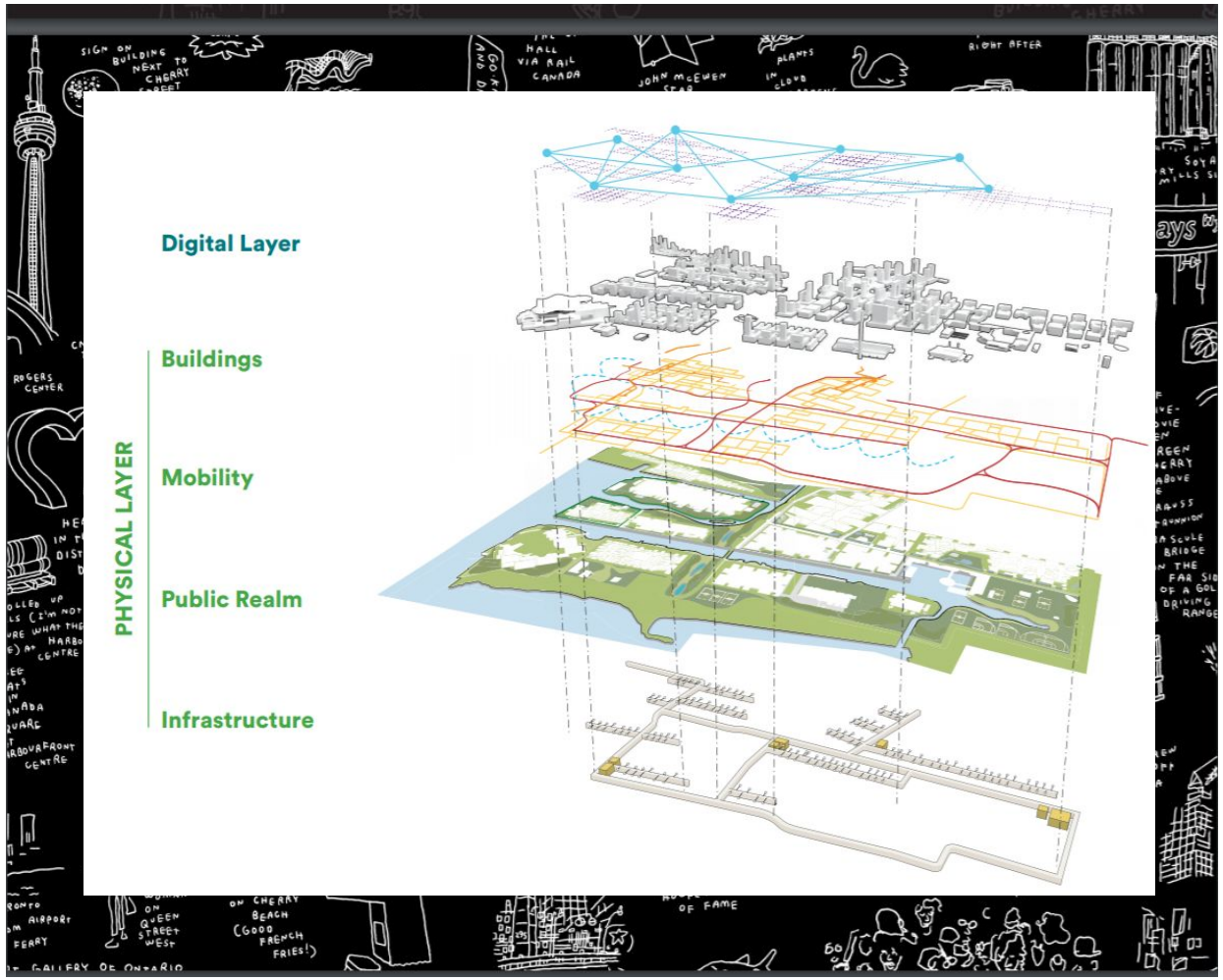
Sidewalk Toronto: PPP Smart City



Sidewalk Toronto will blend people-centered urban design with cutting-edge technology to achieve new standards of sustainability, affordability, mobility, and economic opportunity.



At the core of a future city is a layer of digital infrastructure that provides ubiquitous connectivity for all, offers new insights on the urban environment, and encourages creation and collaboration to address local challenges.

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3. Open Smart City Guide V 1.0

Open Smart Cities Guide V1.0 (http://www.opennorth.ca/open-smart-cities-guide)

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Evidence informed guidelines

1. Open Smart Cities in Canada: Environmental-Scan and Case Studies – Executive Summary (find here: https://osf.io/preprints/socarxiv/e4fs8/)
2. Open Smart Cities in Canada: Assessment Report for the cities of Edmonton, Guelph, Montreal, and Ottawa and also the province of Ontario's Smart Grid and smart meter data (find here: https://osf.io/preprints/socarxiv/qbyzj/)
3. Open Smart Cities FAQ (find here: https://cippic.ca/en/Open_Smart_Cities)
4. Webinars 1 & 2 (listen at: http://bit.ly/2yp7H8k and https://vimeo.com/247378746)

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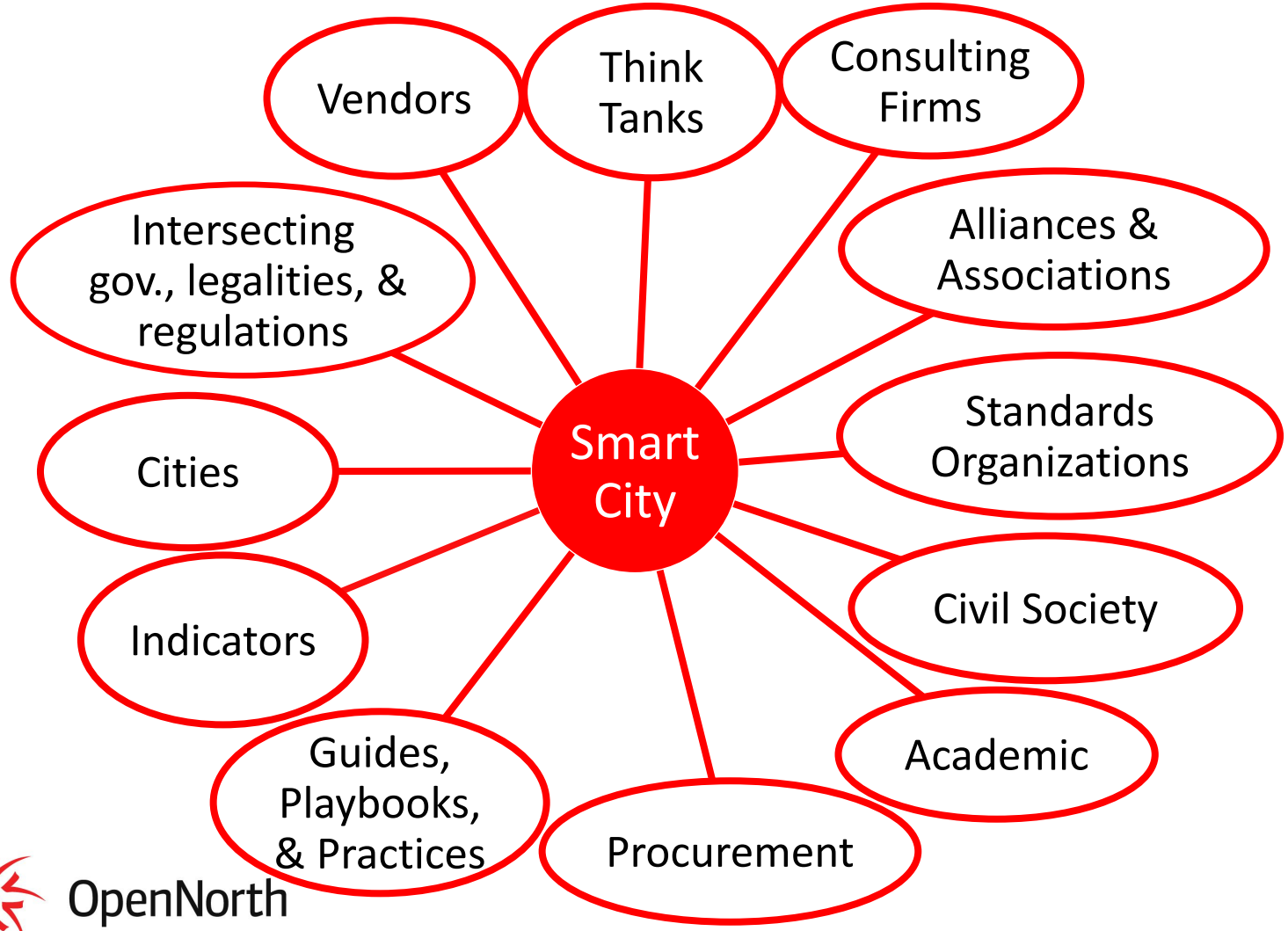
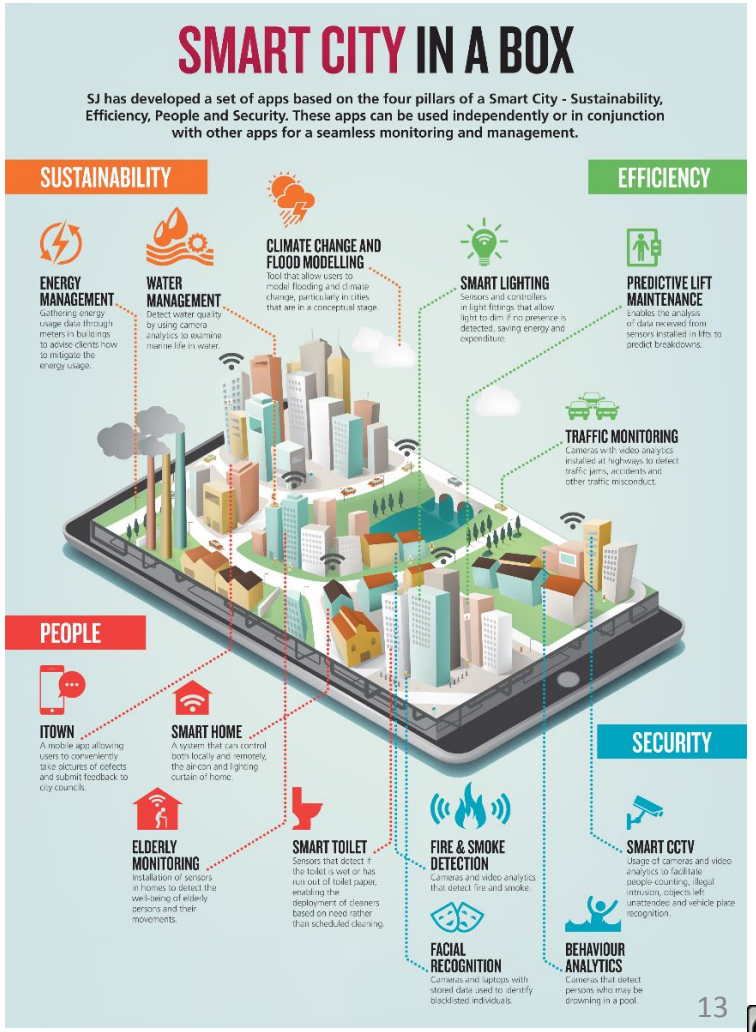
Smart City





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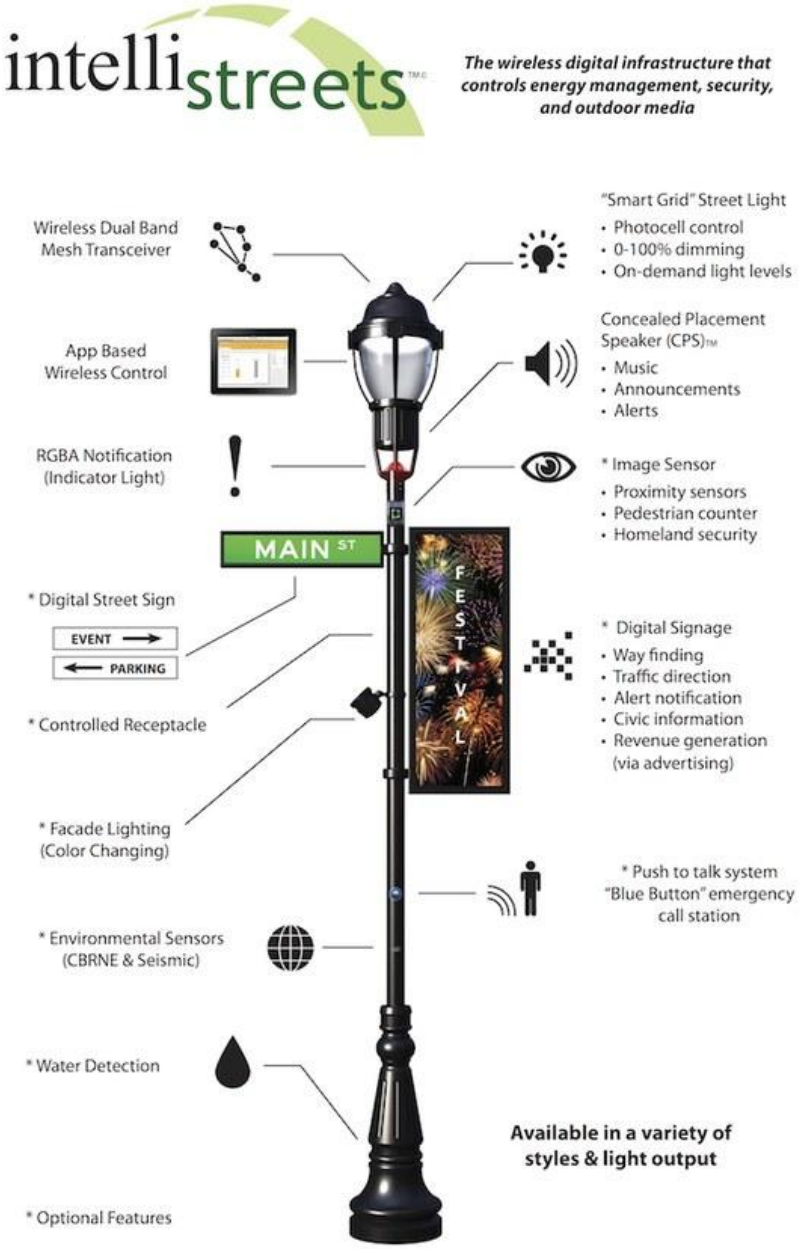
Internet of Things (IoT)

- Security & privacy vulnerabilities (hacking)
- E-waste – cost, short shelf life
- Mission creep - potential
- Surveillance / dataveillance potential
- Ownership / procurement
- Repair – DRM
- Device lock in
- Archiving - the lack thereof
- Reuse – unintended purposes
- Sustainability & maintenance & management
- Interoperability – the lack therefor
- Standards – emerging



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Data & Technology

are considered as more than the unique arrangement of objective and politically neutral facts & things

&

they do not exist independently of ideas, techniques, technologies, systems, people and contexts regardless of them being presented in that way.

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A city is

- is a complex and dynamic socio-biological-physical system.
- It is a territorially bound human settlement governed by public city officials who manage the grey (i.e., built form), blue (i.e., water) and green (i.e., land) environment and the people they serve as per their legal and jurisdictional responsibilities.
- Cities are much more complex than this, however, for the purpose of this exercise, we have limited ourselves to a functionalist and an administrative definition.

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Data and Networked Urbanism

- **Smart cities** in the common sense of the term and as per their current manifestations are:
  - "[technologically] instrumented and networked,
  - [with] systems [that are] interlinked and integrated,
  - and [where] vast troves of big urban data are being generated [by sensors] and used to manage and control urban life in real-time".
  - Public administrators and elected officials invest in smart city technologies and data analytical systems to inform how to innovatively, economically, efficiently and objectively run and manage the cities they govern.
  - Predominately, a smart city is about quantifying and managing infrastructure, mobility, business and online government services and a focus oriented toward technological solutionism.

(Kitchin 2015)

Definition of the Open Smart City 1.0

An **Open Smart City** is where residents, civil society, academics, and the private sector collaborate with public officials to mobilize data and technologies when warranted in an ethical, accountable and transparent way to govern the city as a fair, viable and liveable commons and balance economic development, social progress and environmental responsibility.

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5 Themes

1. Governance
2. Engagement
3. Data & Technology
4. Data Governance
5. Effective and values based smart cities

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1. Governance in an Open Smart City is **ethical**, **accountable**, and **transparent**. These principles apply to the governance of social and technical platforms which include data, algorithms, skills, infrastructure, and knowledge.

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- Ethical Governance
- Governance Structures and Participation
- Cooperative and Multi-jurisdictional Governance
- Accountable Governance
- Transparent Governance
- Cooperative Governance

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2. An Open Smart City is **participatory**, **collaborative**, and **responsive**. It is a city where government, civil society, the private sector, the media, academia and residents meaningfully participate in the governance of the city and have shared rights and responsibilities. This entails a culture of **trust** and **critical thinking** and **fair**, **just**, **inclusive**, and **informed** approaches.

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- Participatory
- Collaborative
- Responsive
- Trust
- Critical Thinking
- Fair & Just
- Inclusive & Informed

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3. An Open Smart City uses data and technologies that are **fit for purpose**, can be **repaired and queried**, their **source code are open**, adhere to **open standards**, are interoperable, durable, **secure**, and where possible **locally procured** and scalable. Data and technology are used and acquired in such a way as to **reduce harm and bias**, **increase sustainability** and enhance flexibility. An Open Smart City may defer when warranted to automated decision making and therefore designs these systems to be legible, responsive, adaptive and accountable.

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- Fit for Purpose
- Repaired and Queried
- Open Source
- Open Standards
- Cybersecurity and Data Security
- Reduction of Harm and Bias
- Local Procurement
- Balancing Sustainability

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4. In an Open Smart City, **data management** is the norm and **custody and control over data** generated by smart technologies is held and exercised in the public interest. Data governance includes sovereignty, **residency**, **open by default**, **security**, **individual and social privacy**, and **grants people authority over their personal data**.

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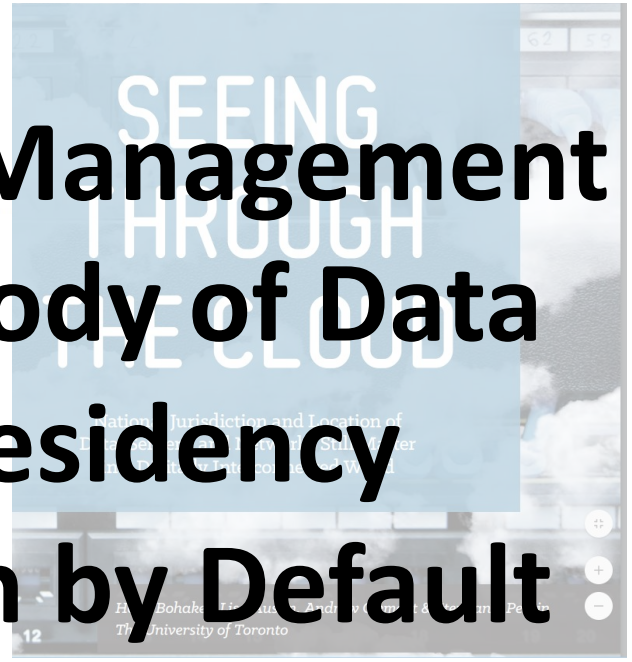
- Data Management
- Custody of Data
- Residency
- Open by Default
- Security
- Privacy
- Personal Data Management



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5. In an **Open Smart City**, it is recognized that data and technology are not always the solution to many of the systemic issues cities face, nor are there always quick fixes. These problems require innovative, sometimes long term, social, organizational, economic, and political processes and solutions.

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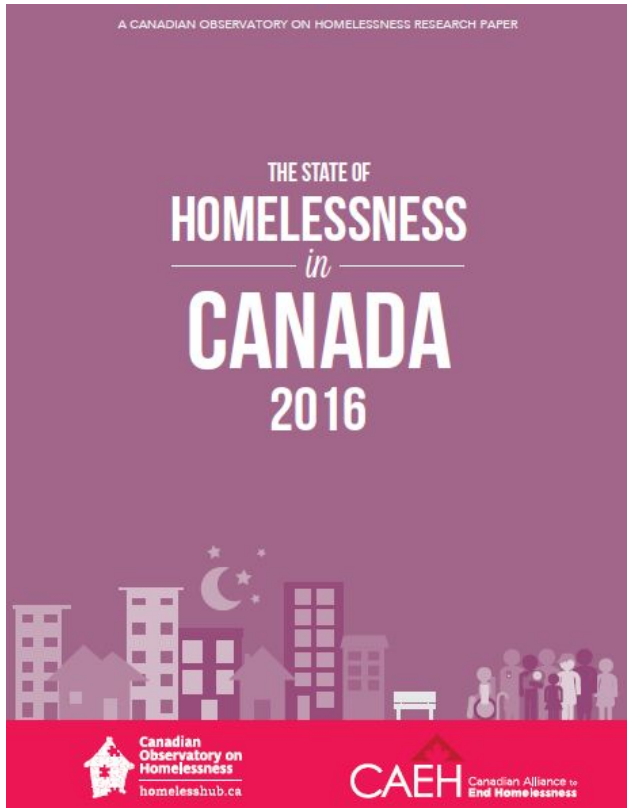

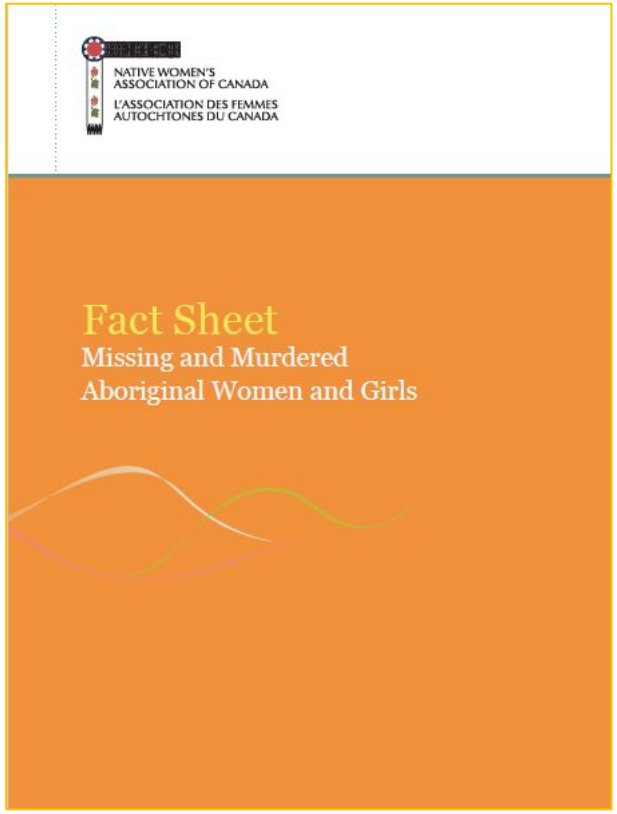

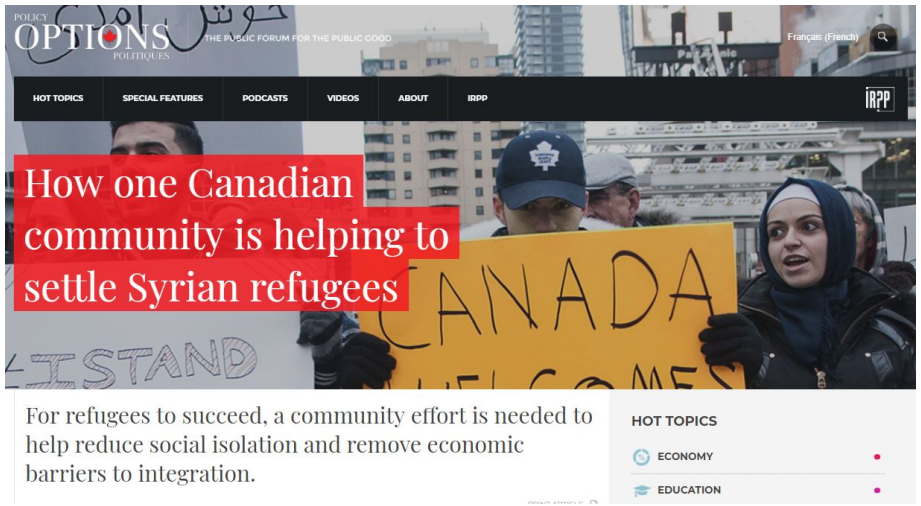

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"not just [about] a 'right to use technology', which is precisely where many smart city initiatives stop, but rather the right to shape the city using human initiative and technology for social purposes to make cities better."

Hollands (2014)
Critical interventions into the corporate smart city

- Open Smart City should benefit and empower people and social movements.
- These initiatives are propelled by human values and principles of accountability, transparency, ethics, equity, openness, human rights, and inclusivity.
- Thus, we emphasize that efficiency and progress should not be the key drivers for the deployment of smart city technology.
- Our fifth characteristic of an Open Smart City would also recognize:
  - the right to disconnect
  - the right to be anonymous in a connected city.

5. Conclusion

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Limitations & Strengths

- **Limitations**
  - We could have organized it by component, specific technologies or software stack
  - We could have consulted more broadly on each item, especially to experts in law, cybersecurity, industry associations, etc.
  - We could also have met with residents, makers, civil liberties organizations, civic technology groups and more…
  - We could also have taken a less government centric approach
- **Strengths**
  - We looked at the literature and at examples and we defined an Open Smart City
  - The definition captures what is missing in data and networked urbanism
  - Although and Open Smart City does not yet exist, we were able to find many examples and resources that lead us to believe that it is possible, and we hope you find them to be useful.

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Final Remarks

- The Open Smart City Guide V1.0 is a Living Document that will be updated on a regular basis and we are counting on you for your help. You can access it here **http://www.opennorth.ca/open-smart-cities-guide**
- Please send feedback, ideas, critiques etc. to **info@opennorth.ca**

Next Events:

- Webinaire 3, 25 avril 12h30:

https://zoom.us/webinar/register/WN_hwnsww3bQtuz3fasyO-qJQ

- Open Cities Summit Pre-Event to the International Open Data Conference in Argentina, Sept. 2018 and the theme is Open Smart Cities
- Canadian Open Data Summit, Nov. 2018

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Project Outputs

1. Open Smart Cities in Canada: Environmental-Scan and Case Studies – Executive Summary (find here: https://osf.io/preprints/socarxiv/e4fs8/)
2. Open Smart Cities in Canada: Assessment Report (find here: https://osf.io/preprints/socarxiv/qbyzj/)
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Q&A

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Discussion Questions

- What do you think of this definition?
- What concepts do you think are missing from this guide?
- How do you envision this guide changing over the long term?

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Merci | Thank You

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