DSAP Preliminary Commentary and Questions on Sidewalk Labs' Draft Master Innovation and Development Plan (MIDP)

Author: Waterfront Toronto's Digital Strategy Advisory Panel
Provided to Waterfront Toronto: August 19, 2019
Published: September 10, 2019

Summary

This Preliminary Commentary sets out initial impressions, comments and questions from Waterfront Toronto's Digital Strategy Advisory Panel (DSAP) panelists about the draft Master Innovation Development Plan (MIDP) submitted by Sidewalk Labs.

Panelists have raised questions or concerns about the MIDP in general (including the inaccessibility of the document and the lack of detail around many digital elements) and made specific comments around various digital innovation and digital governance-related proposals. These include, but are not limited to:

- **Overall:** In many areas, the MIDP is not sufficiently specific about critical areas of its digital innovation proposals, and it does not provide a clear path for individuals, civic society, or small/startup businesses to participate from design, implementation, operations, and sustainability perspectives.

- **Digital Innovations:** Further information is required to show how digital innovations - including infrastructure and launch services - will support Waterfront Toronto's goals for Quayside. This should include a shift from "what" is proposed to "how" the proposal will accomplish the objective, and why the proposal is superior to alternatives.

- **Data Governance / Privacy:** The development of overarching data governance mechanisms should be shifted to Waterfront Toronto and its government partners, while Sidewalk Labs should focus on elaborating on how it will make its own proposals for data collection, processing and use more

transparent, accountable and amenable to a robust privacy protection regime.

- **Intellectual Property / Economic Development:** While welcome, the current value sharing proposals are insufficient. As well, additional specific commitments should be made about enabling the growth of the local urban innovation industry.

This Commentary is neither a formal review nor an evaluation of the draft MIDP, and does not represent a consensus position of the DSAP. However, it should be taken as an indication that there are challenges that the DSAP will look to see addressed in any supplementary material or revisions to the MIDP.

Table of Contents

Introduction

Digital Strategy Advisory Panel (DSAP)

Formed in 2018 by Waterfront Toronto, the [Digital Strategy Advisory Panel](#) (DSAP) is an arm's-length body which provides objective, expert advice to Waterfront Toronto management. This advice is aimed at ensuring that matters related to digital strategy (including, but not limited to, the protection of privacy, cybersecurity, the ethical use of technology, and the equitable distribution of benefits) are addressed in a robust way that encourages socio-economic innovation and development, and preserves and promotes the public good. (For further information, see "About the Digital Strategy Advisory Panel," page 25.)

Purpose and Nature of this Commentary

This document represents the preliminary impressions (both positive and negative), comments and questions of DSAP Panelists on Sidewalk Labs' draft Master Innovation and Development Plan (MIDP). It is not an evaluation of the MIDP; rather, it is intended to indicate to Sidewalk Labs, Waterfront Toronto and Waterfront Toronto's government partners the areas for which individual Panelists see the need for clarification, amendment or additional information. As described in the "Next Steps" section below, the DSAP will undertake a full review once the final MIDP is received.

This Commentary does not represent the consensus position of DSAP as a whole; rather, it is a summary of comments made by individual Panelists (which are included as an Appendix). Comments do not necessarily represent the opinion of Waterfront Toronto.

While DSAP Panelists had the opportunity to review and comment on a draft version of the Digital Innovation chapter (Chapter 5, Volume 2 of the Master Innovation and Development Plan) in March, they did not receive the complete MIDP until it was made public on June 24, 2019. Given the timeline - less than 2 months to review and understand the implications of a 1500+ page proposal in which complex digital issues are pervasive - the feedback in this Commentary is by necessity preliminary. Thus, the Panel would like to be clear that:

- The absence of comment about any element of the MIDP does not imply acceptance, approval or disapproval of that element; and,
- Comments are provided based on Panelists' current understanding of the MIDP and other available information, and are subject to change.

Further, comments or questions on an element of the MIDP should not necessarily be interpreted as acceptance that Sidewalk Labs is the only appropriate party to address the comment/question, or to implement that (or any other) element of the MIDP.

This Commentary (and its underlying comments) constitutes, in part, the advice that the Digital Strategy Advisory Panel is providing to Waterfront Toronto's management. It represents a set of individual questions, observations and critiques of the MIDP. However, a cautionary note: this may not necessarily identify all elements of the plan that may be considered positive, as the primary value the DSAP is providing at this stage in the process comes from identifying gaps, asking for clarification, or assessing proposals. This is stated in order to place these documents in context of the larger discourse around, and assessment of, the MIDP.

Next Steps

Following the publication of this Commentary, DSAP Panelists anticipate the receipt of supplemental information from Sidewalk Labs. In particular, Panelists would appreciate receiving a reconciliation document that clearly describes whether and how the comments and questions for Sidewalk Labs have been addressed in the final version of, or addendum to, the MIDP. The DSAP would also expect to continue to receive updates from Waterfront Toronto on any developments or responses related to comments and questions best addressed by them and/or their government partners.

Regardless of whether any additional information has been provided, upon receipt of the final version of the MIDP, the DSAP will engage in a full review of all elements of the plan (and any relevant contextual considerations) which fall within the expertise of the panel. It is expected that this will result in a number of recommendations to Waterfront Toronto management. This review will also be made public.

Should there be any areas which DSAP believes it does not have the requisite expertise to review or evaluate, the Panel may recommend that Waterfront Toronto study them separately.

Summary of DSAP Member Comments / Questions

Overall Impressions

Overall, Panelists[1] tended to feel that the MIDP is - to quote one particular comment - "frustratingly abstract." Comments included that the document is somewhat unwieldy and repetitive, spreads discussions of topics across multiple volumes, and is overly focused on the "what" rather than the "how." There are a large number of innovations put forward - many of which Panelists recognized as being positive - but little detail is present on how they would be designed or implemented, the unique value proposition put forward is not always convincing, and accountabilities are undeveloped.

Moreover, the scope of the proposal was seen as unclear and/or concerning. Some Panelists felt that certain innovations were irrelevant or unnecessary and were unclear on what would constitute a "minimum viable plan" (i.e. the "must have" vs. "nice to have" elements of the MIDP, the impacts of the removal of various proposals, or the fall-back plans should an innovation fail -- an outcome that becomes increasingly likely as the number and interconnection of innovations increase). Further, a number of Panelists expressed uncertainty about what innovations were

---

[1] As noted prior, Panelists were not asked to confirm or deny their agreement with any comments made. Thus, attribution of a comment to "Panelists" means that multiple Panelists expressed a similar sentiment, but does not necessarily imply that all Panelists agree. Similarly, attribution to a single Panelist does not necessarily imply lack of agreement about the view / comment by other Panelists.

proposed for, and would be viable and beneficial at, the scale of Quayside, or Villiers West as opposed to the larger IDEA District. It was suggested that the MIDP would benefit from a discussion of the dependencies between digital solutions, scale, and any required legislative changes, and set out any interim solutions or approaches that will be considered to allow the project to proceed while those dependencies are resolved.

Panelists felt that the MIDP did not appear to put the citizen at the centre of the design process for digital innovations, as was promised in the beginning and is necessary for legitimacy. For instance, while the MIDP speaks of co-creation, the actual development process described and/or followed tended to involve creation of a solution by Sidewalk Labs (perhaps following a problem definition session with the public), followed by public consultation on that solution. This is unsatisfactory - not the least because some Panelists have questioned whether Sidewalk Labs is fully capturing and addressing critical feedback from those consultations. While there is tension between presenting a complete MIDP and leaving decisions to be made through co-creation, at minimum a process could have been put forward by which Torontonians - and, in particular, any groups most impacted by a particular technology - would be given agency throughout the design process.

The development process for, and end result of, the MIDP have also raised concerns amongst Panelists. For instance:

- The MIDP speaks to the need for agile processes in city building - but in the development of the MIDP, at least one Panelist believes that Sidewalk Labs has not shown the ability to work with governments, private sector actors or the public in an agile manner. For instance, it was noted that the description of the Urban Data Trust went from a single bullet point on a

slide in Fall 2017 to a 40-page slide show in Spring 2018, without any obvious iterative process through which the public was engaged.

- Sidewalk Labs made several presentations to, and sought feedback from, the Digital Strategy Advisory Panel - but Panelists question the extent to which this feedback was incorporated into the Plan, or why their frequent calls for greater specificity and specific examples appear to have gone unheeded.
- Sidewalk Labs has undertaken significant lobbying and support-building efforts - for instance, previewing the MIDP before its release with potential supporters of the project, and placing few (or no) restrictions on those individuals and groups. On the other hand, DSAP members - who may be best placed to provide a critical voice on digital issues related to the project - were provided a draft of the Digital Innovation chapter only after signing a non-disclosure agreement, and panelists had to operate within the restrictions to public disclosure therein.

The formatting of the MIDP itself also raised concerns - in particular, its lack of basic usability features and failure to inclusively design for accessibility from the start in an integrated approach. For instance, the document lacks a detailed table of contents, an index, clickable links within endnotes, a consolidated and searchable version, or a non-pdf online version. Further, as of the time of this writing (6+ weeks after release of the MIDP) only Volume 0 has been released in accessible format. These are not academic concerns; they call into question Sidewalk Labs' commitment to usability and accessibility - and, in particular, the integration of these properties from the design

stage - for the systems and technologies that it has proposed in the MIDP.[2]

The overall lack of responsiveness to feedback, and the formatting of the MIDP, made some Panelists question whether Sidewalk Labs is truly an open and engaged partner that is listening to critical feedback.

Initial Impressions - Digital Innovation (General)

While this Commentary will discuss specific innovations in the following sections, as an overarching theme Panelists felt that the MIDP did not provide sufficient detail on the proposed digital innovations. Areas flagged as needing further information included:

- Dataflows and systems architecture overviews, from both technical and experiential perspectives;
- Ownership of, procurement of, jurisdiction over, and responsibility for innovations;
- Integration with existing infrastructure;
- Partnership with Canadian technology companies and innovation centres;
- Enforceable commitments and protections for Sidewalk Labs' pull-out or failure of the technologies;
- Whether and how these innovations can be scaled up or applied in other cities;

---

[2] Note from Waterfront Toronto: On September 4, 2019 (after our receipt of this Preliminary Commentary) Sidewalk Labs notified us that they had posted accessible versions of all MIDP volumes at: https://www.sidewalktoronto.ca/accessible-midp/. This is a welcome development, but does not change the concern raised by DSAP Panelists about the integration of usability and accessibility into the design stage.

- Whether Sidewalk Labs has the appropriate project management skill and experience to handle the many inter-related projects across multiple technologies and disciplines;
- A robust discussion of resilience, including the definition of a 'resilience by design approach' - including a discussion of the responsibilities for sustaining, maintaining and upgrading technology over time; and,
- Specific performance goals in Quayside for the proposed digital launch services to earn the right to proceed to Villiers West.

Panelists in particular wanted Sidewalk Labs to provide a single list of *all* digital innovations proposed - not just those Sidewalk proposed to implement itself. Currently, this information is spread across multiple Chapters and Volumes.

Lastly, questions were raised about certain estimates and assumptions in the MIDP. For instance, is it reasonable to assume that "self-driving vehicles can form the backbone of the ride-hail system by roughly 2035" -- or that autonomous vehicles are inevitable, and thus whether we should facilitate this outcome rather than critically examining whether this is the best approach to urban mobility?

Initial Impressions - Digital Infrastructure

Chapter 5 of Volume 2 of the MIDP sets out three proposed innovations that might be classified as "digital infrastructure": ubiquitous connectivity (including the use of Super-PON and Software Defined Networking), "Koala" standardized mounts, and a decentralized credential system.

For each of these technologies, some Panelists questioned their necessity and relevance for the overall MIDP, particularly given that

the provision of affordable, high-speed (1Gbps) internet to all residents is a precondition of any development in Quayside, based on Waterfront Toronto's existing partnership with Beanfield Metroconnect.

Beyond this, Panelists flagged:

- Super-PON does not appear to functionally benefit residents, but only reduces costs for service providers (and likely only at a much larger scale than Quayside).
- The benefits of Super-PON are inappropriately being compared to existing City of Toronto broadband services, where they should in actuality be compared against the service provided on the Waterfront by Beanfield Metroconnect.
- Software-Defined Networking appears to be inappropriately bundled with Super-PON (based on the "Super-PON approach" table on page 387 of Volume 2).
- The incentives for hardware manufacturers to support Koala are currently unclear (unlike, for instance, the USB standard which was developed by a consortium of dominant hardware companies with a strong incentive for interoperability).
- Adopting Koala mounts rather than supporting current standard connections (such as CAT 6A, ethernet and standard power) may actually create a barrier to experimentation.
- The actual business case for Koala in this project is unclear given the capital costs of wide deployment and the uncertain recovery of those costs through savings on device deployment as well as the likely need to financially incent hardware manufacturers to support Koala.
- While a welcome proposal, it is unclear how a distributed credential system will be overseen, what services will rely on it, or how it would succeed given the failures of similar attempts at developing such a service.

Initial Impressions - Digital Governance

Panelists raised a number of significant concerns about the proposed digital governance mechanism, the Urban Data Trust - as well as with underlying concepts such as "urban data."

The MIDP makes clear that the rules set out by the Urban Data Trust would apply to all data collectors in Quayside, including both public and private organizations. However, it is not clear that the City of Toronto (or any other government actor) can legally surrender governance of data it collects to an Urban Data Trust, nor that it would be appropriate for an appointed body (such as a Trust) to have the authority to overrule the decisions of an elected body (such as the City).

Similarly, there are potential Charter issues with the Urban Data Trust having authority over the collection of data by not-for-profit organizations, civil society groups or individuals, given the impacts on freedom of expression (which includes the right to inform oneself). In both of the above instances, the inappropriateness of the Urban Data Trust's authority remains regardless of the likelihood that it would actually assert that authority.

More broadly, the question was raised about under what authority the Urban Data Trust would be able to require that all parties enter into contractual arrangements with the Trust in order to collect data in Quayside - particularly with respect to those parties who are not entering into contracts with Waterfront Toronto or Sidewalk Labs (each of which could presumably require parties to submit to the Trust's oversight as a contractual term). Supposing such an authority exists, would those contracts represent an effective enforcement mechanism? Would reliance on them be viewed as an attempt to override law?

Panelists also raised questions about, among other things, the proposed composition of the Trust's Board (of which only one of five explicitly represents the interests of data subjects, and at least three of which represent data collectors / users), the oversight of the Trust, how the Trust would interact with public security agencies, the appropriateness of referring to the body as a "trust" when it does not have a legal responsibility to serve the interests of its beneficiaries, and (as with many solutions) whether it is viable at the scale of Quayside. A Panelist also wondered whether current projects and developing frameworks in Ontario (e.g. the Ontario Data Strategy), Canada (e.g. Canada's Digital Strategy) and Toronto (e.g. the Open Data Initiative) have been taken into account and/or integrated into the proposed governance framework. Lastly, one Panelist wondered whether the Trust would have a feedback loop which allowed it to review outcomes other than compliance - for instance, whether approved projects actually realized their expected or anticipated benefits.

Sidewalk Labs does state that the proposed framework is only their recommendation, and that the Trust's form and function will be determined by other parties (including potentially the Trust itself). However, one panelist has raised concern that the level of detail provided will create a situation in which the proposed Urban Data Trust is a starting point to be implemented (with Toronto City Council's primary decisions being around staffing and resourcing), as opposed to being an input into a broader discussion of the appropriate governance model.

"Urban data" was also a challenging concept for some Panelists. For instance, the distinction between urban data and transactional data is unclear, and potentially artificial. By way of example, in the current proposal, an individual's movement collected via surveillance camera

would be considered urban data (and subject to the Urban Data Trust's rules), while the same data collected via a phone app would be considered transactional data, and not subject to the Trust's rules.

Beyond this, if - as described in one of the scenarios provided to illustrate the Urban Data Trust - footage from private security cameras is considered "urban data", then the term should likely be considered overly broad. It would be challenging to argue that this data is a public resource that should be broadly shared, or that current privacy law does not cover this form of collection.

This leads to the follow-up question: to what extent is the Urban Data Trust duplicative of existing regulators, and to what extent does it add a potentially stifling compliance burden to small businesses (in addition to a potential cost to collect data)? It was noted by one Panelist that for this and other governance mechanisms, the MIDP does not make a clear case for why a new governance body is needed, as opposed to better resourcing for existing bodies, while other Panelists suggested that the MIDP could - or should - have been an opportunity for capacity building within the public sector.

Lastly, one of the key roles proposed for the Urban Data Trust is to make urban data widely available. Some Panelists questioned what exactly this would mean (Is data fully open? Would the Trust somehow maintain control of it? What is the cost of accessing "open" data? etc.). Sidewalk Labs has flagged that they, or the Trust, would promote the use of common formatting standards to make data more usable (even proposing to create standards where none exist). One Panelist wondered whether an oversight body, such as the Standards Council of Canada, would play a role in this, and whether Sidewalk Labs has evidence that current open data efforts related to the urban realm are outdated.

A number of Panelists further flagged that simply making data open will not be sufficient to broaden and democratize obtained benefits. A number of suggestions and questions were put forward, including:

- Committing to sharing tools and resources (such as data stories) with the wider public;
- Restricting access to data by large companies which have previously engaged in anti-competitive practices; and,
- Examining whether equal access for all parties is appropriate, or existing data asymmetries should be taken into account.

Some Panelists are of the belief that Digital Governance is an issue to be worked out by Waterfront Toronto and the three levels of government; thus comments above are provided to aid those discussions, and do not necessarily warrant a response from Sidewalk Labs (which would be better served focusing its efforts on issues more clearly in its ambit). However, regardless of the structure, some Panelists commented that it will be important to recognize that data gathered and services delivered in public spaces need to be owned and/or controlled by the public sector, while enabling private sector and community innovation.

Initial Impressions - Other Privacy and Security Considerations

Among the privacy and data security matters flagged by Panelists, two prominent ones emerged relating to (i) de-identification; and, (ii) data residency.

While the use of robust de-identification is a positive, Panelists raised a number of outstanding issues that would need to be addressed. First, it cannot be assumed that de-identifying personal information removes its collection and use from the ambit of Canadian privacy law. For instance, it is (at minimum) arguable that under PIPEDA (the

law that would apply to collection of personal information by private sector actors in Quayside), even if personal information is immediately de-identified and never stored in identifiable form, consent would be required for the initial collection of that information. Sidewalk Labs should acknowledge this, and make clear how it will comply with its obligations.

Second, reliable de-identification is notoriously difficult to achieve (particularly when it involves location data or individuals and groups that represent very small minorities or who are outliers), and encompasses a number of techniques of varying effectiveness. Further, de-identification cannot be considered in isolation; the risk of re-identification relates strongly to the availability of other data-sets for potential correlation. Thus, the likely effect and impact of a commitment to de-identification can only be evaluated with more precise information about the de-identification techniques being proposed. One panelist suggested that de-identification might be enhanced through the creation and use of synthetic data - which might be considered a fifth type of Urban Data.

It was suggested by one Panelist that, given the proposed role for de-identification in establishing and maintaining public trust in the data ecosystem, a certification mechanism might be established to ensure the robustness of de-identification processes. A similar mechanism could be used should Sidewalk Labs create and use of synthetic data.

Lastly, some Panelists flagged that regardless of the strength of the protections (including de-identification) put in place, the risk of a data breach or other privacy violation will almost certainly not be reduced to zero. Thus, Sidewalk Labs should be clear about its plans in the event of such an incident - particularly where the individuals impacted are the most at risk for data abuses, such as those in minority groups.

On data residency, a simple statement from one Panelist sums up the general sentiment: "Best efforts isn't good enough. A clear commitment is needed." For example, though not included in the attached comments, at a meeting of the DSAP on July 22 a Panelist raised the question of why, if lack of redundancy is an issue preventing data localization, Sidewalk Labs' response is to not localize data, rather than committing to create the level of redundancy necessary to permit localization.

Initial Impressions - Intellectual Property / Patent Pledge

In general, Panelists were unsatisfied with the "Testbed Enabled Technology" proposal (10% of net profit for 10 years, starting at the time of the second sale) put forward by Sidewalk Labs. A number of reasons were put forward, including the insufficiency of a 10 year term, the notorious difficulty of measuring, and easy manipulation, of "profit", and whether Quayside would be sufficiently large to satisfy the scale required to meet the described conditions for a testbed-enabled technology. Concern was also raised that only technology is covered by this arrangement, which leaves out the full value of the insights gained from the execution of the MIDP that would be used to advise future cities with which Sidewalk Labs partners.

One participant also raised concern that agreement to this arrangement could, in effect, tie the success of Waterfront Toronto (or another public sector body) to the financial returns of Sidewalk Labs, potentially compromising (in fact or in perception) its primary focus on the public interest.

On the Patent Pledge, Panelists noted that the Pledge was not as equitable as it might seem; the mutual non-assert requirement means that for Company A (for instance, a Canadian SME) to use any single

Sidewalk Labs' technology, Company A must allow Sidewalk Labs (and its affiliated companies - potentially including all Alphabet subsidiaries) to use *all* of their patented technologies in Canada, a much higher imposition.

Moreover, the focus on not asserting Canadian patents implies that Sidewalk Labs reserves the right to assert patents issued in other jurisdictions, such as the US or EU. This could create a significant impediment to Canadian companies seeking to expand internationally, should they rely on Sidewalk Labs' patents while developing in Canada.

Overall, Panelists suggested that Waterfront Toronto insist on stronger, more tangible commitments to fostering the development of Canadian, Ontarian, and Torontonian companies. For instance, it was argued that a commitment to procuring at least 50% of technology from local firms would make economic benefits tangible, enable the use of global technology services that are not available otherwise, and perhaps incent international suppliers to create or increase their local presence.

It was also suggested that the MIDP would benefit from a discussion of how Sidewalk Labs will engage with both Canadian innovators and the Innovation Centres across Toronto, Ontario and Canada (such as MaRS, Communitech, OneEleven, the Centre for Social Innovation, etc.) to assist with solution development.

Initial Impressions - Launch Services

In the MIDP, Sidewalk Labs sets out a series of 10 core digital services which it would provide at launch, in cases where "achieving fundamental project goals … would require an innovation the market has not pursued." For a number of these services (including SeedSpace, the outcome-based building code, CommonSpace,

Collab, and to some extent the mobility management system and the public realm maintenance map) questions were raised about whether a technical innovation was truly required to solve the identified problem, whether it would be effective at solving the problem, and/or whether the market had not pursued the innovation.

Panelists freely acknowledged that many of the issues that these services intend to solve - such as the rigidity of current planning, and lack of adequate park maintenance - are legitimate, and improvements are possible. However, some of the proposed solutions felt like "tech for tech's sake" - applying a complex technological solution to a situation that mostly doesn't need it.

The concern raised here is not about Sidewalk Labs offering these services; rather, it is about what Waterfront Toronto is trading away to get them. Many of the solutions put forward are interesting, but they (a) aren't necessarily unique to Sidewalk Labs, (b) are applied to situations that don't necessarily require technological solutions, (c) generally lack success metrics and (d) aren't necessarily addressing priority issues. Panelists thus question what value (if any) should be placed on these launch services in the context of negotiations between Waterfront Toronto and Sidewalk Labs.

Initial Impressions - Contextual Considerations

Lastly, Panelists identified a number of considerations relevant to assessing the acceptability of the MIDP but not specific to its content. These include, but are not limited to, Alphabet's significant economic and political power, the data-driven business model of many of Sidewalk Labs' corporate siblings, and the lobbying efforts around the MIDP.

While these are not all strictly "digital strategy" matters, they are relevant to the Panel to the extent that the context around a project - including the market position and prior actions and behaviours of its proponent - must be taken into consideration when evaluating both the potential or likely impacts of the project and any future commitments made by its proponent. Panelists are of the opinion that the MIDP should not and cannot be considered in isolation, and in developing advice to Waterfront Toronto management will take an expansive view of the project.

Preliminary Observations – Report Writing Working Group

To create the above Commentary, the DSAP struck a Report Writing Working Group - tasked with collecting and summarizing comments and feedback from all Panelists. During their process, the Working Group has made a number of preliminary observations, which are described below. Again, these are not the findings nor the consensus opinion of the DSAP Panel as a whole, but rather observations on key themes extracted from comments provided by Panelists.

Overall
- In many critical areas, the MIDP is not sufficiently specific about critical aspects of its digital innovation proposals to be able to adequately assess them.
- There are gaps in the plan with respect to how the public (i.e. the individual public/residents as well as government), civic society and the small business/startup sector can specifically participate in Quayside from a design, implementation, operations and sustainability perspective.

Digital Innovations
- The proposed digital infrastructure elements do not seem to be essential to the achievement of Waterfront Toronto's goals for Quayside. (This does not preclude their inclusion in the project if an appropriate business or functional case can be made.)
- The proposed Launch Services require further elaboration and specific performance targets, in order to confirm that they are in fact essential to meeting Waterfront Toronto's goals for Quayside.

- In general, the description of digital innovations should expand beyond "what" Sidewalk Labs aims to accomplish, but also "how" they will accomplish those aims, why the proposal is superior to other alternatives (particularly in meeting public interest objectives), and what accountabilities will be put in place.

Data Governance / Privacy

- The development of data governance for this project - including assessment of whether a data trust in an appropriate vehicle - should, going forward, be led by Waterfront Toronto and its government partners.
- Proposed personal data protections - including de-identification - are either insufficient or insufficiently elaborated, and lack a plan which addresses the actions that will be taken in the event of a privacy breach or other incident (particularly where such an incident impacts a vulnerable population).

IP / Economic Development

- The recognition of the public sector - and the public - in value creation and its translation to financial benefits is welcome, but the current proposals do not seem to adequately recognize the full value of their contribution.
- Although the MIDP contains expressions of support, and modest financial commitments, for the development of technology firms in Toronto, Ontario and Canada, given the scale of the proposal there should be significant and specific additional commitments made to enable the growth of the local urban innovation industry.

About the Digital Strategy Advisory Panel

Formed in 2018 by Waterfront Toronto, the Digital Strategy Advisory Panel (DSAP) is an arms-length body which advises Waterfront Toronto management on how best to incorporate data privacy, digital systems, and the safe and ethical use of new technologies in the next phase of waterfront revitalization.

The Panel provides Waterfront Toronto with objective, expert advice to ensure the following principles are addressed in a robust way that encourages socio-economic innovation and development, and preserves and promotes the public good:

- Ethical use of technology
- Accountability
- Transparency
- Protection of personal privacy
- Data governance
- Cybersecurity
- Benefits accrued from intellectual property and data are broad and equitable

Members

The Panel is composed of [15 members](#) who are recognized as leaders or experts in their respective fields, including Canadian and international subject matter specialists from academia, industry, the civic technology community and legal experts.

Chair: Michael Geist
Vice-Chair: Charles Finley

Panelists:
Alaina Aston
Andrew Clement
David Dame
Khaled El-Emam
Karen Gomez
Kurtis McBride
Carlo Ratti
Diane Reynolds
Pamela Robinson
Teresa Scassa
Jutta Treviranus
Kevin Tuer
Mark Wilson

Report Writing Working Group

The drafting of this Commentary was led by a four-person Working Group: Andrew Clement, Charles Finley, Karen Gomez, and Mark Wilson. The Panelists thank this group for their efforts in creating this document.

Secretarial and production assistance for this Commentary was provided by Waterfront Toronto.

Appendix – Consolidation of Comments / Questions

The following is the complete list of comments provided by members of the Waterfront Toronto Digital Strategy Advisory Panel on the draft Master Innovation and Development Plan. They are directed to Sidewalk Labs, Waterfront Toronto, and Waterfront Toronto's government partners.

Though they have been re-organized, these comments are included as initially provided by the Panelists (excepting minor edits for spelling/grammar and the removal of potentially identifiable information). Each comment is the opinion of its author, and not necessarily that of the Panel as a whole or of Waterfront Toronto.

Table of Contents

Digital Innovations – Chapter 5, Vol 2

Digital Innovation - General

This section has 13 comments:

1. In contrast to the specificity of the Urban Data Trust proposal, the MIDP is relatively thin in its details about the proposed digital infrastructures, software and databases. Please provide comprehensive dataflow and systems architecture overviews. Use layered or stack models, where appropriate.

2. The digital innovations need to be updated to include all digital innovations not just those that Sidewalk plans to implement itself. Scattered throughout the documents are digital systems, some of which Sidewalk proposes to RFP, some of which it will 'partner' to implement. For example systems are proposed for Digital Fabrication for the wood buildings, affordable housing, robot delivery, offsite parking, energy management (Perform) , new utility bills, thermal grid and power grid. In order to get a comprehensive view of the economic opportunity and the scope of data governance a comprehensive map is required of all digital systems.

3. Totally agree. Need a more comprehensive approach to bringing together the various innovations across chapters. The current approach means the "digital innovation" chapter is too narrowly defined and misses many of the innovations and their policy implications.

4. Related to this, please make public a comprehensive inventory of the kinds of information SWL would provide to the UDT for approval about its purposeful solutions and core services, e.g. where would sensors of what kinds be located and with what data outputs? Where would the data from these sensors flow, how processed, for whom and for what purposes?

5. Foundational to governing the wide range of digital assets mentioned in the Plan are questions of who would own them, what jurisdiction(s) would they be governed under and which parties would be responsible for developing, testing, operating, maintaining, funding and disposing of them. Please provide a comprehensive inventory of its various proposed digital assets (including all physical infrastructure, software systems and databases) that makes clear the relevant jurisdictions and responsibilities.

6. Obsolescence, currency, and refresh are all considerations that need to be dealt with in depth in the implementation and operating agreements. In addition technology replacement provisions are required should the implementation fail to operate reliably or meet its targets in contributing to the RFP goals.

7. The plans should not just outline the new technologies being proposed) but also more detail on how those technologies will be sourced, evaluated, maintained and secured. The sustaining, maintenance and upgrading of urban technologies are the largest expense over the lifetime of any asset. I would like to see more here on how this will be addressed and by whom.

8. The MIDP gives the strong impression that it was developed with little direct involvement with the range of relevant Toronto

community actors or with attention to inter-operability with existing (digital) infrastructures. This raises the prospect of Quayside becoming a 'digital island' within Toronto. Please provide a comprehensive inventory of the status of its relationships with relevant actors, how its proposed digital innovations will benefit the various stakeholders and work with existing infrastructures?

9. How much consideration is being given to extending the innovations in the IDEA district to the rest of the City?

10. SWL makes numerous "commitments" in the Digital Innovations chapter and throughout the MIDP more generally (e.g. on open standards, patents, desisting from facial recognition, etc.). What contractual language would SL propose to give these commitments the force of law?

11. How will SWL ensure that WT and the City will be well protected (in terms of infrastructure, investments, system integration, etc) if it or its subcontractors, affiliates, etc. pull out of the project? See Google Fibre pull out in Louisville KY.

12. Interoperability is inadequately addressed. Without interoperability with personal alternative access systems, the data innovations proposed for individuals with disabilities will not function. How will interoperability be planned and assured?

13. Frustrated by how over-sold this proposal on digital innovation is at times. For example, the MIDP states: "But digital innovation raises a number of challenges that cities like Toronto are just starting to address. These include making sure basic digital infrastructure is affordable and open to everyone, making sure data is standardized and publicly accessible, and

making sure there is a transparent process for protecting privacy and the good of the city." How does this proposal achieve that? How does a slice of the Waterfront make basic digital infrastructure available to everyone? How does this improve our existing privacy laws at the provincial level or PIPEDA?

Digital Innovations - Infrastructure
General

This section has 4 comments:

14. Volume 3 states that without the proposed Digital Network 'standard broadband services available in Toronto' would be the Business as Usual result.This is both incorrect and seriously misleading. East Bayfront already has the advanced capabilities of the Beanfield network which surpasses standard Toronto broadband services and includes public WiFi. It also includes TV and phone services which despite the rapid growth of over-the-top services are still required. The comparison of the proposed Digital Network needs to be updated to the correct BAU case for evaluation purposes, This volume does later acknowledge that the digital network 'would be implemented directly by Waterfront Toronto's broadband internet partner'.

15. The lack of discussion of the evolution of mobile network technologies to support IOT is surprising. LTE-M and NB-IoT are already in wide global deployment Additionally there is 5G – this technology has widespread industry and government support and is already in trial in various locations. IOT Device manufacturers will likely invest in these technologies ahead of Koala. What role would these new mobile technologies play in the vision for Quayside given?

16.   As one of the panelists correctly stated at the last meeting (July 22), there is very little in this digital innovation chapter that does not have an existing technology solution/alternative, and yet Sidewalk Labs states that ubiquitous connectivity "would only become financially sustainable at a larger service area, given the number of residents or businesses needed to recoup the initial investment." This seems unlikely given Waterfront Toronto's existing contract with Beanfield.

Metroconnect accomplishes this scale using traditional fibre-based technologies. I believe the final MIDP would benefit greatly from elaborating on the issue of economy of scale. For instance, what is the minimum viable product assuming only Quayside and not the larger IDEA District? Does anything fall apart if we don't hire SWL to develop new technology? SWL partially answered this question on July 22nd, saying: "The plan can still be achieved successfully, but with less gains," and "It is challenging to achieve market rate returns when only considering Quayside, but more reasonable when adding Villiers." However, I recommend that the final MIDP dig into this issue further.

17.   Is Quayside big enough to start to deploy digital infrastructure in a financially sustainable fashion?

Super-PON
This section has 7 comments:

18.   The potential value of this seems to be purely economic for the carrier in implementing a fibre network. It does not seem in any way essential for any of the proposed digital innovations and could even potentially be retro-fitted in time over existing fibre.

19. The Super-PON technology promises impressive capabilities, but who will benefit? Given the difficulties Google Fibre has encountered in deploying its advanced fibre services in the US (cited (inadvertently?) in endnote #10) it is clear how SWL's corporate sibling will profit from a Quayside deployment. What is much less clear is whether Quaysiders will enjoy any advantage over the gigabit bandwidth service already offered by Waterfront Toronto's contracted provider, Beanfield Metroconnect.

20. How will the residents of Quayside benefit from the Super-PON network in comparison with the network infrastructure Beanfield already provides? Please provide a systematic comparison of the various costs and benefits of Super-PON versus Beanfield service in the Quayside context.

21. A SWL representative stated that one possible advantage of SuperPON is "future proofing." What is the basis for this claim given that Super-PON appears not to have undergone extensive field testing and has yet to be approved by the relevant IEEE standards body? Would not a more reliable and cost-effective form of future-proofing be to specify generous conduit diameters and abundant access points?

22. What is the status of SWL's discussions with Beanfield? Is Beanfield supportive of Super-PON deployment. If Super-PON is not deployed and Beanfield technologies used instead, what effect would this have on fulfilling other aspects of the Plan?

23. This aspect of the proposal seems irrelevant to the overall plan. Use Beanfield for networking and undertake to develop community WiFi networks. That's all.

Software-Defined Networking
This section has 4 comments:

24.   Vol 2. It states that "at the core of SWL proposed network is the belief that residents, workers and visitors should have continuous access to their own secure Wi Fi connection wherever they go…". This assumption needs to be validated. I am under the impression that this did not come up in public consultations.

25.   Minor point but it seems that the features described in the table are for Super PON and SDN. My impression is that Super PON is about splitting light into its components to enable more users on the same fibre.

26.   For some reason this is bundled with Super-PON. It would seem that this could be implemented on any fibre network and does not require Super-PON. There may be some value in a centrally managed network but this should be separately assessed for the business case and vulnerabilities. There are costs currently borne by users to manage their own networks which would be assumed in a centrally managed system that would need to be recovered. Again it does not seem in any way essential for any of the proposed digital innovations.

27.   An interesting proposal, but similarly unnecessary for the plan. The networking aspects of the MIDP are not integral to the plan.

Koala
This section has 5 comments:

28. Koala may or may not be a cost saving as it depends on what assumptions are made about ubiquitous or on-demand deployment. If ubiquitous then there is a significant initial capital cost which may be recovered over time from a different actor who is deploying devices. If on-demand then there is likely no initial savings. The business model and business case for deployment needs to be clear and viable. Again it does not seem in any way essential for any of the proposed digital innovations.

29. The initial USB standard was created by a consortium of dominant hardware companies who had a strong incentive for inter-operability and the market power to make the standard universal (Compaq, DEC, IBM, Intel, Microsoft, NEC, and Nortel). Sidewalk does not seem to have formed any such consortium nor is it clear that such a consortium is possible given the wide variety of devices that may be attached. In its absence it is unclear that there is any incentive for hardware providers to make the investment required to support Koala. Sidewalk will likely need to subsidise that investment.

30. Architects have been using standardized kit-of-parts schemes for decades (example: Habraken in the 1970s) but often run into issues implementing if other players don't follow suit. While the successful proliferation of the USB port provides a useful precedent in the IT field, can we think of any precedence in the built environment space? How can the life span of these standardized mounts be extended to avoid early obsolescence?

31. Deliver 5G at lower costs with digital mounts? Is this realistic given timing of deployment of 5G? Will it make any difference to the broader wireless infrastructure in Toronto?

32. Why do we need Quayside or this project for more innovative mounts? If a good idea, could be pilot project anywhere in the city.

Distributed Credentials
This section has 3 comments:

33. The proposal to experiment with distributed digital credentials (DDC) and related minimally disclosing ID technologies is a welcome one since if adopted it offers a promising approach to greatly reducing privacy risks and giving individuals more control over their personal information. There have been several similar attempts at this approach to authentication in the past decade (e.g. by IBM and Microsoft). How will this particular approach address the pitfalls these earlier attempts encountered?

34. Given the understandable sensitivities around the management of personal credentials, it will be vital for maintaining public trust that agency for overseeing distributed digital credentials be publicly accountable and independent of other infrastructure or service providers. How heavily is SWL willing to invest in making distributed digital credentials work, while staying entirely at arms-length from any such independent, accountable credentialing agency?

35. Notwithstanding its virtues, it appears that like the other elements of proposed digital infrastructure, it is not clear what services will actually depend on it. Please specify which core and other services will rely on a distributed digital credential infrastructure, and what benefits it will offer over more conventional identification and authentication approaches.

Digital Innovations - Open Standards
This section has 4 comments:

36. The specific license under which source material is provided matters. For example the Apache License (Version 2.0) explicitly grants patent licenses in addition to copyright licenses. The MIT License does not. Making patents available is generally what allows others to create equivalent source code to implement standards such as the World Wide Web examples cited.

37. For the commitments to open standards through established standard-setting bodies, will SWL provide assurances that any standard-setting body it utilizes be accredited through the Standards Council of Canada? This includes standard-setting for open-data APIs and data formats.

38. The MIDP talks about Gehl Institute's Public Life Data Protocol as a guide to their work. It all sounds good but some food for thought: April 1, 2019 Gehl Institute reorganized to focus singularly on the Protocol but there has been nothing released on it since the 2017 beta version. If you look into the Protocol and its details it is going to be a challenge to implement here (e.g. here's the link, https://gehlinstitute.org/tool/public-life-data-protocol/ download and read, for example, the directions for "Perceived Gender" documentation or any other element of the evaluation in the tool). I flag this not to nit-pik but to highlight for every idea in the MIDP the potential for challenging things to be under the hood exists.

39. SWL says current urban data is outdated or stored in "messy file formats"? Evidence?

Digital Innovation - Launch Services
General

This section has 4 comments:

40. The overall process rightly sets out that Sidewalk would need to achieve specific performance goals in Quayside in order to earn the right to proceed to Villiers West. Solutions that are not in the digital innovations chapter are often quite clear what those goals are. For affordable housing, greenhouse gas emissions and electricity consumption Sidewalk has analysed the impact of its proposals. This quantification and analysis is notably lacking for the proposed launch services in the digital innovation chapter with the exception of Schedulers and Koala.

For example the mobility management system claims that it will 'reduce congestion and improve safety'. Specific outcomes requiring a complex and sophisticated set of sensors, software and policies at a not inconsiderable capital and operating expense are absent. Without some quantification of current state and goals it will not be possible to evaluate this potential digital service. For example, when considering safety, how will this be compared with other approaches typically included in Vision Zero programs? It could also be argued that a certain level 'congestion' is a symptom of urban success and not a problem to be solved. Sidewalk has recognised that at the Quayside scale the impact of this system will be 'meaningful but modest' (page 85) and then provides some targets at the scale of the IDEA district only.

Each of the proposed launch services requires specific targets at the Quayside scale, and where the impact is limited at that scale, at the Quayside plus Villiers scale.

41.   (Volume 2, page 380) Are the SWL participation blocks in the chart exclusive to SWL? It is unclear how much input other stakeholders will have in the development of these capabilities.

42.   Sidewalk software development is primarily located in New York at this time. Sidewalk should commit that the majority of the software development missions for the Launch Services will be located in Toronto.

43.   The MIDP suggests that it will catalyze services not currently pursued by the market. But some of the examples - next generation bike sharing or pop-up stores surely are being pursued by the market. What makes this so special that would lead to something different?

Perform
This section has 1 comment:

44.   The real-time modelling tool 'Perform' is listed as a purposeful solution in Volume 3 page 124. However it is not included in the proposed list of launch services 444-447 of Volume 2. Schedulers are listed there. Can Sidewalk please clarify what its plan is for Perform?

Seedspace
This section has 2 comments:

45.   Foot traffic is an interesting metric to consider when designing the flexible retail platform. For instance, foot traffic data could be used to develop a dynamic billing system or to identify retail areas suffering from low foot traffic that could be remedied by reconfiguring the space or selecting a stronger anchor tenant.

46. There are launch services that duplicate (sort of) things we already have but with technology platforms. SEEDSPACE - it seems to pull together what landlords and BIAs do. City of Hamilton is already piloting temporary business licenses. Pop up shop management is occurring everywhere. My concern here is SWL is proposing a technology solution (which they want reward for) to problems/issues for which non-tech solutions are already in play. And they are inventing tech solutions for things that aren't top priorities. As with Koala, if SWL wants to go off and do this stuff on their own or with private sector partners, ok fine. But when this stuff is bundled in here as part of a too aggressive ask for land (e.g. we can't do these things at the scale of Quayside, we need more land) and a return on their investment (e.g. a piece of property tax), we're spending public money/resources on things that aren't top priorities or solving problems that distract attention/divert resources from bigger issues (e.g. actual affordable housing). In the Partnership document (volume 3), objective 3 is "not tech for tech's sake" (p. 22) - I think there is a lot of tech for tech's sake in here.

47. Why does WT need to incentivize this? Why don't they just go partner with Oxford or another large property owner/manager and do it among themselves?

Commonspace
This section has 2 comments:

48. Commonspace is a technology update of analog technology planners use all the time (e.g. clipboard, paper, pencils). We've been observing how people use public space for a long time guided by the work of people like William Whyte, Kevin Lynch,

Jane Jacobs and more recently Gehl. When we make these observations at the speed of human recording they are labour intensive, time limited and subject to human discretion. We have lots of quick and good tools for seeing how people use public spaces (e.g. not sure where to put a path in a new park? plant grass and give it 2 months, go back, see where people tramped the grass down - called desire lines - and off you go, build your path there). Can we get better? Sure, of course. But let's tread carefully about what kinds of tech we use.

49. Bringing speed and scale to these observations has pros and cons. We can build better public spaces if we know more but gathering too much data that is readily joined to data lakes of other information presents challenges. The ACLU has a model ordinance for proposals for technology that include surveillance elements (see https://www.aclunc.org/sites/default/files/20141112-model_ordinance.pdf for example). The driver behind this ordinance is that when we bring new technologies to public spaces there are big implications.

Scheduler
This section has 1 comment:

50. In addition to automating energy use to optimize heating, cooling, and electricity systems, tenant comfort could be further increasing by allowing them to regulate light and temperature settings via their smartphones. These settings could then be saved and used to calibrate all the spaces they occupy. Bringing energy management down to the user level also helps promote behavioral change as users see how their daily routine and personal preferences impact energy consumption.

Real-time Maintenance Map
This section has 1 comment:

51. SWL makes part of the case for digital infrastructure claiming that public space service operators can't keep up with maintenance. I would argue back the problem isn't that they lack the data they need (e.g. check out the 311 calls on Toronto Open Data portal and any See Click Fix list), when things need to be fixed, the City knows. The problem is the City doesn't have the money it needs to hire the people and do the work. Yes, some efficiencies could be gained (e.g. plan garbage pick up differently in parks because on sensored garbage cans) but gaps in data/tech aren't the biggest barriers. There is a sentence that talks about budget but it reads like a throwaway.

In a world of competing resources, I think we need to make sure we're not throwing public money (or private money that comes with a significant public give/return later) around at technology that is $$ and comes with risk before first sorting if we spent that money on actual maintenance first could we have better outcomes.

Outcomes-based Building Code
This section has 2 comments:

52. In addition to noise, nuisances and structural integrity, I recommend adding foot traffic to the parameters monitored by the outcome-based building code. For instance, one of the common deterrents to live-work scenarios is the added foot traffic that work environments bring. This can be positive as well as negative (for instance more foot traffic may help to improve safety), but is worth monitoring nonetheless.

53. Outcome based code - as I talked about in the last DSAP, this is one example of many in the MIDP where SWL has a proposed a complex technology innovation for a problem: a) that isn't necessarily really a problem; b) a thing that may not need a technology solution; c) doesn't necessarily need to be in a plan that requires significant government investment. Is radical mixed use a top drawer public priority in this neighbourhood / city / region / province / country / the world?

It's cool and important to think about new ways to help small businesses and entrepreneurs get going. City of Hamilton has a temporary business license program. Lots of BIAs have pop up programming. The Downsview Flea is a happening place. All of these things are happening right now with a combination of human ingenuity, a willing municipal partner, creative private sector thinking/doing, and people willing to spend their disposable income.

These comments are not intended to suggest planning can't change or evolve. The future of Toronto requires an innovative planning regime. But what we invent needs to focus on the big issues that matter. There are lots of examples of how zoning is too aggressive and we've over-regulated. So, in spirit I'm keen on the thinking behind the outcomes based code. I think the building technology innovations around finding new ways to move walls and the water/wiring inside are really interesting - but SWL probably won't wait until Quayside is built to try these. They are good ideas now that could be piloted right away.

I think they have proposed a complex technology solution to a situation that mostly doesn't need it. People can help make a bunch of these things happen through a combination of initiative and just not zealously enforcing rules. I fully

understand why a commercial landlord would want these data and as commercial landowners move more and more toward offering building services to their tenants, the data they could gather is of high value to them. But again, what's the significant public good outcome for us to warrant our overall investment/risk management mitigation in this project.

Collab

This section has 1 comment:

54. Collab is another example of a shadow/parallel process designed to mirror the work that public officials and delegated authority bodies of the City already do. Also, Who is accountable when their public programming goes sideways? I really don't understand the drive to move these things out of regular public governance if the desire is to work on behalf of the public good.

It's also similar to other elements of this plan - it gathers processes already taking place in other communities, sometimes partially or fully enabled with tech, and presents a new SWL solution to them without actually really: a) making the case for why more tech is needed; b) why their tech is needed; c) what public good void this tool fills. If the business model for this entire adventure didn't ask for significant public concessions I wouldn't care so much. But they want a lot, so I care more and have higher expectations.

Digital Innovations – Within Pillars

Pillar - Mobility

This section has 4 comments:

55. On mobility subscription, not at all clear what innovation is being established here nor why this is needed for the plan. A mobility subscription might be a good idea, but we don't need Quayside for it. Don't we already have an open eco-system for ride hailing services? What is new here? Several new mobility related innovations – bike counting, adaptive signals, green waves. Need stronger assurances on privacy safeguards and anonymization. Is the no cars estimate (30% have cars) really realistic? What does this mean for sensing traffic patterns? How do we benefit from data on streets in a community that is very different from others? Emphasis on self-driving technology but few streets and few cars?

56. I want to use the example of e-scooters as an example of a persistent tension in this document for me. I found the discussion of e-scooter technology underdeveloped and siloed.

    In the mobility section (p. 50) e-scooters are flagged to say they aren't allowed yet and if they aren't by the time the project is built, we'll try to bring them. Ok, fair enough. I know that trying to write a document that keeps up with emerging trends is hard (e.g. hello practice of urban planning) but then on the page beside the discussion focuses on "how much space should be devoted to bike lanes?". Well, what about how much space

should be imagined/planned/designed for mobility and logistics innovations we can't yet see?

Sidewalks, right now, are designed for movement that is human powered. [The one big exception would be people who use powered mobility devices (e.g. wheel chairs, scooters) and sidewalks and other public realm elements need to be better designed for these people. Full stop]. Bike lanes are already challenged by e-bikes. The speed, silence and rhythm of that ridership creates a tension in already very crowded space. In Toronto we now anticipate e-scooters here by fall. Where do they go? Sidewalks current struggle with small humans on their human powered scooters. The arrival of e-scooters is going to be a real challenge in the public realm.

And then what happens with robots doing last mile delivery? Where are they going to go? Sidewalk? Bike lane? Road? The MIDP has them underground in tunnels (p. 83) but if you think about SWL's need to scale up innovations here elsewhere, I'm going to guess there will be surface delivery options needed too [aside: who controls how deliveries happen? do all delivery operators have to use their tunnels? who pays for the system? maybe it's in the MIDP but I didn't see it yet.

I think the MIDP needs to work harder to present solutions that anticipate managing an increasingly complex public realm. Is a "bike lane" a thing in the public realm of the future? Or do we have surfaces for feet, human powered wheels, low speed electric powered wheels (for small stuff and 1-2 humans), and bigger passenger/stuff with more power wheels? It sort of comes up in page 96 with their 4 street types and on page 128 where they talk about more space for people instead of vehicles. But they talk about pedestrians and cyclists (the

mobility of the future has more user types I think, how do you categorize an e-bike or e-scooter rider?).

This e-scooter discussion is shared to say that in the mobility section there is a curious mix of new sort-of-future thinking but not particularly innovative responses.

57.   The brief history of self-driving vehicle technology is potentially misleading in suggesting that by 2035 "Self-driving taxis become ubiquitous in Toronto." This estimate is highly speculative and contingent on many un-known factors. The report this estimate was based on, MaRS' Framing the Automated Vehicle Landscape, presents no substantive basis for this time estimate. Prepared over a 6 week period in late 2018, it was funded by SWL to investigate the problem of "How might we create market and policy conditions that enable automated vehicles to support safe, equitable, and efficient transportation models for Toronto and Ontario?" Rather than critically examine whether AVs was the best approach to addressing urban mobility issues in comparison to alternatives, this study assumed the inevitability of AVs and focused on how to facilitate this outcome. In light of the weak basis for SWL's foundational "assumption that self-driving vehicles can form the backbone of the ride-hail system by roughly 2035," why is it prudent for Toronto to already begin reducing vehicular street space as contemplated in the MIDP?

58.   Mobility Management - Do we need the WTMA? I would argue, again, I'm not convinced, yet - especially if you look at its functions (Implement objectives; Oversee planning, operations, and maintenance; Manage daily movement patterns) and remember Quayside is 12 acres that needs to connect to a massive urban region transportation system. The site needs to

be integrated, the people inside the public institutions (e.g. TTC, Metrolinx) that manage the other big system need to be in charge here. They need the data. The culture of innovation and experimentation needs to infiltrate the orgs we have and be shared. That's how we take innovation to scale.

What roles will other Alphabet firms/technologies like Replica and Coord play here? It's really time we dig into both as the DSAP if they are in play.

Pillar - Public Realm
This section has 1 comment:

59. Create more open space p. 126 – Why isn't it called public space? Words matter here (e.g. see the comments on the "urban data" vs. public data). Is open space really a privately owned public space (POPS - we use that language here in Toronto)? The ownership and control of these spaces are important issues to clarify.

Urban Data Trust / Responsible Data Use Assessment Process / Data Governance

Urban Data Trust

This section has 22 comments:

60. An issue that I see is that the Urban Data Trust (UDT) will be charged with determining who can collect data in the IDEA District and under what terms and conditions. This will expressly apply to government as well (I asked the question and the answer was that it would). This creates a scenario in which the City of Toronto might decide to collect a certain type of data throughout the City - this could go through its own approval processes -- but it would have to ask separate permission from the UDT to collect the same data in the IDEA District. Conceivably, the UDT could decide against this collection (or it could impose certain terms and conditions), producing a strange (and I would suggest, unacceptable) result. Why should an appointed body trump an elected body when it comes to determining whether data should be collected to serve a public policy goal? I realize that one response to this hypothetical is "that will never happen", but it could. And I think the issue gets at the problem of the legitimacy of the UDT. SWL indicates that it will not be a public body at the outset but that it could evolve into one. Would it not be simpler if it were a public body, established by legislation or regulation, with a specific mandate? MFIPPA or FIPPA's transparency rules could then apply to the entity and whatever authority was needed to make decisions around collection and use of data could be delegated

to it within this legislative frame. It might be possible in the same way also to bring those private sector companies that want to collect data in the IDEA district under the same governance body.

61.   In one of the scenarios provided in the MIDP to illustrate the functioning of the MIDP, the example was given of a garage operator leasing space in the development area who has a misconceived idea about collecting and using data from security cameras in the garage. The example is meant to show how by being required to apply for permission to collect the data, and to complete an RDUA, the garage owner will be stopped from engaging in this improper collection and use of data. The garage owner would, of course, be subject to PIPEDA, and the proposed collection and use of the data would clearly violate PIPEDA, but we are told throughout that the UDT provides a separate and possibly higher level of protection than PIPEDA.

I have two difficulties with this example and its implications. The first is with the definition of 'urban data'. If it includes security camera data from small businesses, then in my view it is overinclusive. Part of the rationale for the UDT was to facilitate data sharing for innovation purposes. In my view, security camera data is just that - security camera data. It should not be considered for further sharing. Its collection, use and disclosure can be governed by PIPEDA.

This overbreadth issue leads into my second concern with this scenario, which is the duplicative nature of some of the functions of the UDT. The federal Privacy Commissioner has provided some pretty clear guidance on the collection of data through security cameras. PIPEDA covers this situation. If there

is no data sharing dimension, why should the UDT play a role? One of the classic reasons for not amending PIPEDA to strengthen it is that to do so would impose a stifling compliance burden on small businesses. But the approach proposed in the MIDP would require the garage owner to comply with both PIPEDA and with the UDT. We're also told that there would be a fee imposed for the collection of data under a RDUA -- and so the additional compliance burden comes with a cost as well. This seems to me to be fundamentally duplicative and creating a problematic burden.

SWL has suggested that the value-added of the UDT is that it helps small businesses comply because many don't understand PIPEDA. The OPC provides all kinds of guidance and information for small businesses and even opened an office in Toronto to have more of a presence for businesses that needed to seek advice. I'm not convinced that there is a justification for increasing the compliance burden and creating duplicative privacy obligations.

62. Here's another issue that relates to the relationship of the data governance regime to civil liberties issues. PIPEDA simply does not apply to certain types of actors or certain types of data collection (eg data collection for journalistic purposes, non-commercial activity, purely personal purposes, etc.) While the commercial activity limitation has more to do with jurisdictional issues, even in Alberta, for example, PIPA only applies to non-profits with respect to the collection, use or disclosure of personal information in the course of commercial activity. One reason for these exclusions is to carve out a space for freedom of expression - which includes not just the right to speak, but the right to inform oneself. I am really concerned about the view of SWL that non-profits, civil society groups -- basically anyone

who collects data within the boundaries of the development --
will have to apply to the UDT for permission to collect. I don't
care how routine or simple the application process is made for
non-profits, academics, civil society groups, etc. - there should
not have to be an application. To place a burden on someone to
identify themselves and to ask permission to engage in an
activity that they should be perfectly free to engage in is not
appropriate. Everyone should be free to walk down to the
waterfront and collect a test tube full of water to send to a lab
to find out if there are contaminants in it. This doesn't change if
it's organized through a public participatory data collection
program. The UDT and the RDUA process as conceived of is
over-inclusive in a number of ways and this is one of them.
There has to be an explicit carve out for non-commercial
activity (or however it is framed).

63. The composition of the UDT is going to be a point of
     contention, it seems to me. I am not sure how SWL arrived at 5
     as the magic number. The 5 are meant to represent different
     stakeholders in the data: one is an IP/privacy expert (so not
     really a stakeholder - which is a bit anomalous); the remaining 4
     represent: academia, the public sector, the private sector, and
     the community. This seems to presume that these are each
     constituencies that speak with a single voice. 3 levels of
     government have an interest in the lands at issue, so there is no
     single "public sector" voice. As for academia - are we talking
     comp sci prof, sociologist, data scientist, law prof? Or is it
     meant to be someone who uses data for research? the
     competencies vary as do the interests. Is the academic
     member meant to represent the interests of academic
     researchers? How will one community rep be able to speak for
     such a complex and diverse city? There's a lot of diversity
     within the private sector as well. Bottom line,

representativeness on this proposed trust seems fraught with problems. Beyond this, what does it mean if the trust is meant to address, in part, concerns over the use of human behavioural data when 3 of 4 "stakeholders" who form part of the trust are users of data and only one 'represents' data subjects?

64.   Enforcement of the UDT decisions a significant concern for me. Under privacy law, the commissioner has some enforcement powers with recent promises that those will be extended in new reforms to come. Order making power, penalties, audit powers, ability to apply to the federal courts are all part of an enforcement toolkit that is essential to compliance. The UDT enforcement is very sketchy - largely just enforcement of contract. Canada does not even have an FTC (like in the US) that might be able to take action on failure to meet obligations. Without real enforcement mechanisms, there is reason to doubt the UDT effectiveness.

65.   Struggling to understand how the UDT would align with the privacy commissioner(s). The law must surely trump anything the UDT rules. Yet it gets confusing when aspects of a proposal may involve PII and other aspects do not. This speaks to the broader issue of privacy laws vs. private governance. The proposal envisions considerable private governance - the UDT, contract binding users of data - but the lines are not clear and raise concerns about attempts to override or sideline the law.

66.   Urban Data into an Urban Data Trust that would or could evolve into a public sector or quasi public agency over time. On this topic it was ambiguous what SWL considered, after all consultations, was a Day One construct that would then evolve alongside the 'known' and already changing Data landscape within Canada - here they even cited the Federal Digital Charter

and Provincial and local consultations regarding data governance but made no Day One model suggestions for operation. (Digital Twin should be built here).

In the execution of this project there will be required Data Use reviews from Day One.

The recommendation of a licence fee cost structure that would/could ultimately be used to fund the Urban Data Trust operation and the key CDO role within it was suggested with no model or example to exemplify how such an operating model would exist. Even with nominal fees modelled against one technology deployment (see comments in general impressions regarding Koala mounts) a fee structure, operating model and ROI proposal could have shown how Government funding would be required to stand up such a Trust initially with the Horizon 2 model of a quasi public agency as a transitory state to proceed towards.

The MIDP discusses an innovative Urban Data Trust model without example of Day 1 operations nor any reference to Day 2 possibility apart from Public or quasi Public suggestions.

One example of Data Collection to Usage Admin fee would be beneficial to review the cost and operating model - not just the decision tree and suggested responsible data use questionnaires.

The digital credentials technology and partnerships discussed to protect privacy would also be a good example of a Data arrangement to flow through the Urban Data Trust. It is not just about the collection of Data that the Trust would have Decision Authority over but in stewardship on behalf of the urban

residents/dwellers. Here, in order to manage and govern appropriately 'Actors' who Authenticate would be a unique opportunity to show the Value and Data for Good that the Urban Data Trust would have over the Quayside project. Also an opportunity to have Corporate players pay licencing fees to become licenced authenticators that also comply with the responsible data use principles upheld by the Urban Data Trust.

67. Will the trust have a feedback loop to determine whether the expected / anticipated benefits that were articulated in the original submissions have materialized? For example, a regular review of projects to evaluate outcomes (not just compliance)?

68. Wouldn't having a public registry of all sensors also create a security risk and make matters easier for malicious actors who would want to sabotage a commercial entity's prospects, or to damage the reputation of the district? The idea of having a public registry of devices should be reconsidered or at least heavily qualified.

69. Oversight and accountability of the UDT itself are missing from the MIDP. What does SWL propose to address this lack?

70. Explain how the proposed "Urban Data Trust" would be bound by PIPEDA and (M)FIPPA laws.

71. The UDT appears mainly intended to benefit prospective data users, and less so the data subjects. Why is this?

72. The trust's role seems to evolve into creating a market for data (e.g. page 435) to manage data licensing. That is an interesting idea but seems to diverge from the initial principles of the trust.

73. In contrast to the claims in the sidebar on p. 423, SWL appears to have mis-understood the Open Data Institutes definition of 'data trust'. Why is there no mention in the MIDP of legal responsibility to beneficiaries, as the ODI promotes?

74. Given this absence of legal responsibility to serve the interests of its intended beneficiaries, why is it not misleading to use the word "trust" in the name?

75. The urban data trust appears linked to the creation of the IDEA District. There is a need for a proposal that specifically addresses these issues if the project is limited to Quayside.

76. Have the efforts of the Province (Ontario Data Strategy), the Feds (Canada's Digital Charter) and the City of Toronto (e.g. open data) been taken into account when designing the UDT/data strategy?

77. For the trust, would a solely commercial purpose be acceptable? For example, if there is a proposal to collect data whose main outcome would be bringing more traffic into a private parking lot or to sell more tickets to a private amusement park – would these be deemed acceptable? Approving projects only if they have a public good will limit commercial innovations and possible the ability of companies and startups to thrive in this environment.

78. (Volume 2, Page 424) Re: Beneficial Purpose, does this mean that a company cannot use urban data to create a product that benefits them? That is, can they use the data to create their product/service for the sole purpose of driving revenue and profit?

79. The role of public security agencies and their access to data needs elaboration. What process would be followed for access to data if requested by a public security agency?

80. The CDO is a critical role, and a very operational one. I think it would be useful to define job description more precisely. It is a combination of a COO with a legal background who understands data. This is definitely not a person with a purely policy background.

81. As part of the Responsible Data Use Assessment process, understanding the data flows would be important (data sources and destinations).

Urban Data

This section has 4 comments:

82. SWL is proposing a new category of data - "urban data" . It characterizes this data as data that no one can own. I'm not sure if this is the right characterization - they seem to be suggesting there is a public/communal interest in the data, rather than it being data in the public domain. In any event, one of the difficulties I see with this is that it relies on both public and private sector actors relinquishing claims to urban data. Sort of. For private sector actors to be able to collect urban data, they have to seek permission, go through the RDUA, and presumably manage any collected data according to the terms of that agreement (which may allow them to keep the data as confidential and proprietary - the door is open for that). In terms of the public sector, the suggestion seems to be that data that would normally simply be public sector data would no longer be public sector data if it fell within the definition of urban data. But governments have an obligation under the law to manage

data under their custody or control in accordance with the law (MFIPPA, if it is the City) and any relevant policies or directives. If the data is collected by the city, then it seems to me it is public sector data and the City can't just surrender it to governance by the UDT -- at least not without some sort of legislative amendment that would allow it to do so. So I really struggle with the relationship between public sector data and urban data. It is possible that none of the data being collected by the proposed sensors is being conceived of as public sector data by SWL - if not, then this too is a bit of an issue, since data collected for better urban decision-making, etc. should be public sector data (IMHO). So my question here is how do you reconcile "urban data" with public sector data. Can this only be done through legislation?

83.   On the subject of "urban data" - the MIDP distinguishes urban data from transaction data. I wonder if this is really a straightforward distinction. I could see the distinction between payment information, for example, and "urban data". However, I have more difficulty with other scenarios. For example, in the MIDP we are told that sensors on ride-sharing vehicles in the IDEA district would be collecting urban data, and so the ride-sharing companies would have to go through the UDT for permission to collect this data. However, data about the customer's interaction with the company is transaction data. But how would data such as the start and end points of the trip, route data, how long the trip took etc. be characterized? Is that transaction data?(It relates to the calculation of the fee paid for the service) Or urban data? (It could be useful data for understanding traffic patterns, etc.) This is just one example. I think it might be challenging to distinguish between urban data and transaction data.

84. Given that information collected in public spaces is effectively 'owned' by the City, on what basis would the UDT have any authority over it?

85. The UDT and RDU Assessments appear to apply exclusively to 'urban data.' What is left relatively un-specified is the use of data from all other sources. Termed 'transactional data', this may be at least as valuable for urban purposes but may be more problematic from a privacy perspective. For example, location data routinely captured by Google from Android devices and Google Maps. Will SWL commit to a robust, independent oversight regime that covers all data, urban and transactional, used within the project?

Open Data
This section has 8 comments:

86. Explain how a policy of "open by default" is always in the public interest. In particular, explain how "open data" policies won't disproportionately help the large social media and tech companies, given the structural asymmetries in the data-driven economy.

87. Due to the nature of the project there is an obvious interest in maximizing economic elements to open data, but to echo previous feedback it is essential to democratize benefits of data widely, not just those who are able to reap those benefits or those who are charitable enough to use their skills to develop this. It is a sticking point for me that the MIDP include a commitment to sharing tools like data stories with the wider public, particularly with the people who chose to make this neighbourhood of the future their home. From a public benefit perspective this requires minimal effort and provides large

public benefit. It could be a suggested feature or role of the Urban Innovation Institute, but something I would like to see in the final draft.

88.   Given the existing US Department of Justice and European Union Competition Bureau investigations into the anticompetitive practices of large social media and tech companies, how should the Urban Data Trust place specific restrictions on the access to data by those types of companies to ensure competitive markets for innovators in the Toronto ecosystem?

89.   Urban data will be made publicly accessible. As open data? For a fee? How will the model be financially sustainable?

90.   (Volume 2, Page 402) How can open data be both open and secure?

91.   (Volume 2, Page 383) What does "shared publicly" mean in this context? As open data? What is the governance model behind sharing data publicly?

92.   (Volume 2, Page 402) I assume that "anyone else" mean large corporates too? Is equal access for everyone the right way to go? Does asymmetry need to be taken into consideration?

93.   (Volume 2, Page 403) I think all data needs to have an owner to ensure quality, context, etc. It's the requirement to share data that should be up for discussion

Data Localization
This section has 3 comments:

94. We had a discussion about data localization and SWL's commitment to it. I note that in the discussion of the UDT in the MIDP (page 434) SWL does not necessarily contemplate the UDT having control over all of the data it governs. It states, "Facilitating access could be accomplished in a variety of ways from having the Urban Data Trust actually hold the data to having it set rules that require collectors to publish de-identified, aggregate or non-personal data in real time." What does this approach mean for data localization? Could the UDT impose local storage as a condition? I did not find this in the RDUA or principles, but I might have missed it somewhere in the documents.

95. If SWL cannot guarantee that data remains exclusively within Canadian jurisdiction, in light of the (foreign) surveillance provisions contained in the U.S Patriot Act, the FISA Amendments Act and Executive Order 12333, how can it give assurance that the privacy and security of Torontonians will be protected in any cases where their data may reside in or transit via the United States?

96. The public has spoken loudly in favour of data residency. While there is reason to debate whether data residency provides iron clad safeguards (it doesn't), the public clearly feels more comfortable with data resident in Canada. Best effort isn't good enough. A clear commitment is needed.

De-Identification / Data Protection
Tis section has 7 comments:

97. Much of the claimed privacy protection for personal data created and/or used within the proposed project depends on robust de-identification. However, this is problematic in several

respects. Does SWL recognize that under Canadian law de-identified personal information, whether at the individual or aggregate level, remains governed by the relevant privacy laws and continues many of the same protections as the original personally identifiable information, e.g. accountability, purpose specification, openness?

98. De-identification is notoriously difficult to achieve in many cases, notably location tracking data. Achieving reliable de-identification (ie with insignificant risk of re-identification) depends on the type of data collected, the uses to which it is put and the availability of other information sources. In particular, de-identification at source, as is the proposed default, does not guarantee it can't be re-identified later by combining with other data.

99. How does SWL propose to ensure that de-identification is robust, esp. if it may be matched against other data sources after the point of capture? What specific de-identification techniques does SWL intend to use with what types of data? What has SWL's experience been with these techniques to date?

100. Sidewalk did not include the use of synthetic data as part of their proposals. For example, for creating public data sets, synthetic data can provide a reasonable solution for protecting privacy but maintaining the statistical properties of the datasets. Would synthetic data be a fifth type of urban data? More generally, as I was reading the document there were many instances where synthetic data would be a good solution to the problem identified. I would recommend that this be included in the scheme to create a trusted process for data use and disclosure.

101. When entities are making claims about de-identification, there should be a mechanism to certify that they have implemented good practices. There are many cases where entities make claims about de-identification but under further examination the practices are not very robust. Given the role of de-identification in maintaining public trust in the data ecosystem, this should be accompanied by a certification mechanism (say, by third parties) as part of the requirements. The same would be for the creation of synthetic data.

102. In addition to comments above regarding the inadequacy and difficulty of de-identification at source, I want to stress that these data protections do not work for individuals and groups that are tiny minorities or outliers. These individuals are also the most vulnerable to data abuse and misuse. Privacy will be breached. There is little discussion of what will happen when it is inevitably breached. Other than assuming that privacy measures will be in place, what are the plans for governing and protecting the data of individuals that have the most at risk? What will happen when privacy is breached and the data is open to bad actors?

103. To add to the prior comment, it is not whether a breach will happen, it is when it will happen and what you plan to do about it. I would be interested in seeing a commitment to the residents and users. No one wants to think of a breach, but I think moving forward it is important to make tangible commitments to users, something in the line of Desjardins move to offer all members free, lifelong protection after their data breach.

Security

This section has 3 comments:

104. (Volume 2, Page 408) Security by design: Do the three design goals include redundancy?

105. One of the glaring omissions of this proposal is a robust discussion of resilience. Even though improved resilience, be it against weather effects, terrorism, etc., can benefit from a strategic deployment of technology, it can only be achieved using a "resilience by design" approach. There was some discussion of technological resilience on pg. 408, Vol 0 but this is insufficient.

106. Assuming the security by design results in a system that is different than the City's systems of today, will this tax city staff to maintain? Will it make the rest of the City's systems more vulnerable? How will the two systems be integrated given that legacy systems are likely proprietary?

Intellectual Property / Patent Pledge / Procurement

Intellectual Property - Testbed Enabled Technology
This section has 12 comments:

107. This strikes me as a weak offer. It's not the percentage that's the problem, it's the term. City building takes time and innovations that involve city development play out over decades, not years. Ten years is too short a time frame to fully benefit. Moreover, as others have noted, there is reason to doubt the utility of the patent pledge given its jurisdictional limitations.

108. As the movie business learned long ago % of net profit is hard to measure and easily manipulated particularly when a product's profits needed to be extracted from overall corporate accounts with relatively arbitrary allocation of overhead costs. This is very hard to value in the overall business case for the public sector. Should Waterfront Toronto wish to pursue this it necessarily needs to be a % of gross including associated services. This does not feel like a priority to me. A more tangible commitment to fostering Canadian, Ontario, Toronto companies would be more impactful.

109. Overall, I think there are a number of highly questionable financial arrangements in the proposal. Providing anything software-related at cost is not a concession, it is an imposition. The 10% for 10 years is also unlikely to be appropriate as (1) most profits are likely to be beyond the 10 year horizon given the timelines of development and (2) it is easy to manipulate

the profitability of complex/custom software by dividing the contract into provision of the technology license and provision of the services to support its roll-out.

110. Would Quayside alone qualify as a large enough deployment to satisfy the "test-bed conditions" as a pre-requisite for profit sharing?

111. Has the feeling of university tech transfer strategies that have largely failed. Those strategies envision universities benefiting with a percentage of revenues from patents. But the data suggests that few do. A better public-interest strategy may be open science that emphasizes public availability of new technologies. In other words, is there a better public interest option to benefit from new innovation and commercialization?

112. Testbed Enabled Technology also applies to the entire project of Quayside and the extended proposal by SWL in response to the RFP. There is no other Urban Testbed that will utilize technology to enable an urban development like this project. To that end my view is that this entire MIDP is candidate for being described as Testbed Enabled Technology.

With this it is stated that all IP associated will be shared at 10 percent upon the sale of the solution to the Second customer. SWL will generate enormous shared IP in the execution of the MIDP at scale and overall in the design, plan and execution of the many component parts of this initiative, but the most valuable will become the overall IP gain in the process of being selected as a partner.

WT cannot execute a second program at scale in the same manner as SWL will be able to as a global company with niche

experience and resources and IP experienced on the testbed of Quayside. It is here that I would suggest that the share of Program/Project IP in the overall execution of this process to a second city should be considered for WT. As a minimum this would fund an Urban Data Trust in Quayside and truly create the opportunity for Data to serve as Good for Canada.

113. I share the concerns of panelists, but I also want to take a moment to mention that it really cannot be underscored enough how unique this commitment is for Sidewalk to recognize the role of the public sector in value creation and that it should translate to financial benefits. At the same time, since this type of arrangement is unique, for Waterfront Toronto to decide whether or not this is appropriate given the concessions Sidewalk's MIDP requests there needs to be a greater understanding of the organization's business model, its resources and strategy for scale of innovations past Toronto.

I share the concerns of panelists, but I also want to take a moment to mention that it really cannot be underscored enough how unique this commitment is for Sidewalk to recognize the role of the public sector in value creation and that it should translate to financial benefits. At the same time, since this type of arrangement is unique, for Waterfront Toronto to decide whether or not this is appropriate given the concessions Sidewalk's MIDP requests there needs to be a greater understanding of the organization's business model, its resources and strategy for scale of innovations past Toronto.

This is not your regular technology or product; much of what has been proposed potentially shifts how cities operate, are planned and are built. It is not something cities will be eager to adopt immediately, and with this type of technology it is not the first or the second customer that will be challenging, it is achieving scale, which will take a long time. My recommendation would be to extend the timeline for benefits and thoroughly understand their future ambition and the resources that will be allocated in the midst of undertaking the massive development of Quayside/the IDEA district and navigating growing pains of Sidewalk Labs as an organization. Given the limited information on Sidewalk's future, it is puzzling to know whether or not this will be a deal whose benefits justify the concessions that need to be made by our institutions to achieve Sidewalk's vision of the IDEA district.

114. There was a lack of any form of a valuation model for data collected. Pg. 221 - 10 percent of profits shared when product was sold to second city post WT. This valuation is based on product models only - there was no mention of how any data valuation would be monetized. For example - not selling the actual product or data from that specific product - but the vaster data collected for the overall execution of this project, stage by stage and gate by gate. Here could be the most valuable data set available for valuation - the actual run book and insights from the execution of the MIDP. Would this also become profit shared when SWL advises the next city on such a program based off the initiation and early success of this MIDP.

115. I worry that agreeing to this could partially tie the success of Waterfront Toronto as an organization to the financial returns of Sidewalk Labs. How valuable would a testimonial from Waterfront Toronto or the City of Toronto be about a Sidewalk Labs product or technology be when the world knows any purchase may result in % gain? Cities have an open policy of communication despite borders largely because of the shared mission to public interest. This point should not be underemphasized, particularly when you consider Sidewalk Labs has limited experience with developments. There are talented people on staff, but their collective track record will be built alongside this project. All important pieces to consider when thinking about the value vs concessions being made, particularly if any commitment is made to the desired IDEA district.

116. (Vol. 3, Page 112): What does "practical" mean in terms of the development of the advanced systems? If developed by SWL, will SWL own the IP and license it to WT? If so, what are the

terms of the license? Does SWL suggest they have unilateral rights over the development of the advanced systems for Quayside and Villiers West?

117. (Vol. 3, Page 113): "SWL would transfer knowledge to the public administrator to enable it to take over the advanced systems development role after Quayside and Villiers West." Is IP and source code, etc part of the knowledge transfer?

118. (Vol 3, Page 113): "With respect to advanced systems, SWL would notify the relevant administrative unit within the public administrator if it intends to utilize a product or service in which it holds a financial interest within Quayside or Villiers West." In this case does the Public Administrator have unilateral veto rights or is it just about providing notice of an intended action?

Patent Pledge
This section has 3 comments:

119. "The only condition is that those taking advantage of the pledge not assert their Canadian patents against Sidewalk Labs or its affiliated companies." — This condition, emphasized in the presentation, is not nearly as equitable as it sounds. It effectively means that in order to use SWL tech, you have to give them all of yours — it basically removes the ability of small firms to exercise or patent anything. This is a higher imposition on the small firm than the large.

120. I also struggle with the patent pledge. The pledge is: "Sidewalk Labs would pledge not to assert Sidewalk Labs' digital-innovation-related hardware or software patents issued in Canada ("Canadian Patents") against third parties who develop and sell innovations that utilize such patents". The pledge is for

SWL not to assert its Canadian patents -- presumably it would be free to assert its US or European (etc.) patents for the same technologies if those developers try to patent, sell and/or use their technology in other jurisdictions. So how valuable is this patent pledge? Anyone who is limited to the Canadian market is going to be pretty limited. And how does this patent pledge work if the technology involves the routing of data that might cross international borders? (I'm thinking here of the patent infringement litigation that was launched against RIM all those years ago - it might be possible that technology used in Canada could be subject to claims of infringement of US patents simply because of the way the invention functions and the way in which information is routed). Anyhow, this is not really my area of specialty - but I do wonder whether these are issues.

121. Explain how the patent pledge gives innovators in the Toronto ecosystem an opportunity to scale globally.

Procurement

This section has 4 comments:

122. Their "General approach: Buy rather than build, wherever possible" raises a few flags in my view. Why is Sidewalk Labs purchasing the technology? While I don't expect all details to be ironed out just yet, and there will be scenarios in the MIDP where Sidewalk Labs will purchase technology to fulfill its role in the project, this section reads as if Sidewalk Labs will be procuring a large amount of technology and "give priority to technology that is local to Toronto, Ontario, or Canada".

Will this be at odds with Ontario Broader Public Sector Procurement Directive that Waterfront Toronto must follow? I recognize the value of acting as a catalyst to the innovation

ecosystem, but the Public Sector Procurement Directive has stipulations like "contracting and purchasing activities must be fair, transparent and conducted with a view to obtaining the best value for public money" - which would limit the ability to prioritize local firms. Will this mean that to follow this commitment Sidewalk Labs would need to do most of the procurement? Sidewalk Labs would be free from this Directive, but I would expect, given the nature of the project, that there be a clear commitment of full transparency in its decision-making. In the final draft I expect such a commitment be explicit - how else will Sidewalk Labs be held accountable that there are (or aren't) giving priority to technology that is local to Toronto, Ontario, or Canada?

123. Given that SWL is committed to catalyzing a new urban innovation ecosystem in Toronto, please detail the terms and conditions of your Supplier Agreements to ensure local innovators are able to own and control, and thus commercialize their innovations.

124. The economic modelling shows the potential for economic benefit but specific actions are required to realise those benefits. Perhaps more important than numbers of jobs are numbers of firms supported. Sidewalk plans to give priority to technology local to Toronto, Ontario, or Canada when purchasing technology. These plans need to become commitments both for Sidewalk direct procurement and for procurement for those Sidewalk contracts with. A specific commitment that at least 50% of technology and services would be procured from firms that are local to Toronto, Ontario or Canada would make the economic benefits credible. A 50% level would enable the use of global technology and services

that are not available otherwise and perhaps incent those suppliers to create or increase their local presence.

125. There is a potential disconnect between undertakings to source local technology and using the best technology. While the best technology may be local, it will not always be. Choices will often need to be made, and the proposal would be more credible with a clearer acknowledgement that local options will be explored, but not always used.

Overall Impressions of the MIDP

Size / Scale / Nature of MIDP (document and project)
This section has 12 comments:

126. Overall, the MIDP is unwieldy, and a great deal of cross-referencing is required to find all relevant details on particular issues.

127. On first sight, the print version of the draft MIDP is very impressive, visually rich in terms of its physical size, scope of ideas and graphic dazzle. But on closer inspection, it better resembles a coffee table book to be marveled at by flipping through pages than a planning document that enables the critical scrutiny necessary for public decision-making.

128. In general, the MIDP makes for a good story; I was under the impression it would be more tactical in nature.

129. There are some very positive aspects to the MIDP. I feel like SWL is more like an aggregator of innovation as the proposal identifies many innovative or efficient approaches and aggregates into a single proposal. The SWL-backed innovation is more limited, but the aggregate proposal provides an interesting pilot project that brings together many common-sense or innovative proposals to development (it is described in the River District chapter as a "demonstration project".

      However, I also find the proposal extremely repetitive and often unconvincing with respect to the unique value proposition it

provides. Some of the proposals seem unnecessary or irrelevant (e.g. Super-PON or the mobility subscription). Many others are interesting but don't require Quayside in order to implement. Indeed, many of the community-based innovations (e.g. Koala, software defined networks) could be implemented without SWL.

I also struggle with the size of the project. If just Quayside, many of the plans seem overly ambitious. Quayside is relatively small and the benefits from traffic sensors and other smart technologies in the community have little prospect of delivering over a small footprint with a handful of large buildings. That is not to say that the IDEA district is a must. In fact, part of the problem with the proposal is that it is not always clear where the policy will work with only Quayside or requires a larger space to get off the ground.

I find some of the community discussion divorced from the reality of how people live and work. The housing section speaks of people moving from smaller units to larger family units as if in a major city people never leave a small area. Other aspects of the plan that envision people living and working in the same area seem unlikely – commuting is a fact of life for many people and the notion that this will be a neverland in which everything – housing, jobs, schools, religious institutions, gyms, etc. is a block or two away strikes me as fantasy.

So too the benefits from some of the data collection. For example, if this is a community with significantly reduced car usage, what does that mean for the value of the traffic data? How useful is the pilot project for other parts of the city that do not have similar usage rates?

130. I found Volume 0 to be informative. It provides some context around the vision of the project. However, the level of detail is insufficient for implementation and full evaluation.

I too was displeased by the repetitive nature of the content or the tendency to spread out the discussion of a topic across multiple volumes.

It is difficult to be everything to everyone. In attempting to do so, you end up being nothing for anyone. How does SWL propose distilling all of the public feedback to achieve the best outcome while recognizing that some of it may be contradictory?

I continue to struggle with the geographic scope and the expected outcomes of this project. I feel that, at the scale of Quayside, the project will be more of a living lab than a fully functional community. If it is a living lab, will it tolerate failure? What is WT's expectation? Clearly, SWL feels that full functionality cannot be achieved at the scale of just Quayside.

131. This document got the attention of a grand unveiling, and over the last few months, I have heard again and again about how "hard" Sidewalk's job was to balance detail required, but the level of detail that was expected of them was laid out entirely in the Plan Development Agreement. Based on the PDA never in the wildest of scenarios could anyone have predicted this document would be 1500+ pages.

They made the choice to go way beyond that, often in completely inappropriate ways, partially justified as feedback heard over the course of their consultation. They heard a variety of concerns and felt they should acknowledge those concerns

and address them in the proposal. Except, no one asked them to do so - they were right to acknowledge those concerns, but they should have known their role and directed those concerns to the correct institutions, or used this as an opportunity to grow public sector capacity and expedite conversations that are desperately needed in cities across the world. They had the opportunity to build sustainability into the project, to contribute to the challenging work of navigating "smart cities" and prove critics wrong from the start and have instead chosen to prioritize their interests. I understand they have worked with various stakeholders and circulated elements of the plan prior to its release, but this issue persists.

Take the Data Trust - until well into the project the discourse did not point to this being a key part of the MIDP. Under the plan development agreement a data trust is mentioned a total of once in Schedule I with the caveat that it will "Explore novel forms of data governance". Based on Schedule B I get how it could fit under the digital platform, but again, no one asked for anything past an exploration. Government adapts based on public feedback, successful proponents don't. Schedule B, also lays out in 1.04 that "the plan may require revisions of, or other approvals under, such existing applicable laws and existing policy framework, in which case the implementation of any such plans will be subject to the relevant Governmental Authorities making or granting such revision or approval. The MIDP will be developed through a process of co-creation and collaboration between the Parties, informed by a robust public engagement process and close collaboration with the City of Toronto and other governmental agencies and stakeholders." Feedback from other panelists on their proposed Urban Data Trust shows how their proposal falls short in several regards

and would have benefited from proper collaboration with existing entities already working in the space.

132. Overall their work so far shows the PDA wasn't followed as intended. Unfortunately they have opened up Waterfront Toronto, their organization, and the entire project to criticism that a private entity is driving public policy in the City of Toronto. The public draft should not have anything other than recommendations on what elements are required or essential to the development of Quayside. The fact that Waterfront Toronto had to release a "note to the reader" outlining their concerns over 66 pages is baffling. At the scope of the IDEA District, with the concessions being requested, I guarantee a number of actors would be willing to come to the table. It is a serious concern to me that with hindsight this RFP will be seen as a "backdoor" for Sidewalk Labs.

133. It is really unclear to me what pertains to the IDEA District, what pertains to Quayside alone, what is Quayside + Villiers West, and what is some other area. It appears to be fuzzy / jump around between sections.

134. The MIDP is attempting to be a plan, a proposal and a 'test-bed" all at once. On one hand, there is an attempt to retain the original spirit of test-bed, experimentation and on the other to respond to requests for specificity by laying out elements of a more traditional urban plan. There are ideas that are proposed under well-established principles and regulatory frameworks (how buildings meet the street, building codes), new proposals that may exist at the intersection of jurisdictional policy frameworks currently under revision (privacy, data governance) and specific technology proposals that seem neither particularly new, and in some cases are already being done by

others. The reach of the plan is ambitious (and beyond the scope originally asked for) and the gaps lie in the interstitials, in how the "plan", the "testbed" and the "proposal" fit together, or do not fit together. It is here where the gaps can yawn wide, where the pessimist may see societal-level dangers, and the optimist may see opportunity, though necessarily tinged with caution.

It is not a new debate in the realm of innovation and transformation, but how do we work within what is well known, and yet create what is yet to be understood? In the spirit of testbed, the MIDP lives in a space (Quayside, and perhaps beyond) that is currently considered physically "empty", though it is certainly not without its history. Grand plans upon what is considered empty space have a problematic history, stretching back to colonialism, and more recently mid-century urban renewal and "world-fair" urban futures. The MIDP has grand vision of spaces that evolve and react to behavioural and environmental patterns, of flexible residential and commercial spaces, and of the systems of notification and management dependent on data, sensors and new technologies. At the same time, it is a traditional development plan of buildings, streets and, in some ways is reminiscent of the grand visions of plans never realized (The Metro Centre that resulted in the CN Tower on the waterfront comes to mind, or the extension of St. James Town.). As such the MIDP straddles a space of deep regulatory tissue and physical specificity (governed by existing building codes, planning, zoning), and an undiscovered country of new technologies, data, though it in itself operates in an existing world of standards and legacy technologies. As such, the MIDP must find a way forward not only within the policy and regulatory environment but also operationally, how new technologies will work with the legacy stack, and how Quayside

will fit together with the rest of the city both from a governance perspective and operationally. In many cases, Sidewalk chooses to find this path in two general ways.

First, it proposes a set of governance bodies that currently do not exist, under the umbrella of a "Public Administrator" with indeterminate responsibilities and funding. The Public Administrator resembles Waterfront Toronto but is not named specifically as such. As has been mentioned repeatedly elsewhere, is not clear how these new bodies are funded, of who gives them agency, and how they fit into our democratic urban governance currently in place. And is there a version of the plan that could move forward without these questions answered? Or better stated is there a version of the plan that could move forward within the existing public governance structure we have?. We need more detail on who owns what, who is responsible for operations and maintenance, and how procurement is to be managed. These are key questions to be addressed before we could move forward with an approval of the plan and I think we would need to see more specifics.

Secondly, on the technology stack side, Sidewalk attempts to resolve the tension, between what exists and what does not, by proposing to conduct audits of existing technologies and companies and to engage with them, with a welcomed local bias in terms of participation (and IP but that has been dealt with extensively elsewhere as well). In the MIDP, when there is an identified technology gap, Sidewalk proposes to fill that gap themselves. The only exception is where the gap seems particularly complex and controversial, in which case they propose a third-party body (such as the Urban Data Trust) These two default positions are problematic.

In summary, in attempting to be a test bed on an empty tableau, but to do it by proposing a very specific development, connected to an area already governed by public policy and regulations, means that governance proposals, and the development and technology development process, will need to be far better defined, with agency and decision making defaulting to the public body, and practically, leveraging existing public structures first before creating new ones. I also suggest we separate the "test-bed" much more explicitly from the "proposal", to create a more agile Plan with accommodation for fluidity, experimentation, city-building process innovation, more prototyping, and for far greater multi-party collaboration over a realistic time period of a decade. Allow things to fail, to be incomplete, and then to graduate to the city or society entire, in an inclusive and democratic way.

135. For a document that repeatedly emphasizes human-scale experiences and provides lush illustrations of projected street life, the lack of an 'experience' perspective related to the digital dimension is striking. To enable Torontonians to get a better sense of this key aspect of the proposal it would be very helpful for SWL to provide a variety of 'day in the life' scenarios for Quaysiders, eg a resident, a worker and a visitor. These scenarios should highlight the various ways that data about them would be captured by various means, not just project installed sensors, but other digital devices, as they travel through the Quayside district, what happens to that data, who accesses it, for what purposes and how the person would be affected immediately and in the longer term by these digital processes.

136. The MIDP provides context that raises some uncomfortable concerns. A number of very specific decisions are

"recommended", and Sidewalk Labs recognizes that those decisions are up to decision makers, but the MIDP is the document that will ultimately be put in front of decision makers, including Toronto City Council. By laying out bureaucratic processes, and even HR decisions, those "recommendations" will become the starting point and it should under no circumstance get to that point. Sidewalk Labs brings an important and valued perspective, but they are not to dictate what governance or resource allocation looks like when it has such important implications to the work ahead with and after this project. This is particularly true for the Urban Data Trust.

137. Shadow City and Civic Governance Infrastructure: the MIDP has lots of calls for new organizations to be invented. They seem like parallel inventions to institutions we already have in part/full (e.g. public administrator for the IDEA district - economic and development and planning departments; Open Space Alliance - Park People / parks and rec departments. I think a fundamental principle moving forward is that we don't invent new organizations / institutions until we first invest the government/NGO ones to see if we can grow them first. Page 71 of the V 3 states: "The innovative solutions needed to achieve Waterfront Toronto's priority outcomes require management and oversight by dedicated, accountable, and financially self-sustaining, community-based governance structures." I would argue that given the complexity of data-governance elements of this plan, it will be expensive and technically difficult to build the right capacity inside discrete organizations, especially for a 12-acre site. Every new organization that is set up has operations costs. The capacity to innovate needs to be focused inside government organizations first so that the lessons learned can be scaled and so that innovation emerges from democratically

accountable processes. Similarly, why invent new NFP orgs what will require funding when perhaps some/the better part of what is proposed could be integrated, more economically, into existing ones with proper funding.

"What" vs. "How"
This section has 4 comments:

138. There are a number of examples of "how" the MIDP would be implemented, but most of the plan seems to be focused on the what, but at a frustratingly abstract level. Much has been made of the size of the report, but a significant amount of it might be characterized as repetition. Though understandable that there is a matrix of elements overlapping each section, and that summaries and roundups are necessary to such a large document, it contributes greatly to the bulk and the difficult navigability of the document.

139. Much of the innovation here is going to be in the "how" of the design and delivery process. Through there are many proposals for new governance bodies, there is not enough on the "how" of the design process. Given the infusion of theoretically interoperable technologies and with much rhetoric about putting the resident/citizen at the centre of the process, there is much left unsaid about how the design of these technologies will unfold. If the true innovation here is a combination of design and consultation methodologies sourced from urban design, architecture, design and software development (in other words if this really is a city "designed from the internet up"), I am not seeing it so far in the MIDP. I would like to see much more an intersection of design thinking, agile development, human-centred design and traditional design charrettes to make sure the "user" i.e. Torontonians are directly involved in

the design process, rather than simply numbers to be quoted from general public relations-based public consultations. This is not easy to do, but being more transparent about the "how", and by whom, rather than simply the "what" will accomplish two things:

Help address the lack of trust the public has shown in the entire process to begin with.

It will take many years to realize a new vision for Quayside (and beyond, if approved), and the technology innovations proposed here may be superseded by others. What should be truly new, is how can public, and private partners, working together with the community, reimagine city-building that is both enabled by the new technologies, and ensures protection and participation by the very public that is supposed to benefit by this development.

To me, this will be the true innovation - digital and otherwise.

140. My overall impression is one of a summary version of the many discussions we have had regarding the MIDP and Digital and Data Trust plan progress. It feels on reading as a very good summary of our dialogues to date.

What surprised me was the lack of a definitive plan to suggest implementation. For example: The Koala Mounts and the Urban Data Trust. It could have been used as an example of just how a physical proposal to Data collection would theoretically interact - in an iterative example which would display a type of data collection - sensor using proposed infrastructure - the Urban Data Trust and CDO in decision authority - the RDU completion - the licence costs for the Data Trust to issue - where and how those licence costs/income would have been applied back to

support the Trust and fund the CDO as a micro example of the mechanism to support proposed technology, the model to execute it and the economics - this would then provide outcomes and further questions but also provide an example of how this could scale.

What concerns me is the lack of translating our many dialogues and calls for specific examples to model towards a plan that is executable even in a lab simulation.

SWL should and could be building a digital twin to model the program at scale - I was surprised at the lack of this.

141. How does this project affect the rest of the City's operations - infrastructure, inclusion, mobility, etc.? Are we creating a siloed Utopia that could be the target of disdain by the rest of the City?

Minimum Viable Plan

This section has 3 comments:

142. I would encourage Sidewalk to prepare a "Minimum Viable Plan". There is a lot being proposed, but hard to know what the interdependencies are, what is prioritized, and what are the minimum number of proposals that would make for a viable plan. Also, and was asked in the previous set of questions on the digital chapter specifically, it would also help to outline interim solutions or approaches that might allow the project to move forward where the time frame for either governance or technology dependencies to be resolved might be prolonged.

143. The sheer number of proposed innovations is daunting. The risk of failure grows perhaps exponentially with the number of proposed innovations. It is essential that a minimum viable

solution be identified to achieve the RFP goals with fallback plans should a particular solution be infeasible.

144. The project manager in me wants to see a detailed project plan complete with Gantt chart, dependencies, deliverables, and critical path tasks. This is a massive project and, as such, I find it difficult to understand the implications of the effect on the overall project objectives should one or more of the proposed elements be removed. For example, what happens if the LRT expansion is not constructed? Does the project stop because it will impact many other tasks?

Document Readability / Accessibility
This section has 2 comments:

145. Curiously, this MIDP lacks the basic features large complex documents normally include to enhance readability - a concise executive summary, a complete fine-grained table of contents and a comprehensive subject index. The impression that the document has been designed more for public persuasion than systematic scrutiny is reinforced when one turns to the electronic version. It is especially puzzling that an enterprise renowned for its digital prowess doesn't offer a browser viewable and searchable version of the document. Requiring the downloading of PDFs deprives the many who are not well set up for this mode of access from convenient reading. The absence of a single version of the entire document thwarts comprehensive search. The 2-up double column layout and the absence of active links in the endnotes add further reading obstacles.

Given the great deal of careful and skillful attention paid to the design of the MIDP, why was not greater priority given to

accessibility and readability?

When submitting the final MIDP (presumably the draft MIDP, plus addenda), please provide the following to better enable public study: a. concise executive summary, b. complete fine-grained table of contents, c. comprehensive subject index, d. responsive, browser viewable, navigable and searchable version, e. active links for endnote URLs, and more of them, and f. single, searchable, 1-up PDF version of the entire Plan, in addition to the existing PDFs.

146. Despite commitments to "prioritize accessibility", the MIDP was released in an inaccessible format and no accessible alternatives were provided. Sidewalk committed to provide accessible versions "within the coming weeks," but has yet to produce these (https://www.sidewalktoronto.ca/accessible-midp/), more than a month from release. The high production document excludes a large number of Toronto residents.

This is very concerning. If this is indicative of how accessibility will be "prioritized"-- as an afterthought and a separate, segregated measure -- all the commitments to inclusive design and accessibility ring false. The document itself could have been made accessible from the start. This would have aided all readers in navigating the document, finding relevant sections, and creating more readable views on a variety of devices.

Process
This section has 2 comments:

147. While the term co-design is used frequently throughout section 0, and in some other sections, it appears to refer to public consultations to solicit opinions, and feedback sessions once

plans are developed. There is little description of a process that would bring the various individuals and groups that will be impacted by the plan into the ongoing design process. There is nothing to suggest that those that will be impacted will have any agency in making the plan 'our' plan. I recognize that there is a tension between presenting a specific plan and leaving decisions to be made through co-design. A fulsome description of the process for participation in co-design and potential roles for individuals and groups most impacted by the plan would make the assurance of inclusion, accessibility and respect for diversity more believable.

148. As the MIDP process has unfolded, my concerns about Sidewalk's role as developer/proponent have grown for reasons including:

a. **Relentlessly push for what they want while demonstrating very little capacity or good faith to show they are listening** (e.g. how much of our feedback on the draft digital chapter actually made a difference? Is this about a 12 acre site or something much bigger?)

b. **They have used the power of their media machine, depth of their experience, and political connections in Toronto to float new ideas in public to build social license on their own terms while the government partners are hamstrung by regular public process**. Consider DSAP's signing of an NDA to read the draft digital chapter in March 2019. We were all bound to not talk about it until the MIDP was public. But for a month leading up to the MIDP's release, SWL was doing the full court press showing presentations about the MIDP and its ideas to people in philanthropy, community organizations and social enterprises without asking any of them to sign anything but

also asking them to support the project publicly. So they got to sell their plan to leading "city builders" who have little background in tech/data and those of us with expertise are muzzled until the proper release. To me that is not good faith public process.

c. **For all of their talk about agile processes, they have not demonstrated they can work that way in and with government partners/the public in public.** Take the data trust as an example. It was a one bullet point on a slide in the fall of 2017 and then the next thing, 6 months later, it's a 40 slide deck at the DSAP late spring 2018. Wouldn't an agile method have meant they worked iteratively, in public, gathering ideas, building them in, testing them? What about a 1524 page, gorgeously designed boxed set says "draft"?

Substance aside, how comfortable is WT feeling about choosing a development partner who behaves like this? I know WT staff have tried to corral the effort but feels like you have been usurped on many fronts. The Board Chair's letter and the recent amendment to the PDA are curious developments.

Civic Engagement
This section has 2 comments:

149. Tied to the aspirations set out in the PDA that the project would set new standards in urban technologies and city-building, if the plan is serious about public engagement and literacy it should be more forward about creating an engagement model with the public. This includes helping the public frame the discussion with a civic digital literacy onramp into the issues and to assist the public in contributing to the design and implementation of the plan. This should be enabled and delivered by a trusted, and

preferably public-sector or non-profit entity that can partner with citizens/residents in an inclusive and empowering way.

150. In particular, citizen and resident participation with agency (i.e. empowered and influential) is missing from the MIDP. There are references to a Civic Assembly, Care Centres, to the collaboration with Digital Public Square and Collab and to the involvement of residents through GRIT. I would prefer to see these brought together more formally as a civic technology layer, that is owned and executed by citizens, and to enable stakeholders including citizens, residents, business owners and others to have a direct impact on the design of these technologies, the digital layer, and the physical spaces. This impact does not just include consultation, but should include real co-design, initiation and prototyping etc.

Contextual Considerations

General

This section has 1 comment:

151. Seeing the MIDP in isolation cannot be discussed without first considering how Sidewalk Labs, the successful proponent, has behaved thus far. If given the license and approval of our institutions will this pattern of behaviour stop or only intensify? The MIDP shows a grand vision, but their track record puts serious doubt on how they will work moving forward as they move to the most challenging element - implementation.

Questions / Concerns re: Alphabet, Google, other subsidiaries

This section has 4 comments:

152. SWL's CEO has acknowledged that approval of the MIDP depends on winning the public's trust through being transparent and accountable. Many of the issues relevant to Sidewalk Labs' earning sufficient trust and DSAP's ability to adequately evaluate whether the Plan well serves Torontonians interests relate to characteristics of Sidewalk Labs as a corporate entity not directly addressed in the draft MIDP. Controversies around Sidewalk Labs' relationship with Google and other Alphabet subsidiaries are well publicized and contribute to on-going skepticism over SWL's intentions. Two of the main areas of controversy are: a) Alphabet/Google's enormous economic and political power, and b) Alphabet/Google's dominant data-driven business model, based on monopolizing and monetizing user attention and personal information flows, characterized as

surveillance capitalism. How does SWL address these concerns?

153. SWL has clearly taken steps to distance itself from the rest of the Alphabet enterprise, notably by committing to not sell personal information nor use it for advertising. However, this does not fully settle the issue. Among other concerns, what about the role Alphabet and its other subsidiaries might play in the Quayside project?

    Several Alphabet subsidiaries/affiliates will evidently have an interest in participating in the project, eg Google Fibre, Waymo, Intersection, and Replica among others including some with controversial data driven business models. Even if SWL is committed to not giving priority to these corporate siblings, as is explicit in the case of Waymo alone, might they not have exerted influence in developing the MIDP or through involvement with SWL be better poised than their competitors to take advantage of the opportunity?

154. What Alphabet subsidiaries and affiliates were involved in developing the MIDP and in what way? What Alphabet subsidiaries and affiliates might play a part in the Quayside project?

155. Beyond the expected oversight of data collection and use proposals by the UDT, how will SWL ensure that Alphabet's data-driven subsidiaries and affiliates will not enjoy an advantage through their corporate connections over potential competitors?

Taxation
This section has 1 comment:

156. A prominently expressed concern about Alphabet/Google as a corporate actor is its alleged [tax avoidance](#), with it facing multiple investigations and fines in the billions. How much did Alphabet and it subsidiaries earn in Canada in 2018, and how much corporate tax did it pay?

Lobbying

This section has 2 comments:

157. One area in which Alphabet is alleged to wield its corporate power, quite legally but to the possible detriment of the public interest, is in its extensive lobbying activities. (Lobbying in this context includes formal lobbying as commonly understood in a governmental setting as well as more colloquially as targeted persuasion.)

    Please provide a comprehensive report of SWL's various lobbying efforts over the course of this initiative, beginning in 2016. Include the following in this report:

    List of individual lobbyists: 1. name, areas of specialization, relationship to Sidewalk/Alphabet.

    List of lobbying targets: 1. name of organization or individual; 2. type of org (government, federal/prov city, business, non-profit, university); 3. section/ministry/department and 4. area of competence or expertise.

    Lobbying contacts: 1. date, 2. duration, 3. location, 4. mode (in person, email, telephone/conference), 5. SWL rep(s), 6. individual(s) targeted, 7. purpose and topic(s) of lobbying, and 8. incentives, financial and otherwise, offer in exchange for

supporting the Sidewalk TO initiative.

Lobbying expenditures. Broken down by: $ amounts spent on lobbying services, incentives offered, other budgetary sources - under sections of the PDA Budget (esp. (vii) Communications, External Affairs & Engagement), SWL, Alphabet, others.

In addition to providing the lobbying report in document form, please also submit an electronic ('soft') version suitable for query and analysis (e.g. as spreadsheet(s) or SQL database).

158. Please provide further details of SWL's lobbying connections with the Toronto Region Board of Trade. Please explain all of SWL's relationships and interactions with the Board of Trade, and how this contributed to their involvement in this project, especially in relation to the BOT's January 2019 advocacy of a Civic Data Hub as a model for the data trust, and the BOT's July 2019 letter signed by 30 'civic leaders.'

For the public letter, did SWL take the initiative or contribute in any way to its drafting or editing? Which prospective signatories did SWL lobbyists contact, and what forms of encouragement or incentives did SWL offer? (See Shawn Micallef tweet and [Torstar opinion](#) 2019 July 5).

Public Engagement
This section has 1 comment:

159. SWL conducted an impressive range of "public engagement" activities, but the MIDP does not provide sufficient detail about them to assess whether SWL proposals are an authentic reflection of public consultation as normally understood for policy formulation. In various places, there are *What we heard*

sections, followed by *How we responded*. While it is not reasonable for the Plan to incorporate all the suggestions made, it is important to know about the full range of concerns people expressed, including those that SWL chose not to respond to.

How can we tell whether SWL's proposals were genuinely informed by public consultation or whether SWL steered the process in its interests, cherry-picked favourable opinions or used the feedback to avoid criticism while claiming public support?

Other Considerations

This section has 5 comments:

160. Partnership - The proposal could have done a better job of outlining how SWL will engage with the many innovation centres across Toronto, the province and Canada. These entities are in an ideal position to assist with technology development including advanced systems and purposeful solutions.

161. Environmental scan - Much can be learned from the successes and failures of others. It would have been good to see a section about what else is going on around the world beyond a sidebar treatment of X Road (Vol 2)

162. Public sector capacity-building - A very positive commitment to 'transfer knowledge to the public administrator to enable it to take over the advanced systems development role after Quayside and Villiers West'. Building public sector capacity should be an explicit goal of the planning and implementation process. Can Sidewalk elaborate on what additional opportunities exist particularly in the Quayside and Villiers West phases of the project? Maria Mazzucato 'public -private partnership arrangements ... will only succeed as dynamic knowledge-intensive collaborations with both sides equally committed to investing in in-house competencies and capabilities' The Value of Everything.

163. Project Management - Many aspects of the proposal for Quayside require innovations that do not yet exist or integrations that have never been done before. The Program

Management of many inter-related projects across multiple technologies and disciplines is unprecedented. I find the discussion of this under-developed in Volume 3 Chapter 2. These systems, skills and culture are not capabilities that I expect Sidewalk can readily develop in-house.

Real estate developers have some of these skills and in many cases hire construction managers to oversee complex programs as does Waterfront Toronto. The digital content of many of the proposed innovations goes far beyond what those parties would traditionally manage. IT projects often require system integrators to manage complex digital programs.

Approving the MIDP in any form without additional detail and clarity on how implementation would be managed and what types of parties would be engaged by whom, would be high risk for both Sidewalk Labs and Waterfront Toronto.

164. Costs of creating new governance mechanisms - This project, at the scale of the desired IDEA district, makes not even 1% of Toronto's geography and makes me wonder about the tradeoffs from an equity perspective of what the opportunity cost of creating the new governance the MIDP requests will be. Municipal fiscal budgets are very tight right now, particularly around staffing, the assumption that budgets will be made for what at first glance seem as redundant institutions come off as out of touch with the local canadian context (particularly from a position of sustainability over the long term). To evaluate this proposal the City of Toronto had to set aside $800,000, which I highly doubt they expected would be spent at the beginning of the fiscal planning period, but which was a necessary move. Sure, it came out of debt financing reallocated from a capital project now on hold, but what if that project is further pushed

down because of this decision? This project has an opportunity cost for all levels of government, and the MIDP should be more thoughtful about how to minimize this.

New institutions grow as a result of need, often spin off from existing institutions, but won't do so until it is clear existing institutions are unable to meet or hinder that emergent role (e.g. a senior executive being spread too thin as a result of growth in portfolio). No one should discuss the development of these potential agencies in this level of detail. I would recommend instead to focus their proposal to recommendations of what is absolutely needed for the project and how Sidewalk Labs is positioned to help institutions grow into their potential roles.