EX12.2

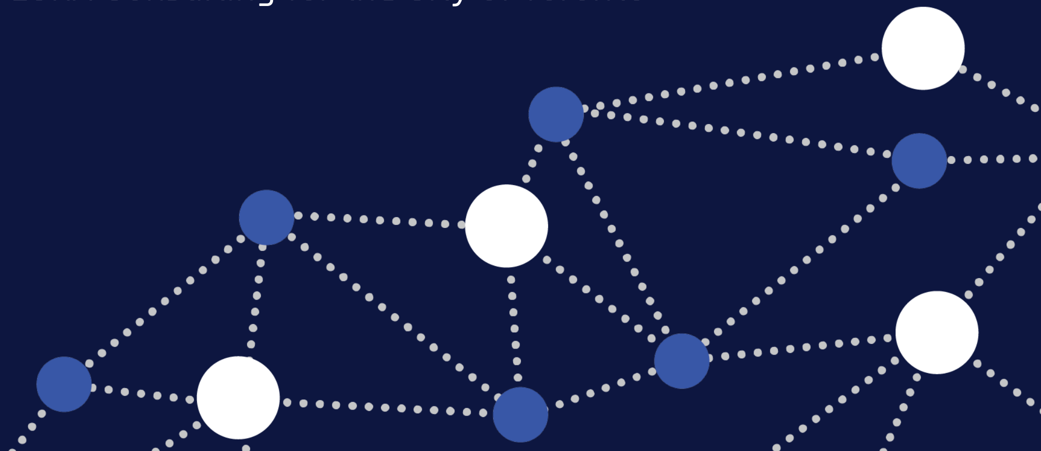
DIGITAL
TECHNOLOGIES
& YOUR
CITY

Developing the City of Toronto's
Digital Infrastructure Plan

ROUND ONE ENGAGEMENT SUMMARY REPORT

JANUARY 2020

Prepared by LURA Consulting for the City of Toronto



TORONTO

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Executive Summary

The use of digital infrastructure is one of many tools to help the City of Toronto achieve its strategic goals and priorities. As the use of digital infrastructure to provide City services and manage City assets evolves, the way in which information is collected, used, managed and protected must also evolve. The Digital Infrastructure Plan (DIP) will modernize and formalize the roles, functions and procedures within which digital infrastructure decisions at the City are made.

The first round of consultation for the DIP was designed to help inform the City as it fulfils the direction received from Toronto City Council in February 2019 to develop a policy framework and governance model associated with digital infrastructure, and a work plan for implementation. It also fulfills direction received in June 2019 to evaluate policies on ethical digital standards and create a code of technological practices. The starting point to developing the DIP is to build consensus around a set of clear ethical principles that articulate a vision for the use of digital infrastructure. The primary purpose of the consultations held between December 7, 2019 and December 19, 2019 was to obtain feedback on five proposed draft digital infrastructure principles.

Efforts to engage members of the public included multiple communication tactics, such as public meetings, an online questionnaire, promotion via social media, and the project's web page. Three public meetings were held; one of these meetings was also livestreamed on YouTube. The following points breakdown the participation rates and outreach results:

- 195 people were engaged by either attending the public meetings (75 people) or by tuning into the YouTube livestreamed City Hall public meeting on December 9, 2019 (120 people). An additional 100 people have viewed the recorded video since that time.

- 72 people submitted written feedback by filling out the paper feedback form at a public meeting (8 feedback forms), by submitting feedback through the online questionnaire (54 completed questionnaire), or by submitting feedback through the dedicated project email address (10 unique emails). Members of the public also provided feedback by speaking to staff who took notes at the public meetings and by providing feedback on sticky notes directly onto display panels.

- 88 people submitted completed applications to participate on the Community Advisory Group to be established in 2020.

- 5,745 people engaged with the City's dedicated project web page or social media posts on Facebook, Instagram, LinkedIn and Twitter by using the City hashtag (#SmartCityTO), posting comments, liking and/or sharing the City's posts.

Among the feedback received, several recurring overall key messages emerged:

1. Overall, participants expressed **support for all five draft principles** presented by the City and indicated that the City was heading in the right direction. Interestingly, all principles were received relatively equally with none being perceived negatively or out of line with public opinion and without any principle receiving noticeably more attention than others.
2. To improve upon the principles as presented, participants noted that the **terms within the principles could be simplified and/or explained**, so that everyone is able to understand their meaning.

3. Participants expressed a desire to understand **how the City plans to implement the DIP** and realize the intent of the draft principles. Related to this, participants asked **how success of the DIP will be monitored and evaluated over time**.
4. Participants indicated that the City should **look to best practices** from around the world and learn from others. They indicated that the DIP should **exceed minimum requirements**.
5. With respect to public engagement, participants noted **the importance of engaging broadly** and making the process accessible to all. Significant to this is ensure that all material is concise, written in plain language, and can be easily understood so that all Torontonians can participate and provide feedback.

Specific key takeaways for each principle are as follows:

Equity and Inclusion

- There were several comments received concerning the wording of the principle, stating that while it is comprehensive, it is not necessarily actionable.
- Some participants noted that innovative solutions should be devised to utilize open data to promote equity, reduce barriers, and promote a connected community by bringing information to all residents regardless of their digital literacy.

A Well-run City

- It was suggested that the implementation of technology should not become the primary objective. The principle should be people-centric and be focused on improving accessibility to City services; maintaining effective and efficient public services; and developing connected communities.

Social, Economic and Environmental Benefits

- Participants noted that the City must ensure that public benefit is of utmost priority when it comes to the collection and use of private data.

Privacy and Security

- Participants suggested collecting only data that is necessary, and that collection of an individual’s data must be permission based, requested in clear and simple words, with rules listing the public spaces where data can and cannot be collected. Policies should exceed minimum standards.

Democracy and Transparency

- Participants placed emphasis on engaging more residents and improving education to lend to true democracy and transparency. The average person should be able to understand and participate in conversations about digital technology.

The feedback received from this first round of consultation will be used to adapt and refine the guiding principles that will form the foundation of the DIP. The second phase of consultation is scheduled to take place in mid to late 2020.

Section 1: Project Overview

The use of digital infrastructure is one of many tools to help the City of Toronto achieve its strategic goals and priorities. As the use of digital infrastructure to provide City services and manage City assets evolves, the way in which information is collected, used, managed and protected must also evolve. The Digital Infrastructure Plan (DIP) will modernize and formalize the roles, functions and procedures within which digital infrastructure decisions at the City are made.

Digital Infrastructure is defined as: *infrastructure that creates, exchanges or uses data or information as part of its operation.* Digital infrastructure includes physical structures, cabling and network systems, software systems, data standards and protocols as well as the data itself. Some examples include sensors (cameras, GPS sensors, microphones, etc.), broadband and telephone networks, Wi-Fi, desktop software, web pages, and mobile apps and open data standards.

Project Objectives

The DIP is envisaged as a tool to help guide day-to-day as well as long-term decisions related to digital infrastructure. It will also be used to help evaluate internal and external proposals in the digital realm. Creating a DIP is a significant undertaking due to the scope of work and complexity of issues. The starting point to develop the DIP is to build consensus around a set of clear ethical principles that articulate a vision for the use of digital infrastructure and guide decision-making. Additional work required to develop the DIP includes:

- Implementing a Community Advisory Group;
- Researching matters related to data governance;
- Creating application and evaluation standards;
- Clarifying internal city processes; and
- Developing fine-grained implementation policies.

Consultation with stakeholders, members of the public and other groups is fundamental to developing the DIP.

Round One Engagement Purpose and Objectives

The first round of public consultation for this project was intended to solicit feedback on a series of draft principles developed based on Council direction from June 2019 that directed staff to evaluate policies on ethical digital standards and create a code of technological principles.

Through this consultation, the City hoped to understand:

- What the public liked about the draft principles?
- What new policies and/or procedures are needed?
- What topics require further discussion and consideration?
- What suggestions the public had for strengthening the City's approach?
- What things remain unknown in this space but that we do not want to lose sight of?

Feedback heard during this round of consultation will result in refinements to the draft principles to create working principles that will be reviewed by the City's Executive Committee in early 2020. While not final, these refined principles will form the basis of the DIP and will provide context for future rounds of consultation. The principles may be further refined in later stages of the process as appropriate.

Engagement Audiences

Engagement for the project was executed between December 7, 2019 and December 19, 2019 and included multiple engagement methods. In total, 195 members of the public were engaged by attending a public meeting in person or by viewing the livestreamed public meeting at City Hall on December 9, 2019. 72 people provided direct feedback by completing the feedback form at the meeting, completing the feedback form through the online questionnaire or by emailing the project team via the dedicated project email. Additionally, over 5,700 people were reached through social media. These values are further defined in Section 2.

In addition to the engagement of the general public, the Planning Review Panel were also consulted. This Panel is a representative group of Torontonians that help the City Planning Division guide growth and change in Toronto by providing informed public input on planning initiatives. Input from the Panel is not included in this report but is contained in a separate document specific to the Planning Review Panel Process. Comments received from the Planning Review Panel will be integrated into the project team's broader analysis of consultation feedback.

Project Timeline

The DIP will be developed over the next 18 to 24 months and will be informed by additional rounds of stakeholder and public consultations. This report highlights the results of the first step which is to seek feedback around a set of clear ethical principles that articulate a vision for the use of digital infrastructure in the City. The timing for the development of the DIP is illustrated in Figure 1. The subsequent steps in the process will be informed by the feedback received during previous rounds of engagement.

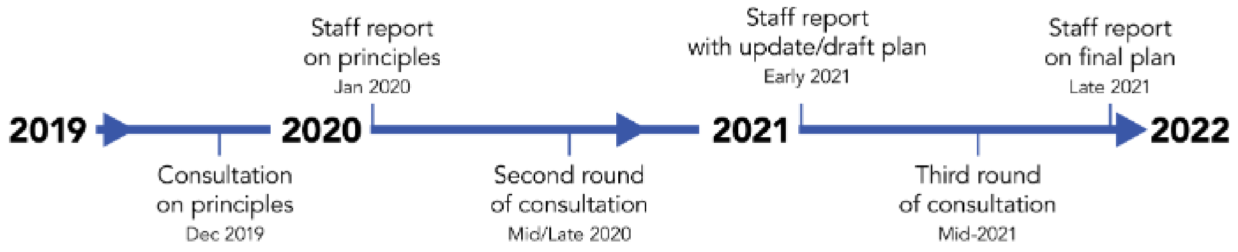


Figure 1: Anticipated Consultation Timeline

Report Contents

This engagement summary report documents the results of three public meetings and the online questionnaire that comprised the engagement process for round one of the project. It highlights the engagement methods used to gather public input and includes an analysis of the feedback received. These key messages, as described in this report, will be reviewed and considered by the project team and will influence the development of the draft principles and the Digital Infrastructure Plan. The report concludes with an analysis of next steps for the project including engagement opportunities for future phases of the project.

Report Methodology

All comments received at the public meetings and through the online questionnaire have undergone a thematic analysis. This involves summarizing and categorizing qualitative data so that important concepts within the dataset are captured. Once the thematic analysis was completed for each question, the collection of themes was used to formulate the descriptive text in this report. It is important to note that comments received were wide-ranging. A fulsome documentation of all feedback can be found in **Appendix A**, **Appendix B** and **Appendix C** of this report.

Section 2: Engagement and Communication Methods

The engagement program for the Digital Infrastructure Plan was designed to maximize public participation through a multi-pronged approach. This section will demonstrate the communication and engagement methods that were used to gather public input and will also show the numbers of people engaged through each method.

Engagement Methods

Public Meetings: Three public meetings were held at different locations and times across the City. The project team and subject-matter experts from the City attended each meeting to help answer questions and aid discussion. The events each began with an open house portion, which was followed by a context-setting presentation and questions of clarification period. Attendees then returned to the open house format to provide feedback on the draft principles. During the open house portion, participants were invited to review project information, the draft principles, and existing example policies. Case studies were used to demonstrate the principles in action. Participants were also provided with a discussion guide which mirrored the content of the display panels. Participants were able to give their input and feedback on the draft principles and ask questions in the following ways:

- Completing a feedback form and returning it to project staff;
- Writing feedback on post-it notes and placing it on to feedback display panels; and
- Speaking with staff who recorded participant feedback and questions.

The presentation, display panels and discussion guide from the public meeting were all made available online for public review.

Online Questionnaire: An online questionnaire was also posted, mirroring the opportunity for providing input found at the public meetings. The presentation, display panels, and discussion guide from the public meetings were all available online for public review. The feedback form available at the public meetings was mirrored in an online questionnaire, which was available for length of the engagement period (December 7 – 19, 2019).

Email: In addition to attending meetings and completing the questionnaire, participants were invited to communicate via email to the dedicated project address (digitalfeedback@toronto.ca).

Communication Methods

Several communication channels were used to reach out to the members of the public about the Digital Infrastructure Plan. The following list describes the various methods that were used:

Printed Media: Project information was released to the public starting from November 25 to December 2 on Toronto Sun, Ming Pao (Cantonese), Canadian Chinese Express (Mandarin), Senthamarai (Tamil), Correo Canadiense (Spanish), Philippine Reporter (Tagalog), Corriere Canadese (Italian), and Sol Portuguese (Portuguese). Information released contained a brief about the project and an invitation to attend the public consultation meetings. Members of the public were also encouraged to visit the project website to learn more information. For the full list of media where the advertisements appeared, refer to **Appendix D**.

Social Media and Digital Ads: The City of Toronto used its Facebook, Instagram, LinkedIn, Twitter and YouTube accounts to promote the public consultation meetings and online questionnaire from November 21 to December 12. The unique project hashtag #SmartCityTO was used to categorize and promote the information on social media. Further digital ads ran from December 1 to 12 on Toronto.com, The Weather Network, CP24, and the Toronto Star. A report on social media impressions can be found in **Appendix D.**

Project Web page: The City's website acted as a communications portal to inform the public about the Digital Infrastructure Plan. A landing page, http://toronto.ca/connectedcommunity, hosted all information regarding the project including general information, project updates, a link to the online questionnaire, and an option to subscribe for plan related e-updates.

Outreach to Indigenous Communities: Following discussions with the City of Toronto's Indigenous Affairs Office, the project team has initiated contact with the Mississaugas of the Credit First Nation but consultation has not yet begun.

In order to encourage participation of Toronto's First Nations, Métis and Inuit residents, the December 2019 consultations were promoted through an email to Toronto's Aboriginal Support Services Council. The City has also initiated contact with the First Nations Information Governance Centre (FNIGC) in order to learn about First Nations principles of OCAP (Ownership, Control, Access and Possession). To date, no meetings have been held, however. Consultation and engagement with Toronto's Indigenous communities and experts in First Nations information governance will be a component of the Next Stage of work, as discussed below.

Engagement and Reach

Traditional consultation methods engaged 195 members of the public during the engagement period, through attend open-house style public meetings and viewership of the livestreamed December 9th, 2019 public meeting. Additionally, written feedback was received by 72 people. The traditional methods of engagement were useful in facilitating an understanding about the project, fostered participation from Torontonians, and obtained feedback to guide the development of the draft principles. Social media engagements were useful in raising awareness about the consultation and project in general. As demonstrated in the table below, social media engagement efforts potentially reached up to 5,745 people.

The table below includes tallies for those "engaged" and "reached" during this round of consultation. Engaged includes people who attended a meeting in person or who participated actively online. Reached is defined as those people who viewed the materials online but did not provide feedback. Further details on engagement totals and definitions for social media engagements can be found in **Appendix E**.

Traditional Consultation Methods

Engagement Method	Engagement Activities	Engagement Reach
Public Meetings	Three public consultations were held across the City to maximize participation. The meetings included a presentation from the City and an open-house component for members of the public to review initial project materials, speak with the project team, and provide feedback. **Dates (2019):** December 7 – McGregor Park Community Centre, Scarborough December 9 – Toronto City Hall December 12, – North York Central Library, North York	**Engaged** 75 **Reached** NA
YouTube	The December 9 public meeting was livestreamed and archived on the City's YouTube channel. It can be viewed at any time. **Timeframe:** December 9, 2019	**Live Views** 120 **Total Views** 220
Written Feedback	A feedback form was made available at the public meetings for participants to provide written feedback. Additionally, an online questionnaire was developed to engage participants who may not have had the opportunity to participate at one of the in-person engagement events. The feedback questions asked in the questionnaire mirrored those asked at all public consultations. Participants were also welcomed to submit feedback by email. **Timeframe:** December 7, 2019 – December 19, 2019	**Engaged** 72 **Reached** 1,300
	Total Engaged	**267**
	Total Reached	**1,520**

Digital Outreach Methods

Outreach Method	Outreach Activities	Reach
Project Web page	A dedicated web page was developed within the City of Toronto's website to act as an integral platform for all project related information. Through the web page, interested people could also subscribe to receive updates and information about the project. **Timeframe:** October 25, 2019 – December 19, 2019	**Reached** 1,421

Outreach Method	Outreach Activities	Reach
Social Media	**Facebook** four organic Facebook posts (Dec 6, 9, 12 and 13) drove traffic to the consultation and project web pages, resulting in: • Likes, Comments, Shares: 24 • URL Clicks: 61 From November 21 to December 12, a paid Facebook post generated the following results: • URL Clicks: 161 A Facebook event was created for each public consultation session and resulted in: • URL Clicks: 301 • Responses: 459 **Instagram** An Instagram post was added to the City's main Instagram account which generated 160 likes. An Instagram story resulted in 55 URL clicks. **LinkedIn** Two posts on the City's LinkedIn page promoted the consultation and online questionnaire resulting in 31 shares and 430 URL clicks. **Twitter** A project hashtag, #SmartCityTO, was used to promote the engagement online on Twitter using the @CityofToronto account. This generated the following: • Tweets: 313 • Retweets: 190 • Contributors: 144 From November 21 to December 20, 16 organic tweets from the @CityofToronto account generated: • Engagements: 334 • Retweets: 84 • Likes: 118 • URL Clicks: 295 From November 21 to December 12, two paid Twitter posts from @CityofToronto generated the following results: • Engagements: 396	**Reached** 5,745

Outreach Method	Outreach Activities	Reach
	- Retweets: 41 - Comments: 4 - URL Clicks: 723 **Timeframe:** November 21, 2019 – December 20 2019	
Digital Advertisements	digital advertisements from December 1 to 12 in various sizes, geo-targeted to Toronto on the following sites: - Toronto Star/Toronto.com - The Weather Network - CP24 **Timeframe:** December 1, 2019 – December 12, 2019	**Reached** NA
	Total Reach	**5,745**

Engagement Evaluation

While significant efforts were made to spread awareness about the project and the engagement opportunities, the project team is seeking to significantly increase the level of engagement in future stages. The following describes what the project team perceives to have worked well and what could be improved upon for future rounds of consultation.

What Worked Well:

- The project team made considerable efforts to raise awareness about the project and encourage participation through traditional media (print advertisements) and digital and social media (Facebook, Instagram, Twitter and online/digital advertisements). Analytics demonstrate that the potential reach of these advertisements was strong having reached approximately 5,745 people.
- Those who attended meetings and provided written feedback provided extensive in-depth feedback articulating a variety of ideas and perspectives to inform revisions to the draft principles.
- There was a high level of interest in public interest in becoming actively engaged in the project through the Community Advisory Group, with 88 completed applications submitted.

What Could be Improved:

- The project team received some comments through the first round of engagement that the consultation materials were text heavy. This may have limited engagement, particularly as it relates to the online survey. While 1,300 people opened the online survey, only 54 people completed it. The project team interprets this as an opportunity to simplify content

for future rounds and include less dense text and more graphics / images to encourage broader participation.
- The project team also heard that all content should be written in plain language and should avoid jargon or tech industry language. While the project team made efforts to do so, continued efforts to simplify of content in future rounds of consultation would make the consultation material more accessible.
- Several participants encouraged the City to consider education initiatives to help the average citizen engage in the conversation with the base knowledge needed to understand what is being discussed and provide relevant feedback. Suggestions included a glossary of terms or brief videos to explain key concepts.
- The online engagement was live for nearly two weeks, however the three public meetings took place over the course of six days. The lead-up to the holiday season may have potentially impacted participation rates at these meetings. It would be desirable to have future rounds of engagement be longer, particularly to encourage greater online participation.

Section 3: What We Heard – Key Messages

Participant feedback was sought to influence the development of guiding principles for the DIP. Five draft principles were presented with definitions of their intentions, explanations of relevant policies currently in place, and policies being considered by the City. Case studies to demonstrate the principles in action were also provided. Participants were presented with four questions to guide their feedback on each of the draft principles. The questions were as follows:

- What do you like about this draft principle?
- What suggestions do you have for strengthening the City’s approach?
- What are the key questions that need to be addressed or clarified as the project continues?
- Do you have any additional advice related to this principle?

The following subsections are intended to provide a high-level overview of what was heard. These overviews should be interpreted as key messages and not a verbatim transcript of feedback recorded by participants or staff. For a fulsome transcription of individual points provided by participants, please refer to **Appendix A** for in-person engagement feedback, **Appendix B** for online questionnaire responses and **Appendix C** for emailed feedback.

Overall Key Messages

Feedback specific to each principle is presented further below. Across all feedback, several recurring key messages emerged. These overall key messages are as follows:

- Overall, participants expressed support for the draft principles presented by the City and indicated that the City was heading in the right direction. Interestingly, all principles were received relatively equally with none being perceived negatively or out of line with public opinion and without any one principle receiving noticeably more attention than the others.
- To improve upon the principles as presented, participants noted that the terms within them could be simplified and/or explained, so that everyone is able to understand their meaning.

- Participants expressed a desire to understand how the City plans to implement the DIP and realize the intent of the draft principles. Related to this, participants asked how success of the DIP will be monitored and evaluated over time.
- Participants indicated that the City should look to best practices from around the world and learn from others. They indicated that the DIP should exceed minimum requirements.
- With respect to public engagement, participants noted the importance of engaging broadly and making the process accessible to all. Significant to this is ensure that all material is concise, written in plain language, and can be easily understood so that all Torontonians can participate and provide feedback.

Principle 1: Equity and Inclusion

The draft principle was presented as follows: *"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."*

Key Points of Feedback

What do you like about the draft principle?

- Participant feedback indicated strong support for the principle. Participants indicated the statement was comprehensive, encompassing, has not left gaps, and is important Toronto.
- Participants highlighted specifics of the statement that they appreciated seeing acknowledgement of, such as equity, equity seeking groups, Indigenous people, and accessibility.
- Among things the City is currently doing, participants appreciated the equity lens, WiFi in City spaces, and that the Accessibility for Ontarians with Disabilities Act was an element of this.

What suggestions do you have for strengthening the City's approach?

- There were several comments received concerning the wording of the principle, stating that while it is comprehensive, it is not necessarily actionable. Clarification of the terms within the principle was also suggested, with others suggesting to expand on terms within the statement (e.g., equity-seeking groups, vulnerable populations, etc.). One person suggested the addition of the word "protect".
- Some participants noted that innovative solutions should be devised to utilize open data to promote equity, reduce barriers, and promote a connected community by bringing information to all residents regardless of their digital literacy.
- With respect to the implementation of this principle, some participants suggested that the City should exceed relevant minimum requirements, and vendors should demonstrate how their solutions enact this principle.

What are the key questions that need to be addressed or clarified as the project continues?

Questions raised by participants with respect to this principle included:

- How will digital literacy break down barriers for equity-seeking groups?

- Does the principle mean that activities will be directly linked to improving inclusion and equity, or does it mean that any activity will consider an inclusion and equity lens?
- How will you measure the benefits and impacts of projects on specific groups?
- How will decisions be made when there are competing priorities and different impacts on different groups?
- How will the DIP relate to other equity-related initiatives of the City?
- How will potential unintended consequences be monitored?

Do you have any additional advice related to this principle?

- Several participants suggested involving equity seeking groups in matters related to the advancement of digital infrastructure.
- Participants suggested looking at and learning from best practices from elsewhere, and applying what works well.

Principle 2: A Well-run City

The draft principle was presented as follows: *"Digital Infrastructure will enable high quality, resilient and innovative public services and support evidence-based decision-making."*

Key Points of Feedback

What do you like about the draft principle?

- This principle was well received by most participants, with some specifically expressing support for evidence-based decision-making, using technology to improve service delivery, and having innovative public services.
- Among things the City is currently doing, participants appreciated the City's efforts and vision with regards to procurement. They stressed the importance of social procurement, keeping the process transparent, and applying all of the draft principles to the procurement process. Additionally, participants expressed support for the Cloud Strategy
- Among things the City is thinking about, participants indicated support for the idea of creating digital standards, the creation of an evaluation framework, and me sustainability objectives.

What suggestions do you have for strengthening the City's approach?

- It was suggested that the implementation of technology should not become the primary objective. The principle should be people-centric and be focused on improving accessibility to City services; maintaining effective and efficient public services; and developing connected communities.
- Some participants suggested using simpler language and providing clarity on the terms within the statement itself (evidence-based decision-making, 'well-run', etc.).
- Some specific changes were suggested, such as replacing the word "will" with the word "must", and the addition of language around open source solutions.
- Some suggested the need for further detail, such as an explanation of how the principle will be implemented and evaluated over time.
- Look to best practices, such as the digital standards that are being developed nationally.

What are the key questions that need to be addressed or clarified as the project continues?

Questions raised by participants with respect to this principle included:

- How will data support evidence-based decision-making?
- What do these principles mean in the context of procurement processes?
- How will success be measured?
- What municipal services are in the scope of the DIP?
- What happens in an instance where the City's elected officials do not agree with the principle?
- How will different departments share data and improve effectiveness and efficiency across the City?

Do you have any additional advice related to this principle?

- There is a need to establish a long-term vision for the success of the DIP.
- Look at what other cities around the world and doing in this space and learn from their experiences.
- On a local scale, multi-city cooperation may yield benefits.
- The City should develop contingency plans and risk management strategies with respect to technology use.

Principle 3: Social, Economic and Environmental Benefits

The draft principle was presented as follows: *"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."*

Key Points of Feedback

What do you like about the draft principle?

- The principle was well received by participants, who appreciated that it indicated a positive future, is comprehensive, places "social" first, and is measurable.
- Among things the City is currently doing, some participants indicated support for the Open Data Program while highlighting its importance for social and economic benefit and using data to serve public interest. Support was also expressed for The Green Market Acceleration Program and Academic Partnerships.
- Among things the City is thinking about, appreciation was expressed for the fact that the principle is considering the issue of "technology for technology's sake'.

What suggestions do you have for strengthening the City's approach?

- Some participants indicated that the City should define terms in the context of this principles such as "positive", "equity", "benefits", and "public good".
- Some comments indicated rephrasing the principle such as replacing "academic institutions" with "learning centres", and restructuring the sentence as "Digital infrastructure must support the success of…, thereby contributing to positive…"
- Several participants suggested the addition of a health lens that would consider the negative health impacts of technology.

- It was noted that while benefits from the use of digital technology should be the end goal, potential negative issues and impacts should be assessed and evaluated.

What are the key questions that need to be addressed or clarified as the project continues?

Questions raised by participants with respect to this principle included:

- How will the benefits be defined and assessed? Which indicators will determine that social, environmental and economic benefits have been realized?
- How does Toronto compare internationally?
- Will an oversight body be established to oversee the progress that is being made and the plan is for coming years?
- Will one of social, economic, or environmental benefits take priority? And if so, why?

Do you have any additional advice related to this principle?

- Participants noted that the City must ensure that public benefit is of utmost priority when it comes to the collection and use of private data.
- Some comments suggested giving more consideration to the environmental impacts of growing digital infrastructure and include policies to regulate disposal of technological products and minimizing energy consumption.
- The DIP needs to be people centric and not be executed as a formality. It has to adopt a holistic approach and result in real benefit to residents.

Principle 4: Privacy and Security

The draft principle was presented as follows: *"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."*

Key Points of Feedback

What do you like about the draft principle?

- Participant responses related to privacy and security indicates that residents are pleased to know that the City is thinking through these issues. They acknowledged the importance of having a principle that addresses privacy and security.
- Among things the City is currently doing, participants expressed support for legal contracts, privacy impact assessments, and compliance with the Municipal Freedom of Information and Protection of Privacy Act.

What suggestions do you have for strengthening the City's approach?

- Data security and protection against both internal and external threats is of importance to participants. Governance should ensure strict oversight on the security of all data collected.
- Participants suggested collecting only data that is necessary, and that collection of an individual's data must be permission based, requested in clear and simple words, with rules listing the public spaces where data can and cannot be collected. People should be able to have the ability to opt-out of providing their data. Moreover, there needs to be education regarding what data is being collected.

- Some participants expressed that the approach taken to protecting security and privacy should be collaborative with other levels of government and draw on international best practices that exceed minimum standards. The City's approach should be reflective of the fact that technology changes fast and that privacy policies be adapted accordingly.
- Participants suggested a need to explain the terminology associated with the principle.

What are the key questions that need to be addressed or clarified as the project continues?

Questions raised by participants with respect to this principle included:

- Who ultimately owns the data that is collected?
- Will individuals be able to access their data, refuse to provide data, and delete their data?
- What personal information is collected?
- How does the City intend to protect residents from misuse, hacks, theft or breaches?
- Where will data be stored?
- Who will benefit from the DIP, the City or private vendors? And how will they benefit?

Do you have any additional advice related to this principle?

- It was suggested that there needs to be a plan of action when unexpected situations arise to quickly release/conceal private information that could be damaging. Proactive risk management and mitigation strategies are important.
- A well-thought-out legal framework is required to ensure that third parties maintain data privacy, along with frequent audits and strong penalties for those who are found to be non-compliant.
- Participants advised that the technology should be entirely owned by and located in Canada.

Principle 5: Democracy and Transparency

The draft principle was presented as follows: *"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."*

Key Points of Feedback

What do you like about the draft principle?

- Participants expressed support for the principle of democracy and transparency, and its importance in public processes. Specifics of the statement were highlighted, such as ethics, accountability, transparency, and oversight.
- Among things the City is currently doing, participants indicated support for open decision-making processes, the layers of accountability, and freedom of information.
- Among things the City is thinking about, participants were enthusiastic about the creation of a Community Advisory Group that will provide further guidance. Support was indicated for a web page that will help promote transparency, working with other City agencies, and opportunities for the City to use more open source software.

What suggestions do you have for strengthening the City's approach?

- Some participant comments related to this principle suggested that the terms within it need to be further defined.
- Participants placed emphasis on engaging more residents and improving education to lend to true democracy and transparency. The average person should be able to understand and participate in conversations about digital technology.
- Some participants suggested that the City could explore possibilities of creating a data governance model such as a data trust wherein a trustee or a group of trustees would make decisions about how data can be used on behalf of the public.
- Feedback from participants indicated an interest in seeing the City establish an oversight and audit mechanism by appointing a dedicated official for data information management.
- It is important to participants that partnering organizations do not claim complete intellectual ownership of ideas that are developed using public data and assets. It was suggested that the City maintain a partial ownership of intellectual property and enforce strict regulations on all vendors. Participant feedback indicated an interest in seeing the City establish safeguards to protect against the use of digital technologies for the sole profit of corporations who benefit from the collection of "free" data.
- It is important to participants that democracy and transparency are upheld during the complete decision-making process that concerns data collection and use. They recommend looking at international example such as Estonia, where members of the public can see who is accessing their information and what kind of information is being used.

What are the key questions that need to be addressed or clarified as the project continues?

Questions raised by participants with respect to this principle included:

- How does the City plan on ensuring a democratic process?
- Will an ombudsman or similar official be appointed to manage issues during the process and in what ways will suggestions and feedback be addressed?
- How does the City plan on publicly reporting on its accountability to the principles?
- Will the City's open data platform allow public access to collected data?
- How will the City put this principle into practice?

Do you have any additional advice related to this principle?

- It was suggested that the idea of transparency seems to be at odds with the principle of privacy and security.
- It was suggested that closing the gap in digital literacy may help to improve the democracy of the process.
- Participants noted that ongoing consultation and engagement are an important aspect of this principle.

Additional Key Messages

Participants were asked to share feedback related to principles or other concepts that may not have been addressed in the presentation, display panels or other consultation materials. Participants were asked to respond to the following questions:

- Is there anything else you would like to add?
- What questions do you have?
- What suggestions do you have for improving the consultation process?

Additional Feedback

- Participants expressed overall support for the principles, noting however that it will be necessary to have tools to assess how effective they are.
- Participants suggested that the principles may need to be simplified in order to be accessible to all. Both the language as well as the branding need to be simple and appealing. Moreover, terminology will need to be defined.
- Participants cautioned that the rapid evolution of technology calls for a plan that is agile and adaptable.

Outstanding Questions

Additional questions raised by participants included:

- How will we know if the DIP is a success? What indicators will be used to assess it?
- What data is being gathered, stored, and transferred?
- How will the City regulate vendors and partner organizations that use public data and infrastructure as a part of their business model? How will it ensure compliance?
- How will the DIP be applied to ongoing projects such as Quayside?
- Will data sovereignty be a part of the DIP?
- Will the DIP be agile in order to adapt to emerging issues and the pace at which technology evolves?
- Why will it take until 2022 to develop the DIP?
- How and when will the public be further involved in the development of the DIP?
- Who will the DIP apply to?
- Will vendors who collect and use data be audited? What happens to vendors who are non-compliant with the DIP?
- How will the City evaluate the use of facial recognition software?
- What is the City’s jurisdiction in this space?
- How do these principles connect to the City’s overall principles for how it operates?

Engagement Process Feedback

- Participants expressed an appreciation to be able to contribute their feedback towards developing the DIP.
- All audiences (from general public to subject matter experts) should be involved in this consultation, and able to share their feedback in both digital and non-digital formats. Effort needs to be made to educate the community and reach out to people who may not be digitally connected. It was suggested to make further marketing and promotion efforts to increase awareness of the consultation process itself.
- The City should consider using simpler language and more graphics in its information materials to encourage conversation and participation from a diverse group of people. The process needs to be accessible to all and information needs to be conveyed in a straightforward manner.

- Participants supported the idea of creating an advisory body that has representatives from various perspectives and constituencies. Related comments suggested that local organizations such as schools and libraries, and residents representing the city's diverse demographics be consulted as well.
- Participants expressed a desire to know when further consultation will be occurring, and how the City will be notifying residents about its progress.

Next Steps

The DIP will take approximately 18 to 24 months to finalize and will include at least three rounds of public consultation. The feedback received from this first round of consultation will be used to adapt and refine the guiding principles that will form the foundation of the DIP. The second phase of consultation is scheduled to take place in mid to late 2020.

Community Advisory Group

In 2020, a Community Advisory Group (CAG) will be established. Members will be selected from 88 completed applications received in December 2019. The CAG is a non-political and non-decision-making advisory committee of volunteers made up of interested individuals, and representatives from organizations and community groups. The role of the CAG is to:

- Act as a sounding board for the Project Team to share and discuss ideas and findings;
- Provide guidance and suggestions to strengthen proposed approaches, concepts and materials (including materials to be presented at public meetings);
- Provide a sense of the broader community's sentiments and concerns and how these might be addressed; and
- Provide a forum for two-way communication between members of the public, members' organizations (if applicable) and the Project Team.

Indigenous Engagement

Building upon initial outreach efforts in Round One, consultations place with the Mississaugas of the Credit First Nation and outreach to Toronto's urban Indigenous communities and experts in First Nations information governance will be a component of the Round Two work plan.

Lessons Learned

As noted in Section 2: Engagement and Communication Methods, the project team has noted some takeaways from participants to consider for future rounds of consultation. Moving forward, the project team will consider the following:

- Continue efforts to distribute consultation information, meeting notices and general project awareness through various traditional and digital media resources to maximize engagement.
- Providing information to participants in concise and less text-heavy formats that considers infographics or alternatives to convey complex information in a simplified and accessible way.
- Providing information to participants in plain language that avoids unnecessary jargon or tech industry language where possible and as appropriate.

- Providing educational materials such as brief videos describing key information or a glossary of terms. The project team could also consider in-person digital literacy events to promote education and awareness.
- A longer round of engagement to encourage broader participation.
- While participation rates were lower than expected, interest in the Community Advisory Group was much higher than anticipated with nearly 90 completed applications submitted. This may indicate a desire to engage with the project team and consultation materials at a more personal level and should be considered for future rounds of engagement.

Appendix A: Individual Meeting Summaries

Appendix A provides an overview of the three public meetings conducted for this project, key elements of the meetings, followed by the questions of clarifications asked by the participants.

Digital Technologies & Your City

Scarborough Public Meeting Summary

December 7, 2019

10:00am – 12:30pm

McGregor Park Community Centre, Scarborough

Draft

Project Background

Digital technology is changing the way we access information, work and connect with each other. Municipal services that integrate digital technology are leading to increased efficiencies, improved decision-making, and better management of public assets. As the use of digital technologies increases, the City is developing a Digital Infrastructure Plan (DIP) to guide day-to-day, as well as long-term planning directions and decisions, and to help evaluate internal and external proposals in the digital realm (e.g., Quayside).

The City has commenced a public consultation program that responds to City Council direction in February 2019 to develop a policy framework and governance model associated with digital infrastructure, and a work plan for implementation. It also fulfills direction received from Council in June 2019 to evaluate policies on ethical digital standards and create a code of technological practices. The starting point for this work is to develop a set of principles to guide the DIP.

The DIP will take approximately 18 to 24 months to finalize. During this time, at least three rounds of stakeholder and public consultations will be conducted (Figure 1). This summary documents the first of a series of three public meetings to discuss and receive input on the draft guiding principles. The feedback received during this consultation will be used to adapt and refine the guiding principles to form the foundation of the DIP. Staff will report on the outcomes of this first round of consultations to Executive Committee at its meeting on January 23, 2020. The report will include an updated version of the principles, which will reflect feedback received during these consultations.

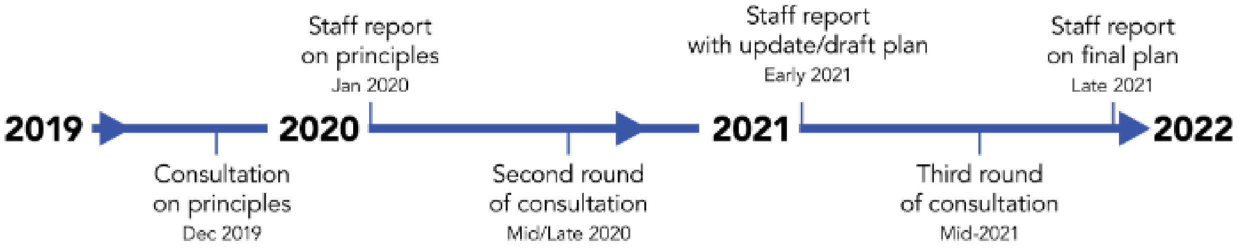

Staff report
on principles
Jan 2020
Staff report
with update/draft plan
Early 2021
Staff report
on final plan
Late 2021
2019
2020
2021
2022
Consultation
on principles
Dec 2019
Second round
of consultation
Mid/Late 2020
Third round
of consultation
Mid-2021

Figure 1: Anticipated Consultation Timeline

Meeting Overview

The first of three public meetings for the DIP was held on December 7, 2019, from 10:00 am to 12:30 pm at McGregor Park Community Centre in Scarborough. The event began with an open house portion, which was followed by a context-setting presentation and questions of clarification period. Attendees then returned to open house portion to provide feedback on the draft principles. During the open house portion, participants were invited to review project information, the draft principles, existing example policies, and case studies used to demonstrate the principles in action. Participants were also provided with a discussion guide, mirroring the content of the display panels. A meeting agenda can be found in **Appendix A.**

Participants were able to give their input and feedback on the draft principles and ask questions in the following ways:

- Completing a feedback form and returning it to project staff;
- Writing feedback on post-it notes and placing it on to feedback display panels;
- Speaking with staff who recorded participant feedback and questions.

While participants were encouraged to write their feedback down in their own words, staff were provided with note-taking sheets and were instructed to write down feedback heard in conversation with participants. Staff also collected contact information from participants who requested follow-up to questions that may not have been answered at the meeting. Participants who desired more time to provide their feedback were encouraged to complete the online survey or to email their feedback to the City at digitalfeedback@toronto.ca.

In total, approximately 15 people attended the December 7, 2019, public meeting. This report provides an overview of the presentation, a summary of the questions of clarification that followed, and a summary of the feedback received from participants.

Presentation

A context-setting presentation was provided by Lawrence Eta, Chief Technology Officer (CTO), with the City of Toronto. Lawrence commenced the meeting with a Land Acknowledgement before continuing with his presentation. His presentation discussed the purpose of the DIP, its intended purpose, the reason for its development and its relation to the Quayside Project. He also provided an overview of the anticipated consultation schedule, emphasizing that public consultation is critical to the development of the DIP. He then proceeded by introducing the five draft guiding principles, as follows:

1. Equity and Inclusion;
2. A Well-run City;
3. Social, Economic and Environmental Benefits;
4. Privacy and Security; and
5. Democracy and Transparency.

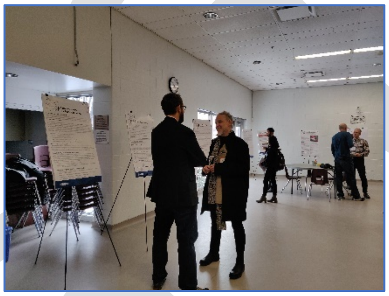
Draft

The presentation concluded with a discussion of the next steps before the floor was opened for questions of clarification. The full presentation can be found on the project website at https://www.toronto.ca/connectedcommunity and a recording of the presentation, filmed at City Hall on December 9th, 2019 can be found on YouTube.com:

https://www.youtube.com/watch?v=DLrOLr5E8t0&t=585s.

Questions of Clarification

Following the presentation, the floor was opened to questions of clarification from participants. A transcript of the questions and answers can be found in **Appendix B.**



Feedback Summary: Key Messages

Participant feedback was sought to influence the development of guiding principles for the DIP. A series of five draft principles were presented with definitions of their intentions, explanations of relevant policies currently in place and policies being considered by the City. Toronto-specific case studies to demonstrate the principles in action were also provided. Participants were presented with four questions to guide their feedback on each of the draft principles. The questions were as follows:

- What do you like about this draft principle?
- What suggestions do you have for strengthening the City's approach?
- What are the key questions that need to be addressed or clarified as the project continues?
- Do you have any additional advice related to this principle?

The following subsections are intended to provide a high-level overview of what was heard. These overviews should be interpreted as key messages and not a verbatim transcript of feedback recorded by participants or staff. For a fulsome transcription of participant feedback, please refer to **Appendix C**.

Draft Principle Feedback and Key Messages

Draft Principle 1: Equity and Inclusion

"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."

Draft

Participant feedback indicated a keen interest in the topic of equity and inclusion. The majority of the feedback received at the meeting was related to this subject matter. The key messages from participant feedback are detailed below.

- **Data thoroughness** is critical. Participants expressed interest in knowing how the City plans to assess gaps in data collection that may result in inequities in service provision. If the goal is to provide municipal services that are determined by "evidence-based" decision-making, there needs to be mechanisms in place to ensure that hard-to-reach populations are being accounted for. The City should also account for the data it does not know it does not have. Questions to consider include, "what data is being collected?", "what data is not being collected, and why?" and "how is data being collected?"
- The **benefits** of digital technologies should be experienced by everyone and not a select subset of the City's population. People should not be excluded from receiving the benefits of technology. The City should assess the potential barriers that may prevent equitable access to the shared benefits of technology. A question to consider is how such barriers can be overcome.
- The principle could better **define vulnerable populations** to provide a clear understanding of who this term includes. For example, one participant acknowledged that seniors are not explicitly mentioned within the definition. This may be an issue as seniors are typically a demographic that has less access to technology. The City should consider how the DIP relates to other municipal policies such as the *Toronto Seniors Strategy: Towards an Age-Friendly City*.
- The City should consider how the **digital divide** is being addressed through this principle.

Draft Principle 2: A Well-run City

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

Participant feedback highlighted opportunities for the City to improve its services and operational efficiencies. The following points demonstrate the key messages from the feedback received.

- The City could consider how **public health** and general health benefits can be addressed through this principle. For example, could the City use technology to determine if people are having health-related issues and improve access for emergency services?
- Related to **operational efficiencies**, participant feedback indicates that opportunities exist to improve road repairs (e.g., a pot-hole reporting system), other repairs (e.g., streetlight replacement), environmental concerns (e.g., pesticide usage monitoring) and waste diversion (e.g., identifying contamination in recycling at the source).

Draft Principle 3: Social, Economic and Environmental Benefits

"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."

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Feedback related to social, economic and environmental benefits focused on a discussion on how these benefits would be assessed and defined. The key messages from participant input are documented below.

- While benefits from the use of digital technology to Toronto's residents, businesses, academic institutions and community organizations should be the end goal, **potential negative issues and impacts should be assessed and evaluated**. A few participants suggested that the City should take a cautious approach to evaluating proposals to recognize that any digital technologies used in the City may result in undesirable outcomes.
- To strengthen the City's approach, participants suggested that the City should **clarify how benefits are defined and evaluated**. For example, regarding economic benefits, who is the intended recipient? Who can access the benefits of Smart City technology?
- **Clarity on the outcomes of existing policies and programs** could be provided to support the public's evaluation of this principle. For example, what have been some of the results of the Green Market Accelerator?

Draft Principle 4: Privacy and Security

"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."

Participants provided input related to privacy and security that indicates there is a desire to better understand how the City intends to protect residents from misuse, hacks, theft or breaches. The following section highlights what was heard.

- The City could provide an explanation of how companies using digital technologies are permitted and/or regulated and what regulatory authority the City has.
- Some participants expressed concerns related to privacy and security specifically as it relates to **facial recognition technology**.
- The City could **consider an education campaign** to complement the consultation process. Education could combat apathy towards concerns about privacy and security while simultaneously addressing community fears related to surveillance, information misuse, hacks, theft or breaches.

Draft Principle 5: Democracy and Transparency

"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."

Participant comments related to democracy and transparency indicate that these terms need to be further defined and explained. The following points demonstrate the key messages heard from participants.

- **Consider if democracy and transparency are the correct terms**. Participants noted that the terms seem to be appropriate but may need to be explained more clearly. For

Draft

example, if invoking the term democracy, does this suggest there will be public votes on the use of technology? Additionally, the idea of transparency seems to be at odds with the principle of privacy and security.

- **Public education and engagement** is needed to lend to true democracy and transparency. The average person should be able to understand and participate in conversations about digital technology now and at future milestones.
- A lingering question is **how the City's approach to transparency can be translated into the private sector** (e.g., Open Data). Can the City require a private entity like Sidewalk Labs to make data openly available for public use?

Additional Key Messages

Participants were asked to share feedback related to principles or other concepts that may not have been addressed in the presentation, display panels or other consultation materials. Participants were asked to respond to the following questions:

- Is there anything else you would like to add?
- What questions do you have?
- What suggestions do you have for improving the consultation process?

This section provides an overview of the key themes emerging from the additional feedback received from participants.

Assessment or Implementation

- **Some clarity is needed to understand the purpose of the DIP**. Specifically, is it intended to act as a tool to assess and evaluate internal and external digital infrastructure proposals, or is it meant to act as a tool to implement the use of digital technology?
- An assessment approach appears to be favoured based on public feedback. However, the DIP's evaluation process should be to examine both the benefits of digital technologies as well as the potential harms.

Agility and the City's Ability to 'Keep Up'

- Participant feedback is clear that there is some **concern related to the pace at which technology develops and the City's ability to be nimble** in its reaction to digital infrastructure proposals.
- Given the timeline of the development of the DIP (scheduled to be completed towards the end of 2021), clarity should be provided as to how the City plans to respond to internal and external proposals that are submitted before the DIP is completed.

Engagement and Consultation

- Staff should **consider engaging and educating City Council early** to explain the issues and what they need to be aware of in order for them to evaluate and approve the DIP. The DIP should be considered for approval by Council and not just Executive Committee.
- The conversation on digital technologies needs to be ongoing, inclusive and far-reaching. Underserved and hard to reach populations should received extra attention.

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- **Effort needs to be made to go out and educate the community and collect feedback wherever they may be** (e.g., libraries, shopping malls, etc.). Apathy towards digital technologies and the diminished rights of an individual over their information and privacy should be challenged through this process.

General Comments

- Recognize that technologies "snowball" and build off each other, which can result in undesirable uses that are not hard to predict. This goes beyond unintended uses (e.g., a secondary use for technology or data discovered after the fact).
- Technology is not always more efficient, and efficiencies can actually be reduced by technology. Technology is also often more expensive to maintain than some low-tech solutions.

Next Steps

The DIP will take approximately 18 to 24 months to finalize. The feedback received from this first round of consultation will be used to adapt and refine the guiding principles that will form the foundation of the DIP. Staff will report on the outcomes of this first round of consultations to Executive Committee at its meeting on January 23, 2020. The second phase of consultation is scheduled to take place in mid to late 2020.

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Appendix A: Meeting Agenda

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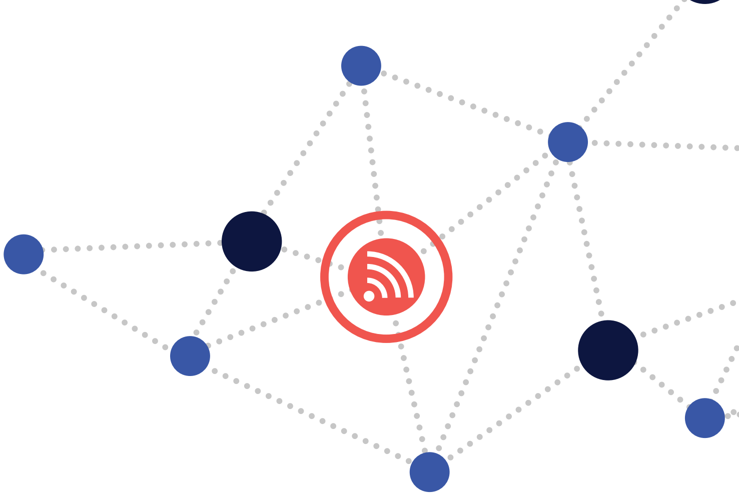
City of Toronto
Digital Infrastructure Plan



Meeting Agenda

December 7, 2019

10:30 a.m.	**Welcome and Introductions**
10:35 a.m.	**Context Setting** • What is this project about? • What are other jurisdictions doing? • How will consultations happen? • Draft Digital Infrastructure Principles
11:10 a.m.	**Questions of clarification**
11:25 a.m.	**Engagement Activity**
12:30 p.m.	**End of Session**

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DIGITAL TECHNOLOGIES & YOUR CITY

Appendix B: Questions of Clarification

The following is a summary of the discussion. Please note that this is not a verbatim transcript, but a high-level overview of the key concepts discussed. Questions are marked by a '**Q**,' Comments are marked with a '**C**' and answers and responses are noted with an '**A**.'

Q. How is the thoroughness of data being accounted for in this process? With regard to equity, it is easy to overlook important issues and there is sometimes an intended or unintended bias towards the type of data being collected. Essentially, how will you ensure the data collected benefits all Torontonians?

A. Part of this process is to understand what data is being collected from the public and determine the existing policies governing the collection of information. We need to determine how we can move forward with regulatory tools. Through this process, we hope to determine how we wish to regulate data collected and that will help us move forward as a City towards equity.

Q. What is the ultimate purpose of the DIP? Is it about regulating technology or regulating data? Is this plan about implementation or is it about assessment?

A. The DIP will be an assessment tool that may or may not lead to implementation. The City cannot implement new technologies without an assessment process. Technology and data have a relationship, and we recognize that. I do think that the DIP will be a tool to help us assess technology use in our City. To be clear, the DIP is not simply to approve technology. The City's decision on an internal or external digital technology proposal may be a yes, a yes with conditions, or a no.

Q. The timeline for the development of the DIP goes until the end of 2021. What is the City's ability to be agile when it comes to reviewing various proposals as they arrive? For example, some agencies are now considering facial recognition technology.

A. Within the Information and Technology (I&T) Division of the City, we know that we need to be nimble. We have assembled a team internally to address issues of data security and privacy. However, while this plan is laid out to 2021, there is an understanding that we need to address gaps in our skillset as a City division to ensure we can appropriately position ourselves and respond to all the advancements that are coming. We don't pretend to have all the answers now and recognize the need to change and adapt as this process proceeds towards the completion of the Digital Infrastructure Plan in 2021.

Draft

Appendix C: Detailed Participant Feedback

Appendix C provides the full transcribed written feedback provided by participants as well as notes taken by staff in conversation with members of the public. This appendix is divided into two main sections. The first section details feedback related to the five draft principles. The second section provides all additional feedback that was received.

Section 1: Draft Principle Feedback

The following input was received regarding the five draft principles.

Draft Principle 1: Equity and Inclusion

What do you like about the draft principle?

[No direct feedback was received]

What suggestions do you have for strengthening the City's approach?

- Focus on expanding the reach of the City's and its private partner's data collection to hard-to-reach populations.
- Define vulnerable populations. For example, seniors are not explicitly mentioned, but typically have less access to technology.

What are the key questions that need to be addressed or clarified as the process continues?

- What data will be collected?
- How will the City account for data that it does not know it does not have?
- How does the City consider an ethical approach to data collection? How will the City make sure that it is collecting the right information and not missing anyone from an equity perspective.
- How will the City evaluate facial recognition artificial intelligence when it becomes available?
- Will the City evaluate a proposal from Toronto Police Services to use facial recognition technology?
- What, if any, facial recognition technology is already being used?
- How does the DIP relate to other equity policies such as the *Toronto Seniors Strategy*?

Do you have any additional advice related to this principle?

- Consider how to address apathy towards digital technologies amongst equity-seeking groups.
- Find ways to ensure that the City and its partners are collecting data with thoroughness in mind. Ensure data gaps are filled.
- Consider how technology can be used to bridge language gaps in our city.

Draft

Draft Principle 2: A Well-run City

What do you like about the draft principle?

- Operational efficiencies are one of the most vital things for the City right now.

What suggestions do you have for strengthening the City's approach?

- Are we looking at health benefits?
- Use technology to report potholes.
- Use technology to track non-compliance and contamination within recycling.
- Consider monitoring pesticides being poured down the drain or into the sewer system.
- Consider a system that can detect when streetlights are out.

What are the key questions that need to be addressed or clarified as the process continues?

- How can the City proactively use technology to find out when people are having health issues (e.g., strokes, heart attacks)? What are the associated privacy concerns with this?

Do you have any additional advice related to this principle?

- Recognize that if the City says no to digital technologies, the private sector may find a way to implement it without approval.
- Balance the convenience that can be provided through technology with the need to protect people's privacy.

Draft Principle 3: Social, Economic and Environmental Benefits

What do you like about the draft principle?

[No direct feedback was received]

What suggestions do you have for strengthening the City's approach?

- Examine the potential negative social, economic and environmental impacts or issues that could be caused by digital technologies.

What are the key questions that need to be addressed or clarified as the process continues?

- How are economic benefits defined? Who are the economic benefits of digital technologies extended to?
- How are benefits assessed against each other? (e.g., a social benefit versus an environmental benefit).
- The results of some of the case studies are not clear. For example, what is the results of the Green Market Accelerator program?

Do you have any additional advice related to this principle?

[No direct feedback was received]

Draft

Draft Principle 4: Privacy and Security

What do you like about the draft principle?

[No direct feedback was received]

What suggestions do you have for strengthening the City's approach?

[No direct feedback was received]

What are the key questions that need to be addressed or clarified as the process continues?

- How will the City assess and evaluate the use of automated vehicles on City streets?
- Has the City determined how it will assess and evaluate facial recognition technology?
- What is the responsibility of a private citizen who has external-facing security cameras on their property? Is there a requirement to disclose this information?
- What policies exist regarding the storage of Bluetooth data?

Do you have any additional advice related to this principle?

- Consider how to address public fears related to the over-collection of personal information. Provide education on what is already being collected in the public realm.
- Consider how digital technologies can be used as a counter-terrorism measure.

Draft Principle 5: Democracy and Transparency

What do you like about the draft principle?

[No direct feedback was received]

What suggestions do you have for strengthening the City's approach?

- Outreach and education will strengthen the City's approach. Democracy can only be achieved if people are able to engage with what is happening in their city.
- Have staff who work with data at the table when proposals or contracts are being evaluated. Not just the directors who oversee those who do the day-to-day work.
- Any proposal needs to be contextualized. The "why are we doing this" aspect of any proposal needs to be clear.

What are the key questions that need to be addressed or clarified as the process continues?

- How will democracy be achieved through the DIP? Is it true democracy, such as a voting system at the issue-by-issue level?
- Will data collected by private entities (e.g., Sidewalk Labs) be available through the City's Open Data platform?

Do you have any additional advice related to this principle?

- Recognize that transparency inherently conflicts with the idea of security and privacy.

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Section 2: Additional Feedback

This second section captures the additional feedback from the three questions outlined below.

Is there anything else you would like to add?

- Agility and thoroughness should be considered as principles.
- Clarify whether the DIP is intended to act as an implementation tool or an assessment tool.
- The principles should demonstrate potential negative impacts or drawbacks associated with digital technologies.
- Recognize that technology isn't always efficient and can sometimes be more expensive to maintain than low-tech solutions.
- Recognize that technologies "snowball" and build off each other, which can result in undesirable uses that may not be difficult to predict. This goes beyond unintended uses (e.g., a secondary use for technology or data discovered after the fact).

What Questions do you have?

- What is the ability for the Plan to be adapted to respond to unforeseen technological advancements once it is finalized in 2021?
- How flexible will the plan be to address emerging issues that may occur while the Plan is still being developed?
- Is this Plan about data, technology or both?

What suggestions do you have for improving the consultation process?

- Consider broader outreach to various communities and additional places for engagement (e.g., shopping malls, libraries).
- Consider an alternative approach to the conventional public meeting.
- Ensure that youth are represented in the Community Advisory Group.
- Recognize that people may feel apathetic towards the infiltration of technology and diminished personal privacy. Determine ways to capture this audience in the engagement process and challenge citizens to participate.
- The timelines associated with this project may be too long. Consider being more aggressive to keep up with the pace of technology.
- Engage council early so that they are aware of the key issues and why this Plan is critical to the City's future.
- Consultations need to be ongoing.

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Digital Technologies & Your City

City Hall Public Meeting Summary

December 9, 2019

6:30pm – 9:00pm

Toronto City Hall

Project Background

Digital technology is changing the way we access information, work and connect with each other. Municipal services that integrate digital technology are leading to increased efficiencies, improved decision-making, and better management of public assets. As the use of digital technologies increases, the City is developing a Digital Infrastructure Plan (DIP) to guide day-to-day, as well as long-term planning directions and decisions, and to help evaluate internal and external proposals in the digital realm (e.g., Quayside).

The City has commenced a public consultation program that responds to City Council direction in February 2019 to develop a policy framework and governance model associated with digital infrastructure, and a work plan for implementation. It also fulfills direction received from Council in June 2019 to evaluate policies on ethical digital standards and create a code of technological practices. The starting point for this work is to develop a set of principles to guide the DIP.

The DIP will take approximately 18 to 24 months to finalize. During this time, at least three rounds of stakeholder and public consultations will be conducted (Figure 1). This summary documents the second of a series of three public meetings to discuss and receive input on the draft guiding principles. The feedback received during this consultation will be used to adapt and refine the guiding principles to form the foundation of the DIP. Staff will report on the outcomes of this first round of consultations to Executive Committee at its meeting on January 23, 2020. The report will include an updated version of the principles, which will reflect feedback received during these consultations.

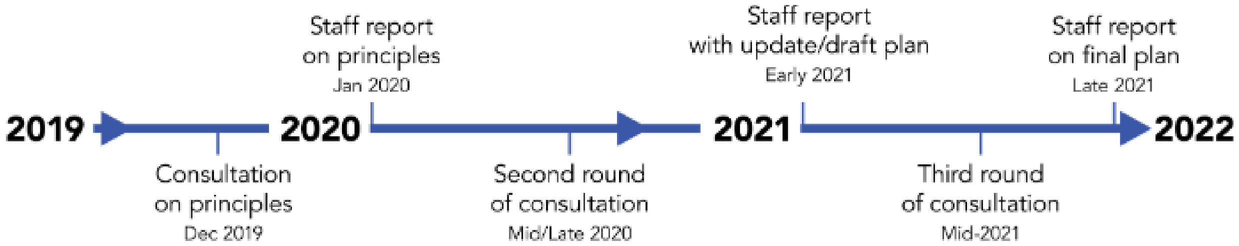
Staff report
on principles
Jan 2020
Staff report
with update/draft plan
Early 2021
Staff report
on final plan
Late 2021
2019
2020
2021
2022
Consultation
on principles
Dec 2019
Second round
of consultation
Mid/Late 2020
Third round
of consultation
Mid-2021

Figure 1: Anticipated Consultation Timeline

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Meeting Overview

The second of three public meetings for the DIP was held on December 9, 2019, from 6:30 pm to 9:00 pm at Toronto City Hall in Downtown Toronto. The event began with an open house portion, which was followed by a context-setting presentation and a questions of clarification period. Attendees then returned to the open house portion to provide feedback on the draft principles. During the open house portion, participants were invited to review project information, the draft principles, existing example policies, and case studies used to demonstrate the principles in action. Participants were also provided with a discussion guide, mirroring the content of the display panels. A meeting agenda can be found in **Appendix A.**

The presentation portion and questions of clarification period for this meeting were also livestreamed on YouTube, where viewers were invited to submit questions via the project's Twitter hashtag #SmartCityTO.

Participants were able to give their input and feedback on the draft principles and ask questions in the following ways:

- Completing a feedback form and returning it to project staff;
- Writing feedback on post-it notes and placing it on to feedback display panels; and
- Speaking with staff who recorded participant feedback and questions.

While participants were encouraged to write their feedback down in their own words, staff were provided with note-taking sheets and were instructed to write down feedback heard in conversation with participants. Staff also collected contact information from participants who requested follow-up to questions that may not have been answered at the meeting. Participants who desired more time to provide their feedback were encouraged to complete the online survey or to email their feedback to the City at digitalfeedback@toronto.ca.

In total, approximately 30 people attended the December 9, 2019, public meeting. An additional 40 people watched the meeting live on YouTube (with more watching since). This report provides an overview of the presentation, a summary of the questions of clarification that followed, and a summary of the feedback received from participants.

Presentation

A context-setting presentation was provided by Lawrence Eta, Chief Technology Officer (CTO), with the City of Toronto. Lawrence commenced the meeting with a Land Acknowledgement before continuing with his presentation. His presentation discussed the purpose of the DIP, its intended use, the reason for its development and its relation to the Quayside Project. He also provided an overview of the anticipated consultation schedule, emphasizing that public consultation is critical to the development of the DIP. He then proceeded by introducing the five draft guiding principles, as follows:

1. Equity and Inclusion;
2. A Well-run City;

3. Social, Economic and Environmental Benefits;
4. Privacy and Security; and
5. Democracy and Transparency.

The presentation concluded with a discussion of the next steps before the floor was opened for questions of clarification. The full presentation can be found on the project website at https://www.toronto.ca/connectedcommunity and a recording of the presentation, filmed at City Hall on December 9th, 2019 can be found on YouTube.com:

https://www.youtube.com/watch?v=DLrOLr5E8t0&t=585s.

Questions of Clarification

Following the presentation, the floor was opened to questions of clarification from participants. A transcript of the questions and answers can be found in **Appendix B.**

Feedback Summary: Key Messages

Participant feedback was sought to influence the development of guiding principles for the DIP. A series of five draft principles were presented with definitions of their intentions, explanations of relevant policies currently in place and policies being considered by the City. Toronto-specific case studies to demonstrate the principles in action were also provided. Participants were presented with four questions to guide their feedback on each of the draft principles. The questions were as follows:

- What do you like about this draft principle?
- What suggestions do you have for strengthening the City's approach?
- What are the key questions that need to be addressed or clarified as the project continues?
- Do you have any additional advice related to this principle?

The following subsections are intended to provide a high-level overview of what was heard. These overviews should be interpreted as key messages and not a verbatim transcript of feedback recorded by participants or staff. For a fulsome transcription of participant feedback, please refer to **Appendix C**.

Draft Principle Feedback and Key Messages

Draft Principle 1: Equity and Inclusion

"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."

Participant feedback indicates support for a principle dedicated to equity and inclusion. Some participants specifically noted that they were pleased to see the City approach the DIP through this lens. The key messages from participant feedback are detailed below.

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- The City could consider **a specific definition of equity** to set a standard or threshold by which to evaluate internal and external digital infrastructure proposals. Doing so may help the City apply a social justice lens to use of digital infrastructure, set requirements for external vendors to address equity through the use of technology, assess the trade-offs to achieving equity when evaluated against other principles, and determine what constitutes as a violation of this principle. One example provided by a participant was to set specific standards to evaluate accessibility.
- This principle should be used to evaluate proposals to acknowledge and **prevent potential harms** to equity-seeking groups and vulnerable populations. Such harm may occur unintentionally in situations where the City may avoid collecting data from sensitive populations resulting in limitations to evidence-based decision-making related to public services and the needs of these communities.
- Some participants indicated that **education and efforts to increase digital literacy** will be a key component to support equity and inclusion. While efforts should be made to bring people “up-to-speed” to ensure their participation in a digital world, work should also be done to ensure access to municipal information, resources and services for those who do not wish or are unable to transition to an electronic world.
- Utilizing this principle may present an opportunity to **establish an equity baseline** within the City’s data collection.
- Related to the first point, participants identified a need for **more information about how this principle might be applied**. For example, one participant asked how this principle might be used to govern the application process. Another asked how accountability to equity seeking groups and vulnerable populations might be considered.

Draft Principle 2: A Well-run City

“Digital Infrastructure will enable high quality, resilient and innovative public services and support evidence-based decision-making.”

The second principle was well received by participants who appreciated its simplicity and linkage to improving public services. The following points demonstrate the key messages from the feedback received.

- Digital technologies should be used to **connect and build communities**.
- It was noted by a few participants that considerations for **open source software** should be identified within this principle. One participant stated that a vendor should not be given exclusive rights to the data it gathers.
- Several participants suggested **evaluation process** considerations by which to assess whether digital technologies might support a “well-run city.” One suggestion was to consider evaluating proposals similar to how building development applications are assessed. This evaluation approach could adopt a high-level framework (i.e., master plan or official plan), followed by a mid-level approval framework (i.e., secondary plan), and a granular approval model (i.e., site plan approval). Another participant stated that evidence-based decision making should be linked to a series of performance indicators and metrics to gauge the efficiency, effectiveness and quality of digital technologies.

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- **Partnerships** should be considered to ensure that the City remains innovative in its approach to service delivery. One participant also suggested that the City could do early work to identify potential partnerships with non-governmental organizations (NGOs).
- The City should address how it intends to deal with technology failure (e.g., the cost of maintenance, replacement and/or removal).
- Some lingering questions include how municipal services will be scoped within the DIP and **how new digital services will be linked to the City's existing service model**.

Draft Principle 3: Social, Economic and Environmental Benefits

"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."

Feedback related to social, economic and environmental benefits appeared to be well received, however, participants indicated that the principle seemed vague and lacking in explicit detail. The key messages from participant input are documented below.

- Participants indicated a desire to understand **how the City defines "benefits."** Key questions include, "what are benefits?" and "Who benefits?" Participant feedback indicates that the City should set ambitious goals related to social and environmental benefits. For example, the City could make a clear commitment to sustainability through its use of digital technologies. Finally, it was noted that the benefits of technology should be experienced by individuals and should not solely lead to concentrated wealth or corporate power.
- One participant said that the piece related to **evidence-based decision-making** from the second draft principle should also be applied to this principle.
- The City should **consider opportunities for public-private partnerships** in situations where funding options are limited to achieve broad social, economic and environmental benefits.
- Some outstanding questions related to this principle include providing an understanding of the authority the City has to extend the benefits of technology to all residents. Participants also desire an understanding of the value their data has.

Draft Principle 4: Privacy and Security

"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."

Participant responses related to privacy and security indicates that residents are pleased to know that the City is thinking through these issues. The following points demonstrate the key messages heard from participants.

- Participant feedback indicated a need to understand **the City's capacity to enforce privacy and security standards** and its ability to set consequences for those who violate such standards.
- Participants also indicated a desire to understand how the City might evaluate privacy and security and where it might **set hard boundaries for the type of data collection technologies that are permitted** in the City. Key evaluation questions to consider include

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an understanding of how the vendor might benefit from data collection and if the City receives equal, greater or lesser benefit. One participant suggested invoking the Oakes Test (https://ccla.org/cclanewsite/wp-content/uploads/2018/07/Section-1-and-the-Acorn-Test.pdf) to assess if a technology proposal will be necessary, proportionate, appropriate and effective in its application. Another participant suggested that a risk management and mitigation strategy could be considered by the City in relation to this principle.

- **Data governance** is top of mind for participants related to this principle. The City needs to understand its jurisdictional boundaries related to the regulation of data governance while also recognizing the shortcomings of current legislation at the provincial and federal level. It was suggested that the City should take extra measures, where possible, to protect the privacy and security of Torontonian's data. Some participants also identified the need to distinguish between different types of data and related requirements to provide different regulations for each.
- Additional considerations include the determination of ways in which an individual might **opt-out** from having their data collected and second, how the DIP's ability to uphold privacy and security standards may be evaluated over time.

Draft Principle 5: Democracy and Transparency

"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."

Draft principle five, focusing on democracy and transparency was generally supported by participants. The key messages and considerations related to this draft principle are outlined below.

- Improving **digital literacy could be noted in the principle** to acknowledge that democracy related to digital technologies is limited by the public's understanding of key issues such as privacy. For example, one participant asked how democracy can be achieved when there is a substantial gap in knowledge, skills and access to technologies between those who are "insiders" in this field and the general public.
- Participant feedback indicates an interest in seeing the City establish safeguards to protect against the use of digital technologies for **the sole profit of corporations** who benefit from the collection of "free" data.
- Related to the previous point, participants reiterated the need to **clarify the City's jurisdiction** regarding the regulation of digital technologies and data collection. One participant suggested that the City consider an ombudsman to oversee objections, appeals and issues that might arise related to digital technologies and data governance.

Additional Key Messages

Participants were asked to share feedback related to principles or other concepts that may not have been addressed in the presentation, display panels or other consultation materials. Participants were asked to respond to the following questions:

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- Is there anything else you would like to add?
- What questions do you have?
- What suggestions do you have for improving the consultation process?

This section provides an overview of the key themes emerging from the additional feedback received from participants.

Additional Principles to Consider

- One participant suggested that the City could consider a stand-alone principle related to ethics.
- Another participant suggested tying the concepts of "trust" and "the future" into the principles.

Benefit Analysis and Weighing Trade-offs

- Several participants emphasized the need to consider public benefit as the primary goal of any digital technology.
- One participant suggested that the City consider how the five principles might be evaluated against each other and how potential trade-offs might be made clear to the public.
- It was noted that the City should consider detailing how a private vendor might benefit from the implementation of digital technology and how the City will benefit and who might be excluded from experiencing such benefits.

DIP Development Timeline

- While some participants were happy to see that the City appears to be taking a measured approach to develop the DIP, others expressed that the timeline is too long. One participant noted that the City could investigate key concerns related to current proposals (e.g., Quayside) that could be treated through an accelerated plan development process.

Collaboration and Iteration

- Collaboration, and looking to others, is an important concept for some participants. This feedback suggests the desire to see the City explicitly acknowledge that other Cities are going through similar processes and that it can learn from others to develop a sound approach to harnessing the benefits of digital technologies.
- Participants want some assurance that the DIP will be able to adapt to the pace of technological advancement. Feedback indicates that the final Plan should be treated as a "living document" that can be amended to address emerging issues.

Consultation Process

- While participants were pleased to see case studies to demonstrate the principles in action, some additional information was desired. For example, some participants said that it would be valuable to understand the potential negative consequences associated with real-life digital technology applications.

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- The City should consider how to use less text-heavy informational materials in future rounds of consultation.

Next Steps

The DIP will take approximately 18 to 24 months to finalize. The feedback received from this first round of consultation will be used to adapt and refine the guiding principles that will form the foundation of the DIP. Staff will report on the outcomes of this first round of consultations to Executive Committee at its meeting on January 23, 2020. The second phase of consultation is scheduled to take place in mid to late 2020.

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Appendix A: Meeting Agenda

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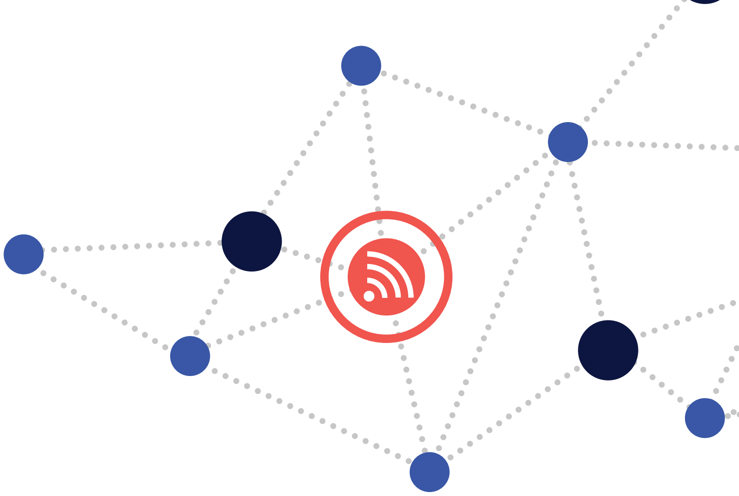
City of Toronto
Digital Infrastructure Plan



Meeting Agenda

December 9, 2019

7 p.m.	**Welcome and Introductions**
7:05 p.m.	**Context Setting** • What is this project about? • What are other jurisdictions doing? • How will consultations happen? • Draft Digital Infrastructure Principles
7:40 p.m.	**Questions of clarification**
7:55 p.m.	**Engagement Activity**
9 p.m.	**End of Session**

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DIGITAL
TECHNOLOGIES
& YOUR CITY

Appendix B: Questions of Clarification

The following is a summary of the discussion. Please note that this is not a verbatim transcript, but a high-level overview of the key concepts discussed. Questions are marked by a '**Q**,' Comments are marked with a '**C**' and answers and responses are noted with an '**A**.'

Q. I have questions related to the feedback you are seeking for principles. I want to get a sense of whether you are set on having these five principles and are just looking to tweak them or if additional principles can be added, if some could be removed, or if they could be scrapped entirely.

A. The draft principles were prepared to help guide the conversation with the public. They are not fixed. We are looking to the public for advice on what we might be missing, what we may not have considered and if some of these could be removed or adapted. It is key to say that these are draft. We are also interested in hearing if you think we've missed a principle entirely. We are very open to feedback.

Q. Related to equity, will the DIP include explicit provisions for accessibility for the City's various access points with people with disabilities. Are there specific standards to make information accessible? This might include a provision for verification or a standard for a website content to ensure it is accessible?

A. Yes. The City follows provincial legislation called the Accessibility for Ontarians with Disabilities Act (AODA) and there is a date where everything needs to be compliant, meaning fully accessible. From an accessibility standpoint, we are working towards AODA compliance for all web content to ensure that any material the City makes available can be accessed by people with disabilities.

Q. One thing that wasn't addressed in the presentation was the potential for collaboration with other municipalities. Is the City looking for ways to build on collaborative efforts with other cities? This model has been successful in the implementation of other new policies.

A. I've been speaking with our City Manager. He sees the Greater Toronto Area and broader region as part of a larger picture related to housing and transportation, for example. By this same lens, yes, we are collaborating. We are looking at the greater region. I also sit on a Chief Information Officer Strategy Council with a group of other municipalities from the west coast all the way to the east coast. In the City of Toronto's technology strategy, we have talked about the concept of a well-run city. One of the approaches to this strategy is about partnership. Partnership has not been specifically identified as a draft principle, but we can take that as feedback. Partnership with other municipalities is certainly part of an approach we respect and understand.

C. Within this realm, there are issues related to privacy and security where private entities are using data in ways that members of the public may not be aware of. Cities may have to look at whether they have the authority to require transparency to address this issue. The "internet of things" allows for data collection in ways we have not seen before and

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causes some surveillance concerns. People need to understand what they're giving up. If the City is creating the DIP with democracy and transparency and security and privacy in mind, we need to ask how much authority the City has to enforce this Plan through zoning and similar legislation.

Q. One way to mitigate concerns related to democracy and transparency is to develop open source software. What is the City's approach to open source software? Would the City consider open source as a contributing factor to approving or denying a digital infrastructure proposal?

A. The City has an Open Data Master Plan and part of the approach for that plan is utilizing open source technology that allows the community to be able to build and create. Open source is now a part of our DNA. There is always a balance of questions in terms of the security aspect, but from a technology standpoint, open source is a key criterion for what we're looking for.

Q. In terms of feedback, what kind of granularity do you want? The principles are quite high-level. Because of this, you do not necessarily get an understanding of how doable they are.

A. We certainly are not afraid of receiving detailed feedback and we welcome it. Getting to that level of detail will help explain to the public the "how" related to the way the DIP will function. There will be more public consultations on these granular pieces in the future. We recognize that the principles are not stand-alone items and that we need to be able to execute on what they promise. You are able to go deep with your feedback and all of it will be considered by the project team.

Q. What legal and or regulatory framework enables the City to create this type of framework or guideline for technology? My background is in urban planning, so I am mentally comparing it to something in the Planning Act. I am wondering what municipalities are entitled to ask for and what type of criteria can be applied to evaluate proposals. I'm wondering what the comparable legislation would be in this case.

A. From a regulatory framework perspective, there is some existing guiding legislation that we can look to. For example, the Municipal Freedom of Information and Protection of Privacy Act (MFIPPA) guides our technology projects and privacy impact assessments. Regarding future of regulatory frameworks, we are involved in an intergovernmental working group with the province and the federal government to determine how we can align our policies and regulations. Any solution will be a combination of efforts across the three levels of government.

Q. I am specifically interested in inclusion. How many people knew about this meeting? I haven't heard anything about it in the media and the City isn't boasting about what it has done. You need to speak to the press and make sure this project is very public. Use every methodology to get the message out. We want to boast about our City, so, let us.

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A. We take that feedback and recognize that there is always an opportunity to do more in terms of outreach. We have done press, but we are also going to need to do more. You're right, we need to generate the buzz and get the message out even more.

C. The City's communication should not just be about awareness, but education as well. People may not understand the terms that we are talking about today. Consider short videos or a glossary of terms to help people understand what is being discussed so that they can engage in the conversation.

Q. Related to internal and external digital infrastructure proposals, are there any current allocations in the budget for digital infrastructure investments for the next year or the year following? This might include the purchase of hardware that would be publicly owned infrastructure. Are there line items in the budget as to future investments the City will be making to drive infrastructure? If there aren't, are you able to provide direction as to where we should be advocating for that type of investment?

A. The City is currently in its budget cycle right now. To answer your question, "is there a line item dedicated to the DIP or digital Infrastructure?" The answer is no. However, the City does have various capital investment projects related to digital infrastructure in the works. For example, The City is working towards providing public Wi-Fi. The program is called TO Connect. It is focused on providing Wi-Fi within actual civic spaces, which is phase one. The second phase will be to provide Wi-Fi to our City divisions and the third stage will look at how we provide Wi-Fi more broadly in public. So, there is a line item investment for that which you would be able to find. There would also be a line item for the City's investment into the approach to the spectrum for 5G telecommunications. What we are doing is not just infrastructure for telecommunications, but also some of our back-office operations. Those examples include the automation of water provision and a pilot of a Salesforce Customer Relationship Management platform that will assist the City in how resident noise complaints are responded to. We do have a ten-year plan to allocate funds, but we go to council every year to determine how our budget is developed. As for the second part of your question, can you advocate? Yes, of course. We encourage you to do so.

Q. I don't see any information on how you plan to build upon this plan once it is in place. Technology changes very rapidly and the City needs to be able to respond to the trends within the tech industry. I'm wondering how the City plans to include feedback and criticisms to build upon this plan once it is in place.

A. Looking back to the timeline to develop the DIP, our final staff report isn't due to Executive Committee until late 2021. This report will follow after two more rounds of consultation in 2020 and 2021. It is important for us to understand and recognize technology evolves. This space is constantly changing. We recognize that where we are today isn't where we will be when our report is due at the end of 2021. It will be important for us to continue refining this Plan to rise to the challenges we see.

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Q. I'm impressed to hear about the efforts taken to get the message out. There are more than two million Torontonians, but only about fifty people here tonight. I kindly recommend you consider the messaging you are using and the media that is being used to get the message out. What is the plan to keep the public engaged in the process as the next two years roll out? Particularly, how will the information be shared and how will we be kept informed in a way that is relevant to our busy lives?

A. We have our Strategic Communications team with us through this process. We are using various methods and forums to get the message out and we are monitoring the feedback we received in terms of social media. We will continue with that channel and will use social media to spread the message. Reports will be made summarizing what we hear from the public and will inform the staff reports we submit to the Executive Committee. These will all be publicly available. I think through this process we look to your feedback to tell us what more we could do to keep the public engaged. Please let us know what more we should be doing and where we may not be visible in the community. It's a large City and we need to utilize our various channels to constantly communicate with Torontonians.

Q. My understanding is that the DIP is being written to evaluate internal and external proposals. I understand that the DIP will take some time to develop. Does this mean that there will be no decisions made on digital infrastructure in this development period? Is everything on hold or will the City continue to make decisions?

A. This process does not hold our investment and does not necessarily dictate how we move forward. We are innovating as quickly as we can and are actively investing in technology. We are not just waiting around for the Plan to be finalized.

Q. Can you elaborate on the City's definition of digital literacy and target demographics that the City plans on addressing through that lens?

A. In terms of the definition of digital literacy, I cannot recall it off the top of my head specifically. However, the City does have digital literacy initiatives and programs in place. A lot of work has been done in the last couple of years across different communities from a career and work perspective, for example. The idea is to help people from different experiences or different walks of life be successful in the modern digital age.

Q. I want to better understand the scope of the DIP. In the discussion guide, there is a definition of digital infrastructure and there are some provided examples. Is the scope of the Plan related to everything digital or is it specific to new kinds of smart devices?

A. The scope of the Plan will be broad. There are elements of digital technologies that are external facing (public), but also digital technologies in terms of the modernization the City's back of house processes. We have policies that need to be looked at with how we respond some of these areas of concern. There are a lot of digital pressures that we need to understand and respond to. For example, if new technologies are rolling out in our City in the public sphere, our internal processes and technologies need to be up-to-date to support these functions. The public experience from end to end needs to create a positive experience for all.

Q. How will the public be informed about the conclusions drawn from the consultation process?

A. The City has retained LURA Consulting to prepare public engagement summary reports that will highlight the key findings from our conversations with members of the public and will inform how we build the Plan. LURA is a third-party engagement firm that has no vested interest in the outcomes of this Plan other than to ensure that the public has ample opportunity to influence its development. All engagement reports will be appended to our staff reports that are received by Executive Committee. The first staff report will be submitted to Committee on January 23, 2020. This report will be publicly available on the project website.

Q. You say that the DIP will use existing policies and regulations as a backbone. However, many of the policies and regulations from higher levels of government are out of date. How will you reconcile this disconnect?

A. We do recognize that the speed of policy setting, and the pace of technology are not the same. It is evident. We are reviewing how we look at various relevant policies. For example, we are looking at MFIPPA and how we can modify it for today and for the future. The guiding principles will help us in doing so. We recognize that some of the laws were written in a different time. For us, it will require some analysis and a jurisdictional scan. We are not the only municipality working through these issues. We will need to determine the laws that we will need in terms of flexibility and how we bring those laws up to current needs at a minimum with the future also in mind.

Q. What cities do you look to as an example for what to do regarding digital infrastructure?

A. We look to Barcelona, Helsinki, Dubai and Kansas City from a telecommunications example. Some cities in Japan are also leading in this sector. These are just some examples. However, many cities are actually watching what we are doing. While some cities are focused on the technology, it is the policies, privacy and security elements where many cities haven't fully come to conclusion on.

Q. Will Sidewalk Labs and all of its projects be subject to the DIP?

A. Yes.

Draft

Appendix C: Detailed Participant Feedback

Appendix C provides the full transcribed written feedback provided by participants as well as notes taken by staff in conversation with members of the public at the December 9, 2019 public meeting. This appendix is divided into two main sections. The first section details feedback related to the five draft principles. The second section provides all additional feedback that was received.

Section 1 - Draft Principle Feedback

Draft Principle 1: Equity and Inclusion

What do you like about the draft principle?

- The fact that it is stated first, and it is all about equity and inclusion that includes all vulnerable populations.
- The issue is addressed.
- Specific provisions have been made.
- Noble objective and is unquestionably valuable.

What suggestions do you have for strengthening the City's approach?

- Require tech vendors who provide digital infrastructure to demonstrate how exactly their solutions enact this principle.
- Require specific web accessibility provisions for all City and City funded access points (web, etc.)
- Flesh out the specifics.
- There are fair trade-offs by seeking equality and inclusion across all domains and a clear threshold needs to be set for what constitutes an equity violation.
- We need to be careful that, surface-level equity such as, not including data about protected classes does not lead to other harms down the line.
- Very important that the policy is for the people, by the people.
- Want to maximize the amount of equity achieved with the data collected.
- Set specific and monitored standards for accessibility.
- Make it easier to understand and be specific. Seems vague and full of government talk.

What are the key questions that need to be addressed or clarified as the process continues?

- How will this principle be used to govern the process?
- What specific conditions/concerns need to be met in order to move on this principle?
- How will accountability manifest in the governance process?
- How do we balance fostering 'electronic literacy' with providing access for people who do not want to transition to an electronic world?
- Thresholds.
- Define Fairness.
- Equity in terms of accuracy, false positives, or false negatives?

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- Concerns with excessive data collection and what happens with data.
- Concerns with use of the data in changing people's behavior.
- Does the City sell data? Does the City have a policy on when it sells data?
- What are the data development opportunities?
- Is there a baseline data opportunity?

Do you have any additional advice related to this principle?

- Use the social justice lens mentioned during the land acknowledgement.
- Understand that contradictions exist.
- Requires engagement with algorithmic fairness literature.
- The cost of retaining people who know about security is going to be very expensive but necessary.
- Standards are very important when comparing different databases. We need to talk to each other and share data.
- Include moral and ethical issues that need to be addressed, especially when it comes to data and privacy.

Draft Principle 2. A Well-Run City

What do you like about the draft principle?

- It links public services to digital infrastructure.
- Emphasis on ethics and transparency.
- Integration of Vision Zero principles.
- Love it!
- Simple, and easy to understand in practicality.

What suggestions do you have for strengthening the City's approach?

- The City should make use of the Municipal Reference Model to understand the existing service context for digital infrastructure.
- Make explicit the reference to NGO partnerships, such as CivicTechTO, Code4Canada, Bikespace.
- Add language calling for open source / FOSS (Free or Open Source Software).
- Engagement with Mark Fox's work on the "CityOS."
- Evaluate technology proposals like development applications.
- Build adaptable versus grey solutions (solutions that are adaptable and not fixed).
- Promote connected communities more.
- At each stage, assess the harm technology can bring.
- Study the psychology about living in a city and how it feels.
- Place/use of open source.
- Vendor contracts should not give vendors exclusive right to the data gathered.
- Evaluate similar to development applications. High-level, mid-level and low-level applications and evaluation.
- Provide clarity on how to bring unique innovation to the City. Where do we start?

What are the key questions that need to be addressed or clarified as the process continues?

- Which municipal services will be scoped into the DIP?
- How will new digital services be linked to the existing City Service Model?
- Will there be Multi-city cooperation?
- Collaboration with civil society
- Stakeholder/user feedback
- What are the points of engagement?
- What will the frequency of engagement be?
- Are there any backups?
- Can an innovative solution be provided to city?
- Further clarity on innovative and super unique solutions to the city through sole source procurement process. Where do we start?
- What happens when technology fails? How much should we rely on it? What is the contingency plan and how to mitigate?
- What happens when technology fails?
- Consider the ethics and harm that technology can bring. How does that get captured?

Do you have any additional advice related to this principle?

- Evidence-based decision making should be linked to service performance management and the new indicators and metrics must be linked to efficiency, effectiveness and quality indicators.
- Comparative objectives to cities like Tallinn or Singapore need to be set.
- Facial recognition and tech monopolies are “hard no’s.”
- Direct questions to make intentions as clear as possible.
- Make the framework known.
- Direct questions for transparency and to function as a way to eliminate.
- Assess the harm technology can bring in relation to each of the principles.
- Consider “hard no’s” (e.g., facial recognition, and monopolization).
- Make sure we live in a thriving city.
- Building connected communities.
- More case studies.
- Use technology to build communities.

Draft Principle 3. Social, Economic, And Environmental Benefits

What do you like about the draft principle?

- I like the triple bottom line approach to benefits realization. (The triple bottom line (or otherwise noted as TBL or 3BL) is an accounting framework with three parts: social, environmental (or ecological) and financial.)
- Hope and optimism.
- I agree with it.

What suggestions do you have for strengthening the City's approach?

- Require all prospective DIP proponents to express the benefits of their projects in triple bottom line methods.
- Explicitly acknowledge the need to make concentrated efforts to realize these benefits.
- Recognize that more concentrated wealth and greater corporate power are costs not benefits.
- Active engagement with Waterfront Toronto, demands of Sidewalk Labs, and incorporating and scaling those principles.
- Ambitious social, economic and environmental goal setting.
- Identify critical infrastructure and identify optimum funding model. Why build out infra yourself if you have alternative financing (P3) options.
- The focus needs to be increased on more streetcars, buses and opportunities to take transit rather than patios and sidewalks.
- Commitment to sustainability efforts and environmentally friendly methods.

What are the key questions that need to be addressed or clarified as the process continues?

- How specifically will the City deliver on this principle?
- How can the City use its authority to extend the benefits of digital technology for all?
- Where does Toronto see itself on a global stage?
- How valuable is our data?
- How to manage the interests of Canadian tech companies in how digital technologies will be incorporated in Canadian market?
- Harms assessment and physical safety.
- How will you encourage more transit users versus uber/lyft/taxis and private cars?

Do you have any additional advice related to this principle?

- Pull forward the evidence-based decision-making practice (from previous principle) and apply it directly to this principle.

Draft Principle 4. Privacy and Security

What do you like about the draft principle?

- The principle speaks to how the City will operate.
- Effort to address issues of privacy and security.
- A modest goal.
- Privacy impact assessments / privacy-by-design.

What suggestions do you have for strengthening the City's approach?

- This principle should outline the consequences of violating this principle. Make it clear what is at stake if there is any breach of this principle.
- Include City licensed or facilitated projects through zoning, etc.
- Address data collection through IoT (internet of things).

- Address enforcement issues, i.e. AirBnB.
- Active engagement with different types of data and their levels of privacy priority.
- A clarification of the consequences of security failure.
- Need to look at how the technology specifically functions.
- Describe what cannot be privatized at all.
- When a third party comes into the city, they should follow a private consent approach.
- The City must ask why technology is being used and avoid going into techno-solutionism (jumping to the conclusion that technology can solve all issues).
- Need evaluation criteria, imagine procurement process with more layers.
- Whenever a federal party is proposing a new system, need to ask four questions "Oakes test" – is the solution 1. Necessary, 2. Proportionate, 3. Appropriate, and 4. Effective.
- Imagine Toronto that Toronto might become the first City to have a Digital Cities Pad for every single proposal.
- Distinguish between different types of data, who is using it, and for what purpose. Govern these different types differently.
- You need to take extra measures that go beyond current privacy laws (which are inadequate) to safeguard data.
- The contracts that the City signs with vendors should be secure data for the public through the Open Data program. (No more tera nets).

What are the key questions that need to be addressed or clarified as the process continues?

- What happens when new situations arise that are not covered by privacy laws or existing policy?
- Might we enact a precautionary principle that forces the case for digitization/data capture?
- Where does City jurisdiction end?
- What kind of data requires privacy?
- Who owns the data?
- Who is a steward/fiduciary?
- Explain what authority the City has to regulate?
- How do you make in an individual agency into an organization?
- What is the purpose for the solution?
- Can you understand this technology?
- How do we evaluate success of the DIP over time?
- What solutions are possible of the DIP is not working/successful?
- Who does the DIP serve?
- Who does the DIP this benefit?
- Who does the DIP exclude?
- How does a potential external vendor benefit?
- How does the City benefit?

Do you have any additional advice related to this principle?

- This principle is the one with the greatest risk to Toronto residents. Apply a risk management and mitigation strategy here!
- Need to understand the areas where the city has power and authority.
- Open source software.
- Welcome deeper feedback.
- Legal framework enables the city to create tech guidelines – Planning Act.
- There will always be certain users excluded from the use of digital technology.
- I want to be able to say, “that’s my information, I don’t want you to have it anymore, I want it back.”

Draft Principle 5. Democracy and Transparency

What do you like about the draft principle?

- Transparency principles are asserted.
- The effort to address democracy and transparency.
- Excellent.

What suggestions do you have for strengthening the City’s approach?

- How might digital tools improve transparency and democratic decision-making in this DIP?
- Clarify the regulatory role of the City.
- Clarify the role of civil society and particularly anti-poverty groups.
- Need to ensure that large corporations do not capture all the value produced by this engagement and openness.
- Data access needs to not subsidize large players.
- Add provisions for City facilities and infrastructure collecting data – aka the Internet of Things.
- The City provides its data under an open source license. If its software is open-sourced as well, then the public can audit its privacy principles (and contribute). Open source the software development process. You are taking consultations at the policy level; take it at the development level too!

What are the key questions that need to be addressed or clarified as the process continues?

- Will an ombudsman be named to handle objections, appeals, or issues that arise in this governance process?
- How do we ensure democracy when such a substantial gap in knowledge, skills, access, and power exists between insiders and others?
- How can the City enforce open policies in privately delivered services?
- Different uses of data must be treated differently.
- How is digital literacy embedded in the principles mentioned? Would like more specifics of initiatives to facilitate literacy in the public (especially privacy matters) and what demographics would be targeted and where (example: in libraries and other

organizations). Would you be more focused on younger or older generations? How does that feed into current initiatives of public awareness?

- Policy scope.

Do you have any additional advice related to this principle?

- Be explicit about the checks and balances that will be enacted to implement this principle.

Section 2 - Other

Is there anything else you would like to add?

- Strengthen your statements surrounding how your Open Data Master Plan will integrate/align with the DIP.
- Due to the very broad scope of the DIP, I recommend the City look at some specific areas of key concerns as it relates to the Quayside development that can be accelerated from a policy and governance perspective.
- The Internet of Things offers the promise of data concentration of enormous scope. This in turn offers the possibility of new business models, for example a rent reduction in return for access to all household's IoT devices and permissions from residents to desired purchases.
- Consider ethics and harms (example: physical and psychological harms) due to data issues.
- There should be a stand-alone principle around ethics.
- Emphasize sustainability and environmentalism and environmental impact of technology development.
- Add "future" and "trust" into the principles. Without these two words, the public does not know that the city stands for trust and future.
- If you rate success for each principle, example five stars on 'equity' but four stars on 'well-run city', explaining to the public how you trade-off between principles will generate good feedback.
- I am very happy to see a long timeline to get this right.
- Add the need to collaborate with other municipalities. List as an initiative the City will consider.
- Need to be able to iterate on the plan while its in place. Consider mechanisms for change beyond 2020 as well.
- The proposal must specifically articulate/analyze who will be benefitted from a piece of infrastructure, who will be excluded from the benefits, how will the vendor benefit from the initiative. Example: for trash collection, exclude people who cannot pay monthly, who don't live in the city.
- Prioritize public benefit.
- The consultation was interesting and informative.
- The roadmap is way too long. Tech moves faster than your consultations and reports.

What questions do you have?

- What authority does the City have to require transparency in these new business models?
- How much authority does the government have to collect data, to help regulate, or at least require disclosure?
- How do we tie the Open City Network into city building? (https://theopencity.org/)
- How can the public find the results of the conclusions and the consultations?

What suggestions do you have for improving the consultation process?

- Please extend the scope of the challenges you intend to address.
- Lots of text on boards, a lot to take in.
- Videos describing the words and a glossary to help people engage.
- Twitter for consultation reps. Use it to communicate not just what is said but how it informed us.
- A couple of people thought this was not an intuitive process - logic flow of the stations, the presentation, and then the stations again.
- Too much reading at the consultation. Please add visuals and graphics next time.

Digital Technologies & Your City

North York Public Meeting Summary

December 12, 2019

1:30pm – 4:00pm

Toronto Public Library - North York Central Library

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Project Background

Digital technology is changing the way we access information, work and connect with each other. Municipal services that integrate digital technology are leading to increased efficiencies, improved decision-making, and better management of public assets. As the use of digital technologies increases, the City is developing a Digital Infrastructure Plan (DIP) to guide day-to-day, as well as long-term planning directions and decisions, and to help evaluate internal and external proposals in the digital realm (e.g., Quayside).

The City has commenced a public consultation program that responds to City Council direction in February 2019 to develop a policy framework and governance model associated with digital infrastructure, and a work plan for implementation. It also fulfills direction received from Council in June 2019 to evaluate policies on ethical digital standards and create a code of technological practices. The starting point for this work is to develop a set of principles to guide the DIP.

The DIP will take approximately 18 to 24 months to finalize. During this time, at least three rounds of stakeholder and public consultations will be conducted (Figure 1). This summary documents the second of a series of three public meetings to discuss and receive input on the draft guiding principles. The feedback received during this consultation will be used to adapt and refine the guiding principles to form the foundation of the DIP. Staff will report on the outcomes of this first round of consultations to Executive Committee at its meeting on January 23, 2020. The report will include an updated version of the principles, which will reflect feedback received during these consultations.

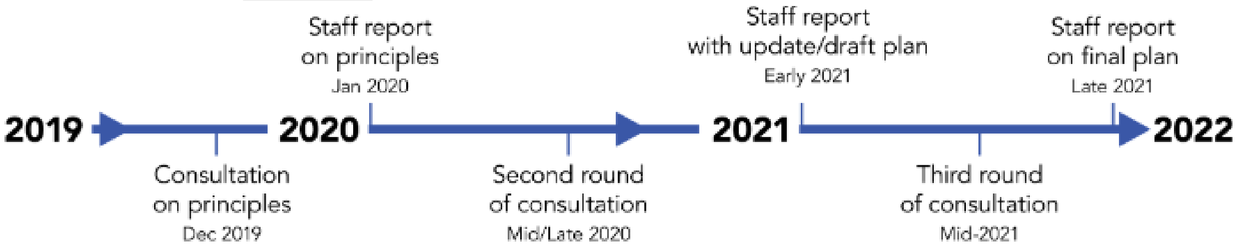
Staff report
on principles
Jan 2020
Staff report
with update/draft plan
Early 2021
Staff report
on final plan
Late 2021
2019
2020
2021
2022
Consultation
on principles
Dec 2019
Second round
of consultation
Mid/Late 2020
Third round
of consultation
Mid-2021

Figure 1: Anticipated Consultation Timeline

Meeting Overview

The third of three public meetings for the DIP was held on December 12, 2019, from 1:30 pm to 4:00 pm at the North York Central Library in North York. The event began with an open house portion, which was followed by a context-setting presentation and a questions of clarification period. Attendees then returned to the open house portion to provide feedback on the draft principles. During the open house portion, participants were invited to review project information, the draft principles, existing example policies, and case studies used to demonstrate the principles in action. Participants were also provided with a discussion guide, mirroring the content of the display panels. A meeting agenda can be found in **Appendix A.**

Participants were able to give their input and feedback on the draft principles and ask questions in the following ways:

- Completing a feedback form and returning it to project staff;
- Writing feedback on post-it notes and placing it on to feedback display panels; and
- Speaking with staff who recorded participant feedback and questions.

While participants were encouraged to write their feedback down in their own words, staff were provided with note-taking sheets and were instructed to write down feedback heard in conversation with participants. Staff also collected contact information from participants who requested follow-up to questions that may not have been answered at the meeting. Participants who desired more time to provide their feedback were encouraged to complete the online survey or to email their feedback to the City at digitalfeedback@toronto.ca.

In total, approximately 30 people attended the December 12, 2019, public meeting. This report provides an overview of the presentation, a summary of the questions of clarification that followed, and a summary of the feedback received from participants.

Presentation

A context-setting presentation was provided by Lawrence Eta, Chief Technology Officer (CTO), with the City of Toronto. Lawrence commenced the meeting with a Land Acknowledgement before continuing with his presentation. His presentation discussed the purpose of the DIP, its intended use, the reason for its development and its relation to the Quayside Project. He also provided an overview of the anticipated consultation schedule, emphasizing that public consultation is critical to the development of the DIP. He then proceeded by introducing the five draft guiding principles, as follows:

1. Equity and Inclusion;
2. A Well-run City;

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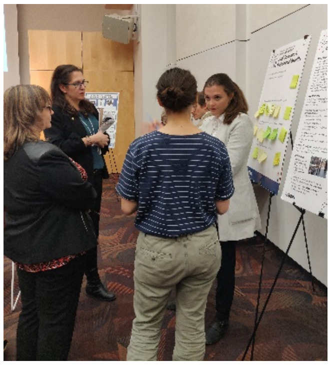
3. Social, Economic and Environmental Benefits;
4. Privacy and Security; and
5. Democracy and Transparency.

The presentation concluded with a discussion of the next steps before the floor was opened for questions of clarification. The full presentation can be found on the project website at https://www.toronto.ca/connectedcommunity and a recording of the presentation, filmed at City Hall on December 9th, 2019 can be found on YouTube.com:

https://www.youtube.com/watch?v=DLrOLr5E8t0&t=585s.

Questions of Clarification

Following the presentation, the floor was opened to questions of clarification from participants. A transcript of the questions and answers can be found in **Appendix B.**



Feedback Summary: Key Messages

Participant feedback was sought to influence the development of guiding principles for the DIP. A series of five draft principles were presented with definitions of their intentions, explanations of relevant policies currently in place and policies being considered by the City. Toronto-specific case studies to demonstrate the principles in action were also provided. Participants were presented with four questions to guide their feedback on each of the draft principles. The questions were as follows:

- What do you like about this draft principle?
- What suggestions do you have for strengthening the City's approach?
- What are the key questions that need to be addressed or clarified as the project continues?
- Do you have any additional advice related to this principle?

The following subsections are intended to provide a high-level overview of what was heard. These overviews should be interpreted as key messages and not a verbatim transcript of feedback recorded by participants or staff. For a fulsome transcription of participant feedback, please refer to **Appendix C**.

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Draft Principle Feedback and Key Messages

Draft Principle 1: Equity and Inclusion

"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."

Participant feedback indicates support for the principle dedicated to equity and inclusion. Some participants specifically noted that they were pleased to see the City approach the DIP through this lens that included Indigenous and vulnerable populations as well as those with accessibility needs. The key messages from participant feedback are detailed below.

- The principle could **include additional groups** such as the new immigrants and low-income groups, as well as identify concerns regarding language barriers and racism. It was also mentioned that the City should include seniors living in long-term care homes and encourage participation of such individuals by providing digital literacy programs. The City could catalog all underrepresented/effected groups and develop a process to consult them.
- Some participants indicated the need to **address inequities with respect to internet access and broadband services**. The City could identify neighbourhoods that currently lack broadband services as well as provide Wi-Fi in buses, subways, and major stations. Doing so may promote increased participation in the digital world and help the City reach out to neighbourhood-level groups. These efforts would make data infrastructure more accessible for all while also promoting the utilization of neighbourhood-level information. In order to efficiently enable installation of internet services, the City should leverage infrastructure construction processes and timelines.
- The City could consider establishing a **long-term measurement framework** to assess the achievement of equity and inclusion.
- Participants stressed on the importance of this principle and the need to **reinforce the equity and inclusion lens** across other principles as well. The goal would be to create a City that can effectively respond to the aspirations of all people.

Draft Principle 2: A Well-run City

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

The second principle was well received by most participants who appreciated its importance and linkage to enabling innovative public services. The following points demonstrate the key messages from the feedback received.

- Several participants suggested that the City considers using open source solutions and defining a vendor management process that is specifically tailored for technology. One recommendation was to **establish non-proprietary contracts** that would enable vendor-compliance to public domain standards and provide the City the flexibility to contract

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multiple manufacturers. It is indicated that this approach would support cost management and promote transparency.

- One participant stated that it is important to address the approach the City would take to evaluate evidence-based data-driven decisions in contrast to politically driven decisions.
- Some participants suggested that the City should consider implementing solutions such as introducing a platform to **consistently gather public feedback** and establishing an **emergency alert system** like MyWaterToronto's automated messages to alert customers of higher than normal water use.
- Several participants emphasized on the importance of including a health lens that would **consider the negative health impacts of technology** as detailed in the 5G Crisis Awareness & Accountability report, the BioInitiative Report, and the Emergency Management Framework for Canada.
- Tying in with the above point, the City should consider **enabling technology in hospitals and innovation centers** as well as use data to provide information about health care centers and health care providers.
- Alignment with Provincial and Federal initiatives will further enable a Well- run City.
- One comment indicated **rephrasing the principle** by replacing "will" with the word "must".

Draft Principle 3: Social, Economic and Environmental Benefits

"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."

Feedback related to social, economic and environmental benefits appeared to be well received particularly the use of technology to help businesses and improve public life. The key messages from participant input are documented below.

- **Partnerships and data ownership** raise important questions from participants regarding the economic benefits of data use. Questions raised include "will data be monetized?", "what are the advantages and disadvantages of monetizing data?", and "is there a vision to guide future partnerships?".
- Participants noted that the Digital Infrastructure Plan should comply with existing employment standards and build a model wherein partner organizations are locally taxed.
- Participants indicated that the City should clearly articulate what words like "equity", "benefits", and "public good" mean. Elaborating current **economic, social, and environmental goals, as well as establishing measurable targets** for each would also be beneficial. The City should then evaluate applications considering the vendors approach towards meeting the City's targets.
- Some lingering comments were made about **including health concerns and impacts of technology on health** as a part of this principle.
- Some outstanding comments highlight the need to consider **collecting and evaluating system-wide data**, that is, beyond the specified project area. For instance, the King Street Pilot project could benefit from collecting data beyond the study area to assess far-reaching impacts. It would also be helpful to look at lessons learned from past projects where digital infrastructure had little to no positive impact.

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- Some comments concerning environmental issues include regulating disposal of technological products and minimizing energy waste.
- Participants indicated a desire to understand **how the City defines certain terms** such as, “social good”, “social benefit”, and “human rights”. Participants would also like to understand how the City plans on **balancing these concepts** in the Plan.
- Some suggestions were made to **foster small businesses and improve entrepreneurial knowledge** by providing relevant skill-development training platforms.
- Several questions were raised to understand how private data will be regulated.
- Additional suggestions related to this principle include reaching out and addressing concerns of more residents and demographics in Toronto. One participant questioned how the issue of racism is being addressed and how everyone, young and old, are protected from unsafe online spaces.
- Some comments indicated **rephrasing the principle** to make it broader, more inclusive, and assuring, for example, replacing “academic institutions” with the term “learning centres”, and replacing “will” with the word “must”.

Draft Principle 4: Privacy and Security

“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.”

Participant acknowledged the importance of the principle related to privacy and security and appreciated its compliance with MFIPPA. The following points demonstrate the key messages heard from participants.

- Participants indicated a desire to know **where within public spaces will data be collected** and **if mass surveillance will be practiced**. Participants suggested that being made aware of such areas would help them make personal choices. Identification of areas where data collection is prohibited, such as, washrooms and children’s playgrounds, is also important. As an added factor to privacy concerns, it is suggested that **data processing is based on consent** and individuals would be provided with the ability to opt-out at any time. Similarly, setting up platforms for individuals to **anonymously submit feedback** to the City can be useful. The decision-making process will be better informed if residents are aware of the trade-offs between personal data collection and convenience of services being offered.
- Participants would like to know if the collected **data is being stored within Canada or outside of Canada** and for how long? They recommend that the City should maintain the data inhouse within a single data inventory and supervise the process of collecting and utilizing data.
- Participants are **concerned about the potential of data breaches**. It was suggested that the City should conduct best practice research to **implement the most secure solutions** currently available.
- The City could connect the Digital Infrastructure Plan with **other existing legislations** such as Public Health Privacy standards and be cognizant that the levels of privacy required changes based on the type of data collected.

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- To strengthen this principle, the City could explore using innovative tools, educational awareness, and signage in public spaces.

Draft Principle 5: Democracy and Transparency

"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."

Participants showed support and further encouraged applying the principles of Democracy & Transparency to all decision-making process. The key messages and considerations related to this draft principle are outlined below.

- Feedback from participants indicated an interest in seeing the City **establish an oversight mechanism** by appointing a dedicated official for data information management. Additional suggestions to the City included operating the digital infrastructure using municipally owned internet.
- It is important to participants that partnering organizations do not claim complete intellectual ownership of ideas that are developed using public data and assets. It is suggested that **the City maintain a partial ownership of intellectual property in all partnerships**.
- Some participants suggested that the City could explore possibilities of **creating a data governance model such as a data trust** wherein a trustee or a group of trustees would make decisions about how data can be used on behalf of the public.
- In the **matter of transparency**, MFIPPA and FIPPA have limited direction. Currently, the Directory of Records is one way for an individual to access records maintained by the government agencies by submitting a notice of collection. Since this approach is not widespread, the City would need to conceptualize innovative ideas to promote access to the public.
- It is important to participants that **democracy is upheld** during the complete decision-making process that concerns data collection and use. They recommend looking at Estonia as an example where members of the public can see who is accessing their information and what kind of information is being used.
- One comment indicated **rephrasing the principle** by replacing "will" with the word "must".

Additional Key Messages

Participants were asked to share feedback related to principles or other concepts that may not have been addressed in the presentation, display panels or other consultation materials. Participants were asked to respond to the following questions:

- Is there anything else you would like to add?
- What questions do you have?
- What suggestions do you have for improving the consultation process?

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This section provides an overview of the key themes emerging from the additional feedback received from participants.

Words of Appreciation

- Participants appreciated the presentation.
- Participants stated that the principles are all-encompassing and reflective of good governance.

Additional Principles to Consider

- One participant suggested that the City could consider adding a principle regarding monetization of data. Since the data that would be collected is a public asset and would drive monetary gains, the principle should identify who benefits from the resulting funds, whether it is the City, the public, or private vendors.
- Participants also suggested including a principle concerning health and a stand-alone principle on environmental outcomes.
- One participant proposed having a principle that describes role of technology in community development.
- In the interest of making information understandable to all, participants suggested the addition of a “principle 0” that would provide background information and definitions related to Digital Infrastructure.

Benefit Analysis and Weighing Trade-offs

- Participants emphasized that data is an invaluable resource, like clean water, and suggested that the public should be the primary beneficiaries of this asset, and not private vendors.

Data Collection and Management

- Participants indicated that having knowledge about what data is being gathered and how it is transferred is important. They also said that different types of data require different governance models and expanding public input on this subject could help inform the project.
- Participants are also interested in knowing what geospatial data would be collected using sensors, to what extent would this be open sourced, how will this data be stored, and if data sovereignty will play a role. Some questions were raised exploring the role of open data to instantly reach large groups.
- Some participants suggested that the City should formulate a plan to manage data archives and consider using existing City archives.

Consultation Process

- Participants encouraged the City to involve additional members of the public in the consultation process, such as, civil society groups, under-served populations, as well as archivists and librarians.

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- The City should consider using simpler language in the informational materials to encourage conversation and participation.

Next Steps

The DIP will take approximately 18 to 24 months to finalize. The feedback received from this first round of consultation will be used to adapt and refine the guiding principles that will form the foundation of the DIP. Staff will report on the outcomes of this first round of consultations to Executive Committee at its meeting on January 23, 2020. The second phase of consultation is scheduled to take place in mid to late 2020.

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Appendix A: Meeting Agenda

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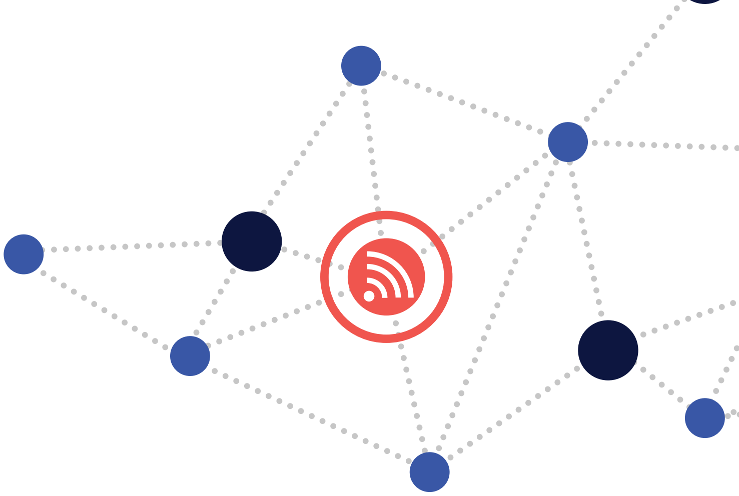
City of Toronto
Digital Infrastructure Plan



Meeting Agenda

December 12, 2019

2 p.m.	**Welcome and Introductions**
2:05 p.m.	**Context Setting** • What is this project about? • What are other jurisdictions doing? • How will consultations happen? • Draft Digital Infrastructure Principles
2:40 p.m.	**Questions of clarification**
2:55 p.m	**Engagement Activity**
4 p.m.	**End of Session**

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DIGITAL TECHNOLOGIES & YOUR CITY

Appendix B: Questions of Clarification

The following is a summary of the discussion. Please note that this is not a verbatim transcript, but a high-level overview of the key concepts discussed. Questions are marked by a '**Q**,' Comments are marked with a '**C**' and answers and responses are noted with an '**A**.'

Q. I realize there is a steep learning curve, but I wish to understand what data is being gathered and what would happen if, in the future, the third-party vendors have an aspiration to do something with the data captured? I would like to know how such an event will be managed, who has the authority, and how will process evaluation be conducted? In order to initiate discussions around this, we need to first understand the basics of data.

A. We understand that it can get very technical and acknowledge that we are moving into an age where data has limited restrictions. In the City context, data is being used to provide many public services, such as, transit and housing. Stringent processes such as Privacy Impact Assessments are followed regarding data privacy, how data is stored, and what data is collected. Currently, the data collected through our phones and personal devices is not governed directly by the City but are guided by the MFIPPA regulations. Understanding this scenario and how to move forward as a City is what we want to achieve through the Digital Infrastructure Plan, while balancing regulation and modernization. For instance, data collected for the King Street pilot project monitored the King Street streetcar to evaluate the overall time saved for a commuter while maintaining the personal anonymity of the commuters. The project did not collect granular data, that is, it identified that an individual was moving, but not who exactly that individual was. Another example is Europe's General Data Protection Regulation (GDPR), that states that an individual will be made aware of what data is being collected, what it might be used for, and asks for their permission to proceed.

C. It would be helpful to provide a non-technical description and categorization of the different types of data used in and around the city to enable specific discussions.

Appendix C: Detailed Participant Feedback

Appendix C provides the full transcribed written feedback provided by participants as well as notes taken by staff in conversation with members of the public at the December 12, 2019 public meeting. This appendix is divided into two main sections. The first section details feedback related to the five draft principles. The second section provides all additional feedback that was received.

Section 1 - Draft Principle Feedback

Draft Principle 1: Equity and Inclusion

What do you like about the draft principle?

- Including Indigenous peoples and those with inaccessibility needs.
- Including the Toronto Public Library, a public organization is good.
- Very important. Happy to see the equity lens being brought into this.
- I like the concept and including vulnerable population, thinking about flexibility and being responsive.
- The draft principle looks good.

What suggestions do you have for strengthening the City's approach?

- Rephrase as "Digital infrastructure must be flexible, adaptable, …, in order to create and sustain…"
- We can also categorize these vulnerable people to new immigrants and financially limited people as well.
- Language barrier needs to be considered.
- NIAs (neighbourhood improvement areas) need robust access to broadband as well along with access to water, etc. Basic equity needs.
- Representative from a private ISP is concerned with the cities process and time requirements for enabling broadband providers to leverage infrastructure construction to improve service. Toronto's process can take months, whereas, Montreal takes 3 days. Fixing this issue needs to be a priority.
- Resilience and housing strategy influence this framework.
- Reinforce the Equity piece.
- Use neighbourhood level data.
- Don't make only city vision documents about data out there.
- Make mention of anti-racism for this principle.

What are the key questions that need to be addressed or clarified as the process continues?

- How are you determining who are the effected people and are you consulting these folks?
- How will accessing data for all be made easy?
- Is 'the right to free assembly' without surveillance, a part of equity? Is there room for justice?

Draft

Do you have any additional advice related to this principle?

- How does one measure the equity and inclusion of the plan? Without measurement we pay superficial attention to equity. Benchmarks should also be set. For example, the amount of affordable housing created can be measured and not only should we set the amount, we should set the duration, that is in perpetuity, not just for 25 years as per current policies and practices.
- Extending free Wi-Fi to other locations such as major bus and subway stations and provide Wi-Fi in the subway.
- This is either one-city or we are nothing.
- Equity & inclusion should be pillars across the Plan.
- Ensure wrap around support for TOConnect exists. Example: digital literacy programs for seniors in long-term care homes.

Draft Principle 2. A Well-Run City

What do you like about the draft principle?

- Very important principle
- For a modern city, it is a nice to have innovative public services as well as gathering data.

What suggestions do you have for strengthening the City's approach?

- Rephrase principle by using the word "must" in place of "will".
- Perhaps add language around open source solutions and emphasize non-proprietary technology solutions where it becomes hard to change providers. This will prevent the City from getting locked into expensive contracts.
- Procurement process needs to be reviewed for technology.
- Have a process for vendor-initiated projects.
- Open procurement is central to digital innovation. As more technological solutions are being delivered by vendors it is important that governments are transparent.
- Providing emergency information through text to all.
- Asking public to provide feedback or suggestions in a web page.
- Alignment with Provincial or Federal initiatives.

What are the key questions that need to be addressed or clarified as the process continues?

- Data often leads to solid evidence, but politics can get in the way. How can you convince the average person/politician to implement an idea most don't understand?
- How will the City contribute to bandwidth planning?

Do you have any additional advice related to this principle?

- It will be good to have the related areas that this principle applies to.
- Refer to "Bio Initiative Report" and "5G crisis & accountability summit". Health concerns with regard to technology & EMF (Emergency Management Framework)
- 2am and 4am peak time health concerns.

Draft

- MyWaterToronto notification for irregular use.
- “Well run city” is a given. You should drop it. It distracts from others.
- Consider the 5G crisis – health concerns are side-effects of smart meters.
- Hospitals and innovation centers.
- The 5G crisis included cell phone tech issues.
- Providing information about health care centers, hospitals, clinics, and dental clinics for low income.

Draft Principle 3. Social, Economic, And Environmental Benefits

What do you like about the draft principle?

- I like that this principle is considering the issue of using technology for technology sake. This is a key issue that all principles should address.
- I like the idea of helping businesses for marketing and commercializing.
- Regarding the King Street project, I didn’t know the City invested in data collection tools like Bluetooth sensors. That’s great!

What suggestions do you have for strengthening the City’s approach?

- The City currently requires contractors it works with to employ unionized owners and abide by many progressive employment standards. The Digital Infrastructure Plan needs to repeat this practice and go beyond to state. We will not partner with organizations who do not pay federal and provincial taxes and owe taxes to Canadian governments.
- Rephrase as “Digital Infrastructure must support the success of…, thereby contributing to positive…”
- Perhaps give some examples where collection of data or introduction of digital infrastructure had little positive impact. Use lessons learned.
- Providing training platform for small businesses or those who want to start a new business for giving basic information and education of being an entrepreneur.
- Expand vision of who we are partnering with and supporting.
- Need to focus on health in this principle.
- Consider health impacts of technologies.
- Use broader and more inclusive language, for example, “learning centers’ instead of “academics”.
- Address experiences of different types of residents and demography.

What are the key questions that need to be addressed or clarified as the process continues?

- To achieve economic, social, and environmental goals, the City needs to clearly articulate current goals in these areas before entering into agreements with third parties in data area. For example, the partnership should articulate how it will meet City’s aims regarding affordable housing, emissions reductions, job creation, poverty reduction, reduction in gun violence. It’s easy to use words such as “equity”, “benefits”, “public good”, but they mean nothing unless there are targets and the partnership demonstrates how it moved the dial towards those measurable targets.

Draft

- Data ownership is an important question. It is good to create economic benefits and encourage data use, but how are data subjects compensated?
- What are the success measures for those who went through training on digital platforms in a specific period of time in respect to the 80-90% fail in new businesses?
- How to regulate private datasets?
- How to regulate data coming from private sources, that is, point of sale?
- While we build infrastructure; how do we address issues of unsafe online spaces?
- How do we build in ways to address existing racism and protecting children from online content?
- How will you balance “social good” with “human rights”? Who defines this?
- Who gets to define a social benefit?
- Is there a role for the city to monetize data? What are the advantages and disadvantages?

Do you have any additional advice related to this principle?

- Please provide training for people who want to start new businesses.
- Add disposal of digital technology to environmental policies. It is wasteful to leave computers on overnight. There should be a policy to turn them off.
- King street should have more data about impact outside the specific project zone.
- When collecting data, should look at a system-wide approach because many impacts go beyond a specific zone.
- Pilots indicate greater data collection in wider zones.
- Health aspect needs to be emphasized more.
- Data collection for geographic based projects should incorporate collection beyond study area.
- Introduce taxes for R&D use of user data for companies like Alphabet.
- Expand principle to include health. Example, “Digital Infrastructure will contribute to a healthy City by…”
- Consider data sovereignty.

Draft Principle 4. Privacy and Security

What do you like about the draft principle?

- This is an important principle.
- It is in compliance with MFIPPA. Thank you.

What suggestions do you have for strengthening the City’s approach?

- Add opt-out clauses and no-go zones. The City needs to state areas where data cannot be collected, for example, in bathrooms, change rooms, children’s playgrounds, etc.
- Mention both internal and external agencies as threats.
- Notice at collection if digital Infrastructure is going to become complex with the proliferation of sensors and automated collection.
- Need to look at how we address this using education, tools, innovative signage, etc.

Draft

- People are concerned about mass surveillance. People want to use public spaces and be free from being monitored and tracked. It must be clear what data is being collected and how it is being used.
- Maintain a public inventory of all datasets.

What are the key questions that need to be addressed or clarified as the process continues?

- Is there a repository in the City to see the types of data that the City is collecting and how they're using it (in one single location)?
- The City needs to explain where data is stored particularly if outside Canada and for how long?

Do you have any additional advice related to this principle?

- Smart meters can be hacked into leading to privacy invasion.
- Important to remember public health privacy legislation as well (and how different types of data require greater privacy).
- Enable anonymous complaints and feedback.
- Consider best practices, not just minimum standards.
- Ask Torontonians about their expectations around use of private info against the convenience of services.
- Cloud solutions are cheaper but carry privacy and security risks. Having clear guidelines for appropriate cloud use is important.

Draft Principle 5. Democracy and Transparency

What do you like about the draft principle?

- This principle looks good.
- Excellent. Thank you.

What suggestions do you have for strengthening the City's approach?

- Oversight mechanism needed.
- Companies claim intellectual ownership over their ideas without articulating that their ideas are founded on public assets and personal data in the public trust funded by public. Therefore, city needs to retain partial ownership in any partnership.
- Rephrase by using the word "must" in place of "will".
- MFIPPA (Municipal Freedom of Information and Protection of Privacy Act) and FIPPA (The Freedom of Information and Protection of Privacy Act) have very little regulations for transparency. The Directory of Records along with notices of collection are the two chief requirements. However, most people have no idea what the Directory of records (DOR) is. Needs innovative ideas to improve.
- Decision-making under the plan should follow the principles of Democracy & Transparency.
- Have an accountability officer whose role is dedicated to data/personal information management.

Draft

- Municipally owned internet is a good idea.
- Interested to see what develops in the alternative data governance model discussions. That is, municipal data trust.
- Explore creation of a data trust.
- You should be able to see who (government, agency, division, etc.) looked at your information, when and why (example, Estonia).
- Decisions about what data is collected need to be democratic.
- What is the decision-making process of what is collected? Encourage democracy.

What are the key questions that need to be addressed or clarified as the process continues?

- Oversight is provided by who?

Do you have any additional advice related to this principle?

- Perhaps include approach on updating Directory of Records/Personal Information Bank info and promote them to the public.

Section 2 - Other

Is there anything else you would like to add?

- A principle must be added around the monetization of data. The city does a poor job of reaping economic benefits from those who use public assets for monetary gains, example, advertisers, TTC billboards, etc. Data is big money to marketers who use it to better target advertising to consumers. The principle needs to state that the city will retain the majority of all funds resulting from use of the data and that we will not forfeit this to third parties.
- Thinking of this Province’s current practice of allowing private company to collect our clean water for virtually no cost to company and make billions selling that free water to Ontarians. Data is like our clean water. We need to establish giving it away for free to enrich third parties. Ontarians and Torontonians need to be main beneficiaries of our assets, both, physical (water) or abstract (technological).
- Add a “Principle 0” defining Digital Infrastructure in terms of data, hardware, and software.
- No principle that speaks to creating community through technology.
- Add an environmental outcome principle.
- Background on data, in and outside the city, would be helpful.
- Will data be monetized?
- Who profits from data?
- Great presentation.
- Reflective and high-leveled seems to be what we are capturing, as in good governance.
- Principles are reflective of good governance.
- Include health lens.
- Different types of data may need different governance models.
- Maybe broaden public input on what data should be collected to support a project and from where. This would act as guidelines for future pilot projects.

Draft

- These principles and ideas are all-encompassing.

What questions do you have?

- How does data transfer work, what does it mean?
- What is the data gathered in City?
- How do data archives occur?
- Can we do email blasts on updates using open data?
- Want more details on the quantitative and qualitative ways that we would evaluate a project.
- Regarding information on geolocated data and sensors used to collect geospatial data:
  - What is collected?
  - What becomes open?
  - How do you decide what should be open (data sovereignty)?
  - How is data being stored?
- Are you working with data archives in the city?
- Public consultations before RFP?
- How much input can residents have towards contributing to positive benefits before the project starts?

What suggestions do you have for improving the consultation process?

- Use plain/simpler language.
- Process and materials should be simplified and need to be inviting for conversation.
- Target under-served populations.
- You should consult archivists from the Toronto archives.
- Create materials to make the plan more understandable.
- Provide more background information.
- Involve archivists and librarians on the committee.
- Please bring civil society groups into your process.

Draft

Appendix B: Online Questionnaire Responses

Appendix B provides the verbatim responses received from questionnaire respondents. Responses have been listed under the corresponding questions. In total, 54 participants completed at least one question of the online questionnaire.

Section 1 - Draft Principle Feedback

Draft Principle 1: Equity and Inclusion

What do you like about the draft principle?

- I particularly like the goal of ensuring that services and information are accessible and usable and that contractors working for the city are held to the same principles that the city aspires to.
- It is a great first step for Toronto to address a gap in digital governance and policy making.
- At first brush stroke of the details is equity for in access including all groups and above all individuals. Hopefully an office and online access for help in using the system
- City wide Wi-Fi
- The wording of the principle is encompassing but lacks any insight has to how the city intends to make the principle real, particularly since the city is at a stage where equity and inclusion is still a challenge. Strategies on poverty, youth, elderly, race and other areas of equity are still works in progress.
- I like that it starts with the equity lens - especially in a city like Toronto, I believe that it is imperative that any initiative begins with an appreciation for the variety of perspectives that will have to be taken into account in order to succeed in the execution of a project.
- It's lawful and is ethical.
- The inclusion of accessibility, equity and cyber security. Additionally, the expected aspect of smart infrastructure (e.g., pipes) is encouraging.
- I like that it's inclusive and very progressive. There are many digital tools that can help with equity and accessibility and it's nice to see my city leading the way in these important areas.
- That equity is being considered
- The parts about 'needs of all Torontonians' and 'accessibility needs.'
- You explain what you are currently doing.
- It generally seems reasonable.
- You're proactively doing something about it. I hope my fellow citizens understand this but might not be digitally literate.
- It is comprehensive.
- I like that the draft principles include equity seeking groups and that data will be collected on these equity seeking groups. I like the declaration of compliance for third party agreements to ensure that they comply with human rights legislation and that future digital technologies are capable of counting equity seeking groups: gender diverse people, such as trans* identified, LGB, people with disabilities.

- I like that the Equity Lens will be applied and that the AODA is embedded in the principle in addition to language around usability and not simply compliance.
- That Wi-Fi access will be extended as that is a key to increasing inclusivity.
- Free Wi-Fi.
- I would agree - Equity & Inclusion are very important.
- Anti-harassment needs to be a key component of any policy to do with technology
- More automated processes
- It mentioned examples and POCs currently being done to try to improve the city's digital presence.
- The 'do no harm' emphasis.
- I think it’s important to consider equity seeking groups. We are all aware of how racialized groups, minority groups, Indigenous, Black, Muslim Jewish LGBT Disabled community members are discriminated against in access to employment. Digital devices cost money. Internet cost money. If someone does not have a job because of the color of their skin, or systemic racism, then the obligation should be on the city as a regulator to equal the playing field or access to digital resources and services. I'm also worried about seniors and newcomers.
- Not bad, but after the colon, are you capitalizing the start of the sentence or not? Above it's inconsistent.
- It reminds us that needs vary between different groups which is an important consideration in the digital realm.
- Essential principle, no one should feel lost or unease due to broad use of technologies. I like Digital literacy and safety initiative. AODA is a must. Priority of accessibility over fancy look.
- Having this principle first is appreciated. When it comes to tradeoffs between principles, it would be useful to have this principle receive a high priority.
- CCI is supportive of this principle.
- I think inclusive and accessible design is critical when designing large and holistic systems, so I'm glad to see this.
- I think the is a good principle, and it is appropriate that this is the first principle. But it isn't nearly strong enough.
- Equity and equity data focus are critical. Kudos for including
- Accessibility is key. Privacy is key. Data usage is key. Practical applications are key.
- That accessibility is a high priority.
- Free Wi-Fi in city spaces is a great idea. I have been in Stratford, Ontario a number of times, and I admire how they have made Wi-Fi a sort of public 'utility', available throughout the city. The more we can provide people free access to Wi-Fi, the better. Also, digital literacy and safety, working with the Toronto Public Libraries- (on anything!!!)
- The fact that you're thinking about it. It's a start.
- In a city with Toronto's diversity, it is clearly appropriate and necessary to include equity and inclusion in any decisions about city infrastructure.
- Great - no real gaps - love that there is a social value being considered (not just commerce).

Draft

- The focus on the potential for harm, centering Black and Indigenous experiences as the forefront
- Paying attention to Equity and Accessibility and currently working on Data for Equity Strategy. We need to start understanding the population demographics better.

What suggestions do you have for strengthening the City's approach?

- No specific suggestion at this time.
- May be include how bias is examined and eliminated
- Full transparency with all area's assets like Toronto Hydro, city parking, Toronto social housing, libraries, etc.
- Alignment with other levels of government.
- A clarification on literally everything, as much of the wording is vague and of little substance
- Technology is fast moving the city's administration is not and dose not posse the agility of tech drivers. The city governance structure is what helps to create a platform for our social wellbeing, therefore the city should tell tech drives to take a pause in public spaces until it has had time to properly contemplate how tech will aid in area of Equity & Inclusion.
- I would like to see more initiative and leadership in innovation/digital policies in neighborhoods outside of the downtown core. From the Quayside project to the King Street pilot, it often feels like everything 'cool' has to start with downtown Toronto and slowly (if ever) branch out to the suburbs. Some of the strongest and most diverse communities are living in North York, Etobicoke or Scarborough. It would be very appealing and exciting to see the City engage with these neighborhoods first when it comes to launching pilots and testing new ideas of making the City stronger. I would imagine it would be quite advantageous for these residents to know that they are important, and it would also encourage them to participate more in the dialogue.
- Recognize that not everything has to be the same to be equitable. The City seems to water down standards to create the same standard across the city - fair but mediocre. The problem with that is a mediocre service (although fair) might be useless and therefore it is better to have a service that is useful even if it is not available everywhere.
- Focus on increasing sensor deployment across the city and opening data sets for the public and researchers in the fields of data science. Smart Cities rely on an abundance of data derived from widely deployed sensors. By opening these data sets, the city can partner or benefit from data analytics (and even host competitions on established data science platforms to advance Toronto's smart city status).
- Consider how quickly technology changes and make sure solutions are as future proof as possible.
- Just do it! All the pieces are already there. The City can't even get the TTC to leverage the wireless options that taxpayers could enjoy immediately. Test technologies in the Port Lands project. Don't ignore all the organizations that have already approached the City and offered solutions.......the City is afraid to move forward!
- Go beyond the bare minimum of the AODA standards. In particular, the captioning standards are quite poor. Think about how technology can be used to increase accessibility in the city rather than simply try to comply with accessibility legislation.

Draft

- I'd increase the focus on promoting equal opportunities for everyone, as the current text seems very minority driven. I understand we are trying to fix issues that have arisen from actions from the past, but first and foremost we should ensure we are not repeating the errors that caused the problems in the first place. I agree that accessibility is very important, and it's great to have initiatives that help specific groups, but if I were creating an inclusion principle it would be more about ensuring everyone can benefit than about underrepresented groups.
- Standardize the use European accessibility standard WCAG 2.0 AA when making digital solutions accessible
- 1) In addition to the AODA, include the OHRC 2) Inclusion is a very loaded word that can be twisted many ways. I am concerned that the people with the loudest voice (money, influence) will use this to manipulate this principal. A technological platform is best when it is neutral and simple. Adding complexity to adapt to individual inclusiveness needs would place the expense on the city to continually adapt to changing needs. A neutral platform, however, can give a base that everyone can use and they can build their own tools on top of that neutral platform at their cost. Taking an analog analogy, if you build a water system with standardized pipe sizes and pressures, everyone can do what they want, within the limits of the system, with that water in their homes. However, if you build it to be inclusive, Group A may need one 3/4' pipe Group B two 1/4' pipes with higher pressure. To serve their needs the system becomes overly complex and costly. Every developer and engineer lives by one principle: KISS - keep it simple smartass. Neutral, not inclusive, is the best way to achieve that.
- Borrow from GDPR, allow your citizens to subscribe as a member of a group. Be as proactive and future thinking as possible to identify groups. Make sure it’s clear why you’re getting the data. Might also want to check out California data privacy law if its best of breed. You have a unique opportunity to get personal data back from the tech giants into the hands of the collective people’s possession. Partner with other cities to prove data (the new oil) is best left in public interests’ hands, rather than a few billionaires’
- None.
- Mandate publication of access and diversity data under the open data framework, to support external public-interest groups' analysis that might lead to improvements. This should guarantee, for example, that public-owned data on transit accessibility and policing are available, and not kept away from the public.
- City Wi-Fi existed several years ago and was provided by Toronto Hydro Telecom (THT) until such time that the City approved the sale of the THT's fiber assets and Wi-Fi assets for Cogeco (for $200M). Another error was awarding the TTC subway telecom project to BIA - with the result that only Freedom Mobile provides cellular coverage in the subway today. The City needs to retain telecom staff who know what they're doing!!
- Clear language and clear definitions on the equity seeking groups. Ability for all electronic systems to capture information about equity seeking groups in order to see gaps and to ensure equitable servicing and programing. A city-wide training of city staff to improve competency on diversity and knowledge of equity seeking groups covered in the human rights code in order how to provide good customer, such as being able to address them if they are gender non-conforming. Advocating with provincial partners to ensure that their

Draft

digital systems also support the collection of socio-demographic data, such as race including indigenous people, gender diverse people, sexual orientation, age and disability to ensure equitable program planning and service delivery for provincially funded or mandated programs.

- I would like to see people with disabilities plainly identified somewhere rather than just saying 'those with accessibility needs'. Usability and accessibility testing should be embedded in any new projects along with a quality assurance gating process. Of course, testing should include people with various disabilities. Procurements should specify accessibility requirements required in the solution.
- Keep Wi-Fi passwords simple -- really simple.
- Include nonprofits organizations.
- The 'what we're doing' and 'some things we are thinking about' seem random, and not necessarily prioritized. Maybe instead of 'what we're doing' it should say 'Current activities that support the principal.' However, instead of jumping to tactics, I would suggest you stick to what activities will be core to the principle: i.e.) Solutions will be affordable and accessible to all citizens. The City will provide tech support for any public interactive solutions that are adopted. The City will include citizens in decision making process. The City will ensure 'smart implementation' - ensuring citizens understand enhancements. Investments in enhancements (or new solutions) will be prioritized by considering equitable impact and/or helping the most disadvantaged.
- Strong guidelines for privacy should be at the forefront
- Define Equity Goals a bit more
- Have less 'sources of truth'. I read through multiple versions of the draft, some of which were very similar, just worded differently. The less documentation and more centralized everything are, the better. b) Get more specific. So far all that has really been discussed with the principles are idealized approaches and goals, which really go without saying since they're ultimately the underlying goals of the city. c) Get as much help as possible. Unfortunately, the city is playing a lot of catch-up in this realm, so they should be actively reaching out to companies, open source communities, tech experts, and the like to help them where they need it. Most people would be willing to contribute their time for free.
- You have to figure out an equitable way to ensure equity groups have access or allowances need to be considered and made in city operations and outcomes which give leeway. Everything has to be evidence based. you need research.
- Expand a bit about the digital literacy and safety stuff. Also, make sure the wi-fi networks are secure.
- Revise the first sentence of the principle as it seems circular. Something like: Digital Infrastructure will operate and deliver outcomes consistently in an equitable and inclusive manner.
- Remember: there are people that do not use Smart phones. Do not link everything to Smart phones, they should not be considered as a base. Always have some 'old school' way to do the things.
- This principle should explicitly name the equity seeking groups: e.g. women, LGBTQ2SI, racialized, disabled and intersections of all the above

Draft

- 'when the City enters into an agreement with a third party (i.e. through a procurement for Digital Infrastructure), the City ensures, through contractually binding language, that the third party complies with... laws' isn't nearly strong enough. Any outsourcing of government functions and any making available the city's infrastructure to third party data collecting must come with appropriate, government levels of transparency (ATIP, etc.) and accountability contractual obligations aren't and can't be a substitute for the responsibility that the government has to its citizens. Law breaking must be enforced not through procurement contracts but through the legal system, and the accountability and transparency must be in place to enforce that. Similarly, Algorithmic Impact Assessments must be used prospectively, as with EAs for other major city infrastructure projects, not solely retrospectively (although any automated decision making must be subject to regular audits).
- Need focus on privacy and the data collected by private, government and for-profit agencies
- Engage more Canadian tech companies into the process
- Ensure that all digital assets meet and exceed the requirements of the Web Content Accessibility Guidelines 2.0 and 2.1.
- None at this time.
- Include community groups, festivals tec. How do you provide neighborhood groups with information useful to them?
- Algorithmic impact assessments are necessary but insufficient to ensure automated processes do not harm equity seeking groups. You should consider human rights impact assessments, which would of course encompass equality rights, while also addressing the other rights issues which may also be engaged in some kinds of automated decision-making processes. Ongoing audit of such systems is also necessary, particularly systems where machine learning processes mean that the decision process may change in unexpected ways over time active oversight and assessment needs to be routinized throughout the lifecycle of a system.
- More open dialog about the implementation of surveillance, tracking and data security. These issues have been merely a bullet point thus far with little substance behind what is at stake.
- It seems pretty solid - I know that there are voices out there that could add real value and they seem to be uninterested in supporting this process. I wonder if there are ways to bring these people in - there is a reluctance in the design and digital making community to working w the city, or in engaging this process, but I am not clear on why this is happening, or what to do to pull them in.
- People should get free or subsidized internet access at home not just at city hall and recreation centers etc.
- Ensure that the data collection methods for Data for Equity for race-based data collected by entities such as the Toronto Police Services are fair and audit for any possible presence of biases and power asymmetry.
- Please go into every decision with the user’s privacy first.

What are the key questions that need to be addressed or clarified as the process continues?

Draft

- How is compliance with the city's principles measured and respected? what are the consequences of non-compliance with same?
- How bias is addressed? How and what information would be shared to the public, between levels of government and agencies and third parties? How third parties use personal data and what are the security measures they should have before receiving such data from the City?
- Keep it super simple please
- How will privacy rights be respected? How will personal property rights be respected? Why do we need to automate more processes?
- This principle needs to be defined in reasonable language. It does not communicate the value or reasoning of equity for residents of Toronto. It is not aspirational nor practical. E.g. I could parse this and ask why this and not that, why is this group mentioned and not that group. One key question to address is does the process need to continue? While it is clear that the tech evolution will continue. The concern is the juxta positioning of the tech evolution in relationship to de-evolution of social wellbeing i.e. growth in poverty, rise in some equity seeking groups being disproportionately represented in areas where outcomes are inadequacy i.e., income, health, housing, food security, education
- I would have appreciated more information on why the entire process will take up to two years to complete. While I appreciate the desire to be thorough, given the current climate, and with neighboring cities such as Mississauga and Hamilton already having released their digital/smart cities platform, I wonder if Toronto will fall behind in its efforts.
- Can uneven service delivery set a higher standard that eventually gets rolled out as the city wide standard i.e. pilot projects in specific areas.
- The scope and ultimate goals on how far Toronto is committed to become a 'smart city'
- How to include everybody on budget? Who gets a say? What group sample is large enough?
- Why does the City dither so much?
- How can digital infrastructure break down barriers for equity-seeking groups? How will accessibility be tested? How will algorithms be checked?
- Clearly defining what 'accessible and useable' mean. A dialup connection is technically 'accessible and useable' but I wouldn't want to surf the modern web with it. Since setting minimum standards might be overly complex for a principles document, perhaps including a 'highest standard' so that minimum service levels can be predictable for everyone. I have *serious* concerns about 'Guidance on the appropriate use of data profiles of individuals, to ensure they are used to increase equity.' There should be no data profiles of individuals. All data should be anonymized and used to build profiles of communities, not individuals. The existing 311 discrimination is evidence of how individual profiles are being used to limit access to services because they record histories of individuals and 'problem' people (people who report a lot of issues) or 'rude' people (frustrated at not being able to get traction) are denied action entirely, even if it's a legitimate need/concern. It is a prime of example of how 'access' and 'usable' are fulfilled while still discriminating against

Draft

individuals. Note: I have not experienced this, it was told to me by a 311 agent as we chatted about how they operate

- Find out best practices from European cities, don't recreate the wheel if you don't have to. Partner with them.
- Is the infrastructure effective?
- How can we ensure that equity-focused groups have straightforward access to our city's data that is relevant to their missions, in a usable format?
- All initiatives must be 'sustainable' and not funded by one-time investments, they need to understand the 'roadmap' for any technology investments and not be subject to the current procurement process which leads to 'one shot' winners!
- Is equity a component embedded in every city department? Are city staff familiar with the City's principle of equity and inclusion? Are staff strained to provide service to equity seeking groups?
- What language can be strengthened in procurement to ensure Vendors deliver accessible products? What usability testing have vendors performed to ensure solution is accessible, inclusive etc.?
- We need to know who has or doesn't have access to Wi-Fi, and what people would use Wi-Fi access for. The digital divide is becoming more and more real. What supports do people need to be able to use digital tools to enable them to achieve their goals.
- Include cyber security and transparency with the use of personal information
- How do you prioritize actions? Does the principal mean that the activities will be directly linked to improving Inclusion and Equity - or does it mean that any activity will consider/ leverage an equity and inclusion lens (i.e.- an online reader software that helps the blind read our website would be a solution that helps drive equity for blind people - who may be a small portion of the City. However, a traffic enhancement that beeps if someone is about to step into traffic might both help the blind, and help distracted pedestrians. To me, both examples drive equity and inclusion, but the latter example would have a wider impact for the people of the City
- How are citizen's private data stored, who has access to it, and how often is the data permanently deleted?
- Need more info about what Equity means
- What specific issues are we tackling? b) What technology are we using? c) How are we protecting against attacks? d) Does everything scale? e) What is the backend that everything runs on and is it up to date? These all go together with my 'more specific' comment.
- See below -- a meaningful opt-out mechanism that does not deprive any individual who opts out of the right to access to a service, neighbourhood, etc.
- Who doesn't have access? Why? Who isn't included? How much of the challenge is related to land, technology, resources? Does it matter where in the city? Should similar services be in the NE as in central Toronto? How can we make it easier to facilitate digital

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literacy? Who are our partners ie. libraries Where can citizens access Wi-Fi always, for free? How do we promote this?

- Not sure.
- Will it be the DIP responsibility to close the digital gap? To what extent will decision-making balance out digital infrastructure implementation costs with the user base range it will serve (i.e. where will the fiscally responsible line be)?
- Seniors, disabled, other vulnerable groups - no one should feel lost or unease due to broad use of technologies.
- What are the connections to Federal Gender+ based budgeting when it comes to projects including federal funding? What are the connections to Provincial Community Benefits frameworks e.g. Bill 6, Infrastructure for Jobs and Prosperity Act when provincial funding is required What are the connections to race based data collection by police services when the collection of data is technology based?
- How would you measure benefits and negative impacts ion projects to specific groups?
- It needs to be made clear that the city and higher orders of government have obligations to their citizens, that those citizens have rights in their privacy, data security, and transparency/accountability in the functioning of _all_ aspects of their cities, and that these cannot be waived nor replaced by contractual obligations.
- how can we protect privacy and keep data personal or in public hands in a commercial 'internet of things' environment? what is the role of the city vs other entities (sidewalk labs? google? foreign actors?) in leading and owning our data?
- Data Ownership, Privacy Rights, Costs
- How is accessibility being incorporated into the strategy? If not, how can the requirements under WCAG be incorporated into the strategy?
- how to make sure all citizens can access the internet-how do people with visual impairment fare?
- Balancing privacy against inclusion.
- How will decisions be made when there are competing priorities and differential impacts on different groups of Torontonians? Will such decisions be made openly and transparently, with consultation? How will the City monitor in an effective, ongoing way, private sector initiatives that seek to leverage resident data in public or quasi-public spaces? How will the City monitor for unintended consequences stemming from digital initiatives, what will be the process for residents to raise specific concerns with the city and be heard, and what commitment will the city make to shut down initiatives that prove, over time, to have negative consequences in relation to equity and inclusion?
- This statement: 'Guidance on the appropriate use of data profiles of individuals, to ensure they are used to increase equity. Is so far off base. Using 5g to profile individuals in real

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time is a scary enough concept, but to frame it as 'how can we ensure this is equitable' does nothing to ease the concerns of privacy advocates.

- I echo the note above - is there a way for all this to become more magnetic - and attract the creative industry and brand thinkers in. They do strategy and persuasion work for the marketplace - it would be so valuable to have their skills and thinking wired in.
- Sidewalk Toronto, whether the REPLICA tool is being used, and how this relates to the dataset that NYTimes Opinion published by Stuart A. Thompson and Gus Wezerek today Dec 19.
- How are you collecting socio-demographic data? Who is helping you to collect it? How are you consolidating such data? What type of equitable program planning and services delivery are you hoping to do?
- How will this principle be aligned with what the province and federal government are doing?

Do you have any additional advice related to this principle?

- no.
- The words “equity seeking groups” could have both positive and negative connotations. Would like to see the word “protect” somewhere.
- More online questions. Please remove if public doesn’t ask questions then they don’t understand what you all are doing
- How do we ensure that Toronto's workforce can obtain / upgrade digital skills?
- Privacy and data collection rights must be made a priority
- Be clear. Concise. Digital Infrastructure will be used to create and sustain equity and inclusion in its operations and outcomes. Ensuring that no one group is left behind in the benefits of or adversely affected by Toronto's approach, management, and control of digital infrastructure....
- It is hard to give advice on a principle when sample??? projects are already taking place in parts of the city. 2018- CBC: “Sidewalk Labs partners with Toronto groups to collect data for public life study” and who knows what other public domain tech evolution is being tested prior to the city have a set of principles in place. Slow down, the people of this city are going nowhere. As a city your job is to help ready us for this next phase of transition.
- Someone during the City Hall consultations recommended a glossary of terms to explain tech terms that may not be intuitive to everyone. I absolutely loved this idea and think it would go far in demonstrating that the City is inclusive in these talks and that everybody in civic society has the right to engage in these discussions - not just the ones in the industry.
- Look at what works instead of what is compliant. The city has plenty of bike lanes, intersections and other examples that are compliant with their standards yet anyone looking at the actual operation see that it doesn't work.
- Just do it! All the privacy issues/concerns have already been destroyed by the technology companies (it's too late to discuss 'principles'. Wake up!!
- Involve equity seeking individuals in the process as part of your core development team from the outset.

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- This wouldn't be my first principle and I'd probably just merge it into the principle about Social, economic and environmental benefits instead. The only thing here that I think is very important and doesn't fit there is accessibility.
- It needs to be more straightforward. This level of detail is meant for the city - what level of detail is meant for citizens to ensure everyone, including vulnerable populations that digital technologies adapted and created by the city are working for them.
- Put more thought into how it could express itself in various contexts with groups seeking inclusion in potentially disruptive ways.
- Be accountable to keep groups informed. Partner federally.
- This should not be the first principle. Privacy and Security should be the first principle.
- 'Digital Infrastructure' implies technology procurements, but the end results must be sustainable services for the City and its Citizens. Technology is evolving much quicker than council realizes, another example is the planned introduction of NG9-1-1 in 2020 - is the City ready?
- Mandatory training for city staff of the city's equity goals and on groups that are equity seeking, especially those covered in the Ontario Human Rights Code.
- Moving service on-line will help improve equity and inclusion by allowing more people to access services that may not have been able to before (e.g. people with disabilities).
- There will and are a lot of questions related to collecting demographic information. The purpose and use of this data collection need to be made very clear and people need to feel that they can opt out of sharing it...
- Again, I think it's a great principal but it's also an obvious principal. Every decision the City makes should consider Equity & Inclusion. Also, why does the City need principals specific for this digital technology project, when the City manager already confirmed which principals the City would adhere by? Financial Sustainability, A well run city, maintain and create housing that's affordable, keep Toronto moving, invest in people and neighborhoods and tackle climate change and build resilience. Shouldn't the focus be on what your digital priorities will be as a result of the city manager's principals? For example, Strategic Plan priority: Invest in people & neighborhoods means that the City is committed to being a place that protects and improves quality of life for all including safety, health, and social and economic well-being and inclusion. The Digital Infrastructure plan will support this by: Goal 1) Access to technology solutions is prioritized. Tactic 1b) Wi-Fi and two touchdown stations will be made available in community centers so that any new digital solution can be accessed by those who don't have a data plan or smart phone. etc.
- No
- Nothing that I haven't mentioned already, other than that I think more could have been done before presenting this, since it really doesn't say much at this point.
- In all things digital, a concern is collection of data on individuals, and allowing private individuals meaningful opportunities to opt out (without being deprived of access to a service or an entire neighbourhood, e.g. Quayside.) Communication and disclosure are something different from a meaningful opt-out mechanism.
- Speak to the groups who are excluded. Ask them what they need, how to make it easier.
- Nope.

Draft

- Inclusiveness can be felt by the simple action of taking the time to explain digital concepts in a way that all people (non-technical and technical) can understand. Need to keep this in mind as the process continues.
- No one should feel lost or unease due to broad use of technologies. There must be low-tech solutions, 'backuping' the innovations.
- The TO Connect program may provide free Wi-Fi for users of a facility. Using an equity lens, lets ensure it does not preclude development of MESH networks based on services provided or created by private sector organizations. So, for example if a private sector organization provides free Wi-Fi at a facility for using the location for a 5G network hub, that should not preclude the development of MESH networks from that hub. Most MESH networks radiate out from public institution internet access services.
- As this process moves forward, we request that the City of Toronto consult with leaders of domestic technology companies.
- include marginalized groups deeply in the development and application of the work above.
- We have innovative solutions for the Wi-Fi in public places, data security, privacy and authentication requirements.
- sorry, no...
- Would like to see a bit of fun included
- Flowery language is great for PR but does nothing to ease to mind of people who are worried about digital encroachment on their private lives.
- No - the intent is important and the real is genuine.
- What current programs are there to improve digital literacy among the most vulnerable population in Toronto?

Draft Principle 2. A Well-Run City

What do you like about the draft principle?

- The wording is good
- Will ensure cost efficiencies are being achieved for the City?
- Using data to make decisions is smart.
- I love the evidence-based decision-making part!
- The principle itself, but not much of the rest.
- Step in the right direction
- It is comprehensive.
- Various ways to propose and procure Digital Technologies. Documents outlining city vision and Digital Technologies proposal are evaluated against them.
- These are all important ideas for the City to be future oriented.
- Cloud strategy
- Much needed digital access but need a bit plainer language when describing the principle.
- I like that there are options for procurement. But transparency is needed. How much of procurement is social procurement? vs. competitive vs. unsolicited?
- Good values.
- It's simple

Draft

- I like you tried to think of all aspects involved.
- The other principles need to be applied to procured services. Many of the principles can be weakened by procuring a service that was developed without the principles. The inclusion of Social Procurement is a useful first step. It is to be seen how it will be concretely implemented in technology purchases.
- CCI is supportive of this principle.
- We're all in favour of well-run cities.
- focus on social procurement
- Competitive Procurement. Cloud strategy.
- The creation of digital standards, which set out new processes for creating digital services, and new expected qualities of those services.
- Digital standards are essential. But I believe these are being developed nationally. Let us not reinvent the wheel but adopt other people's work.
- Including resilience is encouraging, sustainability and repairability are similarly issues when it comes to embedding potentially rapidly obsolete or fallible technologies into infrastructure.
- Fantastic - love being able to interact w city services in a clear and online/mobile way.
- I like that the Procurement process for the city's Digital Infrastructure focused on Unsolicited and non-competitive procurement and social procurement.

What suggestions do you have for strengthening the City's approach?

- Complete an experience matrix to ensure digital process should be used over manual.
- Please think work, live and play for each city block and transit hubs etc., transparency digital upgrade skills jobs transition youth hubs, seniors' hubs, etc.
- Makes sense in principle - in practice I guess we'll see. Councilors make decisions that boggle the mind, for instance the evidence showed that an elevated Gardiner was expensive and underutilized. More evidence didn't change the position of Councilors to re-build it.
- That guidelines and standards will be developed and that an evaluation tool will also be developed.
- Not much! The 'Vision' statements are useless unless each 'Vision' is accompanied by a five-year deployment 'roadmap', otherwise they are just good 'intentions'.
- Covers so much just trying to figure how one gets a executive summary of the various activities available that layperson can understand either weekly, biweekly or monthly and ask questions either for TTC, transit hubs and surrounding areas as there is trend that all city blocks, Transit's hubs, etc. work towards live, work and play especially with digital jobs and co working spaces, seniors hubs, youth hubs, social services all sure coworking spaces for collaboration
- I think the City should have a couple of specific objectives re IoT and agree to give the vendor first dibs to the aggregated data until some critical mass is reached and then it becomes an open data set for everyone. The initial access to the data is the incentive. Vendor must maintain infrastructure for x number of years, and it must integrate and create/collect data in a non-proprietary format.

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- It is hard to understand what “Digital Infrastructure will enable high quality, resilient and innovative public services, and support evidence-based decision-making” means. As stated below the city is already taking action to “enable high quality, resilient and innovative public services, and support evidence-based decision-making”. I have never known the city make decisions void of evidence. It is also difficult to understand how public service will be “high quality, resilient and innovative” particularly when public service is constantly underfunded.
- With respect to what the city is currently doing: has the city released reporting on its procurement process – how well this process is working should be examined prior to augmenting it with technology. It will be useful to clearly state what it means to “integrate into physical infrastructure”. The limitations beyond sustainability of hard infrastructures should be made clear. The “City Vision Documents”. We are a city that always looks to the future our challenges is securing the resources to make our vision real and inclusive. Many of the named vision documents (TO Prosperity, TransformTO Climate Action Plan, HousingTO Action Plan, the City's Commitments to Indigenous Peoples, and the Vision Zero Road Safety Plan) have not yet met their social goals. The city needs to meet these social goals in order to lay the foundation on which to establish principles leading to an integrated digital strategy.
- Know what the objective is. Don't let the implementation or the technology become the objective.
- Integrate digital infrastructure proposals with the built form review process. Make it a requirement to include architects/landscape architects on the team to ensure aesthetic and cultural quality standards are upheld for infrastructure that will have visual/built form impacts.
- If this is guiding procurement, I think it's extremely important to address issues of vendor lock-in. We need to ensure the city will always be capable of switching vendors within reasonable effort if for any reason other alternatives would be more beneficial. In many cases this is about having the possibility of exporting data in a viable format. The text also mentions creation of digital standards, but before creating something I'd research the existence of open standards and contribute to improve those standards instead of creating something from scratch.
- Require Cyber Liability Insurance and get guidance around when to include requirements for a privacy impact assessment (or a simpler tool that gives you a snapshot of how companies manage data and privacy) as it is relevant to digital technology procurements. These items are not in standard procurement practices - but they ought to be. There is little about inter-departmental data sharing and knowledge mobilization.
- Procurement - there is one step in the procurement process that has been lost: Realistic Estimated Cost. Before any procurement an expert need to evaluate the scope of the project and come up with a realistic cost range estimate, including soft costs. The purpose is to identify bids which are intentionally low or exaggerated beyond reason. Principles of Open Source, Open Data, Open Hardware, etc. ought to be adopted so citizens can review, contribute, and expand on what the city constructs.

Draft

- Full visibility and transparency with no barriers to entry. Vendor star rating system. Allow citizens to comment. Full backlog visibility to citizens to determine prioritization. Ability to poll citizens
- None.
- I suspect that the budgeting and procurement processes that the City uses supports 'business as usual' and is not friendly to any kind of digital transformation.
- Digital Technologies and privacy and security of the data collected by these technologies. As our community is more connected, the data collected, and personal information shared with private/public partners needs oversight.
- It's not just about the public service, it's about the city and the people - perhaps include that in principle statement. Also include 'accessible' in addition to 'resilient and innovative'. Perhaps add in language about thinking of the future/technologies, increasing access to city services etc.
- We need a digital innovation component. EG. how will gaming and virtual reality impact how the City does digital work? We need to partner with institutions for this strategic thinking. Also, how are people going to be trained? Many people work on the front line and do not have the luxury of time to think about these things, and yet they are equally impacted by change.
- Strengthen the procurement process. Everything seem to be working in silos if you wanted to procure something. The sustainment project to revamp the computers to windows 10 has been going on for three years now, because of procurement issues.
- More simple plain language to understand how the digital changes will work
- I love the idea of leveraging existing city infrastructure and resources. I.e. the TTC and the Toronto Public Library. Use these community spaces to further the digital infrastructure. These are spaces where community members already are, you just need to make it better. Pool resources. You do not need to start from the ground up. Work with the existing institutions and align your digital strategies.
- None.
- Need to highlight the outcome of the 'enable' and 'support' goals. Is it an effective and efficient public service? Or is it confidence of residents, businesses and visitors that the City operates well?
- Cloud should be 100% Canadian, located 100% in Canada, this i a matter of security. Always ask IT experts for advice. Apply control as strict as possible.
- Standard procurement processes militate against the use of Open Source Software and reuse of hardware. Standard procurement processes favor large established vendors over smaller independents. Implementation of Open Source Software projects and hardware reuse at scale requires rethinking the procurement process to work with multiple small independent vendors.
- Digital infrastructure innovation can leverage sensor data from IoT networks to open new opportunities for efficiency, optimization, and sustainability across a multitude of industries and areas for the City of Toronto to optimize. For example, the City of Toronto can leverage its existing primary industry infrastructure and demonstrated excellence in AI and machine learning to facilitate the collection and storage of, and access to, enormous swaths of data for clean technology innovation. Cleantech companies are already using

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data to make electric power grids cleaner and more resilient for smart city development. Cleantech innovations can use the smart city as a platform, where many disparate systems — energy, traffic, water, and infrastructure — are combined to form a single "data highway" from which countless sustainable business models can be launched.

- In additional to tactical infrastructure defining a 'well-run city', I'd like to see more considerations to ensure and develop liveliness and connectedness of people and communities in a neighbourhood/city. There is a psychological sense of place that influences people's experience in their city, which helps define the uniqueness of a city and makes people proud and excited to live in their city. (This might even be a separate principal?)
- I also don't understand the first and largest point under 'A Well-Run City' is about procurement from third parties rather than the development of internal capacity, certainly for decision making but also in some kinds of implementation. How can any of the other points addressed without a deeply knowledgeable staff able to advise the process and council? I'm also not greatly comforted by the citation of the City's Vision Zero Road Safety Plan and the Toronto Official Plan, which are both widely understood to be toothless and routinely ignored in the day-to-day decision making of the city.
- Don't always go with the cheapest option When giving out contracts. Sometimes it makes more sense to go with a more expensive choice that might be more reliable or work better for the city.
- need equally strong focus on sustainability in procurement (e.g. on food)
- efficiencies in removing red tape and duplicate forms, processes etc.
- That the procurement requirements under the Integrated Accessibility Standards Regulation be incorporated into any guidelines and evaluation tools related to the City's future digital assets.
- Absolutely have agile approach to digital projects and procurements. Also spell out what you mean by 'agile and challenge based', many people may not understand these terms
- A well-run city is also resident-centered. This principle should include people in the equation, not just supporting evidence-based decision making, but supporting security and livability for residents.
- More public consultation, better dissemination of information, perhaps a centralized hub to display your proposals instead of across a series of press releases.
- Hope this will have a little push to it - pull me into services that I am qualified for - or that my family will benefit from.
- You need to think about the interoperability of tools over time and not get locked into using just one vendor's tools/sensors/platforms. Build capacity within local government to do this work itself.
- Which technology company's cloud products are you using for the city's Digital Infrastructure?

What are the key questions that need to be addressed or clarified as the process continues?

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- How are different departments integrated from data sharing? Can processes be made more effective and efficient through a digital strategy? Can time and costs be saved? How is information transparency being addressed? How is success measured?
- How does the individual use this service to better understand and use data to use your services?
- Why the hurry – consultation during a high holiday is bound to not garner undivided attention, unless the city is looking to simply check a box.
- Should any smart city technology implemented in Toronto - come from Toronto? What I mean here is that the company that delivers here has to live with it. The people that build the tech or write the code have to see it in action on a day to day basis. If the tech adjusts stop lights, they have to use the intersection like everybody else so that they see the nuance in action, they see how it performs. That cannot be achieved by any fly-in company with programmers in faraway places. They have no insight into the actual functioning of the product. This has to be seen by the employees of the company top to bottom. The employees will receive informal feedback all the time - it is important they feel shame if the tech doesn't deliver and it is important that they feel pride when the tech solves problems and helps their fellow citizens. I can't stress this enough - if the employees are anonymous and far away - there is no shame nor pride and no art.
- The balance between innovation and longevity.
- What is meant by evidence-based decisions?
- Here we need to think if we want to specifically favor open source or not.
- How citizens are to interact, expand on, analyze, and contribute to these digital projects.
- Does the existing process have biases against entry or transparency, do not scale an ineffective process?
- Is the infrastructure effective?
- Vision is insufficient, there need to be approved 'roadmaps' for every vision endorsed by the Council.
- Will digital standards apply to companies and corporations collecting data for the city?
- What language can be strengthened in procurement to ensure Vendors deliver accessible products? What usability testing have vendors performed to ensure solution is accessible, inclusive etc.? Can checkpoints be embedded in project life cycles (e.g. IT, facilities, new builds, renovations) to ensure digital infrastructure has been accounted for/researched etc. Will the digital standards be mandatory? How will they be enforced? Is there a central check point to ensure digital solutions/services are accessible/compliant to WCAG before launch?
- How does it all fit together? Where are we going over the next 10 years? How will it be communicated across TO? How will people be effectively trained?
- Tighten and streamline hardware and software process so we are dealing with one centralized avenue.
- How open will the data be during and after the procurement process is complete? Will citizens be able to access bid information to see who/how/why decisions were made
- How long is sustainable? There is no turning back technology - If you start it, it will need to be maintained - I can never think of removing a piece of technology once it's in, so the city should also consider what is feasible and incorporate that in project design.

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- What does 'well-run' mean? This is a subjective term that the process might need to define in order to manage expectations of all parties or create a standard that is continuously re-evaluated.
- What the priorities will be when selecting projects for implementation? How the community will be informed about the initiatives, approved for realization?
- How will the procurement principle interact with the equity principle? Social procurement, which increases equity, requires working with small vendors, longer timelines for skill development, and longer-term investments, which often work against the need for ease and speed. The need for ease and speed of procurement must be balanced against increasing equity and related quality outcomes.
- How will the data support evidence-based decision-making? How does the City of Toronto plan to incorporate the standard-setting into the process to ensure that the principle can become a reality? What will the City of Toronto do to develop procurement strategies to support the growth of companies in Toronto?
- How do we promote strong and thriving communities with technology rather than letting technology isolate or intimidate people from walking the streets or engaging with others? How do we ensure that future connected services/infrastructure don't require people to be constantly looking at devices or screens and just works seamlessly, fluidly and ubiquitously?
- What is the role of the city and staff in ensuring that any of these principles are enforced? It is far too early to be thinking about a cloud strategy or social procurement in this context before it is clearly delineated by the city what is and isn't permissible use of citizens data and what the best way for the city to audit and enforce this. Several of the points under 'Some things we are thinking about' are far more fundamental and need urgent work before anything else proceeds, under this principle or others: * How proposals for Digital Infrastructure may be integrated with the existing building, planning and development review processes. * The creation of digital standards, which set out new processes for creating digital services, and new expected qualities of those services. * The creation of an evaluation framework for Digital Infrastructure proposals, using these principles as a guide.
- what is the relationship between city procurement, environment and climate change?
- How to Institute trusted frameworks, how to set up and maintain transparency and open processes that are user friendly.
- Have accessibility requirements been incorporated into the procurement development process? If not, how can these requirements be incorporated into this process?
- Funding
- What are the qualities the City considers key for digital standards? Is it sufficient protection to identify and enforce such standards by contract? What recourse will residents have (as opposed to the City as a body) if contracts are breached by private sector vendors? How will protections for residents be built into standards, agreements, and procurement?
- Tracking, privacy, facial recognition, data security, intended uses of said data, who gets access, lifetime of said data, disposal of said data.

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- Hope that this approach is shared throughout the city system - look for efficiencies and cut saving advantages - and digital thinking used to improve the interface between city services and living in the city.
- You need to think about the interoperability of tools over time and not get locked into using just one vendor's tools/sensors/platforms. Build capacity within local government to do this work itself.
- Which vendor is the city affiliated with for cloud computing? Where will the data be stored and used? Where does the public have a say when it comes to signing a deal with the vendor? What do data-sharing agreements look like?

Do you have any additional advice related to this principle?

- May include speed in the principle. The qualities stated are great if they can be delivered in a speedy way.
- Please keep it super simple and transparent with access to ask questions
- Slow down. Advancing digital technology does not have to be inextricable liked to solving social problems unless the notion of solving social problems through technology is a pathway to surmounting issues of privacy
- The city should host open vendor R of I type sessions open to everyone to see what kind of public civic realm technologies exist and could benefit a private and/or public partnership. These could be hosted every year to 3-year intervals
- Just do it!
- The procurement piece is a lot of lip service. As someone who works in gov and does innovation procurement, I know for a fact that there is much room to improve to reduce barriers to ensure all companies can participate in our procurements, particularly tools like challenge-based procurement.
- Create incentives for private sector citizens to weigh in. There is a lot of smart human problem-solving capital tied up in Banks, Insurance companies and Tech right now but are incented to solve non-social or public interest (i.e. Billionaire) problems
- This should be the fifth principle and not the second principle.
- I suspect that Estonia has a population similar to the City of Toronto - and that country is well ahead on digital transformation.
- No
- Consider new technologies to improve quality of life e.g. beacon navigation technology in underground path system.
- IT should take responsibility of renewing licenses and manage accounts, especially cloud-based infrastructure.
- Digital infrastructure should be needs based and forecasted down the road. Look at what people need now, will need in 10 years, will need in 20 years, etc. It must be something that the people as a majority need.
- Nope.
- Digital Infrastructure life cycle management will be very important to meet the 'well-run' principle. This will have to be requested and enforced in digital projects at the proposal phase.

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- Proceed with caution. Use common sense. No agreement on data sharing or information use can be enforced or controlled 100%.
- There is a need to explicitly include hardware reuse and recycling options. Standard procurement processes do not deal with hardware reuse and recycle adequately. Every technology purchase project needs to consider what will happen to the hardware at the end of the project. Hardware can be repurposed or reused by the city, city agencies, school boards, charities and nonprofit and individuals in the city who do not have their own computers
- As this process moves forward, we request that the City of Toronto consult with leaders of domestic technology companies on this principle.
- This principle is almost completely backwards and needs to be re-thought.
- Simplify!
- Unsolicited procurements are increasingly likely if the City moves forward with allowing a test bed environment in Quayside, as the purpose of a test bed is to create space for innovation. The City should think seriously about whether or not there must absolutely be demonstrable public benefit, beyond economic considerations, for all technologies in the public realm. Meeting needs of the City or its residents should be a first priority and encouraging innovation should never mean offering up residents as guinea pigs.
- More transparency.
- Above.

Draft Principle 3. Social, Economic, And Environmental Benefits

What do you like about the draft principle?

- It addresses the current but not the future aspects.
- Like direction but trying to figure how I can use this wonderful opportunity in future
- Great first start
- Makes sense
- Releasing data is very important.
- This is a great overall lens to keep in mind.
- I like how this principle focuses on creating positive things.
- Everything
- As I alluded to, it’s a great opportunity to bring back the value of our collective personal data back from tech giants.
- It is comprehensive.
- A focus on public data serving the public interest.
- Open data
- Open Data is key to ensuring that citizens are able to keep abreast of the policy's impact. As well, framing decisions on how it is impacted by and impacts post-secondary is important to long term economic development
- Again, good principles.
- it highlights who the City serves and has the potential to be the most measurable of all the other principles.

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- Love the Green market and Academic partnership.
- The principle is sound, but the examples are weak.
- CCI is generally supportive of this principle
- I like this as an idea, particularly when combined with the equity approach described above.
- ALL
- 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.
- I think this is the fundamental principle, this is why we are developing digital infrastructure.
- Social is first, as it should be.
- Open data strategy for anyone to build tools and apps that benefit society. Academic partnership to create job opportunities for students and cross-industry collaboration. Like that there is Green Market Acceleration Program to commercialize Toronto based technologies.
- For me this is the most important principle. It should be number 1 and it could be expanded with more details because it's a bit vague and I'm not sure in the current state how useful it would be to really evaluate policies and proposals.
- It is a bit high level - hard to imagine the items come to fruition
- This principle should be at the beginning of your list. It should be publicized in any way possible. You should keep pushing that we absolutely need to move to a smart city if we are to band together as humans to move to a joyous city, if we want to leave no-one behind, if we are to handle present and (even more) future problems.

What suggestions do you have for strengthening the City's approach?

- Is there a digital office or initiative that collects, identifies and reports benefits earned by the City, people and businesses? Digital services and infrastructure are often behind the scenes, many may not see the benefits without prompts.
- Individuals especially the little folks don't ask questions then I would guess they don't understand what you folks are trying to do
- The city should consider how to articulate and implement measure that are fully resourced to address social issues ahead of proposing a digital principle that "contribute to positive social, economic and environmental benefits" which currently stand unresolved.
- Again, back to *develop here - implement here* - you can't have municipal employees from faraway place. Digital enables that but it's bad practice. Citizens and the data they create through activity are not a resource to be harvested by some Silicon Valley company for profit. Our data, our benefit.
- Release more data, non-identifying data of course, at higher frequency. Increase the data collection mechanism and areas where data is captured. Release clear questions where the city is seeking insights on the released data sets.
- A lot of this work is done behind closed doors or has barriers to participation. Open data for instance - I'd like to see more work around data stories to bring insights to life to residents regardless of data or digital literacy skills. Or the Civic Innovation Office - some of their work is external facing, but most of their 'co-creation' happens during the day. If

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you are serious about this pillar the public (and arguably business community) needs to be engaged differently in ways that are designed to reduce barriers.

- Include Open Source, Open Hardware, etc. and not limit it to just Open Data
- It sounds like you're only talking about self-driving cars, but maybe you mean IoT and responsible 5G
- None.
- Mandate dedicated staff to consulting with non-profit open data users and improving quality of /access to open data. Mandate dedicated staff for usability auditor staff to assess and publicly report on usability of city public user interfaces. (They are currently terrible: try requesting parking enforcement or looking up information about a city park.) Ensure that council and government events and processes are easy to follow online, and ease access to governing processes by citizens.
- The City used to have a 'Chief Transformation Officer', but I guess he quit since he was the only one that understood transformation. Give more responsibility to the City CTO - Lawrence Eta.
- There needs to be extensive consultation with domestic innovators and leaders in the City of Toronto (and across Ontario).
- Provide additional training on how to become contributors to open data. Providing access and training to ARC GIS to document real time changes.
- Data provided through all policies needs to not only be Open but accessible. Locked and static PDFs limit the usability of the data, where possible standard formats should be in .CSV or indexed PDF
- Better communication, more notice for sharing information, things are always last minute. Again, think of your key information sharing spaces, and ensure your Publicity gets on notice boards. A connected city is a communicative city.
- None.
- I like that we are thinking this networked. Unfortunately, in practice, things don't trickle down. Please work with your institutions on communication, and ensuring that messages get shared at schools, libraries, community councilor offices, etc. Things are not being shared.
- 'by supporting the success' - this seems vague. Why not state that the benefits have positive impacts on those groups?
- Use local tech companies, have all the hardware and software development located in Canada, improving the security and generating an economic benefit for the local IT business.
- Each project will need to list quantitative and/or qualitative social and environmental benefits. Social and Environmental benefits cannot be assumed, they need to be measured and tracked.
- The public value of digital infrastructure is becoming increasingly significant, to the extent that cities without adequately aggressive strategies will suffer a widening competitive gap in economic performance. In recent years, leading jurisdictions have taken an increasingly integrated approach to plan and build digital infrastructure, abandoning the siloed approaches of the past, in which governments' technology needs were only loosely if at all connected to broader economic and social outcomes.

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- I'd like to understand how concerns around sustainability or sustainable methods of development will be addressed.
- Best practices and a more inclusive and open invitation to Canadian tech firms using the PPP approach
- There is going to be an inherent conflict in many cases between social benefit and economic benefit, particularly when it comes to enabling the collection of granular, or personal, data from and about people as part of proposed innovations. The City needs to be explicit about its priorities and ensure processes are trustworthy to ensure social license (note, not figure out how to get people to trust processes, actually create processes and policies that are worthy of trust because they put people before profits).
- Transparency
- Take care in the data that is shared - just because it has been anonymized doesn't mean that people can't be identified. Be sure to employ people from marginalized lived experiences to do this work, because they will ask questions and think of things that people from more privileged backgrounds won't think of
- Look into GTA's impact on climate change from transportation and congestion on the 401
- I would like to have a nomination process - bring more work into the civic space for support.

What are the key questions that need to be addressed or clarified as the process continues?

- What does "positive" means in the context of the principle? What are the metrics used to measure success? How can businesses and individuals easily participate in innovation? Will training be provided to maximize the stated benefits? How would the benefits be promoted?
- How can an individual use your services in simple ways for benefits to individuals and small mom and pop businesses and nonprofit groups?
- What evidence-based information is the city using to support the claim that this principle "will contribute to positive social, economic and environmental benefits by supporting the success of Toronto's residents, businesses, academic institutions and community organizations."
- What is the trade balance of data value? Are we importers or exporters? Are we source of primary undeveloped data for other places to develop into higher level products or are we a fully integrated stack of tech?
- Be sure the city doesn't censor usage while keeping internet access safe.
- how will you engage the public and relevant stakeholders differently?
- How to address problems that have arisen between Open Data and the Municipal Freedom of Information and Protection of Privacy Act. As an example, the Toronto Fire Department's use of MFIPPA to get out of their obligation under FPPA to report Fire Code violations to all residents of a property. Data is kept private until it is no longer relevant to the concerned parties, despite no actual privacy concern with reporting what codes landlords are currently in violation of. Citizens are left in the dark with no recourse as freedom of information requests do not allow disclosure in a timely manner.
- How do we untangle innovative minds to get out of banks, instance companies, real estate and tech to solve these real problems? The billionaires who govt let's win are paying them.

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You need to flip the score board to make this happen. Public sector will be left with well-intentioned but under resourced and always chasing, unless the scoreboard is flipped to helping society. Change management.

- Is the infrastructure effective?
- How to infuse awareness of citizens access to government into all technology decisions.
- What will a new procurement process (e.g. one that uses 'challenge' statements) be forthcoming (2023?), and when will 'Vision' statements be followed by 5-year deployment roadmaps?
- The purpose of the Civic Innovation Office. Our division currently has a unit that serves the exact same function as the Civic Innovation Office.
- How do we measure this success? Everyone's wellbeing or just a few here? Who is included, who isn't? How is impact being measured? What are the indicators for wellbeing? Are the indicators the same or different across the city, across the multitude of communities and Toronto landscapes?
- Consider the development of an evaluation system that defines a threshold to be met for each of the benefits. Be clear with the objectives - reduce pedestrian deaths to zero by 2015, reduce traffic generated pollution by half by, improve the speed of public transit trips (TTC currently focused on headroom - consistency instead of user oriented speed of trip)
- Will all 3 benefits need to be met all the time? Or will digital projects just need to demonstrate they considered them?
- How will the deliverables and budget for each project include measurement of social and environmental benefits? Social and Environmental benefits cannot be added after the fact but need to be an integral part of the planning process.
- How do we balance priorities between social, economic and environmental perspectives that may be at odds with each other in some cases?
- individual rights, ownership and stewardship of the data, audit practices
- How do we publicize this great new approach? How do we draw in all the population to back it and become involved in it?
- I've been to a number of consultations recently where economic benefit is considered a social good. Having a strong economy and thriving private sector is socially beneficial, certainly, but at a more granular level, the success of any individual business venture may contribute to or harm individuals, groups, or society. Will the City commit to ensuring that economic benefit alone will not drive decision making?
- What data is collected? Who is harmed by the collection and dissemination? Is the data really necessary for the functioning of government? How can the data be abused? Does the data collection/use target some groups over other groups or make it possible for people to target specific groups?
- What does it mean when you say public-interest IP policy? Who owns the IP? How do you ensure that digital infrastructure is?

Do you have any additional advice related to this principle?

- Include something about the future.
- Keep it super simple.

Draft

- Slow down – understand that people and the societal issues they contend with are not a set of algorithms.
- Just do it!
- I'd merge the equity and inclusion principle here.
- 'To support Toronto's businesses while also ensuring our international trade agreements are respected.' It is not an either-or scenario - they don't have to be tied. It is puzzling to me that this is here vs when you spoke about procurement. Would make this more clear.
- Get the big industries to contribute people, make it mandatory, support them with building a more digitally skilled population
- This should be the fourth principle and the third principle.
- Transformation will increase budgets over the short term, but the 5-year plans must yield eventual efficiencies. Balance the budgets over 5 years. Immediate savings are NOT possible.
- how to implement an app. that contains real time data for social and economic benefits.
- Nope.
- Dump the international trade agreements.
- In the context of global warming, the energy usage by city owned and managed technology needs to be given more detailed consideration. Additionally, the monitoring and use of energy by the city through technology and data analysis also needs more attention.
- This principle will require extensive consultation with Toronto's innovation ecosystem and discussions around standards for open data, harmonization across governments to create market certainty for businesses that do business with the City of Toronto. There should also be a dedicated discussion to data trusts, standard-setting, Intellectual Property and regulations. As this process moves forward, we request that the City of Toronto consult with leaders of domestic technology companies.
- Tourism should be included
- Current City services seem to have been built according to the needs of individual departments - i.e. from the 'inside out'. This needs to change quickly! Digital services should be designed for use by the citizens, not to suit the legacy needs of each department.
- The proposed principle is seemed to be positioning the digital space for idea sharing, information distribution etc. all of which is happing today. While the city, businesses, and academic institution may have a path to using data to predict hard infrastructure needs, create wealth and proposed learning opportunities and system access by analyzing and understanding aggregated or distilled data it is not clear how this will improve economic outcomes for individual residents.
- Maybe should include a housing approach
- focus on evaluating energy intensity of digital infrastructure

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Draft Principle 4. Privacy and Security

What do you like about the draft principle?

- “Be safe” may be challenged. Toronto can safeguard privacy through use of best practices and regular reviews by independent sources.
- The general direction, the devil is in the details
- It is impressive that individual privacy is being considered – however with the speed at which technology is being developed the principle seems to assume that current privacy laws are in tune with current and emerging digital technology.
- makes sense
- I like the focus on security
- Privacy is of utmost importance and a strong and clear principle is excellent.
- Forward thinking, responsible
- It is comprehensive.
- These policies seem fine!
- Privacy protection
- A localized standard for privacy is important, we can't assume that provincial and federal protections are sufficient
- Important that the city is looking at privacy
- Respecting privacy rights, and legal limits on collecting/using data on individuals.
- I'm glad it's being addressed. Very important.
- Good principles.
- Straight-forward. This is an important consideration for acceptance of digital projects by the public.
- Ok, I am happy the City understands there is such thing as privacy. Legal contracts are good idea, although will work more as guidelines.
- It’s an important principle, but hard to implement when data that the city is not allowed to collect on this principle, is simply available for purchase from other sources by the city.
- CCI is supportive of this principle.
- This is important and needs to come earlier. None of the downstream uses of data can be permissible under any kind of a social license unless this is ensured.
- ALL
- When the City collects personal information, it must tell you how it intends to use the information and provide you with the contact information of someone who can answer questions you might have. Clearer guidance about privacy concerns in public-private partnerships, where determining which privacy law applies needs clarity.
- That you are working on it
- Privacy and security are clearly priorities.
- Great stuff - is there a benchmark of success here - what cities are doing this well? What are the best cases for us to study and learn from?
- Giving the citizen the right to see the personal information held by the city.

What suggestions do you have for strengthening the City’s approach?

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- Need a classification system for data based on implications to identify which needs more privacy requirements.
- From past attempts to read reports from any Dept I difficult to find, read etc. When one tries to make comments and seek feedback is tough at best Hopefully a simple access for feedback and making comments would result
- The principal should speak to how it will remain nimble, sustainable and responsive this should be articulated. Terminology such as municipal data trust needs to be unpacked
- don't collect personally identifiable info if you don't need it. use postal codes instead of crazy math models for cohorts
- I like the part about 'in accordance with privacy laws', but I'd encourage this document to really delegate the creation of the privacy rules to other spheres of government. I'm not sure about the scope of what the city could create in terms of new rules for the private sector, but I think it shouldn't, because rules that are too local can be very detrimental to businesses.
- Privacy Impact Assessments (PIAs) happen after you have a vendor, but you need tools to identify how companies handle data and privacy before they are awarded contracts - this isn't always clear in the procurement process. Should be a pillar of evaluation, Guelph is doing some of this. Consider requiring a Cyber liability insurance requirement as more of a standard practice.
- Coalesce with all levels of govt and global munis to make this a global initiative
- None.
- Increase monitoring and control to safeguard personal information and risk any breach of information.
- Include audits of corporations and not-for-profits providing technology services as the compliance practice is often limited to questionnaires with limited follow up or oversight
- No tracking on an open network. Consent, clear, informed. Signs if needed to inform individuals that their habits maybe subjected to data collection. Easy options to prevent data collection. Non identifiable data collection ONLY after clear consent. Concern about growing cyberattacks. City needs EXPERTISE to ensure Toronto is obtaining the BEST minds protecting it. Who is being hired? Must have high level expertise.
- None.
- Define and share the current operational baseline as a starting point for changes. This requires knowledge sharing within the Public Service and to the public
- Any data, once generated, will be used in all possible ways, despite any legal contracts. Do not generate and give access to information that could be used against the city or any of its citizens. The open data will be used both for good and bad intentions, make sure you won't help criminal minds. Can't have 100% protection against data leak - delete all unnecessary data. It sounds overstretched, unfeasible and futuristic, but make the data accessible only inside Toronto)
- The principle needs to extend to purchases of data form other sources that are not generated by the city. The purchase of Moneris data with a deep level of personal information for the King street pilot could be a violation of this principle.
- The transition to the data-driven economy is underway thanks to the increasing number of connected devices through the Internet of Things (IoT), and it creates new opportunities

Draft

as the world becomes more conscious of the value of our data and more concerned about our digital security and privacy. This presents unique cybersecurity and business continuity challenges that need to be strategically addressed by both City policymakers and industry, such as the way that data is classified, whether and when residency requirements should be applied and for what reasons. There should also be a collaboration with other levels of government on cybersecurity initiatives taking place across the country.

- We need to ensure that any information collected about people is clearly stated in a way that is easily understandable by all, not only by those who are technically inclined. A clear value proposition must be communicated, and people need to have a way to opt out of any data collection.
- Having said that. privacy and security are concerns that occur downstream of the more fundamental information governance questions. What are the accountability and transparency structures around who decides what is collected, where, from whom, and for how long it's retained? How can citizens be assured that these structures are working properly? How is a citizen's right to see what data is collected about them enforced? Is there a right to be forgotten? And who makes these decisions, the city or a vendor whose ownership could change hands?
- sorry I included my comments on this under principle 1
- Permission Based
- Make sure you have funding to take on the enough highly specialist staff to ensure security. This has to be built in from the beginning. I know you know it can't be bolted on, but perhaps some of the councilors don't. Make it crystal clear to them, frighten them if necessary.
- Protecting privacy in accordance with privacy laws is insufficient as a baseline when it is universally acknowledged, even by proponents of smart city technologies, that existing laws are insufficient in the face of emerging technologies. Protecting individual privacy is right but protecting group and collective privacy as a public good is also necessary in the age of big data, automated decision making, and social sorting. I'm not a fan of voluntary standards for private sector bodies, because they tend to be unenforceable and changeable when they become inconvenient, but at a minimum this principle should support not just meeting the low threshold of legal compliance (which, let's be clear, is mandatory, it's not an option to fail to meet legal compliance requirements) but committing to internationally-recognized standards of best practice for privacy and security.
- This needs to be in concert with a national data/anti-marketer privacy approach. You need to look at what Sidewalk Labs is doing in Waterfront Toronto with the Replica tool, where that tool's data comes from, and how it's being used. Private-public partnerships are a huge concern, and third parties / private firms should not have access to data the City collects in public space. The City should also be very cautious about what gets collected in privately owned public space.
- Further, break down what PIAs in action look like for business cases. Are we talking about internal or external business practices?

What are the key questions that need to be addressed or clarified as the process continues?

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- Will there be a privacy rating issued by the City? Should there be a privacy policy for all Toronto businesses? What are the safeguards for individuals?
- Keep it super simple. If a public high school student can use your system, then there may be hope for all individuals
- How will the city govern and guide private and not for profit groups collaboration with those offering the implementation of new digital technology into their work. If an individual or some other entity elects to put up a building, there are municipality by-laws that must be complied with what will be cyber equivalent?
- who owns the data - how do licenses work?
- In what cases personal data should be collected by default (opt-out approach), versus requiring the consent of the user before collecting the data? I think in most cases it will be more beneficial for the city to not require explicit consent and given the trends in data privacy I'd suggest clarifying this would be an acceptable approach.
- How to prevent this principle from being abused to conceal information that ought to be public in an expedited manner. Delaying or obstructing release of non-private information can be damaging, and citizens have many interests in this data. A clear policy objective identifying what is and is not private information needs to be established to prevent agencies from hiding behind MFIPPA.
- How do we change the score board, once we have the data?
- Is the infrastructure effective?
- What language can we use in legal contracts to ensure public safety and liability if there was a breach?
- The grey area of 'semi-public' spaces, as well as how to fully enforce contractor compliance -- and detect and severely punish infractions -- are troubling. The corporations that have expressed an interested e.g. in quayside have a record of over-reach, to put it mildly, and any assurances of their good will and intent are meaningless serious compliance/enforcement mechanisms and penalties that bite are needed.
- Concerns IN THE CITY of a user - more of an individualistic nature, citizen and group rights, privacy, censorship, hacking, etc. Concerns OF THE CITY - protecting against external AND internal threats - monitoring is a fine line.... Aligning with larger Provincial and Federal laws and mandates.
- What do City residents, businesses and visitors expect of the City in this context?
- Who are the IT experts City is working with to ensure good industry practices?
- See: takebackyourpower.net. This documentary about smart meters reveals how hackers can break into these systems and monitor peoples' privacy and potentially use the emfs as 'weapons' Google: The Active Denial System used by the army for weapons and crowd control!
- How will the need for security and privacy be balanced against the need for targeted intervention by the city for social and environmental purposes. For example, encouraging energy and water conservation requires targeted messaging and intervention and knowing who is above average in consumption.
- The city needs to consult with industry and experts on standard-setting, IP and considerations for the use of data trusts for this principle.

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- As with earlier, some of the 'Some things we are thinking about' need to be given primacy and an urgency before other principles can be adopted. What are the privacy protections that groups of people should have? How should information and data governance work?
- Security and Identity
- Security strategy.
- Privacy laws may or may not be reformed soon, and they may or may not end up addressing some of the existing gaps. How, in a changing and inadequately-regulated environment, will the city provide clearer guidance not just about what laws apply but what civic expectations are for privacy protections, and more broadly, to mitigate the risks of technologies that facilitate different levels of surveillance and create risks that don't fit neatly into the category of 'privacy' but have the potential to negatively affect our City's livability and the rights of residents?
- What does privacy-by-design mean in this case? How are you involving the citizens and stakeholders?

Do you have any additional advice related to this principle?

- Address how third parties ensure privacy is maintained when data is transferred Should audits be done yearly to address privacy? Many people don't really know what privacy means ultimately, there needs to be more education on the topic.
- Please keep it super simple for lay people
- Slow down – extend your consultation in a more explanative way – not everyone in the city can follow and fill out this online survey
- put someone in charge of this
- Can the City 'dither' any more..........honestly?!!!!
- I'd like to talk about the positive aspects of collecting data, in particular non personally identifiable
- Agile incremental approach, leverage best practices form Europe
- This has to be the first principle!
- Focus on refining and emphasizing this principle. This is generally the first principle and often in the minds of the general public when new technological initiatives come into play.
- As above: The grey area of 'semi-public' spaces, as well as how to fully enforce contractor compliance -- and detect and severely punish infractions -- are troubling. The corporations that have expressed an interested e.g. in quayside have a record of over-reach, to put it mildly, and any assurances of their good will and intent are meaningless serious compliance/enforcement mechanisms and penalties that bite are needed.
- THIS IS BIG. GET YOUR EXPERTS ON IT.
- Nope.
- Over communicate the DIP principles, framework and future projects in both digital and non-digital formats.
- How do you guarantee personal privacy? It is already widely compromised. Educate the people about data safety. Have a low-tech backup, say, in case of black-out.
- Smart Meters are a major health concern. See: The Bioinitiative Report [compiled by industry leaders, doctors, scientist and researchers] This report lists frequencies of radio, electric and magnetism emitted by smart devices and their health effects on human life

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based on the frequency measured. See: the 5g summit crisis and accountability [This is an excellent summit that also addresses possible solutions]
- How will this principle be applied to data used by the city to carry out provision of social services? There is an inordinate amount of personal data collected on recipients of OW, ODSP, social housing etc. that is a form of data surveillance on the poor that most of us are not subject to.
- As this process moves forward, we request that the City of Toronto consult with leaders of domestic technology companies.
- Proactive innovative approach in the design as it relates to data collection and protection rather than reactive
- Privacy is a gateway right that protects other rights, including freedom of expression and association. I would like to see the City acknowledge that privacy protection is both a goal in and of itself, and a means to ensuring that other Charter rights of residents are appropriately safeguarded.

Draft Principle 5. Democracy and Transparency

What do you like about the draft principle?

- This wording is great
- It is hard to understand how this principle will be achieved. Currently many Torontonians don’t understand the process by which the city makes decisions. This assurance that “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” does not come with it an education component beyond a web page for Torontonians to make use of. Case in point the “Quayside” and concerns related to its proposed development did not seem to come to light simple because these democratic processes exist. This has left residents (and only some) playing catch up with this development
- makes sense
- I like the idea of creating an advisory body to give guidance and governance to support a private/public IoT initiatives. However, some City staff will be needed to support and do work for this volunteer board.
- I like everything about it!
- I like the creation of an advisory body to provide advice to the City on issues related to Digital Infrastructure. Huge need for this but would ensure that there is broad representation in this panel.
- The idea, in principle
- Transparency, ability of citizens to get involved
- It is comprehensive.
- This all seems fine....
- I’m glad to see an explicit mention of ethics stated in a principle, however, I’m not sure how any of the points you mention here are following ethical guidelines.
- Open decision-making process

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- I like the layers of accountability
- I love the web page option - highlight everything there in a clear concise way. MANY PEOPLE DO NOT KNOW ABOUT THE OPEN DECISION-MAKING PROCESS, HOW ANYONE CAN ATTEND MEETINGS, ACCOUNTABILITY OFFICES, ETC. This MUST be TRANSPARENT. Advisory body is great. Yes, to collaboration across city agencies, boards and commissions - you MUST work together, info does not trickle down...
- Good!
- The principle is sound, but again difficult to put into practice.
- This is vital and needs to be first or second. Without process, transparency, and accountability, none of the other principles can be enforced.
- Open decision making, freedom of information
- Working with the City's agencies, boards and commissions, to determine how these principles could apply to their Digital Infrastructure. Opportunities for the City to create, encourage and use more open source software.
- I think you're wise to have a stakeholder advisory committee
- The current discussions about digital infrastructure in relation to the Quayside project have suffered from a profound democratic deficit. It is high time the City stepped up to enforce and ensure democratic accountability in processes affecting City residents and City infrastructure.
- Good work - this all feels very thorough.
- Publishing the web page on the city's Digital Infrastructure and creating stakeholder advisory committee.

What suggestions do you have for strengthening the City's approach?

- Include regular citizen inputs so that their concerns will be heard and addressed
- Please keep it simple for the layperson to use and ask questions
- Say how the city intends to publicly bring residents up speed on current transparency practices
- everyone votes - hmmmmm - well not everyone is equally affected by it - lots of opinions but not all are informed
- If we could push more the education aspect that would be great.
- You need to open up deputations - it is the same people each time. Why not have a booth that allows people to record their perspectives prior to an item being discussed? Or allow citizens to send a video of their perspectives? Or offering childcare for those who wait patiently at the committee meeting to have their voices heard?
- Adjusting the principle so that the practice is more realistic. Timely is overly vague and requests can take months for simple requests. Ombudsmen, Commissioners, Auditor Generals, these are all very formal processes that are a giant headache. They're great for some important things but overall, they are too much for most people to engage with. The city needs a 'digital fixer' akin to a bylaw officer. Use the existing 311 infrastructure and where agents deem it appropriate, they forward problems that aren't being addressed to this 'digital fixer' who evaluates and organizes responses. Areas where accountability is needed on a small scale for quick fixes and leaving the larger concerns to those more formal processes. Implementing a digital forum where a Request for Comments (RFC)

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approach can be implemented. These digital surveys are great, but they come far too late in the process and lack of interaction between people resulting in a narrow and uninformed views. I may have an excellent contribution to make on Jane Doe's idea, but I'll never contribute it because I'll never be informed of Jane's views.

- Less red tape and your backlog of policy decisions is fully visible, citizens weigh in on your backlog, they see what’s coming up, they see what’s in progress, they see what’s resolved, they assess what needs to be revisited, dashboards are provided
- None.
- Encourage citizen (non-corporate) participation in government with fantastic online resources explaining processes, and that are rapidly updated with upcoming agendas and meeting results.
- strengthen what open source software means... something like google suite considered open source?
- Education for those older members of City Council and the civil service to ensure they understand the impact they can have by not understanding or engaging with policies. It seems like a regular occurrence that a department head or councilor fails to understand the impact of their decisions and use of information
- Advisory bodies aren’t always the way to go...sometimes they just lengthen getting anything done.
- Democracy and transparency mechanisms have to be robust not only in the city's approach, but in that of contractors -- and the city must be in a position to enforce as well as punish infractions severely. I do not want my life, and that of my fellow Torontonians, to be fodder for Sidewalk Labs, its parent company, or other corporate actors.
- What can you outsource? What harm and risk could that bring? open source is good.... but do a SWOT....does risk outweigh? We need secure infrastructure.
- Basic information including recipient for all the cities contracts, including the digital infrastructure contracts should be published in a usable format. A searchable database with a downloadable machine-readable file format like CSV would be useful The publication of contract information is being led by the federal government, their portal can be seen as an example.
- Make this first and work closely with the province, who may be quite supportive of these kinds of questions and efforts.
- FOI-able documents notoriously hard to work with. need to advocate for a more streamlined approach that favours access over secrecy
- Better Oversight and Audit methods, new innovative approach to elections and electronic voting
- Publicity, publicity, publicity! Most people are interested in this but do not know what you are doing. You have to have dedicated staff in the Smart City Group to work with the press, TV and social media. And publicizing in The Sun doesn't cut it. You know the subscriber numbers for The Star and the Globe and Mail, start getting splashy coverage there. Smart Cities are sexy (although Digital Infrastructure is not), get moving!
- Engage civil society. There is an existing body of organizations with expertise, a range of perspectives and constituencies, and the mandates to participate in this kind of policy process. Leverage that expertise.

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- Have stakeholders involved to contribute towards improving Digital Infrastructure in the city

What are the key questions that need to be addressed or clarified as the process continues?

- How is ethical, accountable and transparency being measured and reported? How are suggestions being addressed? Will there be a easy to use feedback system?
- Keep it super simple
- How will the city safeguard its accountable processes in this digital environment? It is imagined that the city's accountable processes will be upgraded to incorporate innovative technology residents must have assurances that any innovation is dependable.
- What is the net benefit of things? For instance - Google may present itself as a beneficial supplier of cloud-based storage yet has is also hosting a bunch of child porn that it claims it has no right to stop. Nor does it have the ability to do so even if its policy (section 230 of DCMA) was changed. Should we do business with a company that brings a small benefit but has a massive civic liability like this?
- How you will notify residents that digital infrastructure projects are ongoing in their community? Often these can look like regular infrastructure projects or they are part of a larger infrastructure project.
- How do you make the process more accessible? I am exhausted just reading this document, let alone pushing ahead to wade through any such process. 99% of the people in my community would not be able to participate at all and of those that could, they are the least in need of a voice.
- Help citizens understand issues, tell stories with data
- Is the infrastructure effective?
- How can we make it natural for citizens to participate in government and overwhelm the unhealthy influence of professional lobbyists that understand how to exploit the system?
- How do you ensure a fair democratic process for open decision making?
- Developing effective and meaningful enforcement mechanisms to ensure that contractors are held to account.
- What does a happy democratic and transparent infrastructure look like? how does it feel? Who does it include? How do we get there? What are the timelines? Project scope?
- The cities technology policies and internal reports that lead to decisions should be transparently available. The explanation of the budget will be difficult when it spans across multiple city departments. To make the system more democratic, what are some Participatory Budgeting approaches that could be applied to some pilot projects?
- Oversight and Audit process
- How do you reach people to tell them what you are doing, to ask them to be involved, to trumpet our achievements?
- What infrastructure innovations are so consequential for residents that consultation needs to go beyond an advisory body to the populace? How can such consultation be implemented and routinized, perhaps leveraging technology to facilitate more participatory democratic processes?

Draft

- How will you make routine disclosers accessible to the public, especially to those who are not as digitally savvy?

Do you have any additional advice related to this principle?

- Democracy may imply people can vote for initiatives. May have to address those who don't want or understand digital changes.
- Feedback is key to improve upon the services you are offering also keep it super simple
- No
- Add ability for citizens to add comments to backlog items or in process items at council. Council term limits should be sought if you haven't already.
- This should be the second principle.
- It's always a challenge to understand all the data available and then read it online or download all this data and then respond to what data you have access to either by questions Path or a 311 line
- Democracy and transparency mechanisms have to be robust not only in the city's approach, but in that of contractors -- and the city must be in a position to enforce as well as punish infractions severely. I do not want my life, and that of my fellow Torontonians, to be fodder for Sidewalk Labs, its parent company, or other corporate actors.
- To be a world class city, we MUST model this principal.
- The City will need to determine how to objectively self-evaluate how transparent they currently are. Consultation will need to be ongoing once the DIP is implemented to ensure principle #1 can be met
- The Budget for the city of Toronto has been incredibly nontransparent. Multiple individuals and groups have been working on making the city of Toronto budget more transparent to citizens without great success. Let's hope the technology infrastructure budget, which spans multiple city departments can be made more transparent.
- As this process moves forward, we request that the City of Toronto consult with leaders of domestic technology companies.
- Spend time on the Why and What for of data collection and allow for interesting new approaches to using that data in ways not imagined making life better for all constituents and the community
- IT's not just the use of open-source software, it's about having the capacity in house as a municipality to do the software development, deployment, and maintenance so that the data is secure and not abused (i.e. used to develop products and tools that are sold to other municipalities as products).

Section 2 - Other

Is there anything else you would like to add?

- May be define what smart city means and what is Toronto doing to get there through different directives. How are all levels of education included to shape consistent knowledge all things digital?
- Examples of how the layperson can use this opportunity

Draft

- How does the city plan to reach out to and connect with the unengaged? Digital technology providers seem preoccupied with this question and seems to have surmounted it - what is the city's plan for doing the same
- Focus on some key benefits first - like making the TTC better, don't try and boil the ocean
- I think you are doing a great job with this process! I went to the meeting in person, but I really like all the online material and being able to submit my feedback through this form.
- All in all, this is good work, but it really needs to be created for different audiences. This is not an accessible format for citizens - how do you tell your 85-year-old grandmother about this and why it matters? How will you let industry know? How will this trickle-down internally and externally? A lot of work remains to be done.
- Good step in the right direction
- No.
- Since the City is doing so much effort.........why not include world peace and a cure for cancer?
- Digital Infrastructure and Technology will continue to rapidly evolve, but the success of these initiatives is 'optional' depending on how the City embraces these changes. Short term savings will not exist.
- Assistive technologies should be considered in the digital infrastructure. Think not only of people with disabilities but the aging population who is tech savvy. How can services be adapted so they remain inclusive/accessible.
- I am deeply concerned about the prospect that Toronto would contract -and cede authority -- to companies like Sidewalk Labs and its parent corporation. This is unacceptable.
- Need to develop a way to measure the effectiveness of the principles.
- Physicians for Safe Technology mdsafetech.org also article in Vitality Magazine online Dec/2019 on HEALTH HAZARDS OF 5G TECHNOLOGY ‘CITIZENS URGED TO TAKE ACTION BEFORE 5G DESTROYS ALL LIVING THINGS'
- It would be useful to pilot these principles on several smaller projects band ironing out the unforeseen issues before applying these principles to gain some experience before applying it to a large and complex project like Sidewalk Labs Quayside project. A concern is that although this is a step in the right direction, w.r.t. Sidewalk Labs Quayside project it is too little, too late.
- I’m not sure whether this should be another principle or simply a methodology in the design process, but assessing all potential harms related to any proposal is key to help understand and anticipate unintended consequences. This will allow teams to plan, design and build responsibly.
- Focus on Canadian tech and talent!
- Although I have not filled in some of the areas, (as I do not feel I have much to add in this particular field), I DO appreciate the opportunity to respond to this survey.
- Yes. Would it have been possible to have chosen a duller name for this project? No wonder so few people came to the meeting. Use 'Smart City' the way Montreal, Guelph, Vancouver - even Iqaluit - do. Stop trying to pretend it's just another boring engineering project. If it is really limited to infrastructure, you could at least have called it 'Smart City Infrastructure'. You are going to upend Toronto for the better. Shout it from the rooftops. WAKE UP.

Draft

- Digital infrastructure policy must absolutely be in the hands of the public sector, and our democratically elected and accountable representatives. The current significant smart city project in Toronto has operated thus far in a democratic vacuum, despite a lot of consultation theatre. It's time our City steps up and stands up for residents. I hope these principles serve that purpose.
- Please add design and branding into the mix - this all needs to be wrapped in UX and proper style to make it attractive, increase usage and satisfaction, and to be agile (always be improving and looking for feedback).
- Public engagement policy needs to be more robust.
- I would define 'Principle' as a broad philosophy that encompasses the City's values and guides the organization through all circumstances - irrespective of changes in goals, strategies or type of work. Principals should create a company culture where everyone understands what's important.
- Ask for feedback and show evidence of safety before imposing the world with agendas that impair health and life on earth.
- None - this is an excellent program and initiative - I hope TO has the courage and resources to step up and lead this development process, and to think of ways that urban life can be improved w a digital plan/strategy, and how to make the civic experience (volunteering, city brand, kindness, incentives, etc.) desirable.

What questions do you have?

- How does Toronto plan for the future? With all the new and refined data streams, how does the City ensure there is adequate capacity in system and qualified resources to manage the new assets? How is the City address “trust” in data ownership and management?
- Not sure in simple terms how I can use your services. Have a general ideal but drill down to actual uses in detail
- The survey did not seem geared towards Torontonians who are concerned about the basics living i.e. food, shelter, and clothing. It seems to have been designed for those who have a good knowledge of the city how it functions other possible role of technology in our lives beyond shallow information distribution and connectivity, as well as those who are advocate for income, food, shelter, clothing etc.
- Explain how this will be applied to ongoing projects like the Sidewalk Toronto project with Waterfront Toronto. How will the city assert its jurisdiction and impact this project to ensure it meets this?
- Where can I learn more?
- None.
- Why will it take until 2022 (and a new council) to have the plan in place?
- Will there be performance measures defined for the principles?
- How Can we stop 5G [based on evidence of harmful emfs]?
- Will the input during face to face meetings and input from online forms be separately and transparently published on the cities Open Data website?
- How may we assist?

Draft

- In the Public Sector no-one likes a project to fail - there can be consequences, but does the City reward 'risk takers' that succeed with a 'bonus'?
- When am I going to see this on the front page of the Toronto Star? When will New York City make a pilgrimage to Toronto because we are the cutting edge of smart cities? When will the Raptors win again?
- I'm still not clear how these guidelines, given this process will wrap in 2021, will influence City Council decision-making regarding the Quayside project. It's also not clear how influential the City process will be if Waterfront agrees to move forward with Sidewalk Labs, or how tied the City will be to whatever Waterfront approves. Public clarity is profoundly needed here.
- How are you hoping to engage those who are not as literate digitally? Where does governance fall in all of this?
- There was nothing about how you plan to regulate companies that use city infrastructure to generate profit - how will the city respond to this? There are few guidelines for that based on what was presented... and it was described as 'how Toronto should regulate digital technologies and data usage'. It was a lost opportunity not to ask, 'how should the city respond to companies that utilize public infrastructure as part of their business model, like e-scooters?'

What suggestions do you have for improving the consultation process?

- Love to be part of future focus group discussions. Also, the principles stated are great for those with understanding of digital processes. It may be better to include a glossary for others who do not know many of the terms used.
- More specific example via online questionnaire for the layperson to use these devices like a focus group online for the layperson from all walks of life
- Use the digital spaces the city now uses to reach residents, use print media, television, city social service providers to elevate to conversation on this issue so that it become as well understood and common place as getting on the subway. We may not all know how to use the subway, but more than likely a by-stander can help because the knowledge is common among the majority. We are not just an assignment for city staff, and we are not just numbers.
- include links to videos that educate on the debate
- Don't hold it in December and extend the time period for gathering feedback to well into the new year. Have sessions at public libraries to discuss this across the City in North York, and Etobicoke.
- Consultation should come at the start, not the end of the process. At this point it feels like a done deal and our voices will be ignored.
- I think you will find that from the rest of my comments
- None.
- Ensure people with disabilities are included in the consultation process, perhaps hold a specific focus group or consult with the Toronto Accessibility Advisory Committee.
- cascade this information over to the division head. I found this survey out through employee news.

Draft

- The survey is a bit long and can lose someone's attention. Perhaps a simpler version once you've narrowed down some projects is the way to go. Looking forward to the city's plans.
- Who's on the advisory group? What do you bring to the table...?
- Need to consider a PR-type campaign to educate the public on how the City manages digital information to establish an operational baseline. Communicate it via common examples, i.e. what happens when you call 311? Or the utility bill? Or use Wi-Fi at a community center?
- My understanding is that the Scarborough location consultation was not easily TTC accessible and there was a low turnout. The city has done a great job in reaching out to communities for the Anti-Poverty Strategy for example. It would be useful to see the Technology and Data infrastructure strategy take a similar outreach approach by connecting to the groups that are connected in grassroots technology implementation in the city such as FreeGeek Toronto, Toronto MESH. Toronto Freenet, Our Networks, Digital Justice Lab, Girls who Code, Black Professional Technology Network etc.
- Information online is really difficult to dig through, and thus not user-friendly and easily accessible. Even though I knew exactly what I wanted to look for on your website, finding information regarding public events, presentation materials, this survey and the CAG application were really not easily discoverable. Seeing a full page of text (and links hidden within) is incredibly difficult to scan in order to quickly find what I need. I'd encourage you to take a look at https://waterfrontseattle.org for an example of a friendlier site. A more user-friendly design of your information / communication would make information much more accessible to everyone and encourage more participation from people.
- invite more SME companies to participate
- I saw this survey on my Twitter feed- it did not come to my attention in any other medium. I know many people who do not use twitter, and even if they were, might not be following the City of Toronto. Our world is at risk of becoming more polarized as people receive only information that they may already be included to be interested in. (for example, I use Twitter, I want to follow the City of Toronto). Especially regarding our digital future, it is important to make sure we reach out to people who may not be engaged in a digital fashion. I suspect you did send out in in a number of ways, but as someone who uses TTC, and travels across the city in various ways, the Twitter feed was the only way I saw this. Thank you.
- Publicize that it is happening and that it is exciting and worthwhile. That a Smart City is necessary and useful, and that ordinary people are the right ones to guide it. Most people have only heard that it is dangerous, and they are shut out. You have to change that perception. You need funding for dedicated outreach people in your department, and they can't be muzzled by 'public servants don't do that'. Get some uppity people.
- This process was fast, and brief, and even among people I know who care deeply about such things, not widely known. While I appreciate the urgency, particularly given Waterfront Toronto/Sidewalk Labs' timelines, given that this initial phase of consultation is going to form the core of advice given to council at the critical point where the project moves from Waterfront to the City, I'd have liked to see more time spent, more consultation sessions, and more public awareness raising about the process.
- This team has done its homework, and this feels very considered and thoughtful

Draft

- Share it through other public-facing platforms such as Toronto Public Library
- This is a 'make-work' project that will take 18 to 24 months.........and then nothing will happen!
- The 'draft' principles seem to set a fairly 'low bar' - especially given that the Digital Infrastructure Plan will not be final until 2022, but they do go in the right direction.

Draft

Appendix C: Emailed Feedback

The following appendix provides all emails submitted by participants to the dedicated project email address digitalfeedback@toronto.ca. All personal information has been redacted unless submitted by formalized organization.

Email Submission 1

Hi,

I am unable to attend the event, but I would like to submit some feedback. This topic of particular interest, given the upcoming sidewalk labs project.

I would like to know how, if at all, the city is going to incorporate bylaws that might uphold individual ownership of data. Or at least implementing a framework for transparency and access for individuals interested in what data is being collected.

I would like to see some city funded info sessions/learning opportunities geared toward digital literacy (metadata vs recording and reviewing all conversations, etc).

What considerations is the city looking at in terms of representative and transparent supply chain management? Will the city be investing in developing indigenous talent and working with indigenous tech firms? Partnering with CCAB's Supply Change program? Or ensuring any other equity seeking groups are given priority?

What plans does the city have to make technology accessible? In terms of economic, physical, and neurodiversity, is there a plan to make Toronto's digital projects inclusive?

Thank you for taking the time to hear these concerns. Any materials being presented, I'm assuming, will be available in digital format; I would appreciate a link to the files.

Best regards,

[Private Citizen’s name redacted for privacy purposes]

Email Submission 2

Why are these public meetings being held everywhere but in Etobicoke?

This is the second time in the last two months, that a public meeting to engage the public has not been held in Etobicoke.

[Private Citizen’s name redacted for privacy purposes]

Email Submission 3

Hello DIP Team,

Thank you for hosting such a well-organized and friendly consultation event today at the North York Reference Library.

I’d like to offer feedback that hopefully will fit with the DIP drafting process.

These are organized on the pattern of questions in the feedback form but are in response to the principles collectively.

1. What do you like about the draft principles?

The main strength is how these thoughtfully capture so many aspects of data governance.

Also, the language used in the principles seems free of much the buzz words associated with smart city discourse. For example, I appreciate the use of the term 'well-run city' rather than the standard 'efficient city'. Good work.

2. What suggestions do you have for stragnthening the City's approach?

There is room to clarify the problem that the plan is trying to solve.

After talking to a few people at the meeting, it seems the problem is: How will the City regulated its work with outside partners on data-focused projects? In this way, "Infrastructure" is a little misleading. It suggests the Plan about building data infrastructure rather than regulating partnerships.

3. What are the key questions that need to be addressed or clarified as the process continues?
I think a key question is how the future of data governance/politics will affect groups.
While the lens of individual privacy is essential, it seems much more work needs to be done to clarify the connection between data and group culture and community identities. Referring to the equity lens is a good start but it seems to leave something out, something that needs to be discussed openly.

Perhaps it might help to look at work by Christ Gilliard on Amazon Ring and the intersection private data, neighbourhood culture, and municipal policing; Mutale Nkode work on Black communities, social justice and AI; or what Natasha Tusikov is doing on smart city data governance at York University. I'd be happy to suggest others.

4. Do you have any added advice related to this process?

- Perhaps include a diagram showing how this project fits in to the city's organization. It's a bit unclear how it relations to the City's agencies, boards, service (police, fire, etc.), HR/hiring and other components of the City's organizational system. Even as someone who knows the City well, it was hard to tell where the DIP was coming from.
- I would also be transparent about who else the team is consulting with. Usually with public consultation there is also a parallel stakeholder group or advisory group process. I would guess there is one in this case.
- Data is highly political. It would be good to have a honest discussion about who will/could benefit and who is at risk in setting up the DIP regulatory system. It's probably more expedient to gloss over the contested issue for now but I don't think that will serve the long-term aims of this project.
- Related to the last point, the regulatory system that the plan will set up I expect will need to include ways of resolving disputes and accommodating contestation. I'm not sure if this being anticipated base on the discussion today.

Draft

- Lastly (and this urban planners love to say this!), it might be good to make clear that the plan will be a 'living document', meaning that there will be ways of updating and improving the plan as the City and the community at large gains more experience working with data partnerships.

I hope these comments are clear enough to support the project's goals. Please feel free to get in touch if I can help to clarify anything.

Regards,

[Private Citizen's name redacted for privacy purposes]

Email Submission 4

Hi,

Thank you for sharing this information with us. We'll share this on our website and social media. Having only perused it at this point I'm eager to see how this can benefit our business community, both proactively (information that is crucial for business) and for accessibility to services. For starters they should appoint a round table with major industry, along with other players such as MaRS, BILD, the Building Trades, Colleges and Universities to look at issues such as optimization and implementation. Governments seem to have a way of introducing things that catch many unaware, diminishing potential gains.

Regards,

[Private Citizen's name redacted for privacy purposes]

Email Submission 5

hello

Reporting graffiti to 311 should not be on open data..

graffiti is a crime and can related to gang activity.

Anything related to crime should keep the informants Id safe

please do not post my name anywhere.

Sincerely,

[Private Citizen's name redacted for privacy purposes]

Email Submission 6

Hello,

I am writing to you about my concern that your upcoming consultations are grossly insufficient given the nature of the what you are consulting on. The City's Digital Infrastructure Plan is supposed to guide the City's response to current and future 'Smart City' proposals - a burgeoning field that everyone recognizes will be the future of municipal governance and administration.

Draft

You have proposed only 3 consultations limited to a small area of the City. I have also not heard anything of these consultations until I was reading through the presentation from WaterfrontTO on its public briefing yesterday. Is the City actively promoting these consultations at all?

I'm also unclear on what the difference between the Connected Community e-mail address and SmartCityTO e-mail address? Are these two different initiatives? (smartcityto@toronto.ca and digitalfeedback@toronto.ca).

Thank you,

[Private Citizen's name redacted for privacy purposes]

Email Submission 7

Hi,

I'm a resident of Toronto and came across some information about the public consultations on digital technologies in the city.

I'm not able to attend the sessions, but would like to give some feedback.

I'm concerned about 5G being introduced in the city without enough scientific research on the health effects on humans, especially children. Is the City of Toronto doing any research, or at least relying on unbiased, quality research that anyone has done? I hope that we're not repeating history where we allowed things like smoking cigarettes in hospitals and public places, only to find out decades later that it was bad for your health.

My children, family, and friends and relatives live in the city and will also be affected by 5G, especially since cell towers will be located everywhere, including next to most homes and schools, meaning close to children. From what I've read so far, it appears that 5G is likely to detrimental to our health, and even 4G isn't good for children's health.

Please review the attached document and let me know what you think. [attachment below]

Thank you for your time.

Regards,

[Private Citizen's name redacted for privacy purposes]

Draft

Scientists warn of potential serious health effects of 5G

September 13, 2017

We the undersigned, more than 180 scientists and doctors from 35 countries, recommend a moratorium on the roll-out of the fifth generation, 5G, for telecommunication until potential hazards for human health and the environment have been fully investigated by scientists independent from industry. 5G will substantially increase exposure to radiofrequency electromagnetic fields (RF-EMF) on top of the 2G, 3G, 4G, Wi-Fi, etc. for telecommunications already in place. RF-EMF has been proven to be harmful for humans and the environment.

(Note: Blue links below are references.)

5G leads to massive increase of mandatory exposure to wireless radiation

5G technology is effective only over short distance. It is poorly transmitted through solid material. Many new antennas will be required and full-scale implementation will result in antennas every 10 to 12 houses in urban areas, **thus massively increasing mandatory exposure.**

With ”the ever more extensive use of wireless technologies,” nobody can avoid to be exposed. Because on top of the increased number of 5G-transmitters (even within housing, shops and in hospitals) according to estimates, ”10 to 20 billion connections” (to refrigerators, washing machines, surveillance cameras, self-driving cars and buses, etc.) will be parts of the Internet of Things. All these together can cause a substantial increase in the total, long term RF-EMF exposure to all EU citizens.

Harmful effects of RF-EMF exposure are already proven

More than 230 scientists from 41 countries have expressed their “serious concerns” regarding the ubiquitous and increasing exposure to EMF generated by electric and wireless devices already before the additional 5G roll-out. They refer to the fact that ”numerous recent scientific publications have shown that *EMF affects living organisms at levels well below most international and national guidelines*”. Effects include increased cancer risk, cellular stress, increase in harmful free radicals, genetic damages, structural and functional changes of the reproductive system, learning and memory deficits, neurological disorders, and negative impacts on general well-being in humans. Damage goes well beyond the human race, as there is growing evidence of harmful effects to both plants and animals.

After the scientists’ appeal was written in 2015 additional research has convincingly confirmed serious health risks from RF-EMF fields from wireless technology. The world’s largest study (25 million US dollar) National Toxicology Program (NTP), shows statistically significant increase in the incidence of *brain and heart cancer* in animals exposed to EMF below the ICNIRP (International Commission on Non-Ionizing Radiation Protection) guidelines followed by most countries. These results support results in human epidemiological studies on RF radiation and brain tumour risk. A large number of peer-reviewed scientific reports demonstrate harm to human health from EMFs.

The International Agency for Research on Cancer (IARC), the cancer agency of the World Health Organization (WHO), in 2011 concluded that EMFs of frequencies 30 KHz – 300 GHz are possibly carcinogenic to humans (Group 2B). However, new studies like the NTP study mentioned above and several epidemiological investigations including the latest studies on mobile phone use and brain cancer risks confirm that RF-EMF radiation is carcinogenic to humans.

The EUROPA EM-EMF Guideline 2016 states that ”there is strong evidence that *long-term exposure to certain EMFs is a risk factor for diseases* such as certain cancers, Alzheimer's disease, and male infertility…Common EHS (electromagnetic hypersensitivity) symptoms include headaches, concentration difficulties, sleep problems, depression, lack of energy, fatigue, and flu-like symptoms.”

An increasing part of the European population is affected by ill health symptoms that have for many years been linked to exposure to EMF and wireless radiation in the scientific literature. The International Scientific Declaration on EHS & multiple chemical sensitivity (MCS), Brussels 2015, declares that: "In view of our present scientific knowledge, we thereby stress all national and international bodies and institutions...to recognize EHS and MCS as true medical conditions which acting as sentinel diseases may create a *major public health concern in years to come worldwide* i.e. in all the countries implementing unrestricted use of electromagnetic field-based wireless technologies and marketed chemical substances… ***Inaction is a cost to society*** and is not an option anymore… we unanimously acknowledge this serious hazard to public health…that major primary *prevention measures are adopted and prioritized, to face this* ***worldwide pan-epidemic*** *in perspective."*

Precautions

The **Precautionary Principle** (UNESCO) was adopted by EU 2005: ”*When human activities may lead to morally unacceptable harm that is scientifically plausible but uncertain,* actions shall be taken to *avoid or diminish that harm.*”

Resolution 1815 (Council of Europe, 2011): ”*Take all reasonable measures to reduce exposure to electromagnetic fields,* especially to radio frequencies from mobile phones, and particularly the exposure to children and young people who seem to be most at risk from head tumours…Assembly strongly recommends that the ALARA (as low as reasonably achievable) principle is applied, covering both the so-called thermal effects and the athermic [non-thermal] or biological effects of electromagnetic emissions or radiation” and to ”improve risk-assessment standards and quality”.

The **Nuremberg code** (1949) applies to all experiments on humans, thus including the roll-out of 5G with new, higher RF-EMF exposure. All such experiments: ”should be based on previous knowledge (e.g., an expectation derived from animal experiments) that justifies the experiment. No experiment should be conducted, *where there is an a priori reason to believe that death or disabling injury will occur*; except, perhaps, in those experiments where the experimental physicians also serve as subjects.” (Nuremberg code pts 3-5). Already published scientific studies show that there is ”a priori reason to believe” in real health hazards.

The **European Environment Agency** (EEA) is warning for ”Radiation risk from everyday devices" in spite of the radiation being below the WHO/ICNIRP standards. EEA also concludes: ”There are many examples of the failure to use the precautionary principle in the past, which have *resulted in serious and often irreversible damage to health and environments*…harmful exposures can be widespread before there is both 'convincing' evidence of harm from long-term exposures, and biological understanding [mechanism] of how that harm is caused.”

“Safety guidelines” protect industry – not health

The current ICNIRP ”safety guidelines” are obsolete. All proofs of harm mentioned above arise although the radiation is below the ICNIRP "safety guidelines". Therefore new safety standards are necessary. The reason for the misleading guidelines is that “conflict of interest of ICNIRP members due to their *relationships with telecommunications or electric companies* undermine the impartiality that should govern the regulation of Public Exposure Standards for non-ionizing radiation…To evaluate cancer risks it is necessary to include scientists with competence in medicine, especially oncology.”

The current ICNIRP/WHO guidelines for EMF are based on the obsolete hypothesis that ”The critical effect of RF-EMF exposure relevant to human health and safety is heating of exposed tissue.” However, scientists have proven that many different kinds of *illnesses and harms are* caused without heating (”non-thermal effect”) at radiation levels well below ICNIRP guidelines.

We urge the EU:

1) To take all reasonable measures to halt the 5G RF-EMF expansion until independent scientists can assure that 5G and the total radiation levels caused by RF-EMF (5G together with 2G, 3G, 4G, and WiFi) will not be harmful for EU-citizens, especially infants, children and pregnant women, as well as the environment.

2) To recommend that all EU countries, especially their radiation safety agencies, follow Resolution 1815 and inform citizens, including, teachers and physicians, about health risks from RF-EMF radiation, how and why to avoid wireless communication, particularly in/near e.g., daycare centers, schools, homes, workplaces, hospitals and elderly care.

3) To appoint immediately, without industry influence, an EU task force of independent, truly impartial EMF-and-health scientists with no conflicts of interest[1] to re-evaluate the health risks and:

a) To decide about new, safe "maximum total exposure standards" for all wireless communication within EU.

b) To study the total and cumulative exposure affecting EU-citizens.

c) To create rules that will be prescribed/enforced within the EU about how to avoid exposure exceeding new EU ”maximum total exposure standards” concerning all kinds of EMFs in order to protect citizens, especially infants, children and pregnant women.

4) To prevent the wireless/telecom industry through its lobbying organizations from persuading EU-officials to make decisions about further propagation of RF radiation including 5G in Europe.

5) To favor and implement wired digital telecommunication instead of wireless.

We expect an answer from you no later than **October 31, 2017** to the two first mentioned signatories about what measures you will take to protect the EU-inhabitants against RF-EMF and especially 5G radiation. This appeal and your response will be publicly available.

Respectfully submitted,

Rainer Nyberg, EdD, Professor Emeritus (Åbo Akademi), Vasa, Finland (NRNyberg@abo.fi)

Lennart Hardell, MD, PhD, Professor (assoc) Department of Oncology, Faculty of Medicine and Health, University Hospital, Örebro, Sweden (lennart.hardell@regionorebrolan.se)

WE will add signatories to the following list through the end of 2017. The updated list of signatories and the appeal can be found later HERE.

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[1] Avoid similar mistakes as when the Commission (2008/721/EC) appointed industry supportive members for SCENIHR, who submitted to EU a misleading SCENIHR report on health risks, giving telecom industry a clean bill to irradiate EU-citizens. The report is now quoted by radiation safety agencies in EU.

Signatories to the 5G Appeal

(As of September 13, 2017)

Note: The endorsements are personal and not necessarily supported by the affiliated universities or organizations.

EU and European Nations

AUSTRIA

Gerd Oberfeld, MD, Public Health Officer, Salzburg

BELGIUM

Marie-Claire Cammaerts, PhD, Researcher (retired), Faculty of Science, Free University of Brussels, Brussels

CYPRUS

Stella Canna Michaelidou, PhD, Chemist Expert on Environment, Health and Food Safety, President of the Cyprus National Committee on Environment and Children's Health

FINLAND

Marjukka Hagström, LL.M, M.Soc.Sc., Senior researcher, The Finnish Electrosensitivity Foundation, Turku
Osmo Hänninen, PhD, Professor Emeritus (Physiology), Kuopio
Georgiy Ostroumov, PhD (in the field of RF EMF), independent researcher

FRANCE

Marc Arazi, MD, Physician (Whistleblower on Phonegate international scandal), Nogent-sur-Marne
Dominique Belpomme, MD, MSc, Full Professor in Medical Oncology; Director of ECERI, Paris University, Paris & European Cancer and Environment Research Institute, Brussels
Philippe Irigaray, PhD, Scientific Director, Association for Research on Treatment against Cancer (ARTAC), Paris; European Cancer and Environment Research Institute (ECERI), Brussels
Vincent Lauer, Ing. ECP, Independent Researcher, La Chapelle sur Erdre
Annie J Sasco, MD, DrPH, Former Director of Research, French National Institute of Health and Medical Research; Former Chief of Epidemiology for Cancer Prevention, International Agency for Research on Cancer; Former Acting Chief of Program, Cancer Control, World Health Organization, Bordeaux

GERMANY

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Email Submission 8

Hello,

Attached please find a letter from Kathleen Kurtin, President of the Ontario Association of Architects (OAA), in response to the City's consultation on the digital modernization strategy. [Attached below]

Thanks,

[Private Citizen's name redacted for privacy purposes]

Draft

OAA
Ontario Association of Architects

December 19, 2019

[Sent via email to digitalfeedback@toronto.ca]

Smart City TO Public Consultation
100 Queen Street West
Toronto, Ontario, M5H 2N2

Dear City Staff,

The Ontario Association of Architects (OAA) supports the City of Toronto taking steps toward a sustainable digital future. Building on feedback from our membership as well as rulings and recommendations from the Information and Privacy Commissioner or Ontario (IPCO), the OAA has met previously with city officials to discuss strategies that would make the building approval process better for both applicants (architects) and their clients (the public).

For a number of years, our membership has flagged the City's practice of posting unredacted copyrighted materials such as architectural drawings online as not only enabling or even promoting the theft of an architect's intellectual property, but also putting the public at risk.

While some of our members would prefer to move back to what the IPCO characterizes as "the days of attending at the municipal clerk's office to obtain a copy of a record", the OAA accepts the IPCO's findings that posting elements of a planning application online has become a public expectation and serves a relevant purpose. While not interested in trying to prevent a municipality from sharing relevant data or the public from accessing it for legitimate purposes, the OAA remains focused on recommendations issued by the IPCO.

One such recommendation surrounds the IPCO requirement for *data minimization*. Indeed, a pivotal comment from the IPCO is that "the municipality does not have the authority" to collect information that is "useful but not necessary". The OAA asserts that the City of Toronto is woefully and openly in contravention of this requirement. The IPCO also challenges the City to consider whether there is "a requirement to publish the information" and "[w]ill the information be needed by a member of the public to use the record for its intended purpose".

In particular, the OAA flags requirements for detailed floor plans when these are not one of the elements pertinent to the variance being sought. In its report, the IPCO cites the privacy risk associated with disclosure for "an individual who has been the victim of a stalker, or has an abusive ex-spouse who may be looking for him or her". Detailed floor plans showing the exact locations of bedrooms, bathrooms and other elements of the house should only be requested when explicitly required to consider that specific element of the variance. Failure to minimize the information requested may put members of the public at risk.

While safety concerns are paramount, there are also significant concerns relating to the theft of intellectual property. Requiring full submissions irrespective of what variances are being sought also enables members of the public and of the design and construction community to steal an architect's intellectual property. Indeed, our members report that such practices are common. They also report the theft and illicit reproduction of their architectural seals, which puts the public at risk. The OAA is taking active steps to reduce or prevent this type of fraud by requiring its members to transition to a secure digital identity for seal applications.

The OAA asks the City to fully commit to data minimization and hold as an overarching rule to not contravene the IPCO by asking for, or requiring, information that is "useful but not necessary". If a minor variance is being sought for a yard setback, then the information and drawings required should only relate to the specific exterior section of the property requiring a variance. Similarly, if the minor variance is related to the height of an exterior main wall, then the information and drawings required should only relate to that exterior main wall.

Even in instances where elements such as a floor plan may be required, the IPCO rules in Privacy Complaint MC13-67 that "while municipalities move towards greater transparency by embracing the principles of Open Government, they must still ensure that personal privacy is protected." In this vein, the IPCO proposes "technological measures that obscure the contents of minor variance applications, or the personal information in such applications". Some applicants report success with submitting a greyed-out floor plan that doesn't show the functional layout and locations of things such as bedrooms, bathrooms, etc. Other applicants report that Committees of Adjustment have refused such applications. This shows a disregard for the IPCO as well as a lack of consistency and predictability within the City.

The IPCO also spends significant time talking about the need for municipalities to enable technological measures. The OAA has asked previously that the City, at a minimum, implements a click-through user agreement clearly indicating that the information (particularly architectural drawings or submissions) is copyrighted and cannot be used for any purpose other than for the consideration of the variance being requested. While this will not stop the theft of intellectual property, it will demonstrate that the City is a partner against theft as opposed to an enabler or promoter of it.

If the City wishes to take more active measures to prevent the theft of intellectual property, it could move to a mandatory registration system as outlined by the IPCO. In this instance, only people who register and have an account verified could be permitted to access the system and actions like document downloads could be tracked and disclosed as required when there are invasions of privacy or future litigation around the theft of intellectual property. Anonymous access would be eliminated and users could be made aware that their actions on the system are being recorded.

Finally, the OAA would like to point the City to its own best practices as demonstrated by Toronto Building. On their webpage entitled *Request Building Records*, the first paragraph references requirements under the *Municipal Freedom of Information and Protection of Privacy Act* (MFIPPA), citing specific exemptions for personal information and “records, the disclosure of which could reasonably be expected to endanger the security of a building.”

Disclosure is restricted to “wholly residential buildings” and even in that instance, building owners, managers or permit applicants have the ability to object to disclosure if they feel there may be a security risk. There are fees associated with records disclosure, as well as time-based limitations on when records can be disclosed. The application form forces an individual to date, sign and submit a formal declaration. It also contains a section entitled *Information for Applicant* stressing, among other things, that “plans are subject to the provisions of the *Copyright Act*.”

It would appear that Toronto Building has put significant thought into how to do a reasonable, justified disclosure that allows access to the public while still respecting requirements under MFIPPA, protecting the privacy and security of building owners/occupants and discouraging the theft of intellectual property. The City, specifically City Planning, is encouraged to take inspiration from within its own ranks in reforming how disclosure is performed on planning approvals.

The OAA would be happy to work with your office to reform disclosure processes around planning approvals. For your convenience, the IPCO report, *Transparency, Privacy and the Internet: Municipal Balancing Acts,* is attached as well as a December 2018 letter the Association sent to its members and Michael Mizzi, the Director, Zoning and Secretary-Treasurer Committee of Adjustment for the City of Toronto.

While the discussion herein pertains primarily to approvals processes under the *Planning Act*, the OAA would be pleased to work with the City to address similar concerns with other processes relating to the submission and display of copyrighted architectural documents.

Sincerely,

K. Kurtin

Kathleen Kurtin, Architect
OAA, FRAIC
President

Email Submission 12 & 13

-First Email-

Please find my submission below.

1. What do you like about the draft principles?

I like that they show the range of issues that are involved when thinking about this infrastructure plan and all of the attendant trade-offs that must be considered when making decisions related to infrastructure, which, for the City and its residents, is a major public asset. In particular, it's great to see privacy/security being given 20% of the attention, so to speak, rather than overtaking the conversation as has been too common in these conversations to date.

4. Do you have any additional advice related to the principles?

To the point about public infrastructure, add a principle for technological sovereignty. This is a core tenet of the foundational work in Barcelona, and is prescriptive enough to have a real and measurable policy impact. One of the weaknesses of the existing principles, as a set, is that they are all status quo entrenching. It would be hard to argue that the City isn't already considering all of these principles with existing policy. Which hardly makes these five any kind of real hard civic progress. Technological sovereignty means a commitment to public ownership/control of our key digital infrastructures for systems that organize things such as water, transportation, energy, parking, and more. This principle signals a commitment to set the design and procurement of digital systems as something that must reside in public control. This does *not* mean that the City has to build all of its own infrastructures, but it does mean that it always maintains control of what gets built and how it works. The City and its people set the terms.

If the City can't commit to this, it will continue to enable commercialization in parts of our systems that should never leave democratic oversight and control. When commercial actors are enabled to develop and design software and hardware system requirements they are exerting commercial influence/control on the City, and with them long-term impacts, that were never intended through standard procurement. This is a big red flag for agile and challenge based procurement, two issues identified by the City. This includes setting hard and fast requirements about transparency into software systems in order to be considered as potential vendor for the city. If vendors are unwilling to do this perhaps they should consider other sectors to operate in. Additionally, procurement should include training requirements/contracts in order to create internal capacity to manage purchases and shift operating costs for maintenance into in-house divisions.

Add a principle related to City staff from across all City divisions driving this plan and being its priority users. Staff in each City division have intimate knowledge about the risks and opportunities related to the people they engage with through their work. They also know which existing technologies are problematic and how/why. Given that back-office technology is on the table as part of this, there is an opportunity to consider if/how current organizational design could be supported better through technology investments. When City staff are considered priority users in this work, the City services will function better. City staff from across all divisions must be the requirement writers for future purchases, and they need staffing support to be enabled to do so, which could include roving civic product managers.

Add a principle related to context, and digital/data as an ecosystem – something that acknowledges that this infrastructure works as a system, and it cannot be managed in a

Draft

piecemeal way. Professor Jasmine McNealy has been doing work on the idea of data as an ecosystem – this would be a good place to look to consider if/how to take the issues raised and understand them through a contextual lens. This ties into process suggestions below related to digital master plans and environmental assessments, this must all be considered as a system, not its set of parts, as harms and opportunities will not be understand when assessed independently.

Add a principle that explicitly defines privacy as a public good, and develops an anti-surveillance approach. There are so many reasons to go beyond privacy as a construct related to the individual, and expand the idea out into ideas of collective privacy, privacy for groups, etc.

There was mention of this concept in terms of data use, but again, this is a chance to use these principles to be a leaders in cities around the world and committing to a new paradigm for the consideration of privacy would be exactly this – it would leapfrog the updates to both federal laws that are focused on the individual, and get expansive in a new area of privacy policy. The GDPR, while a step forward in some ways (though not all, and is far from perfect) does nothing to address issues of collective privacy.

Delete the principle about “a well-run city” – the City only ever strives to do this (be well-run), and having something this generic dilutes the initiative. Same for its rationale about evidence-based decision making. This is how public policy works. There is no reason to suggest anything other would be happening at the City. All of the sub-points under this principle matter, and perhaps a better way to think about this principle would be through a lens of accountability – so to that end, perhaps revise this one to talk about accountability?

Delete “economic” from the social, economic, and environmental benefits principle. Economic development is, no doubt, an important piece of policy for the City to think about. And the place it should live is firmly in the economic development office. We’ve seen a decade of the problems that are created when the design of the city becomes a market.

To lead in 2020 is to understand that this stream is vital, but must be parsed out from the rationale of purchasing and maintaining vital public infrastructure. The lessons from P3s hold and apply to the digital just as much as they have been learned about the physical.

2. What Suggestions do you have for strengthening the City’s approach

Existing models to borrow from – master plans and environmental

assessments: There are models to consider for how the digital infrastructure plan is developed/created. One of them is to think of the digital version of a master plan. This concept is explained in more detail here, by Léan Doody. Another model to consider is an environmental assessment.

Track all of New York City’s recent experiences and write them up as a case study for informing current work. Particularly the Algorithmic Accountability Task Force and the POST Act. Facial recognition bans are spreading across cities in the US, this would also be a worthy area to hive off and do some research on.

3. What are the key questions that need to be addressed or clarified as the process continues?

It’s great to see agencies, boards, and commissions being considered – now formalize and prioritize their involvement in the creation of this plan. Between the Toronto Police Services and the TTC alone, there are major system implications to consider in a surveillant context. These

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can't be a side note – they should all be formally brought into the planning process, whether through a committee or another mechanism.

Create a line item in the capital budget for this plan. The way this plan is put forward is as a responsive plan, a way to respond to internal or external proposals. While this is important to have, it's not enough. The plan should be funded, so it is not a piecemeal approach, rather an intentional strategic investment. In the interim, as the plan is developed, all of the component parts that are listed in disparate places (public wi-fi, etc.) should be listed in one place.

Define the status quo use of technology and existing infrastructure.

While an exhaustive inventory is a daunting task, it's important to have a proper handle on the technology currently in use, from back-office to public-facing. This will allow for any existing programs or purchases to be viewed through the planning lens. Where are there weaknesses in existing vendor contracts? As government technology policy analysts well know, sometimes the most innovative decision is to cancel an existing contract and reassign the money to something more productive.

Create a trigger and public notices for all RFPs under consideration from January 2020 onwards, prior to the projects going to tender, if they would be the types of projects that would be subject to this plan.

Given that this project will not be complete for close to two years, it's vital to put in an intermediary stage process to triage any procurement occurring in the interim. In the absence of a plan, heightened scrutiny and opportunity for public input prior to tender would be helpful starting steps.

-Second Email-

Do research on synthetic data and create a public report on how it is generated and how it might be used in city contexts. Understand its implications for use in products and begin to develop a policy position on the topic.

[Private Citizen's name redacted for privacy purposes]

Email Submission 14

Thanks for the forward thinking update. It's a big project and it is appreciated.

From my survey response you will see a theme whereby what your doing needs to be done responsibly.

Unfortunately, there are some change management challenges that you'll need to alleviate concerns of citizens.

- we are seeing value of data shifting to tech giants, you need to show how this data is bringing value of data back to the citizens
- we have too much human intellectual capital tied up in banking, insurance, real estate and technology. They, and their billionaire owners are winning. They run the political system, so I understand it's hard to detangle. You need to show that this will (1) change the score toward helping others vs billionaire (2) you need to incent human capital to come out of these off these sectors and work in public interest (3) helping these intellects by building a digitally literate workforce

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- Need to partner globally recommend Europe and UK as they are doing smart city plans

Full visibility, inclusion and transparency throughout the process.

Just a few pointers who deals with these issues on a micro scale every day.

Happy to collaborate

[Private Citizen’s name redacted for privacy purposes]

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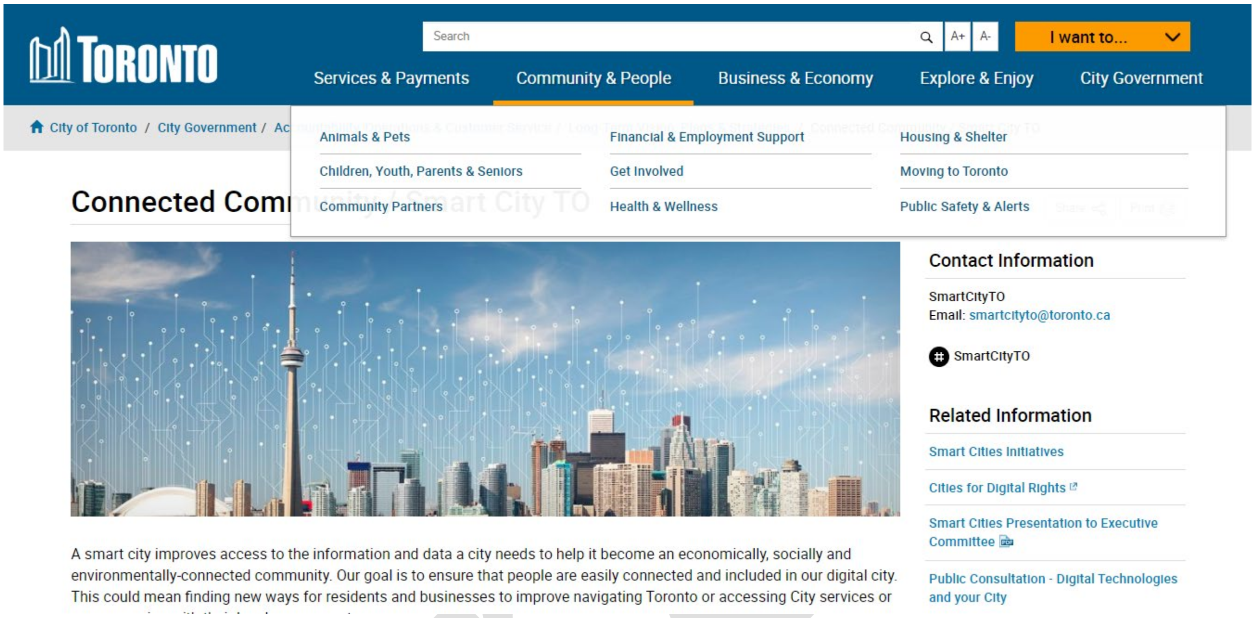
Appendix D: Communication Materials

Each of the following sub-appendices contains full versions of communications materials (during and prior to) the three public meetings.

D-1: Website

https://www.toronto.ca/connectedcommunity



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Search
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Services & Payments
Community & People
Business & Economy
Explore & Enjoy
City Government
City of Toronto / City Government / Accountability, Operations & Customer Service / Long Term Vision, Plans & Strategies / Connected Community / Smart City TO
Animals & Pets
Financial & Employment Support
Housing & Shelter
Children, Youth, Parents & Seniors
Get Involved
Moving to Toronto
Community Partners
Health & Wellness
Public Safety & Alerts
Share
Print

Connected Community / Smart City TO

A smart city improves access to the information and data a city needs to help it become an economically, socially and environmentally-connected community. Our goal is to ensure that people are easily connected and included in our digital city. This could mean finding new ways for residents and businesses to improve navigating Toronto or accessing City services or

Contact Information

SmartCityTO
Email: smartcityto@toronto.ca

SmartCityTO

Related Information

- Smart Cities Initiatives
- Cities for Digital Rights
- Smart Cities Presentation to Executive Committee
- Public Consultation - Digital Technologies and your City

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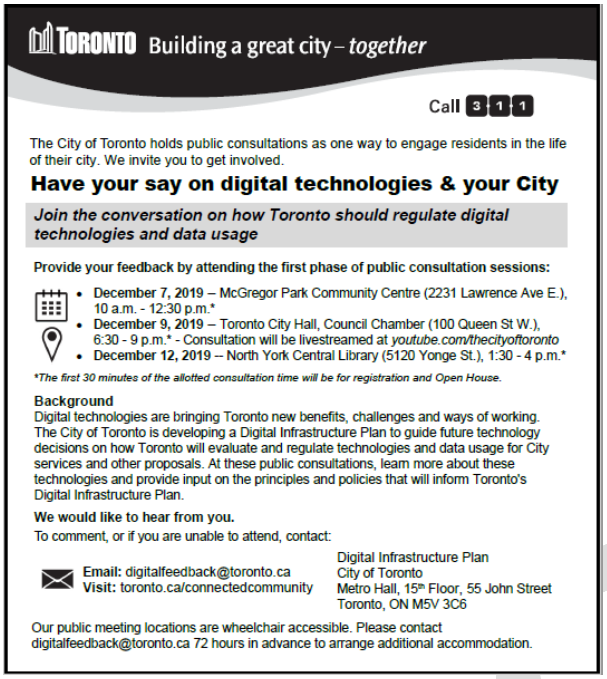
D-2: Newspaper Ads

Toronto Sun – November 27, December 2



TORONTO Building a great city – *together*

Call 311

The City of Toronto holds public consultations as one way to engage residents in the life of their city. We invite you to get involved.

Have your say on digital technologies & your City

Join the conversation on how Toronto should regulate digital technologies and data usage

Provide your feedback by attending the first phase of public consultation sessions:

- **December 7, 2019** – McGregor Park Community Centre (2231 Lawrence Ave E.), 10 a.m. - 12:30 p.m.*
- **December 9, 2019** – Toronto City Hall, Council Chamber (100 Queen St W.), 6:30 - 9 p.m.* - Consultation will be livestreamed at *youtube.com/thecityoftoronto*
- **December 12, 2019** -- North York Central Library (5120 Yonge St.), 1:30 - 4 p.m.*

**The first 30 minutes of the allotted consultation time will be for registration and Open House.*

Background
Digital technologies are bringing Toronto new benefits, challenges and ways of working. The City of Toronto is developing a Digital Infrastructure Plan to guide future technology decisions on how Toronto will evaluate and regulate technologies and data usage for City services and other proposals. At these public consultations, learn more about these technologies and provide input on the principles and policies that will inform Toronto's Digital Infrastructure Plan.

We would like to hear from you.

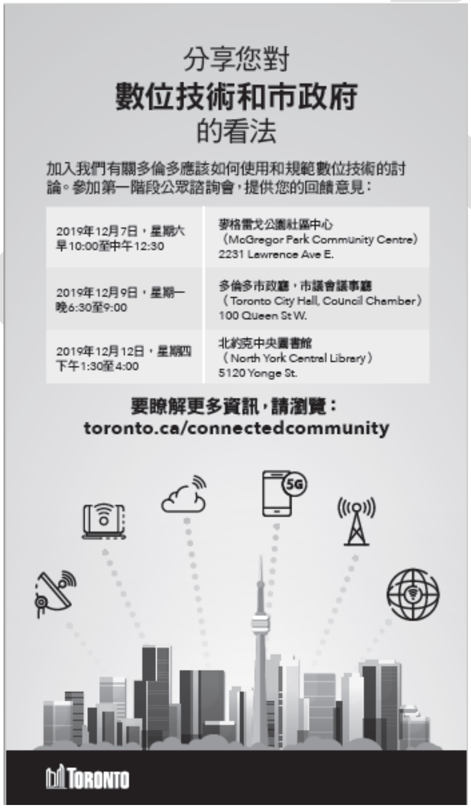
To comment, or if you are unable to attend, contact:

✉ **Email:** digitalfeedback@toronto.ca
Visit: toronto.ca/connectedcommunity

Digital Infrastructure Plan
City of Toronto
Metro Hall, 15th Floor, 55 John Street
Toronto, ON M5V 3C6

Our public meeting locations are wheelchair accessible. Please contact digitalfeedback@toronto.ca 72 hours in advance to arrange additional accommodation.

Ming Pao (Cantonese) – week of November 25



分享您對
數位技術和市政府
的看法

加入我們有關多倫多應該如何使用和規範數位技術的討論。參加第一階段公眾諮詢會，提供您的回饋意見：

2019年12月7日，星期六 早10:00至中午12:30	麥格雷戈公園社區中心 （McGregor Park Community Centre） 2231 Lawrence Ave E.
2019年12月9日，星期一 晚6:30至9:00	多倫多市政廳，市議會議事廳 （Toronto City Hall, Council Chamber） 100 Queen St W.
2019年12月12日，星期四 下午1:30至4:00	北約克中央圖書館 （North York Central Library） 5120 Yonge St.

要瞭解更多資訊，請瀏覽：
toronto.ca/connectedcommunity

TORONTO

Canadian Chinese Express (Mandarin) – week of December 2

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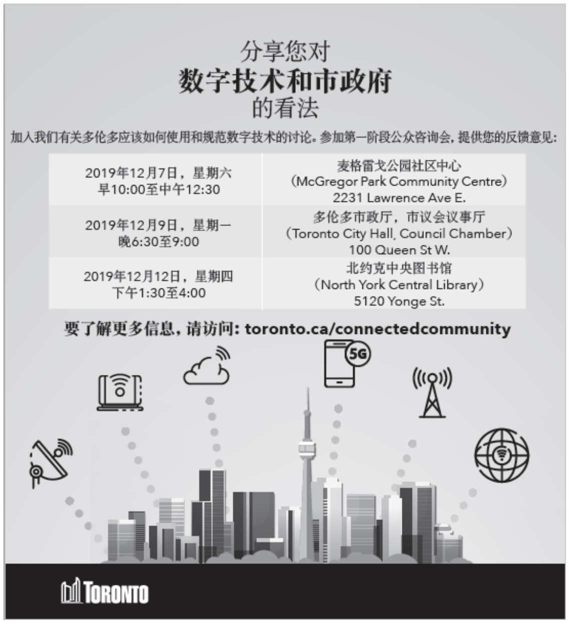


分享您对

数字技术和市政府

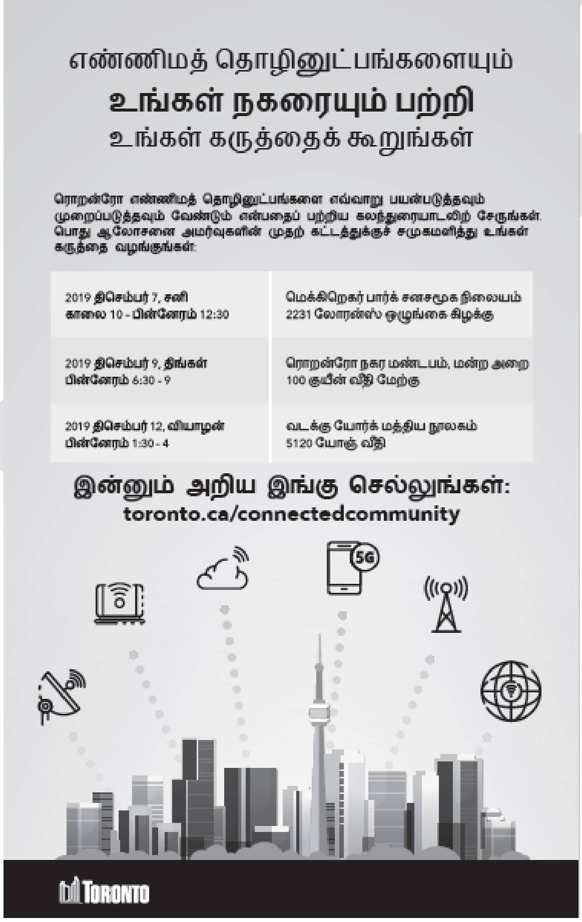
的看法

加入我们有关多伦多应该如何使用和规范数字技术的讨论。参加第一阶段公众咨询会，提供您的反馈意见：

2019年12月7日，星期六 早10:00至中午12:30	麦格雷戈公园社区中心 （McGregor Park Community Centre） 2231 Lawrence Ave E.
2019年12月9日，星期一 晚6:30至9:00	多伦多市政厅，市议会议事厅 （Toronto City Hall, Council Chamber） 100 Queen St W.
2019年12月12日，星期四 下午1:30至4:00	北约克中央图书馆 （North York Central Library） 5120 Yonge St.

要了解更多信息，请访问：toronto.ca/connectedcommunity

Senthamarai (Tamil) – week of November 25



எண்ணிமத் தொழினுட்பங்களையும்

உங்கள் நகரையும் பற்றி

உங்கள் கருத்தைக் கூறுங்கள்

ரொறன்ரோ எண்ணிமத் தொழினுட்பங்களை எவ்வாறு பயன்படுத்தவும் முறைப்படுத்தவும் வேண்டும் என்பதைப் பற்றிய கலந்துரையாடலிற் சேருங்கள். பொது ஆலோசனை அமர்வுகளின் முதற் கட்டத்துக்குச் சமுகமளித்து உங்கள் கருத்தை வழங்குங்கள்:

2019 திசெம்பர் 7, சனி காலை 10 - பின்னேரம் 12:30	மெக்கிறெகர் பார்க் சனசமூக நிலையம் 2231 லோரன்ஸ் ஒழுங்கை கிழக்கு
2019 திசெம்பர் 9, திங்கள் பின்னேரம் 6:30 - 9	ரொறன்ரோ நகர மண்டபம், மன்ற அறை 100 குயீன் வீதி மேற்கு
2019 திசெம்பர் 12, வியாழன் பின்னேரம் 1:30 - 4	வடக்கு யோர்க் மத்திய நூலகம் 5120 யோங் வீதி

இன்னும் அறிய இங்கு செல்லுங்கள்:
toronto.ca/connectedcommunity

Correo Canadiense (Spanish) – week of November 25

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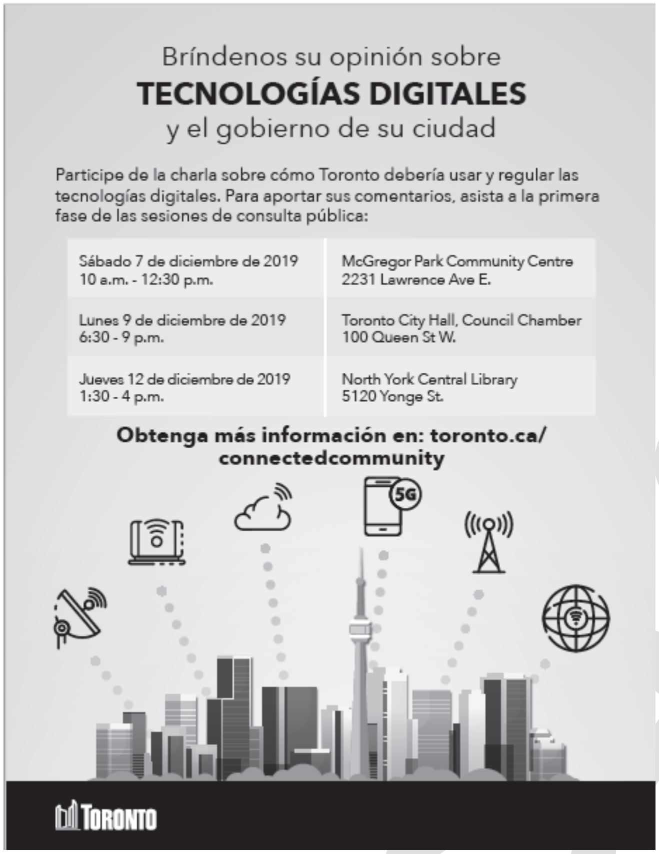


Bríndenos su opinión sobre

TECNOLOGÍAS DIGITALES

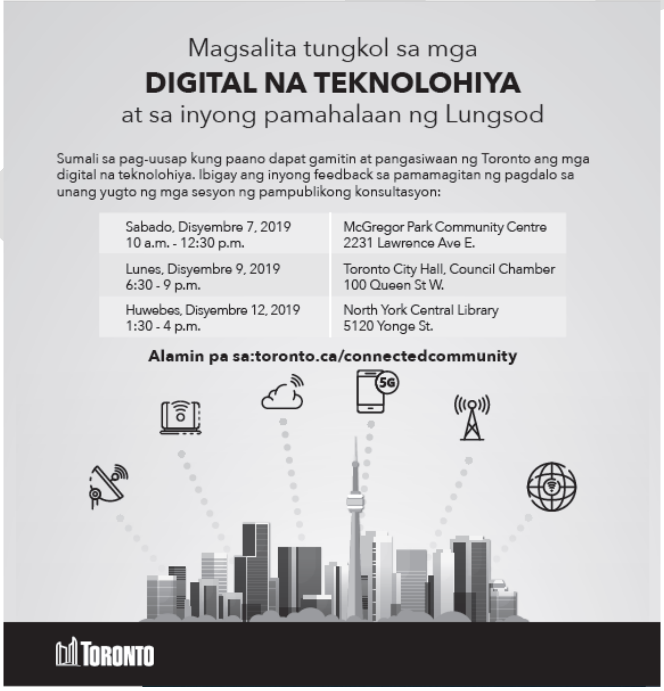
y el gobierno de su ciudad

Participe de la charla sobre cómo Toronto debería usar y regular las tecnologías digitales. Para aportar sus comentarios, asista a la primera fase de las sesiones de consulta pública:

Sábado 7 de diciembre de 2019 10 a.m. - 12:30 p.m.	McGregor Park Community Centre 2231 Lawrence Ave E.
Lunes 9 de diciembre de 2019 6:30 - 9 p.m.	Toronto City Hall, Council Chamber 100 Queen St W.
Jueves 12 de diciembre de 2019 1:30 - 4 p.m.	North York Central Library 5120 Yonge St.

Obtenga más información en: toronto.ca/connectedcommunity

Philippine Reporter (Tagalog) – week of December 2



Magsalita tungkol sa mga

DIGITAL NA TEKNOLOHIYA

at sa inyong pamahalaan ng Lungsod

Sumali sa pag-uusap kung paano dapat gamitin at pangasiwaan ng Toronto ang mga digital na teknolohiya. Ibigay ang inyong feedback sa pamamagitan ng pagdalo sa unang yugto ng mga sesyon ng pampublikong konsultasyon:

Sabado, Disyembre 7, 2019 10 a.m. - 12:30 p.m.	McGregor Park Community Centre 2231 Lawrence Ave E.
Lunes, Disyembre 9, 2019 6:30 - 9 p.m.	Toronto City Hall, Council Chamber 100 Queen St W.
Huwebes, Disyembre 12, 2019 1:30 - 4 p.m.	North York Central Library 5120 Yonge St.

Alamin pa sa:toronto.ca/connectedcommunity

Corriere Canadese (Italian) – week of November 25

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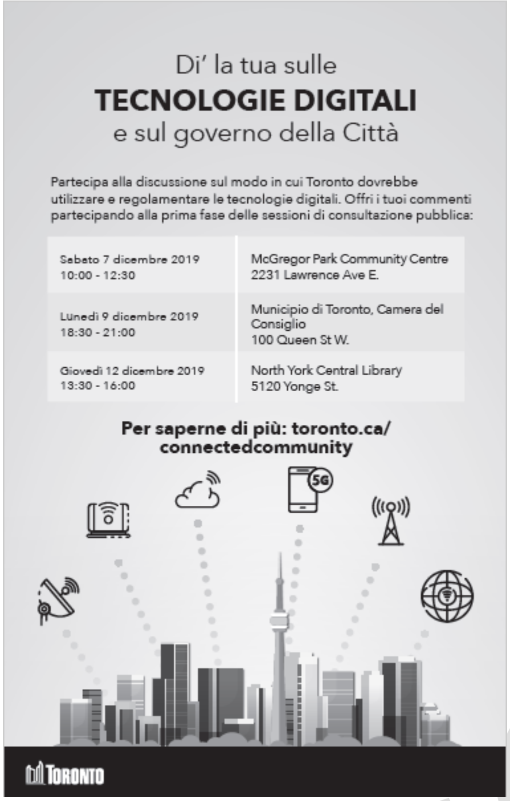


Di' la tua sulle

TECNOLOGIE DIGITALI

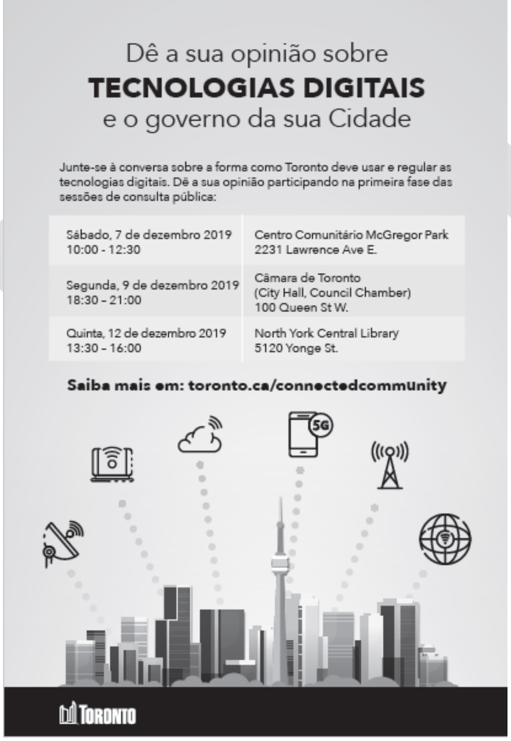
e sul governo della Città

Partecipa alla discussione sul modo in cui Toronto dovrebbe utilizzare e regolamentare le tecnologie digitali. Offri i tuoi commenti partecipando alla prima fase delle sessioni di consultazione pubblica:

Sabato 7 dicembre 2019 10:00 - 12:30	McGregor Park Community Centre 2231 Lawrence Ave E.
Lunedì 9 dicembre 2019 18:30 - 21:00	Municipio di Toronto, Camera del Consiglio 100 Queen St W.
Giovedì 12 dicembre 2019 13:30 - 16:00	North York Central Library 5120 Yonge St.

Per saperne di più: toronto.ca/connectedcommunity

Sol Portuguese (Portuguese) – week of December 2



Dê a sua opinião sobre

TECNOLOGIAS DIGITAIS

e o governo da sua Cidade

Junte-se à conversa sobre a forma como Toronto deve usar e regular as tecnologias digitais. Dê a sua opinião participando na primeira fase das sessões de consulta pública:

Sábado, 7 de dezembro 2019 10:00 - 12:30	Centro Comunitário McGregor Park 2231 Lawrence Ave E.
Segunda, 9 de dezembro 2019 18:30 – 21:00	Câmara de Toronto (City Hall, Council Chamber) 100 Queen St W.
Quinta, 12 de dezembro 2019 13:30 – 16:00	North York Central Library 5120 Yonge St.

Saiba mais em: toronto.ca/connectedcommunity

D-3: Other digital ads

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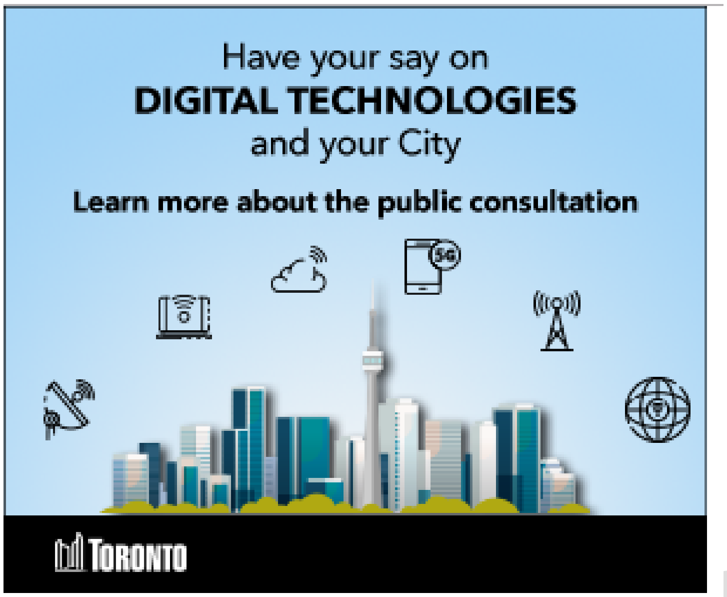
Digital ads circulated via various media were as follows:


Have your say on
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Learn more about the public consultation
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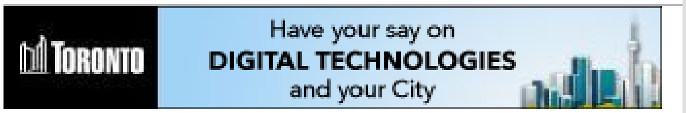
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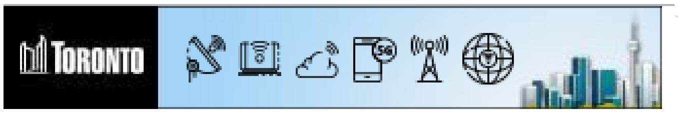

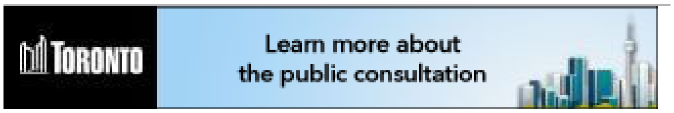
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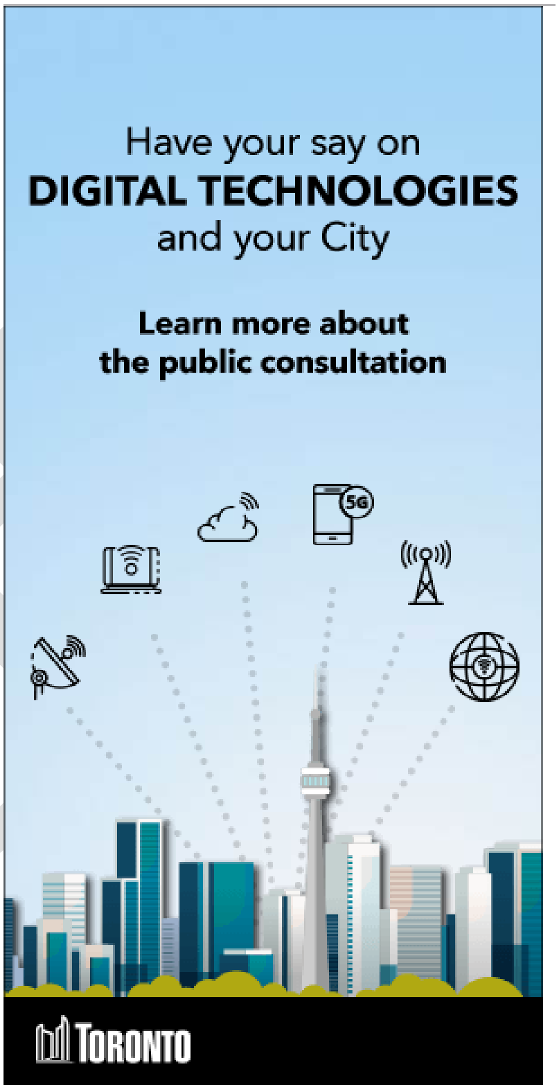
Learn more about
the public consultation


Have your say on
DIGITAL TECHNOLOGIES
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Appendix E: Engagement and Outreach Values

Appendix E provides more details related to how engagement and reach values were calculated. It also details the types of social media interactions that were included in the project team's calculation.

Traditional Engagement Methods

1. **How was the total number of people engaged calculated?** The number of people engaged was calculated at 266. This number is comprised of the 75 people who attended a meeting in person, the 120 people who viewed the livestreamed public meeting on December 9, 2019 and the 72 written feedback submissions. This number is approximate as it is recognized that some individuals who attended the meetings or viewed the YouTube livestream may also have submitted written feedback.

2. **How was the total number of people reached calculated?** This value was calculated from the number of unique individuals who opened the online questionnaire but did not complete the survey. This indicates that they were aware of the opportunity to provide written feedback but were either unable to complete the questionnaire or chose not to complete it.

Out Reach Methods

3. **How was the total number of people reached through outreach methods calculated?** This value represents all those who engaged with digital media advertisements and the dedicated project web page. It incorporates unique web page visits as well as all likes, comments, shares, etc. of the digital media advertisements on Facebook, Instagram, LinkedIn and Twitter. The project team recognizes that this value may not entirely represent individual users as a person could have liked a post on multiple platforms or could have shared multiple posts. There is, however, no feasible method of discerning this.

4. **What is engagement?** Relating to Twitter, engagement refers the number of interactions people have with content (likes, comments, shares, retweets, etc.).

5. **What is a contributor?** Relating to Twitter, a contributor is someone who used the dedicated project hashtag #SmartCityTO while posting a message on Twitter.

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