December 2019

TORONTO

#SmartCityTO

DIGITAL TECHNOLOGIES & YOUR CITY

Digital Infrastructure Plan

digitalfeedback@toronto.ca | toronto.ca/connectedcommunity

Context Setting

Background

- Digital technology is changing the way we access information, work, and connect with each other.
- Digitized municipal services are leading to increased efficiencies, improved decision-making and the better management of public assets.
- As the use of digital technologies increases, the City is developing a **Digital Infrastructure Plan.**
- The Digital Infrastructure Plan will guide day-to-day as well as long-term planning decisions, and help evaluate internal and external proposals in the digital realm.

On the Digital Infrastructure Plan

- In February 2019, Council directed staff to develop a **City-wide Digital Infrastructure Policy Framework and Governance Model.**
- **The framework will articulate a:**
  - Future vision and principles for the use of digital tools and data collection;
  - Description and definition of the City's digital infrastructure;
  - Review of Federal and Provincial legislative and policy contexts;
  - Governance model, including the roles of key groups and individuals;
  - Set of regulations and policies to guide decision making on proposals such as those developed by Sidewalk Labs

What is digital infrastructure?

Digital infrastructure means infrastructure that creates, exchanges or uses data or information as a part of its operation.

Digital infrastructure includes physical structures, cabling and network systems, software systems, data standards and protocols.

Examples include:

- sensors (e.g. cameras, GPS sensors, microphones, etc.), broadband and telephone networks, Wi-Fi, apps and open data standards, etc.

What are these consultations about?

The starting point of this work is to **develop a set of draft principles to guide the Digital Infrastructure Plan**. From public feedback, the City is hoping to understand:

- *What do you like about the draft principles?*
- *What new policies and/or procedures are needed?*
- *What topics require further discussion and consideration?*
- *What suggestions do you have for strengthening the City's approach?*

How will the DIP be used?

- Many existing regulations and policies address a number of related topics: personal information and privacy, security, data management, procurement, intellectual property, consumer protection and others.
- The **Digital Infrastructure Plan will build on these existing regulations** to enable a consistent approach for the City to evaluate digital infrastructure policies and proposals.
- Proposals received before the Digital Infrastructure Plan is complete will be examined in light of both these existing processes *and* the emerging Plan to determine the appropriate evaluation process.

How will the DIP be used?

- Digital Infrastructure Proposals may come from:
  - City divisions, to improve services or asset management; or
  - Private companies, universities, researchers, community organizations, who are looking to partner with the City or launch products or services.
- A number of outcomes are possible through the evaluation process such as:
  - approval and implementation;
  - approval with conditions (for example, new regulatory oversight); and
  - refusal to proceed.

How does this relate to Quayside?

- Quayside is a 12 acre parcel of land on Toronto's waterfront. Waterfront Toronto, a tri-governmental agency, is leading the Quayside project (for more information on this project, visit **https://quaysideto.ca/).**
- Quayside is one example of a project that is expected to result in Digital Infrastructure proposals to the City of Toronto.
- **The Digital Infrastructure Plan will be a key tool for the City to use in evaluating proposals, like the Quayside project.**

Consultation Process

Consultation Process – Round 1

December 7, 2019 -
McGregor Park Community Centre, 10 a.m. - 12:30 p.m.

December 9, 2019 -
Toronto City Hall, Council Chamber, 6:30 - 9 p.m. *(livestreamed)*

December 12, 2019 -
North York Central Library, 1:30 - 4 p.m.

The Digital Infrastructure Plan will take approximately 18 to 24 months to finalize. During this time, **at least three rounds** of stakeholder and public consultations will be conducted.

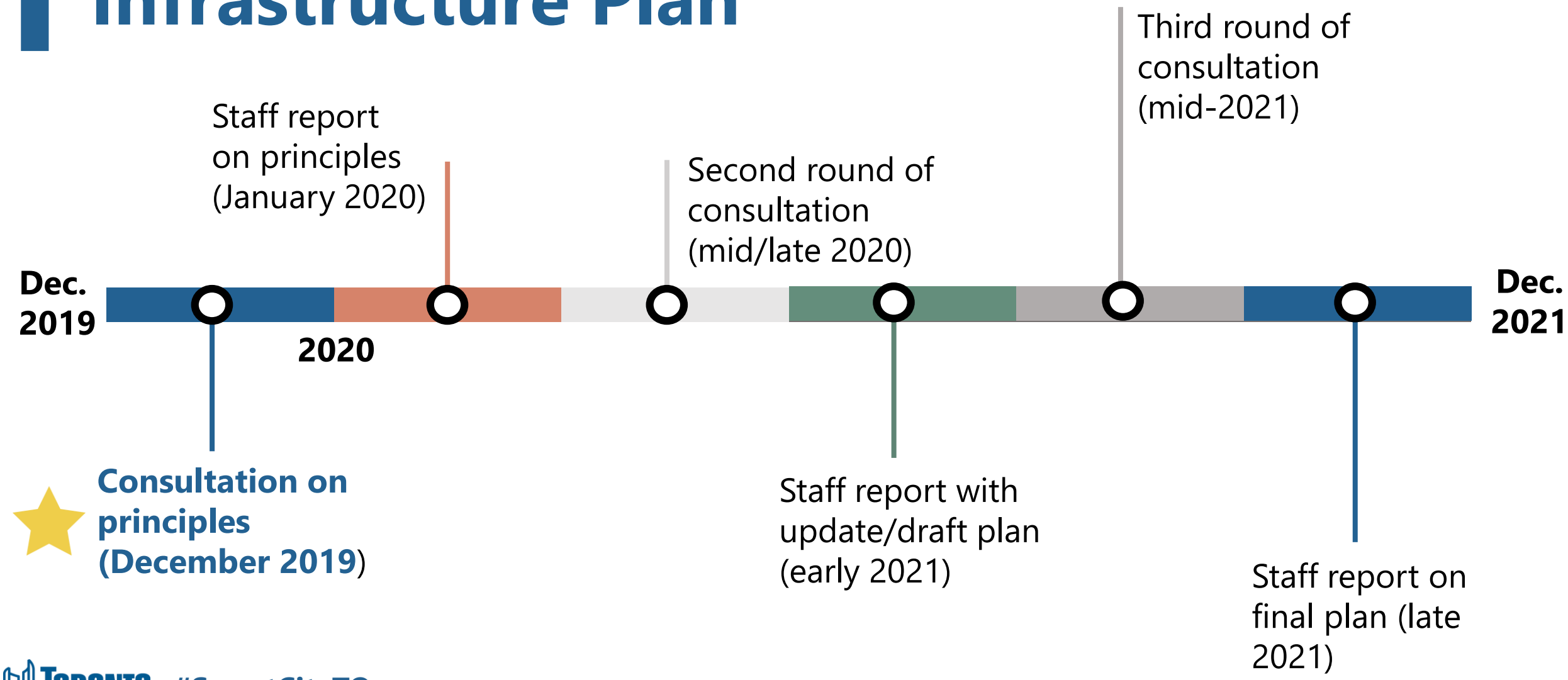
In addition to these public meetings, **an online questionnaire** is available at **toronto.ca/connectedcommunity** – where you can also sign up to be notified about future opportunities.

Comments, questions and feedback can also be submitted by email to **digitalfeedback@toronto.ca.**

Consultation Process – Community Advisory Group

- A **Community Advisory Group (CAG)** will be established in 2020 to provide input on the design of additional consultations and implementation, as well as on the project content itself.
- Anyone can apply to be part of the CAG. Please take one of our CAG overview documents if you are interested (available during the breakout portion of this meeting).
- Applications are open online at **toronto.ca/connectedcommunity**

Roadmap to the Digital Infrastructure Plan



Draft Digital Infrastructure Principles

Draft Principles

The digital infrastructure principles will form the guiding framework for the City's Digital Infrastructure Plan.

- They will help guide day-to-day as well as long-term planning decisions, and will be used to help evaluate internal and external proposals in the digital realm.
- We have developed a draft set of principles to present to you today for your feedback.
- The draft principles are based on the direction of City Council and on research from other jurisdictions.

1. Equity and Inclusion [draft principle]

Digital infrastructure will be used to **create and sustain equity and inclusion** in its operations and outcomes.

Digital infrastructure will be **flexible**, **adaptable and responsive** to the needs of all Torontonians, including equity-seeking groups, Indigenous people, those with accessibility needs and vulnerable populations.

1. Equity and Inclusion

Policies and Practices Today

Equity Lens: the Equity Lens process will be applied to digital infrastructure projects to identify how they will address the City's Equity goals and benefit equity-seeking groups and Indigenous people, as well as potential negative impacts and how they will be mitigated.

Wi-Fi in City Spaces *(in development)*: free Wi-Fi is available at City Hall and most civic centres. The TO Connect program is aimed at bridging the digital divide by expanding free Wi-Fi to recreation centres and Long-Term Care Homes.

Data for Equity Strategy *(in development)*: this strategy will support the collection of socio-demographic data, such as race, gender, age and disability, to ensure equitable program planning and service delivery for Toronto residents.

1. Equity and Inclusion

Case Study: Raising the Village

This case study showcases how the City collaborates with partners to collect, share and analyze data to promote positive outcomes for children and families in Toronto.

The Technology:

- Key technologies used in this case example are data sharing agreements, data analysis, and web visualization.

The Benefit:

- Data gathered will help support research on topics such as child and family poverty, outcomes based on racial identity, inequity and gaps in potential for children and youth, and income and health inequities.

2. A Well-run City [draft principle]

Digital infrastructure will enable **high quality, resilient and innovative public services**, and support evidence-based decision-making.

2. A Well-run City

Policies and Practices Today

Procurement: vendors have various ways to propose Digital Infrastructure components that respond to the City's needs and priorities – competitive procurements, unsolicited and non-competitive procurement (subject to increased oversight) and social procurement.

City Vision Documents: a number of Council-adopted plans, policies and guidelines articulate a vision for Toronto that Digital Infrastructure proposals can be evaluated against (e.g. Corporate Strategic Plan, the City's Commitments to Indigenous Peoples, HousingTO Action Plan, TO Prosperity, etc.)

Connected Community / Smart City initiative: this initiative and team will be responsible for promoting the use of data and technology to connect communities, solve challenges and deliver services efficiently and effectively to residents.

2. A Well-run City

Case Study: Toronto Water Goes Digital

Traditional water meter reading processes were replaced by new automated water meters to provide a standardized system for all Toronto Water customers.

The Technology:

- New automated water meters that send water use information directly to a secure data collection unit for billing and administration.

The Benefit:

- The new water meters eliminate the need for manual readings and provide a more accurate, fair and efficient way to administer water use.

3. Social, Economic, and Environmental Benefits [draft principle]

Digital Infrastructure will contribute to positive **social, economic, and environmental benefits** by supporting the success of Toronto's residents, businesses, academic institutions and community organizations.

3. Social, Economic, and Environmental Benefits

Policies and Practices Today

Open Data: the City routinely releases non-personally identifiable data that can be used by anyone for any purpose through an Open Data license. Organizations collaborating with the City of Toronto are also encouraged to provide data that can be shared through the Open Data Portal.

Transportation Innovation Zone *(in development):* the City is examining a proposed framework for, and designation of, transportation innovation zones for transportation technology trials proposed by third parties.

The Green Market Acceleration Program: provides local firms and foreign investors with an opportunity to collaborate with the City of Toronto in order to accelerate the development and commercialization of made-in-Toronto green technologies

3. Social, Economic, and Environmental Benefits

Case Study: King Street Transit Pilot

The King Street Transit Pilot was about moving people more efficiently on transit and improving public space. A variety of digital technologies were used to collect data on the pilot project.

The Technology:

- Data collection and monitoring was generally conducted using a variety of technologies, including intersection cameras, Bluetooth sensors, and Point-of-sale machines.

The Benefit:

- The Pilot resulted in more reliable, productive and efficient operation of streetcar service in the corridor.

4. Privacy and Security [draft principle]

Toronto's Digital Infrastructure must operate in a way that **protects the privacy of individuals in accordance with privacy laws**, and be safe from misuse, hacks, theft, or breaches.

4. Privacy and Security

Policies and Practices Today

Municipal Freedom of Information and Protection of Privacy Act (MFIPPA): Provincial law outlines conditions when the City can collect, use and disclose personal information. This also applies to all those acting on behalf of the City.

Privacy Impact Assessments: the City conducts Privacy Impact Assessments for all business cases and new technology systems that collect personal information. These assessments use a Privacy-by-Design approach to ensure legal and City policy compliance, put in practice fair information practices, and to reduce, mitigate and avoid privacy risks to the public**.**

Cyber Security Program: the City recently hired a Chief Information Security Officer, who coordinates the City's cyber security program, including initiatives to assess capabilities to identify and respond to cyber requirements associated with digital infrastructure.

4. Privacy and Security

Case Study: Vehicle-for-Hire Licensing Regulations

Data sharing agreements and innovative uses of technology and analytics were used in the modernization of Vehicle-for-Hire licensing and enforcement (Taxis, Uber, Lyft etc.).

The Technology:

- Automated data sharing between licensed parties and the City via a **Data Sharing Agreement**.
- **Automated licence application process** for Private Transportation Company drivers with new licensing issuance technology

The Benefit:

- New technology solutions streamline licensing processes and enhance regulatory compliance.

5. Democracy and Transparency [draft principle]

Decisions about Digital Infrastructure will be made democratically, in a way that is **ethical, accountable, transparent and subject to oversight.**

Torontonians will be provided with **understandable, timely, and accurate information about the technologies in their city**, and opportunities to shape the digital domain.

5. Democracy and Transparency

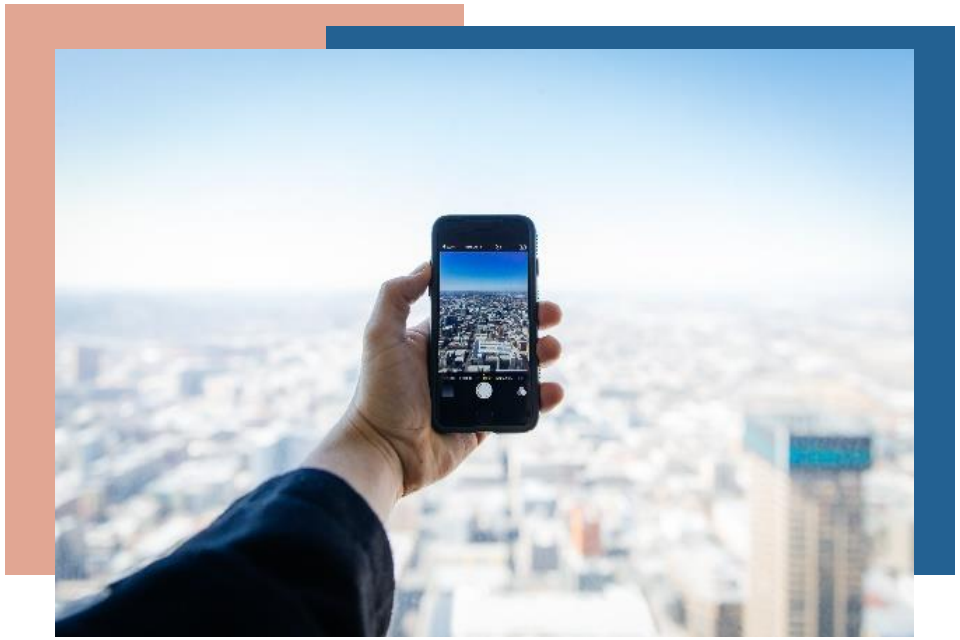
Policies and Practices Today

Open Decision-Making Process: all decisions of City Council are made in meetings open to the public, with limited and specific exceptions. The public are welcome to engage in the decision-making process, submit comments, or speak to Committee. If unable to attend in person, the City Clerk's Office provides livestreams of meetings and hosts a video archive of past meetings, and all documentation.

City Accountability Officers: the City has a number of independent officers who have the mandate to hold the City's decisions to account – the Integrity Commissioner, Auditor General, and Ombudsman.

Freedom of Information: City records are subject to freedom of information laws, where you have a right to request records held by the City.

5. Democracy and Transparency



Case Study: Open Data Program

The City created an Open Data Portal and Open Data Master Plan to help the City's delivery of public services, engage with citizens and find innovative approaches to civic problems.

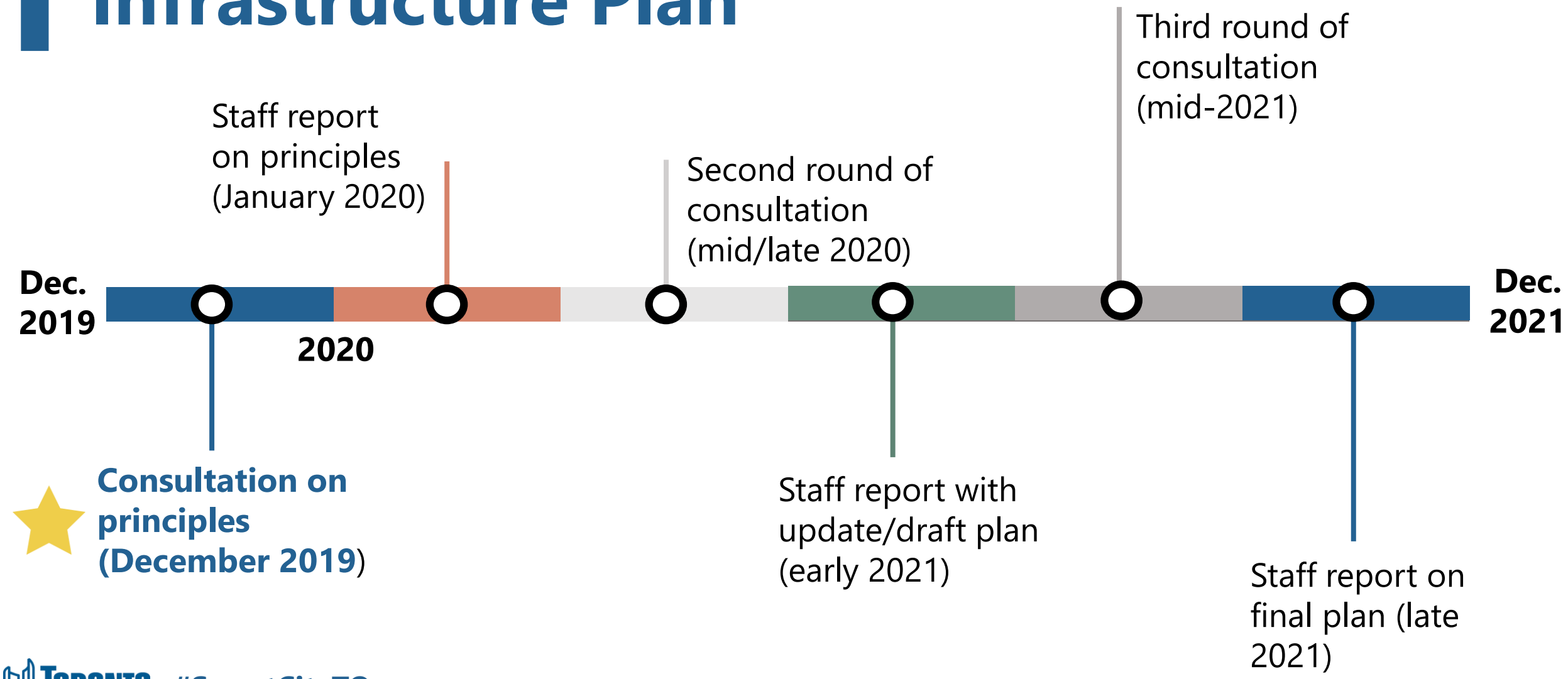
The Technology:

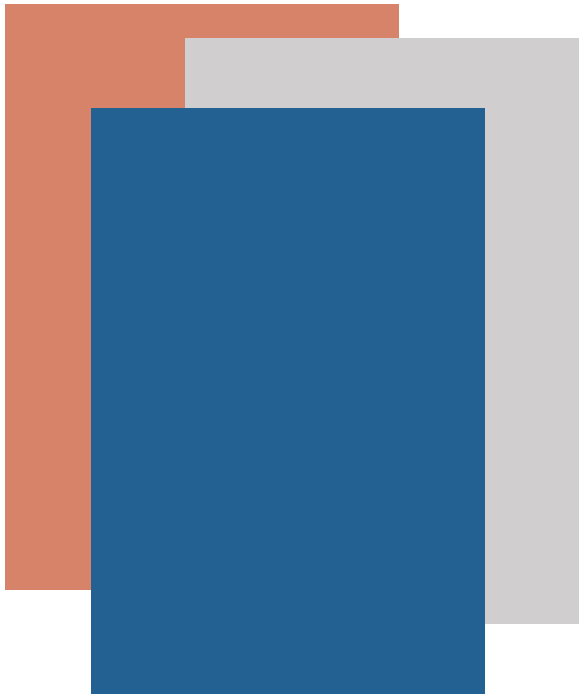
- Open Data is digital data that is made available to be freely used, reused, and redistributed by anyone, anytime and anywhere.

The Benefit:

- The Open Data Portal makes valuable datasets accessible for app and program developers, while also giving everyday citizens a deeper look into the City data that is kept and aggregated.

Roadmap to the Digital Infrastructure Plan





Questions of clarification

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Engagement Activity

- Attendees are invited to participate in a facilitated engagement activity to review draft principles and example policies, ask questions, and provide feedback.
- Around the room, we have a number of stations.
  - Read the information on the boards/in your discussion guide
  - Have a conversation with the project team – let us know what you're thinking!
  - Provide your feedback on the draft principles in-person using your feedback form, or visit **toronto.ca/connectedcommunity** for the online consultation survey!