

**ONTARIO
SUPERIOR COURT OF JUSTICE
(DIVISIONAL COURT)**

B E T W E E N:

**CORPORATION OF THE CANADIAN CIVIL LIBERTIES ASSOCIATION
and LESTER BROWN**

Applicants

and

**TORONTO WATERFRONT REVITALIZATION CORPORATION, CITY OF
TORONTO, HER MAJESTY IN RIGHT OF ONTARIO as represented by the
MINISTER OF INFRASTRUCTURE, HER MAJESTY IN RIGHT OF
CANADA as represented by the MINISTER OF COMMUNITIES AND
INFRASTRUCTURE, AND THE ATTORNEY GENERAL OF CANADA**

Respondents

APPLICATION under sections 2 and 6(1) and 6(2) of the *Judicial Review Procedure Act*, R.S.O. 1990, c. J.1, as amended, and sections 2, 7, 8 and 24 of the *Charter of Rights and Freedoms*.

AFFIDAVIT OF SEAN MCDONALD

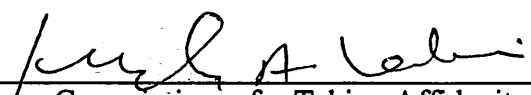
I, SEAN MCDONALD, of the City of Washington, MAKE OATH AND SAY:

Introduction

1. I am the co-Founder of Digital Public, a data governance consulting firm specializing in the use of data trusts. I am also the CEO and General Counsel of Occam Technologies, an international technology company with experience supporting data collection. I earned my law and master's degree from American University and am licensed to practice law in the State of New York, in the United States of America.

2. Attached here as Exhibit "1" is a copy of the report I have prepared in response to a request to give evidence in this proceeding.
3. Attached to my report is the Acknowledgement of Expert's Duty that I have signed as well as my curriculum vitae outlining my education, experience and credentials.
4. The attached report accurately describes the instructions I received, the issues I was asked to address, my opinion respecting each issue and the reasons for my opinion. I have also described the factual assumptions on which my opinion is based, my research, and the documents I relied on in forming this opinion.
5. I believe that my report is accurate, based on the available information. I have prepared this report to the best of my ability.

SWORN BEFORE ME at the City of
~~Toronto~~, in the Province of Ontario on May
...~~28~~..., 2019



Commissioner for Taking Affidavits
(or as may be)

Haresh A. Laheri
NOTARY PUBLIC
Montgomery County, Maryland
My Commission Expires 4/15/20



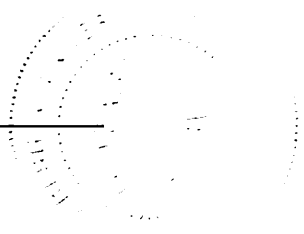
SEAN McDONALD

(Signature) 5.28.19

This is Exhibit "1" referred to in the Affidavit of Sean McDonald
sworn May 28, 2019

Haresh A. Laheri

Commissioner for Taking Affidavits (or as may be)



Haresh A. Laheri
NOTARY PUBLIC
Montgomery County, Maryland
My Commission Expires 4/15/20

May 24, 2019

Fogler, Rubinoff LLP
77 King Street West
Suite 3000, P.O. Box 95
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Re: Expert Opinion on Civic Data Trusts

This report is structured according to:

1. Executive Summary
2. Expert Qualifications
3. Scope of Work and Instructions
4. Background on Sidewalk Labs' Civic Data Trust Proposal
5. Background on Civic Data Trusts
6. Analysis of the MaRS and Sidewalk Proposals
 - a. Urban Data
 - b. The Civic Data Trust
 - c. Localization
 - i. Key Assumptions and Outstanding Questions
 - (a) Trust Creation and Trustorship
 - (b) Data, Licenses, Streams, and Sets
 - (c) Scale, Complexity, and Fiduciary Trusts
 - (d) Beneficiary Definition and Governance Design
 - (e) Data Governance and Intended Impact
 - (f) Investigatory Powers and Enforcement

1. Executive Summary

Sidewalk Labs' data governance proposal surrounding their intended 'smart city' development in Quayside lacks the clarity, completeness, or depth necessary to credibly protect the public's data or privacy. The lynchpin of this proposal is the idea of a Civic Data Trust – an independent governance body that reviews, approves, monitors, and enforces the public's interest in the way that data moves around Quayside. Civic Data Trusts are a promising legal tool, but they remain nascent in application – meaning that there isn't much established best practice, evidence of effectiveness, or legal enabling environment.

The Sidewalk Labs proposal is being developed during one of the most embattled and politically contentious years for large technology companies in recent memory. Alphabet and Google, Sidewalk Labs' parent and sibling company, have made a steady

stream of headlines for anti-trust practices and fines,¹ data privacy investigations,² and unilaterally deciding to change data policies for their in-home sensors, Nest.³ Alphabet, and its subsidiaries, are requesting exceptional collection and use data from places with public privacy protections – and suggesting that their data governance strategy is how they’ll address the major social, commercial, and political issues that arise.

The Sidewalk Labs’ data governance proposal includes three, core components: (1) Urban Data; (2) the Civic Data Trust; and (3) Localization. As proposed, Urban Data is a legally complex concept, that could be difficult to implement, without any clear linkage to the public’s priorities. Similarly, the Civic Data Trust components of the proposal focus on the potential of having an independent data governance mechanism, without ever articulating a singular or complete vision – undermining its ability to allay the public’s privacy and data rights concerns. Sidewalk Labs’ Localization proposal also raises significant questions, not only about how Canadians might exercise their data rights – but how other governments, with authority over Alphabet or its data flows, might exert their jurisdiction over Canadian data. While these proposals are unique and innovative, they are ambiguous about foundational concepts after months of public consultation.

The proposal is openly vague about the legal infrastructure, authorities, and oversight of a Civic Data Trust, obscuring the most determinative characteristics from consultation or analysis. Without understanding, how a Civic Data Trust would be created, what powers a Civic Data Trust might have and over what kind of asset, or who will be represented in its decisions, it’s difficult for experts – let alone the public – to understand the potential for credible privacy and data governance. The Sidewalk Labs proposal doesn’t meaningfully address the Trust creation, what assets a Civic Data Trust controls, how that scales across diverse and competing interests, what core goals it will achieve beyond maximizing data sharing, or what powers a Civic Data Trust might use to achieve those goals. Sidewalk Labs’ data governance proposal is framed as a way of assuring the public that their privacy is paramount, and that they’ll have representation in Quayside’s digital development.

As proposed, the Civic Data Trust is the vehicle for that representation – especially as it relates to protecting privacy and data rights. Based on what we know, though, there isn’t enough information to understand or evaluate the credibility of the legal foundations, institutional authorities, or functional outputs of any of the proposed data

¹ Riley, Charles and Kottasova. “Europe hits Google with a third, \$1.7 billion anti-trust fine. *CNN*, March 20, 2019 <https://www.cnn.com/2019/03/20/tech/google-eu-antitrust/index.html> Accessed May 24, 2018

² Owusu, Tony. “Google is Once again in the EU’s Investigative Sights Over Data Privacy.” *The Street* May 22, 2019, <https://www.thestreet.com/investing/stocks/google-eu-investigation-data-privacy-14969429> Accessed May 24, 2019

³ Song, Victoria. “Nest, as You Knew It, Is No More.” *Gizmodo* May 10, 2019 <https://gizmodo.com/nest-as-you-knew-it-is-no-more-1834667689> Accessed May 24, 2019

governance mechanisms. In other words, Sidewalk Labs' proposal does a very good job of introducing data governance ideas, but doesn't explain how they'd work in practice or achieve their purpose. Without more practical clarity, there's no reason for anyone to believe that Sidewalk Labs' proposed approach to data governance is capable of addressing the large, complicated public policy questions that will inevitably arise from Quayside's digital development.

2. Expert Qualifications

I am the co-Founder of Digital Public, a data governance consulting firm specializing in the use of data trusts. My business partner, Keith Porcaro, and I were some of the first people to explore the use of fiduciaries to manage digital property in 2015 – and contributed to coining the term 'Civic Data Trust'. I am a lawyer, licensed in the State of New York, and provide consulting services to a range of public interest clients, building operational data governance. Our work includes contextual assessment, digital asset ownership auditing, role definition and governance design, and implementation support.

I am also the CEO and General Counsel of Occam Technologies, which is an international technology company with experience supporting data collection and use in 175 countries. I earned my law and masters' degree from American University in 2008 and 2009, respectively, with specializations in international law and alternative dispute resolution. I have been writing on the legal, technical, and social justice impact of data and technology management since 2013. I am currently a Senior Fellow at the Center for International Governance Innovation and Duke University's Center for Law and Technology, where my work focuses on data trusts. I was the inaugural Visiting Fellow at Stanford's Digital Civil Society Lab, where I helped establish and develop the idea of civic data trusts.

My Curriculum Vitae is attached as Appendix B.

3. Scope of Work and Instructions

I was engaged by Fogler, Rubinoff LLP, who are counsel for the Canadian Civil Liberties Association, to provide opinions on the civic data trust model, as described in the *MaRS Civic Digital Trust Primer* and Sidewalk Labs' *An Update on Data Governance for Sidewalk Toronto*.

My instructions are:

To review the proposed data trust model for the Quayside project and provide an opinion on its strengths and vulnerabilities in respect of governance, the use and control of captured data, and collective and individual privacy.

Given that the existing documentation is not final, complete, or binding, I reserve the right to add to or change my opinions based on future details or changes.

4. Background on Sidewalk Labs' Civic Data Trust Proposal

On October 15, 2018, Sidewalk Labs published *An Update on Data Governance for Sidewalk Toronto* – a blogpost and slide deck that outlined the core tenets of their plans for data management related to the Quayside Project.⁴ The slide deck was prepared for Waterfront Toronto's independent advisory board, and the blog post was designed to present the underlying ideas for public consideration.⁵ The proposal is explicitly exploratory, though declarative about the parts of the proposal they do articulate. The Sidewalk Labs proposal focuses on three core tenets: (1) the introduction of a new classification of data, called “Urban Data,” (2) the creation of a Civic Data Trust, which performs a series of data and data rights management functions, and (3) a description of the technical and, arguably, legal approaches they’ll use instead of hosting data collected in Quayside in Canada.

In December 2018, the Canadian consultancy MaRS published the *Civic Digital Trust Primer*, which is an overview and interpretation of civic digital trusts as a concept.⁶ As a disclaimer, I was interviewed as part of the research and my work is prominently cited in their references – though I was not a participant in the workshop, nor did I have any access to, or direct influence on, the content. By its own disclaimer, the Primer is intended as educational and is not legally binding or complete. The Primer was, however, published “in partnership with Waterfront Toronto,” and with “partial funding...provided by Sidewalk Labs,” suggesting that it is indicative of, although certainly not binding on, their priorities.⁷ The Primer is published as a Gitbook, which is a dynamic publication format – meaning that its content is subject to change.

In the ensuing months, MaRS, Waterfront Toronto, and Sidewalk Labs have featured Civic Data Trusts in public meetings and consultations.⁸ None of the sponsoring parties have issued updated proposals or guidance for the Civic Data Trust. Given the delays

⁴ Dawson, Alyssa Harvey. “An Update on Data Governance for Sidewalk Toronto.” *Sidewalk Labs*. October 15, 2018, <https://www.sidewalklabs.com/blog/an-update-on-data-governance-for-sidewalk-toronto/> and “Digital Governance Proposals for DSAP Consultation.” *Waterfront Toronto*. October 2018, https://waterfronttoronto.ca/nbe/wcm/connect/waterfront/41979265-8044-442a-9351-e28ef6c76d70/18.10.15_SWT_Draft+Proposals+Regarding+Data+Use+and+Governance.pdf?MOD=AJPERES Accessed May 16, 2019

⁵ For ease of reference, the Sidewalk Labs presentation and blog post are referred to, from here on, as the “Sidewalk Labs data governance proposal.”

⁶ “A Primer on Civic Data Trusts.” *MaRS*. December 18, 2018 <https://marsdd.gitbook.io/datatrust/> Accessed May 16, 2019

⁷ “About this Primer.” *MaRS*. December 18, 2018 <https://marsdd.gitbook.io/datatrust/about-this-primer> Accessed May 16, 2019

⁸ Roth, Amanda. “MaRS Solutions Lab developing data trust primer for Waterfront Toronto and Sidewalk Labs.” *Logic* December 14, 2018. <https://thelogic.co/briefing/mars-solutions-lab-developing-data-trust-primer-for-waterfront-toronto-and-sidewalk-labs/> Accessed May 16, 2019

in the release of the Master Innovation and Development Plan for Sidewalk Toronto, these documents are the best publicly available reflection of Sidewalk Labs' plans for data governance in the Quayside Project.

5. Background on Civic Data Trusts

Civic Data Trusts are an emerging approach to building governance over data and data rights management. They are still relatively nascent in practice, certainly at scale, so defining them is a commercially and politically contested space.

There are generally two ways that groups are trying to define Civic Data Trusts: (1) focusing on examples of models that do what a group functionally wants it to do, and calling those things a “trust”⁹; or (2) starting from the specific legal definition, and focusing on use cases that do, or could, use that model.¹⁰ The MaRS Primer, for example, speaks specifically to the legal ‘trust’ model, whereas the Sidewalk Labs proposal doesn’t specify a legal approach – and instead points to a range of examples of things that aren’t legal trusts, but play a role in public data management.¹¹ Here, we’ll use the second approach, as it gives us a tangible starting point to define and analyze the terms:

“Data trusts are legal trusts that manage data, or the rights to data. Civic data trusts move beyond single trustees and build models of fiduciary governance over the management, use and sharing of rights to data. By contrast, civic digital trusts are civic trusts that hold digital assets, like code or a subset of digital rights.”¹²

Civic Data Trusts have political potential because of three things that are happening at the same time.¹³ The first is that technology companies are increasingly caught in the middle of, and held liable for, a range of social, political, and commercial conflicts. The second is that a range of governments are imposing penalties under different, and

⁹ “Examples of Civic Digital Trusts.” *MaRS*. December 18, 2018 <https://marsdd.gitbook.io/datatrust/trusts/global-examples> Accessed May 16, 2019

¹⁰ McDonald, Sean. “Reclaiming Data Trusts.” *CIGI Online* March 5, 2019 <https://www.cigionline.org/articles/reclaiming-data-trusts> Accessed May 19, 2019

¹¹ “What is a Trust?” *MaRS*. December 18, 2018 <https://marsdd.gitbook.io/datatrust/trusts/what-is-a-trust> Accessed May 16, 2019 and “Digital Governance Proposals for DSAP Consultation,” slide 12. *Waterfront Toronto*. October 2018, https://waterfrontoronto.ca/nbe/wcm/connect/waterfront/41979265-8044-442a-9351-e28ef6c76d70/18.10.15_SWT_Draft+Proposals+Regarding+Data+Use+and+Governance.pdf?MOD=AJPERES Accessed May 16, 2019

¹² McDonald, Sean. “Reclaiming Data Trusts.”

¹³ Wylie, Bianca, and McDonald, Sean. “What Is a Data Trust?” *CIGI Online* October 9, 2018 <https://www.cigionline.org/articles/what-data-trust> Accessed May 19, 2019

sometimes competing, theories of law, forcing companies to politically prioritize compliance.¹⁴ And, at the same time, there are a lot of interests, with an infinite variety of motivations, pushing for legal ways to share data. The confluence of these three trends calls for a credible vehicle for public oversight of data governance. For technology companies, it limits regulatory exposure. For governments, it pluralizes and outsources a layer of regulatory administration. And, for the public, it creates a way to hold data stewards responsible for their decisions.

As a result, users and public institutions all over the world are developing creative means of creating accountability around data companies and markets. In American legal scholarship, some first amendment attorneys suggest using fiduciary duties as a way to articulate the role of data companies.¹⁵ While that may seem academic, American jurisdiction may be influential as the host country of Alphabet, Sidewalk Labs' parent company, and pending judicial decisions over how extranational data hosting affects jurisdiction. Civic Data Trusts are the culmination and confluence of all three –a contractual vehicle that can create fiduciary duties in digital spaces. Civic Data Trusts represent a model we can use to experiment with data governance models, with legal accountability, in ways that de-risk data markets for industry and public interest users. That said, there are very few data trusts with such a broad mandate in existence, let alone Civic Data Trusts. As a result, very little precedent or dedicated enabling legislation exists for how they might work in practice, or be held accountable by their beneficiaries.

6. Analysis of Sidewalk Labs' Proposal

Sidewalk Labs describes these documents as a proposal, but they aren't structured or described in ways that distill into a clear idea or enable detailed analysis. Sidewalk Labs is playing the dual role of proposing a data governance infrastructure for the Quayside Project, and a vendor whose work may be regulated by that data governance infrastructure. If Sidewalk Labs' MIDP is approved, containing a Civic Data Trust, they will be in the unique, and potentially conflicting, position of having designed the mechanism charged with their oversight.

The Sidewalk Labs proposal, taken together, focus on the market conditions that they, as a data company, want to exist in Quayside, and abstract nearly everything else to the to-be-determined specifics of a Civic Data Trust. Both Sidewalk Lab's proposal and the MaRS deal with consent requirements, privacy, and data ownership, while remaining vague on the interests, powers, resources, representation, legal personality, or justification for the Civic Data Trust. As a result, there's no reason to believe that the

¹⁴ McDonald, Sean. "How Regulations are Shaping Digital Companies." *CIGI Online* April 15, 2019 <https://www.cigionline.org/articles/how-regulations-are-reshaping-digital-companies>
Accessed May 19, 2019

¹⁵ Balkin, Jack M. and Zittrain, Jonathan. "A Grand Bargain to Make Tech Companies Trustworthy." *The Atlantic* <https://www.theatlantic.com/technology/archive/2016/10/information-fiduciary/502346/>
Accessed May 19, 2019

mechanisms proposed are capable of preventing privacy abuses, balancing competing social interests, or ensuring public accountability. The clearest statements in the proposal are best understood as policy requirements – where they suggest market dynamics, decision-making authorities, limitations, and core functions.

This analysis is structured in three parts: (1) an analysis of the core components of Sidewalk Labs' proposal – Urban Data, the Civic Data Trust, and localization; (2) key assumptions and outstanding questions; and (3) conclusions.

(a) Urban Data

Sidewalk Labs proposes to create a category of data created under the authority of the Civic Data Trust, in Quayside, called “Urban Data.” According to the proposal, Urban Data is “data collected in the physical environment,” of the Quayside development.¹⁶ Prior to a substantive analysis, however, it's worth recognizing that a potentially conflicted vendor proposing a new category of data classification, is an atypical, at best, way to approach framing public interest data governance requirements.

While there is clearly a practical benefit to having a term for the data generated specifically through the Quayside project, Sidewalk Labs is carefully defining the concept to avoid any suggestion that data collected through websites or commercial devices is included.¹⁷ Sidewalk Labs' proposal says that the reason Urban Data is unique is because it's “collected in a physical space,” is a meaningless distinction – all data is collected in a place.¹⁸ Ultimately, the proposal to use a new category of Urban Data has the potential to both pre-empt and undermine the independence of any public-led data governance, while requiring public and institutional support for several untested legal concepts.

The first is the logic underpinning Urban Data. Sidewalk Labs asserts that Urban Data should be a “public asset,” which should be made “open and freely accessible to the public,” by an ambiguously resourced, independent Civic Data Trust.¹⁹ It's worth unpacking that as a proposal - Sidewalk Labs is saying that (1) data collected in a specific physical environment (Quayside) should have a unique legal status (Urban Data); (2) as a “public asset,” but also “there wouldn't be ownership of data,”²⁰ which are conflicting concepts and based in property law, and; (3) therefore should be

¹⁶ “Digital Governance Proposals for DSAP Consultation,” slide 13. *Waterfront Toronto*. October 2018, https://waterfronttoronto.ca/nbe/wcm/connect/waterfront/41979265-8044-442a-9351-e28ef6c76d70/18.10.15_SWT_Draft+Proposals+Regarding+Data+Use+and+Governance.pdf?MOD=AJPERES Accessed May 16, 2019

¹⁷ “Digital Governance Proposals for DSAP Consultation,” slide 14.

¹⁸ “Digital Governance Proposals for DSAP Consultation,” slide 14.

¹⁹ “Digital Governance Proposals for DSAP Consultation,” slide 15.

²⁰ Dawson, Alyssa Harvey. “An Update on Data Governance for Sidewalk Toronto.”

managed by an independent Civic Data Trust, without specifying what kind of entity it should be or how it would protect its independence; (4) whose primary function is to grant licenses, host and maintain data, and investigate and enforce license limitations, without any articulation of the basis, legal justification, or checks on those powers.²¹ Before even approaching the substantive merits of each suggestion, it's worth recognizing the complexity and diversity of authorities and theories implicated in implementing Urban Data.

To embrace some of that complexity, this analysis raises several of the high-level issues raised by Urban Data. At a fundamental level, this proposal emanates from a real estate development contract – which is commercial in nature, implicating a number of legal requirements and public protections that may differ from those applied to public authorities. Here, the Civic Data Trust is an independent, ambiguously public entity that receives applications for, and grants licenses to, place sensors and access data collected in the Quayside project. That data, once collected and de-identified, is then openly accessible as a “public asset,” and also subject to use-based restrictions.²² Sidewalk Labs also suggests, however, that “The Trust will have no power to grant exemptions from existing privacy law.” The same document suggests that clarity of usage may substitute for consent “for Urban Data in public spaces, where meaningful consent cannot be reasonably or reliably achieved.”²³ Taken together, these provisions suggest that a to-be-defined Civic Data Trust should be able to grant data collection licenses for commercial activities in Quayside that do not require explicit consent.

Neither Sidewalk Labs nor MaRS propose a specific legal framing for data – and Urban Data is described as “ownerless” and under the “management” of a Civic Data Trust. It's hard to understand, then, whether the rights the Civic Data Trust has to Urban Data are based in property or contract. As Canadian scholar Teresa Scassa wrote, Canadian Law does not clearly classify data as property, any legally significant classification – whether “public” asset or “ownerless” – would likely require a change of law.²⁴ Presumably, though not explicitly, the data collection licenses that a Civic Trust is able to issue are limited to “Urban Data,” and would also include the de-identification and open release requirements described in Sidewalk Labs' proposal.²⁵ If so, those are better understood as functionally standalone policy proposals, which may pre-empt the authority of the Civic Data Trust to define licensing conditions, rather than practical or legal requirements of public data governance.

²¹ “Digital Governance Proposals for DSAP Consultation,” slide 15.

²² “Digital Governance Proposals for DSAP Consultation,” slide 15.

²³ “Digital Governance Proposals for DSAP Consultation,” slide 15.

²⁴ Scassa, Teresa. “Data Ownership.” *Center for International Governance Paper No. 187*. September 4, 2018. <https://www.cigionline.org/publications/data-ownership> Accessed May 16, 2019

²⁵ “Digital Governance Proposals for DSAP Consultation,” slide 15.

Sidewalk Labs suggests that a Civic Data Trust should be the entity to evaluate sensor placement, data collection, and data use proposals. That said, it's not clear how a Civic Data Trust might evaluate those proposals. Despite creating three categories of Urban Data, based on the protections afforded under generic privacy law – there's no significant difference in the proposed role of the Civic Data Trust based on each category.²⁶ Further, Sidewalk Labs uses this taxonomy to explicitly exempt commercially collected data from becoming a public asset or subject to Civic Data Trust governance processes, because “Urban Data is anchored to geography, unlike data collected through websites and mobile phones.” It's unclear why relationship to geography should define the available licensing or ownership models of an independent entity like a Civic Data Trust under the authorities of a real estate development contract.

Similarly, the Urban Data Table includes a section where it commits to working through the Civic Data Trust “for transparency,” suggesting that Sidewalk Labs may otherwise view itself as exempt from, or unique to, the proposed data governance regime.²⁷ In the absence of a clearer articulation of the relationship between the government, the Civic Data Trust, and Sidewalk Labs, it's impossible to evaluate the rights or recourse available to stakeholders in Quayside. Without understanding what rights apply, or what mechanisms might enforce them, there's no reason to assume that the data collected in Quayside would be immune from the same privacy, bias, breach, agency, power asymmetry, and data rights issues that have been well-reported in large, public data systems of similar scale.²⁸

Urban Data, as proposed, raises more questions about data regulation in smart cities than it answers. The proposal does not clearly articulate the public benefit of Urban Data beyond access, and instead focuses on suggesting the market conditions, governance process around, and consent requirements that apply to data vendors. Further, the proposal doesn't clearly articulate the intended limitations of Urban Data as a data classification and, if approved as a component of the MIDP, may have effects that extend beyond the scope of the Quayside Project. Sidewalk Labs' proposal that Urban Data be open and publicly accessible, also pre-empts the authority of the Civic Data Trust and could limit its tools for enforcement. As a frame for public interest data governance, rights protection, or way to maximize the value of data emanating from Quayside, Urban Data prioritizes the interests and protections of data markets over the government or the public.

²⁶ “Digital Governance Proposals for DSAP Consultation,” slide 16.

²⁷ “Digital Governance Proposals for DSAP Consultation,” slide 16.

²⁸ There are a wide range of examples of scholarship analyzing the role of surveillance, algorithms, discrimination, and technology in public institutions and spaces. It's not possible to capture the whole universe of that work, but the work of Julia Angwin, Safiya Noble, Virginia Eubanks, Julia Buolamwini, Ben Green, is illustrative, among many, many others. A list of indicative works documenting abuses of that character are provided in the secondary source list in Appendix B.

(b) The Civic Data Trust Proposal

The MaRS Primer and Sidewalk Labs proposal present a broad spectrum of options for the definition and potential application of a Civic Data Trust. Each interpretation has implications for the likelihood and effectiveness of public data governance of the Quayside Project. The range of available options suggests that there's flexibility in determining the exact mechanism used to govern data. However, the multiple, sometimes contradicting, approaches articulated in MaRS and Sidewalk Labs' proposals undermine clear and definitive analysis. As a result, while there are examples of partial solutions that might work in whole, or in part – there isn't a single, specific proposal that explains the intended powers, rights, or political context of the Civic Data Trust.

Framing Authorities

The MaRS Primer and Sidewalk Labs' proposal do not make concrete assertions about the basic legal, governance, or functional details of using a trust. The MaRS Primer is more specific in its definition of trusts – they describe it as the legal structure in the “What is a Civic Digital Trust?” section, including the core elements of traditional trusts.²⁹ Despite focusing on the legal form, the MaRS primer seems confused about the role of trustees in a “civic,” trust – which both points to the importance and legal character of a “host” trustee, without explaining the significance or difference between that role and other trustees.³⁰ Trustee selection, and the relative power of trustees, is a definitional characteristic in the governance of any Civic Data or Digital Trust. The open-ended nature of the proposals makes it difficult to meaningfully engage with ambiguities in important, core concepts – like whether a “host” trustee is the trustee – or just one trustee, that acts as sponsor and institutional housing for, an otherwise equitable governance mechanism, or something else.³¹ Trustee definition is one, integral example of the ways that these proposals fail to establish enough detail for meaningful public consultation or analysis of impact on data privacy, rights, and governance.

The MaRS Primer also suggests that the legal character of the trustee may influence the applicability of privacy law, by going to great lengths to document the privacy law that applies to each category of suggested trustee.³² The same section of the primer also recognizes the role of commercial activity in defining the compliance regime – and, presumably, contests whether the Quayside Project constitutes a qualifying

²⁹ “What is a Civic Digital Trust?” *MaRS*. December 18, 2018 <https://marsdd.gitbook.io/datatrust/trusts/what-is-a-civic-digital-trust> Accessed May 16, 2019

³⁰ “Business Model Options.” *MaRS*. December 18, 2018 <https://marsdd.gitbook.io/datatrust/trusts/business-model-options> Accessed May 16, 2019 and “Design Principles for a Civic Digital Trust.” *MaRS*. December 18, 2018 <https://marsdd.gitbook.io/datatrust/trusts/design-principles> Accessed May 16, 2019

³¹ *MaRS*, “Business Model Options.”

³² *MaRS*, “Business Model Options.”

commercial activity – or relies on another basis to determine the applicable privacy and consent requirements.³³ The Sidewalk Labs proposal is more open-ended on legal personality – and instead describes a specific data licensing workflow for sensor vendor management, administered by the Civic Digital Trust.³⁴ In both documents, the cited examples of trusts, other than Truata, do not meet their own definition of trusts.³⁵ As a result, the proposals have the effect of taking specific, if conflicting, positions on the laws that apply to Civic Data Trusts, without explaining why, or how, they advance their stated goals or intended purpose.

The ambiguity within and between the Primer and Proposal documents enables Sidewalk Labs to speak in abstract terms about how public influence should work, while making specific policy proposals. One impact of that approach is that it makes the design of the data governance mechanism seem confusing, conflicting, or unrelated to functions its intended to achieve, while advocating for policies that should be the outcome of whatever public data governance is built. For example, the MaRS Primer concurrently positions Civic Digital Trusts as the legal contract, gives examples that are not legal trusts, and suggests that the law applied to data trust activities should be determined by the legal personality of the trustee.³⁶ The Sidewalk Labs proposal doesn't suggest a legal character for the Civic Data Trust, gives examples without explaining how they might apply in Quayside, and introduces a specific, if self-contradicting, description of the functional roles a trust might play. Despite the confusions within and between those proposals for Civic Data Trusts, they do uniformly include proposals for creating a legal basis for data sharing and defining the conditions and characteristics of the data a Trust might license. These proposals create, conflict, and undermine the authority of Civic Data Trusts at the same time. As proposed, there's no articulated justification for Sidewalk Labs' authority to determine the conditions of the Quayside Project data market.

Similarly, the Sidewalk Labs' proposal suggests requiring that all approved vendors publish de-identified versions of the Urban Data they collect through the Quayside Project. While this could increase public access to data collected in Quayside, it could also limit the discretion of the Civic Data Trust to create unique vendor relationships – which is a significant imposition on an organization charged with maintaining market equity. That same limitation could prevent the Civic Data Trust from gaining an advantage over individual vendors, by being able to aggregate data across individual uses. This is another example of the complexity, and potential conflicts of interest, posed by Sidewalk Labs' role as proposing a data governance oversight for a development and market where they are also a vendor. As proposed, there's no

³³ *MaRS*, “Business Model Options.”

³⁴ “Digital Governance Proposals for DSAP Consultation,” slide 15.

³⁵ “Examples of Civic Digital Trusts.” *MaRS*. December 18, 2018 <https://marsdd.gitbook.io/datatrust/trusts/global-examples> Accessed May 16, 2019

³⁶ *MaRS*, “What is a Civic Digital Trust,” “Business Model Options.”

articulated justification for Sidewalk Labs' authority to determine the conditions of the Quayside Project data market.

Functional Justifications

Beyond defining basic authority, the Civic Data Trust proposals don't clearly articulate the relationship between data governance and the social justice justifications for their role, like public ownership, representation, and security. For example, the MaRS Primer presents several functional roles in its "Nutshell" description, and several high-level objectives for the Civic Digital Trust in its "Aspirations for a Civic Digital Trust," section, without explaining how the proposed trust, governance model, or data workflow would achieve those goals.³⁷ Similarly, the MaRS Primer section on "The Need for Security," highlights the importance of security without suggesting how a trust, or data governance, generally, would improve practical data security.³⁸

The MaRS Primer's use case examples are all data sharing use cases, which describe workflows and examples of the kinds of problems smart city data sharing might solve. Similarly, the MaRS Primer section on "The Need for Privacy," argues for the impracticality of consent requirements for private companies in smart cities.³⁹ These are both important practical considerations, but by no means the only reason for, or functional potential of, participatory data governance in the oversight of the Quayside Project's digital footprint. As proposed, the Civic Data Trusts serves the needs of data companies in Quayside, without a clear articulation of how that relates to accomplishing the stated social purposes of serving public interest, solving civic problems, or empowering stakeholders.

Sidewalk Labs' proposal suggests that a Civic Data Trust's governance should be able to do procedurally complex tasks like "ensuring compliance with data protection and privacy laws," while "reliably and speedily – potentially automatically – approv[ing] accurate, self-certified applications," to place sensors and collect data.⁴⁰ Self-certification and regulation approaches are notoriously ineffective at ensuring compliance – Cambridge Analytica, for example, self-certified that they'd deleted the data they'd illegally procured from Facebook.⁴¹ Even were self-certification effective, the suggestion of automated approval processing, no matter the sensitivity of the data,

³⁷ "Aspirations for a Civic Digital Trusts." *MaRS*. December 18, 2018 <https://marsdd.gitbook.io/datatrust/trusts/aspirations> Accessed May 16, 2019

³⁸ "The Need to Govern the Digital Layer." *MaRS*. December 18, 2018 <https://marsdd.gitbook.io/datatrust/smart-cities/governing-the-digital-layer> Accessed May 16, 2019

³⁹ *MaRS* "The Need to Govern the Digital Layer."

⁴⁰ "Digital Governance Proposals for DSAP Consultation," slide 15.

⁴¹ Ng, Andrew. "Facebook's 'proof' Cambridge Analytica deleted that data? A Signature." *CNET* May 16, 2018 <https://www.cnet.com/news/facebook-proof-cambridge-analytica-deleted-that-data-was-a-signature/> Accessed May 16, 2019

is an indication of the desired level of scrutiny. It's clear that the priority is to maximize the total amount of open data sharing, while there's very almost no attention paid to threat modeling, risk assessment, or mitigation tactics.

Sidewalk Labs' proposal suggests technical approaches like de-identification to largely social challenges, like privacy. Of course, de-identification is dubiously effective in protecting privacy in practice, even if it achieves compliance in process.⁴² Both proposals center the role of Civic Data or Digital Trusts on managing some aspect of data collection or use, while ensuring vendor compliance – as opposed to maximizing the public interest in the use of digital rights and licenses in the Quayside Project.

There isn't a clear relationship between the Civic Data Trust's proposed activities and the public interest benefits or impacts listed as justifications for the necessity of data governance. The two, specific use cases that the Civic Data Trust proposals engage directly are: (1) facilitating data sharing through open licensing Urban Data by default, hosted public access mechanisms, and defining an application process for placing new sensors; and (2) managing the challenges and liabilities associated with user consent.

At a basic, structural level, the Civic Data and Digital Trust proposals are vague about the core components of data governance and the ways these mechanisms address the concerns or needs of the Quayside Project. While these contradictions may be resolvable, they are opposed in ways that suggest competing conceptions of the principles and processes of practical data governance. These contradictions are understandable in the early stages of planning, though they limit the possibility for meaningful public debate and undermine the consultation process. Without that consultation, it's impossible to independently gauge the merits, or public acceptance, of the proposal of Civic Data Trusts as the defining data governance mechanism for the Quayside Project.

(c) Localization

Sidewalk Labs' proposal includes a refusal to localize data in Canada, but a promise to use a combination of legal and technical approaches to ensuring the spirit of Canadian data protection law applies.⁴³ A subsequent Waterfront Toronto document on "Implementation Requirements," states that "Jurisdictional localization and equivalent protection provisions consistent with Canadian data protection laws will be incorporated," as well as "Data will be stored in Canada as a first principle, unless

⁴² de Montjoye, Yves-Alexandre; Radaelli, Laura; Singh, Vivek Kumar; Pentland, Alex. "Unique in the shopping mall: On the reidentifiability of credit card metadata." *Science* January 30, 2015 <https://science.sciencemag.org/content/347/6221/536> Accessed May 16, 2019

⁴³ Dawson, Alyssa Harvey. "An Update on Data Governance for Sidewalk Toronto."

there is a documented reason, beyond business case/finance, that precludes the data from remaining here.”⁴⁴

Sidewalk Labs’ does not, however, provide any detail about what those approaches might entail, and instead provides a one-sided analysis of the challenges posed by localization. Ultimately, Sidewalk Labs’ proposals around data governance raise three, fundamental questions: (1) can a real estate development contract create, or absolve, data localization requirements; (2) what does it mean to proxy data localization through contractual provisions and technical protections; and (3) if data isn’t localized, does that enable extra-national governments to project their jurisdiction over data collected in the Quayside Project?

Localization Authority

According to the Sidewalk Labs’ proposal, and other than the Waterfront Toronto requirement, there aren’t any legal requirements for ‘data residency’ or localization raised by the Quayside Project.⁴⁵ The underlying question is whether there are any pre-existing laws that would require data collected in Quayside to be stored locally, or whether the requirement to store data in Canada comes from this procurement. Sidewalk Labs’ resistance to localizing data highlights the ambiguity surrounding the existence of, basis for, or institutional authorities implicated in data localization requirements for publicly sanctioned real estate development procurement. Without a clear government stance on how to define, frame, or enforce the requirements for Quayside Project data it may be premature to initiate practice based on a vendor proposal. It’s worth raising that compliance with Canadian law isn’t the only reason to localize data – there are security reasons, normative self-determination reasons, intellectual property reasons, and jurisdictional restriction limitations, among others. Sidewalk Labs’ approach to approximating localization does not explicitly address or solve any of the other animating factors.

Localization Equivalency and Proxy

Sidewalk Labs’ proposal cites the Business Council of Canada’s position that Canadian legal protection can best be achieved through “contractual requirements and technical mechanisms.”⁴⁶ The Canadian Government has not issued guidance on data localization in smart cities in general, or the functional requirements of a localization “equivalent” for Quayside in specific. Without any articulated rationale for the

⁴⁴ Verner, Kristina. “Data Privacy & Digital Governance,” pg. 96. *Digital Strategy Advisory Panel Presentation, Waterfront Toronto* December 13, 2018 <https://waterfronttoronto.ca/nbe/wcm/connect/waterfront/246c0b92-a561-45bb-8b6c-2ede39e3b492/meeting+book+-+digital+strategy+advisory+panel+-+meeting+ +6+December+13+2018+revised+12-12.pdf?MOD=AJPERES> Accessed May 24, 2019

⁴⁵ Dawson, Alyssa Harvey. “An Update on Data Governance for Sidewalk Toronto.”

⁴⁶ Dawson, Alyssa Harvey. “An Update on Data Governance for Sidewalk Toronto.” and “Digital Governance Proposals for DSAP Consultation,” slide 35.

existence, or absence, of data localization requirements, it's nearly impossible to evaluate whether contractual and technical proxies for Canadian legal jurisdiction are sufficiently capable of protecting Canadians' privacy or other data rights.

Rather than articulate a data governance mechanism design that addresses the underlying concerns, Sidewalk Labs' proposal focuses on reasons why localization is inconvenient and impractical. In fact, the Sidewalk Labs proposal doesn't affirmatively propose anything, it simply argues against localization requirements. That, of course, raises a large number of additional questions about the ways that a Civic Data Trust, or any data governance mechanism, might interact with an approximated data localization infrastructure. A Civic Data Trust's enforcement authority, for example, rests in part on its ability to control access to data, which will be hard to enforce without control over where it's kept. As it stands, the Sidewalk Labs proposal is more of an argument against localization than an articulation of what might serve the same purpose – and the extension of Canadian jurisdiction to data stored outside of its borders is likely to have complex, and potentially unanticipated, political and technical ramifications.

Extra-national Jurisdiction Over Quayside Data

It is also unclear whether or not Sidewalk Labs hosting data outside of Canada will, effectively, give extra-national actors jurisdiction over data generated in Quayside. The physical location of data storage – and the corporate infrastructure necessary to manage data centers – are common ways that governments exert jurisdiction over digital spaces, and the things they represent. Sidewalk Labs' proposal doesn't articulate any detail about the architectural, legal, or political approaches to protecting Canadian legal primacy over Quayside data. The proposal also fails to address how it might cope with, or compensate or, attempts by extranational companies or governments to exert control over Quayside data. While there's been a significant amount of concern about commercial concessions to extranational companies, there's been surprisingly little discussion of the political implications of a foreign government influencing Canadian data.

Ultimately, localization is a political data governance decision. As I've written about, data architecture often plays a role in determining whose jurisdiction, and therefore, whose data rights, are, or aren't, enforced.⁴⁷ The Sidewalk Labs position is that data localization isn't required or convenient, and that they can build whatever's necessary using alternative approaches. Waterfront Toronto's position is that local storage is the default, unless there's a documented, non-financial reason to do otherwise – although there's no detail about who makes that decision, based on what, or under what oversight. Ultimately, it's not clear that the Canadian Government has a defined localization policy or objective, that Sidewalk Labs understands the potential threat models, or that there is any institutional infrastructure for adjudicating international,

⁴⁷ McDonald, Sean. "How Regulations are Reshaping Digital Companies." *CIGI Online* April 15, 2019 <https://www.cigionline.org/articles/how-regulations-are-reshaping-digital-companies> Accessed May 16, 2019

sovereign conflicts over data – all of which are, at least, contestable assertions. Framing data localization around the Canadian Government's enforcement of privacy law narrows the potential benefits of localization, and ignores the threats emanating from internationalizing the processing and storage of public data.

Localization is yet another component of Sidewalk Labs' data governance proposal which focuses on solving for their own compliance priorities instead of the interests of Quayside, the institutional concerns of the Government of Canada, or the quality of the data governance infrastructure itself.

i. Key Assumptions and Outstanding Questions

In the absence of a specific model, there are several open-ended assumptions and questions that are likely determinative of the fitness of the proposal and the readiness of Toronto's enabling environment.

Prior to engaging in the individual merits or limitations of the proposal, it's also worth saying that this analysis assumes that the parties to this deal are acting in good faith and that negotiations will solve a number of the common pitfalls of 'technology-company-as-public-infrastructure provider' that have become common knowledge. Technology companies, for example, approach product development with less process and appreciation for user dependence than public authorities – meaning that foundational infrastructure systems could be discontinued with no plan for replacement, and very little notice, as happened with Google Fiber in Louisville, Kentucky.⁴⁸ In addition to physical infrastructure, Alphabet shuttered products based on its business interests, not public interest or reliance, as evidenced through projects like Google Reader, as well as less popular services like Google+, Google Wave, and Spotlight Stories. This analysis assumes that the contracting processes surrounding the Quayside Project will prevent Sidewalk Labs, and any other licensees, from unilaterally discontinuing lines of products or services with sizable public reliance, absent public approval and alternative planning.

Similarly, unless the authorities are carefully negotiated to be bi- or multi-lateral, Sidewalk Labs may have the authority to unilaterally alter key terms of contracts, like privacy protections. Alphabet did this recently, when they announced that Nest data – which they initially promised would remain separate from users' Google profile – would be combined with the rest of their data infrastructure.⁴⁹ Essentially, when Google acquired smart home thermostat company, Nest, they assured customers that the data they collected through the company would be kept and managed separately, in order

⁴⁸ Holt, Kris. "Google Fiber to shut down in Louisville after ongoing service issues." *Engadget* February 7, 2019 <https://www.engadget.com/2019/02/07/google-fiber-louisville-shutting-down/> Accessed May 19, 2019

⁴⁹ Amadeo, Ron. "Nest, the company, died at Google I/O 2019." *ArsTechnica* May 10, 2019 <https://arstechnica.com/gadgets/2019/05/nest-the-company-died-at-google-io-2019/> Accessed, May 19, 2019

to avoid violating their privacy.⁵⁰ At Google I/O, the company's trade show, Alphabet announced that they were merging Nest products with their home assistants, and removing all of those data protections. Alphabet is famous for unilaterally altering data licensing, architecture, and underlying contractual terms. This analysis assumes that the underlying contractual negotiations, beyond this plan, will establish mechanisms that prevent Sidewalk Labs, or any data vendor, from changing the underlying terms of data- and privacy relevant contracts without public approval.

Lastly, this analysis assumes that any approved development plan will fully define and contextualize the scope of "data governance," – including how any data governance body would work with typical public governance and oversight bodies, like the city council. This is especially important, as Sidewalk Labs is likely to remain a private company – which often struggle with politically sensitive or contentious situations. The most recent example of this was Alphabet's recent proposal, and then almost immediate dissolution of, their Artificial Intelligence Ethics Board.⁵¹ While it's easy to criticize the ethics of companies, the larger issue here is the vulnerability to accusations of political agency, especially at the international level. Whatever data governance mechanism does take shape in Quayside will need a capacity for resolving, or engaging with mechanisms designed to resolve, political controversies that arise from digital and data governance.

The Sidewalk Labs proposal defines its approach to data governance to Urban Data - data collected through sensors embedded in the physical environment in Quayside.⁵² That said, a number of the available approaches to contractually determining, standardizing, or enforcing data governance requirements will rely on additional, external authorities. These aren't flaws, per se, but they are areas that are either unraised or unresolved by Sidewalk Labs' existing proposals – and questions that are adjacent to, but fall outside of the scope of, analyzing the Civic Data Trust and attendant data governance in Quayside.

a. Trust Creation and Trustorship

The typical approach to creating a trust is that an owner donates an asset to a beneficiary, subject to the terms of the agreement and the management of a trustee. As envisioned by Sidewalk Labs' proposal, the Civic Data Trust's primary asset is the authority to review and approve sensor placement, data collection and use, and

⁵⁰ Wohlsen, Marcus. "What Google Really Gets Out of Buying Nest for \$3.2 Billion." *Wired* January 14, 2014 <https://www.wired.com/2014/01/googles-3-billion-nest-buy-finally-make-internet-things-real-us/> Accessed May 19, 2019

⁵¹ Murgia, Madhumita, and Shrikanth, Siddarth. "How Big Tech is struggling with the ethics of AI." *Financial Times* April 28, 2019 <https://www.ft.com/content/a3328ce4-60ef-11e9-b285-3acd5d43599e> Accessed May 19, 2019

⁵² "Digital Governance Proposals for DSAP Consultation," slide 15.

manage public-facing data architecture.⁵³ Unfortunately, Sidewalk Labs' proposal doesn't propose a basis of authority for the Civic Data Trust – based on its role, one might infer it “owns” the rights to data collection in Quayside, but there's no explanation of who would grant those rights, why they're entitled to do so, or how they convey.

This raises several additional issues: (1) the authority to grant data collection licenses isn't usually treated as a defined property interest, which is a requirement of the asset donation that creates a trust; (2) it's not clear what entity has the authority to delegate those functions to a Civic Data Trust – or how that affects the duties and liabilities that emanate from those decisions; and (3) whether the enforcement authorities granted to the Civic Data Trust are based on ownership rights, contracted duties, or some other form of quasi-public authority. Each issue, and theory of authority, defines who has recourse and what mechanisms they're able to engage to enforce it.

Trustors have significant influence over the terms and conditions of a trust, so the founding asset frames a significant amount of the downstream dynamics. Here, it's not clear whether Sidewalk Labs, Waterfront Toronto, or the vendors approved by the Civic Data Trust are the grantor – and what combination of ownership, regulation, contract, and licensing are intended to underpin the supply chain of rights management required. With this much foundational ambiguity, it's hard to understand how the proposed structures could investigate or enforce even basic licenses, let alone some of the more complicated and contextual issues, like the security, privacy, equity, or competitive markets goals suggested by the MaRS Primer.⁵⁴

b. Data Licenses, Streams, and Sets

Data is a dynamic asset – and data produced by sensors remain in continuous production until it fails or is removed. As described, the Civic Data Trust reviews Responsible Data Impact Assessments in order to grant a single license to place a proprietary sensor, collect data, and use data under a set of agreed conditions.⁵⁵ The Civic Data Trust proposals are ambiguous about whether the intended licensing structure is that: (1) the trust owns the sensor and licenses the data, (2) the trust owns the data stream as a condition of licensing the sensor, (3) the trust includes a republication requirement for de-identified data as a condition of its license to operate in Quayside, or (4) something else entirely.

Given that trusts are typically designed based on asset contribution, the structure of licensing frames the authorities of all of the parties involved. Without a clearer

⁵³ “Digital Governance Proposals for DSAP Consultation,” slide 15.

⁵⁴ “The Need to Govern the Digital Layer.” *MaRS*. December 18, 2018 <https://marsdd.gitbook.io/datatrust/smart-cities/governing-the-digital-layer> Accessed May 16, 2019

⁵⁵ “Digital Governance Proposals for DSAP Consultation,” slide 15.

framework around the property classification, or licensing supply chains, the authorities and mechanics of the Civic Data Trust remain largely undefined.

c. Scale, Complexity, and Fiduciary Trusts

The MaRS and Sidewalk Labs proposals both advocate for single trusts to manage multiple functions, social purposes, and beneficiary interests. The MaRS Primer addresses this in raising concerns around beneficiary definition, but neglects the complexity or diversity of interests implicated by pursuing multiple, potentially conflicting, purposes or functions. At a basic, structural level – the hard part of data governance isn't advocating for single, aligned interests, it's balancing valid, competing interests. Trusts have that problem, too – the more diverse the interests, the more important, and complex, the role of governance.

One of the defining characteristics of data trusts is the creation of fiduciary style accountability, which becomes harder to operationalize as they scale to represent multiple, competing interests. The more general the trust, the harder it is to get value out of its unique legal position. At the scale of entire development project, the complexity and potential liability involved for trustees is also increased. Sylvie Delacroix and Neil Lawrence wrote about the practical challenges posed by implementing data governance at the scale, in their recent paper called "Disturbing the 'One Size Fits All' Approach to Data Governance: Bottom-Up Data Trusts."

The MaRS Primer isn't deterministic about how to deploy trusts, and explicitly pushes for prototyping and exploration, so there's every reason to expect flexibility in implementation. Still, absent a clearer articulation of a plan to combat this challenge, it remains a significant risk to the success of any trust-led, scaled approach to data governance.

d. Beneficiary Definition and Governance Design

The MaRS Primer concurrently entertains broad and narrow assumptions about the nature of trusts, which distorts the analysis of creation and compliance. Beneficiaries need to be sufficiently clear and narrow to fit within existing law, which is problematic for the version of this proposal that envisions a singular civic data trust as Quayside-scale data brokerage, platform, or rights brokerage.

One way to approach this, potentially, is to use the opportunity to design representative governance to assign accountable representation into a fixed decision-making structure. While this doesn't implicitly solve the conflict of duties issues, it could mitigate individual trustee liability insofar as the governance structure has explicit beneficiary consent. Although the MaRS Primer raises the issue of beneficiary conflicts, there are no explicit suggestions of how to solve this issue in practice.

e. Data Governance and Intended Impact

The description of the purpose, and potential, of Civic Data Trusts relies on data governance activities to support a wide range of social impact outcomes. As described above, the Civic Data Trust's proposed activities, however, don't include anything outside of basic data management, licensing, and public hosting. Neither the MaRS Primer nor the Sidewalk Labs proposal suggest how data governance activities might achieve the stated goals – not only for a single group of interests, but on behalf of a range of competing interests.

That approach to data governance relies on access to data as leverage and an implicit good, without articulating any of the threat modeling, capacity building, representation, or other activities that might contribute to the achievement of the justifications for the Civic Data Trust. According to the Sidewalk Labs proposal, the Civic Data Trust is charged with making data publicly available, as well as monitoring and enforcing use-based limitations included in Responsible Data Impact Assessments.⁵⁶ Importantly, as proposed, the only leverage a Civic Data Trust might have to punish data vendors are (1) revoking their license to collect data in Quayside; or (2) revoking their access to specific streams of data. There are no proposals for, or discussion of, how these tools could be used to effectively represent or promote the public interest through data governance. Even if one accepts that a Civic Data Trust can reliably enforce its judgment through data access, the proposals only articulate activities that support data sharing and manage privacy compliance. In other words, it's not clear that Civic Data Trusts have enough power, and even if they do, the only things the proposals cover are the activities data companies prioritize – as opposed to things that might benefit the public.

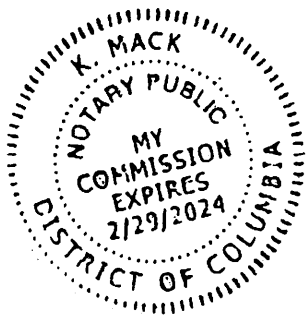
No matter the legal mechanism, neither the MaRS Primer nor the Sidewalk Labs proposal consider the public's interest in data governance, or what types of leverage might be necessary to achieve it. The public communications surrounding Quayside data governance promise a range of benefits, or needs, that are ambiguously met by the activities and authorities they describe.

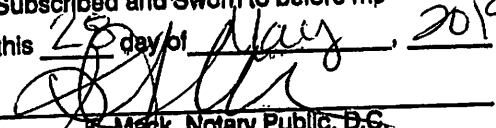
f. Investigatory Powers and Enforcement

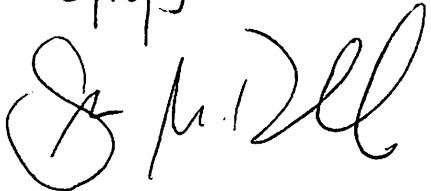
One of the primary functions of the Civic Data Trust, as described in the Sidewalk Labs proposal, is to monitor, investigate, and enforce the limitations of the data licenses it creates. While there is precedent for expanded surveillance, investigation, and recourse based on devolved public authorities in privately managed space – it rarely occurs on this scale, or emanates from enforcing the conditions of a commercial data license. The MaRS Primer is silent on the negative and/or enforcement authorities required to achieve their stated goals. Sidewalk Labs' proposal suggests that Civic Data Trusts should leverage access to an open access data repository as the primary enforcement tool. That approach raises as many questions as it answers.

⁵⁶ "Digital Governance Proposals for DSAP Consultation," slide 15.

While there are plenty of potential solutions, any authority delegated through the Quayside Project over data governance decisions could set a civil liberties precedent beyond the scope of this development. The implications of adjusting the enabling environment to enable quasi-public investigation and enforcement authorities based on public procurement is a substantial decision, and one that may justify additional consultation.



District of Columbia: SS
Subscribed and Sworn to before me
this 28 day of May, 2019.

K. Mack, Notary Public, D.C.
My commission expires February 29, 2024

Prepared by: Sean McD
5/28/19


Appendix A

SEAN MARTIN MCDONALD

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DIGITAL PUBLIC

Co-Founder; June 2015- Present

- Build, enable, and embed governance in the ownership structure of data and digital intellectual property, toward empowering users and providing continuity beyond corporate solvency
- Background: "Toward (a) Civic Trust," "The Civic Trust," & "Toronto, Civic Data, and Trusts"

FRONTLINESMS

Chief Executive Officer; (SIMLab) June 2012 – November 2014, (Occam Technologies) November 2014 - Present

- Build, host, and support one of the world's most popular social impact technologies – with tens of thousands of users in 199 countries, reaching tens of millions of people
- Named the #1 Technology NGO in the world by the Global Journal in 2014; Nominet Trust 100 2014; Google Impact Award 2013
- Designed Social Impact Lab, a non-profit/for-profit hybrid to build and support open source technology
- Bootstrapped Occam Technologies into a self-sustaining social enterprise, building a range of open source and cloud-hosted technology products
- Successfully managed the spin-off of Medic Mobile and Occam Technologies
- Built a client portfolio that includes the Center for Disease Control, Legal Services Corporation, KIPP, Millennium Challenge Corporation, BBC, UNHCR, US Institute of Peace, and Search for Common Ground
- Raised over \$8,000,000 in consulting, product, and grant income
- Built a successful consulting and product practice, with verticals in legal services, campaigning, education, mobile payments, healthcare, humanitarian response, agriculture, media, and research
- Oversee the development and design of the Frontline product suite, including four additional platforms, FrontlineCloud (web-hosted), Frontline Builder (TBR), Payments, and FrontlineSync (Android)
- Oversee all aspects of strategic growth, operations, and business development
- Participate actively in the design, development, and extension of the FrontlineSMS platform
- Represent the organization with customers, media, panels, writing, speeches, and consultations

Director of Operations, January 2011- June 2012

- Design and develop technology products that improve the usefulness of the core platform
- Manage sector-specific projects, including :Medic, :Credit, :Learn, :Legal, :Radio, :Media, and Governance
- Won the Knight Foundation News Challenge in 2011
- Fundraised \$1,300,000 in support of operations and new projects
- Created and managed all consulting, including training, program design and custom product development
- Manage all aspects of organizational, relationship, and business development
- Responsible for the strategic growth and direction of FrontlineSMS and related brands

FRONTLINESMS:LEGAL

Founder; June 2010- November 2014

- Design and develop technology products that improve dispute resolution services in underserved areas
- Partner with FrontlineSMS and other Sister Organizations to develop complementary technologies
- Manage the design, development, and implementation of all projects
- Manage all aspects of organizational and business development
- Draft, edit, and publish content for social media, academic journals, and earned media

METROSTAR SYSTEMS, INC.

Director of New Media Business Development, January 2010- May 2010

- Built the Social Media Aggregation and Research Technology (SMART) Service (now Zoomph)
- Secured Department of State Pilot Funding within two months of SMART Service Launch
- Provided technology consultation, advocacy, and outreach strategies to meet client needs
- Designed social media outreach and advocacy strategies for clients

- Coordinated with Haiti and Chile Crisis Commons groups, providing pro bono social media resources
- Draft, edit, and publish content for social media, academic journals, and earned media
- Drafted and edited marketing, communications, and outreach materials
- Represented MetroStar Systems in earned media, at conferences, and with clients

INTERNATIONAL RELIEF AND DEVELOPMENT, INC.

Program Assistant, January 2009- December 2009

- Managed and backstopped projects in Louisiana, Nepal, Colombia, Cuba, and Indonesia
- Contributed to business development, including in-country assessment of Armenian media development
- Designed technical solutions, drafted, and edited proposal responses to a range of donors, including USAID
- Drafted, edited, and reviewed memorandums of understanding, leases, contracts, and other legal documents
- Prepared and edited donor deliverables, such as quarterly reports, close-out reports, and collateral materials
- Organized two working groups, focusing on Community Organizing and New Media, respectively

THE CENTER FOR PEACEBUILDING INTERNATIONAL

Communications Director, December 2005- January 2009

- Conducted Post-Tsunami Relief Effort assessment in Sri Lanka
- Organized, marketed, and participated in International Symposium on Tsunami Relief Lessons Learned
- Reorganized and redeveloped website, edited funding proposals, press materials, and all collateral materials
- Provided strategic organizational development guidance, consulting with the Board of Directors and staff

PUBLIC INTERNATIONAL LAW AND POLICY GROUP

Senior Research Associate, May 2007- May 2008, Research Associate May 2006- May 2007

- Provided legal assistance to policy-shapers in an active secessionist conflict
- Drafted and edited comparative legal memoranda addressing peace processes and post-conflict transitions
- Managed a team of Research Associates to provide legal assistance

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

Intern, Office of Conflict Mitigation and Management, Spring-Summer 2007

- Analyzed and Drafted technical guidance on Scopes of Work for the IQC Grant Process
- Drafted technical guidance for health program implementation in conflict areas
- Restructured, Drafted, and Edited Communications and Messaging Strategies for DCHA (\$2B Bureau)
- Drafted budgetary memoranda, scope of work orders, and collateral materials
- Co-leader of an intra-agency group on Islam, facilitated office work, and represented office at briefings

SPECIAL COUNSEL- HOGAN & HARTSON, LLP; MCKENNA, LONG, & ALDRIDGE, LLP

Paralegal, January 2005- June 2005

- Conducted extensive reviews of confidential health records in class-action HMO litigation
- Conducted extensive reviews of confidential national security records from Yucca Mountain

THE OFFICE OF SENATOR BARBARA A. MIKULSKI, BARBARA MIKULSKI FOR U.S. SENATE

Press Assistant, January 2004- January 2005

- Wrote, researched, prepared, and pitched press releases, remarks, and collateral materials
- Maintained routine contacts with journalists, pitching stories and organizing public events
- Controlled, reformatted, updated, and enhanced the Senator's website by adding services
- Published a daily clips package for the Senator and the staff, online and in print
- Provided operational support for both campaign and Senate communications offices

NORTHWEST CURRENT NEWSPAPERS, AMERICAN JOURNALISM REVIEW, BALTIMORE MAGAZINE

Editorial Intern, Spring 2002- Summer 2003

- Wrote and edited sidebars and articles, assisted with page layout
- Contacted sources, including high profile journalists to confirm article content

UNIVERSITY OF WISCONSIN, HONDURAS MEDICAL CLINIC

Facilitator, Spring 2001

- Provided assistance to doctors and patients in post-Hurricane Andrew relief effort

THE DAILY TIMES

General Assignment Reporter, Summer 2000

- Wrote articles for daily publication, researched stories and wrote the company newsletter

THE INSTITUTE FOR MULTI-TRACK DIPLOMACY

Intern, Summer 1997

- Assisted with public relations, fundraising, and interactions with international clients

EDUCATION

AMERICAN UNIVERSITY- *Juris Doctor- Spring 2008; M.A., Conflict Resolution- Summer 2009*

WASHINGTON COLLEGE OF LAW- In-Concentration GPA- 3.87

Chile and Argentina Comparative Law/Foreign Investment Law Program- GPA 3.7

SCHOOL OF INTERNATIONAL SERVICE- GPA- 3.95

Honors: Pittman B. Potter Award for Excellence in International Law

Extra-Curricular Activities: President, Society for Peace and Conflict Resolution; Vice President, Alternative Dispute Resolution Society, Communications Law Society; Peer Mentor

Substantial Research Project: *The New Newsocracy: The Solution to Armenia's Old Media Problems*

GEORGE WASHINGTON UNIVERSITY, ELLIOT SCHOOL OF INTERNATIONAL SERVICE- *Spring 2005*

Master's Class: Theories and Implementation of Peaceful Conflict Resolution- GPA 4.0

PHILLIP MERRILL COLLEGE OF JOURNALISM, UNIVERSITY OF MARYLAND- *Spring 2003*

B.A. in Magazine Journalism, Concentrations in Political Science and Spanish

Honors: Notation of Academic Excellence, College Park Scholars Program

BOARDS, ADVISORY BOARDS, & FELLOWSHIPS

DUKE CENTER FOR LAW AND TECHNOLOGY

Research Fellow, August 2018 – Present

CENTER FOR INTERNATIONAL GOVERNANCE INNOVATION

Senior Fellow, October 2018 – Present

THE NEW YORK BAR ASSOCIATION

Member-at-Large, June 2012- Present

STANFORD UNIVERSITY DIGITAL CIVIL SOCIETY LAB

Visiting Fellow, January 2017 – April 2018

THE CENTER FOR INTERNET & SOCIETY (US)

Board of Directors, May 2016 – May 2018

UNITED NATIONS DEVELOPMENT PROGRAMME

Expert, Democracy and Governance Assessment, June 2012- Present

DIGITAL DEMOCRACY

Advisory Board Member-At-Large, October 2009- Present

INTERNATIONAL PEACE PARK EXPEDITIONS FOUNDATION

Vice President of the Board of Directors, October 2009- January 2018

- Drafted the bylaws, articles of incorporation, and mission statement
- Provide strategic and organizational development support

DO SOMETHING.ORG

International Advisory Board, July 2014 – 2016

ECPAT INTERNATIONAL

Technology Advisor; November 2013 - 2015

THE AWESOME FOUNDATION

Trustee, DC Chapter, August 2013 – June 2015

TECHCHANGE

Advisory Board, Member-At-Large, December 2010- December 2014

BERKMAN CENTER FOR INTERNET & SOCIETY, HARVARD UNIVERSITY

Affiliate, September 2012- 2013

THE CLINTON GLOBAL INITIATIVE

Technology Track Advisor; January 2012- January 2013

- Advise members and staff on ways to use technology to increase social impact

THE SOCIAL IMPACT LAB FOUNDATION

Board of Directors, Member-at-Large, March 2011- November 2014

- Act with signature authority for US representation of the Foundation

THE SOCIAL IMPACT LAB COMMUNITY INTEREST COMPANY

Board of Directors, Member-at-Large, March 2011- November 2014

- Oversee the implementation of the mission, coordinate all relevant operations with the staff

THE ALLIANCE FOR PEACEBUILDING

Board of Directors, Member-at-Large, September 2009- April 2012

- Head of the Communications Committee
- Member of Advocacy and Member Services Committees
- Designed, developed, and oversee the creation of the Peacebuilder's Digest (ongoing industry publication)

PUBLICATIONS & PROJECTS

McDonald, Sean Martin, (2019) How Digital Regulations are Reshaping Companies, *Centre for International Governance Innovation (online)* [Available here](#)

McDonald, Sean Martin, (2019) Reclaiming Data Trusts, *Centre for International Governance Innovation (online)* [Available here](#)

McDonald, S. and Wylie, Bianca (2019) Envisioning a Circular Food Economy: Building Confidence in Smart City Policy, *The City of Guelph-Wellington* [Available here](#)

McDonald, S. and Wylie, Bianca (2019) Governing a Digital Circular Economy *The City of Guelph-Wellington* [Available here](#)

McDonald, Sean Martin (2018) The War-Torn Web, *Foreign Policy (online)* [Available here](#)

McDonald, Sean Martin (2018) The Secret Power of Political Data Trusts, *Overture Global* [Available here](#)

McDonald, Sean Martin (2018) Net Neutrality's End Will Let Power Eat the Internet, *Foreign Policy (online)* [Available here](#)

McDonald, Sean Martin (2018) Artificial Humanitarian Intelligence, *Overture Global* [Available here](#)

McDonald, S., Sandvik K., & Jacobsen, K., (2017) From Principle to Practice: Humanitarian Innovation and Experimentation, *Stanford Social Innovation Review* (online). [Available here](#)

Jacobsen, K., Sandvik, K., & McDonald, S. (2017) Humanitarian Experimentation. *Humanitarian Law & Policy* (online). [Available here](#)

Sandvik, K., Jacobsen, K., & McDonald, S. (2017). Do no harm: A taxonomy of the challenges of humanitarian experimentation. *International Review of the Red Cross*, 1-26. doi:10.1017/S181638311700042X

McDonald, Sean Martin. (2016) "Ebola: A Big Data Disaster. Privacy, Property, and the Law of Disaster Experimentation." *Inaugural White Paper, Center for Internet & Society*. [Available here](#)

Banks, Ken, Sean Martin McDonald, and Florence Scialom. "Mobile Technology and the Last Mile: 'Reluctant Innovation' and FrontlineSMS." *Innovations: Technology, Governance, Globalization* 6, no. 1 (2011): 7–12.

McDonald, Sean Martin. "Collective Representation and the Last Mile (Innovations Case Commentary: Protimos)." *Innovations: Technology, Governance, Globalization* 7, no. 1 (2012): 61–64.

McDonald, Sean Martin. "The Case for mLegal (Innovations Case Narrative: mLegal)." *Innovations: Technology, Governance, Globalization* 6, no. 1 (2011): 41–62.

McDonald, Sean Martin. "The New Newsocracy: The New Solution to Armenia's Old Media Problems." *Master's Thesis* (2009)

["Toronto, Civic Data, and Trust."](#) *Medium* (2018)

["Community Data Organizing."](#) *Medium* (2018)

["Your Chief Data Governance Officer."](#) *Medium* (2018)

["Data Review Boards."](#) *Medium* (2018)

["Strava, Contracts, and Our Data Stockholm Syndrome."](#) *Digital Impact* (2018)

["Artificial Intelligence has a Hope Problem."](#) *Medium* (2017)

["Gawker, Facebook, & Governing Truth."](#) *Medium* (2016)

["WhatsApp, Trust, & Trusts."](#) *Medium* (2016)

["Data Law's Radioactive Decay."](#) *Medium* (2016)

["Kik, Azer Koculu, npm, & the Law."](#) *Medium* (2016)

["Civic Business."](#) *Medium* (2015)

["Frontline and the Missing Middle Mile."](#) *OpenSource.com* (2015)

["The Cost of SMS \(is a feature, not a bug\)."](#) *FrontlineSMS* (2015)

["Closing a Door to Open a Window."](#) *FrontlineSMS* (2014)

["The Data Divide."](#) *FrontlineSMS* (2013)

["A Few Words About Problem Solving."](#) *FrontlineSMS* (2013)

["The Multi-Platform Rule of Law."](#) *Skoll World Forum* (2013)

["Engaging the Audience to Transform the News."](#) *PBS Media Shift* (2012)

["Designing Behavior and the Importance of Being Multi-Channel."](#) *FrontlineSMS* (2012)

["The Future of Law is no Field of Dreams," & "Deciding Access- Platforms and Process."](#) *Innovating Justice* (2012)

["Law in the Last Mile: The Potential of Mobile Integration to Legal Services."](#) *VoxPoplii* (2011)

["FrontlineSMS connects people where the web is out of reach."](#) *Nieman Nieman Lab* (2011)

["The Unfortunate Simplicity of Freedom."](#) *Digital Democracy* (2010)

DIGITALPOLITIK NEWSLETTER

Co-Author, 2018 – Present

- [Ongoing Newsletter Project](#)

CAPTURE THE OCEAN PROJECT

Founder, June 2013- Present

- Lead and represent the effort to identify, understand, and advocate for user agency in digital systems

Appendix B Works Cited

Primary

Dawson, Alyssa Harvey. "An Update on Data Governance for Sidewalk Toronto." *Sidewalk Labs*. October 15, 2018, <https://www.sidewalklabs.com/blog/an-update-on-data-governance-for-sidewalk-toronto/>

"Digital Governance Proposals for DSAP Consultation." *Waterfront Toronto*. October 2018, https://waterfronttoronto.ca/nbe/wcm/connect/waterfront/41979265-8044-442a-9351-e28ef6c76d70/18.10.15_SWT_Draft+Proposals+Regarding+Data+Use+and+Governance.pdf?MOD=AJPERES Accessed May 16, 2019

"A Primer on Civic Digital Trusts." *MaRS*. December 18, 2018 <https://marsdd.gitbook.io/datatrust/> Accessed May 16, 2019

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"What is a Trust?" *MaRS*. December 18, 2018 <https://marsdd.gitbook.io/datatrust/trusts/what-is-a-trust> Accessed May 16, 2019

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"Aspirations for a Civic Digital Trusts." *MaRS*. December 18, 2018 <https://marsdd.gitbook.io/datatrust/trusts/aspirations> Accessed May 16, 2019

"Design Principles for a Civic Digital Trust." *MaRS*. December 18, 2018 <https://marsdd.gitbook.io/datatrust/trusts/design-principles> Accessed May 16, 2019

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Secondary

Amadeo, Ron. "Nest, the company, died at Google I/O 2019." *ArsTechnica* May 10, 2019 <https://arstechnica.com/gadgets/2019/05/nest-the-company-died-at-google-io-2019/> Accessed, May 19, 2019

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Buolamwini, Joy. "Response: Racial and Gender bias in Amazon Rekognition – Commercial AI System for Analyzing Faces." *Medium* January 25, 2019 <https://medium.com/@Joy.Buolamwini/response-racial-and-gender-bias-in-amazon-rekognition-commercial-ai-system-for-analyzing-faces-a289222eeced> Accessed May 16, 2019

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**ONTARIO
SUPERIOR COURT OF JUSTICE
(DIVISIONAL COURT)**

BETWEEN:

CORPORATION OF THE CANADIAN CIVIL LIBERTIES ASSOCIATION and
LESTER BROWN

Applicants

and

TORONTO WATERFRONT REVITALIZATION CORPORATION, CITY OF
TORONTO, HER MAJESTY IN RIGHT OF ONTARIO as represented by the
MINISTER OF INFRASTRUCTURE, HER MAJESTY IN RIGHT OF CANADA as
represented by the MINISTER OF COMMUNITIES AND INFRASTRUCTURE, AND
THE ATTORNEY GENERAL OF CANADA

Respondents

APPLICATION under sections 2 and 6(1) and 6(2) of the *Judicial Review Procedure Act*, R.S.O. 1990,
c. J.1, as amended, and sections 2, 7, 8 and 24 of the *Charter of Rights and Freedoms*.

FORM 53

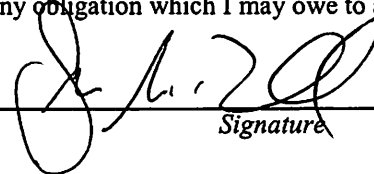
Courts of Justice Act

ACKNOWLEDGMENT OF EXPERT'S DUTY

ACKNOWLEDGMENT OF EXPERT'S DUTY

1. My name is Sean McDonald. I live in Washington in the District of Columbia.
2. I have been engaged by or on behalf of the Corporation of the Canadian Civil Liberties Association and Lester Brown to provide evidence in relation to the above-noted court proceeding.
3. I acknowledge that it is my duty to provide evidence in relation to this proceeding as follows:
 - (a) to provide opinion evidence that is fair, objective and non-partisan;
 - (b) to provide opinion evidence that is related only to matters that are within my area of expertise; and
 - (c) to provide such additional assistance as the court may reasonably require, to determine a matter in issue.
4. I acknowledge that the duty referred to above prevails over any obligation which I may owe to any party by whom or on whose behalf I am engaged.

Date May 18 2019



Signature

NOTE: This form must be attached to any expert report under subrules 53.03(1) or (2) and any opinion evidence provided by an expert witness on a motion or application.

AN CIVIL LIBERTIES

-and- TORONTO WATERFRONT REVITALIZATION
CORPORATION et al.
Respondents

Court File No. 211/19

**ONTARIO
SUPERIOR COURT OF JUSTICE
(DIVISIONAL COURT)**

PROCEEDING COMMENCED AT
TORONTO

AFFIDAVIT OF SEAN MCDONALD

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Fax: 416.941.8852

Lawyers for the Applicants