

Land Acknowledgement

Sidewalk Labs recognizes that this land we now call Toronto has been the site of human activity for over 15,000 years; we are within the Treaty Lands and claimed Territory of the Mississaugas of the Credit. Toronto is now home to many diverse First Nations, Inuit, and Métis peoples. It is the responsibility of all people to share in wise stewardship and peaceful care of the land and its resources. We are mindful of a history of broken treaties, and of the urgent need to work continuously towards reconciliation, and we are grateful for the opportunity to live and work on this land.

Toronto

When we ask Torontonians what they dream about for their future neighbourhoods, we don't hear about dreams of jetpacks and flying cars.

We don't hear about 21st-century modern high-rises and flashy finishes.

What we hear are dreams that are far more basic, more human, more fundamental.

A place with safer streets.
More breathable air.
More walkable sidewalks.
A place where people are more engaged with their world than with their phones.
A place that's both inspiring and affordable.
A place that's welcoming for artists and entrepreneurs, for the creative class and the working class.
A place where, quite simply, everyone who wishes to call it home, can.

What do
you see
in your
dream city?







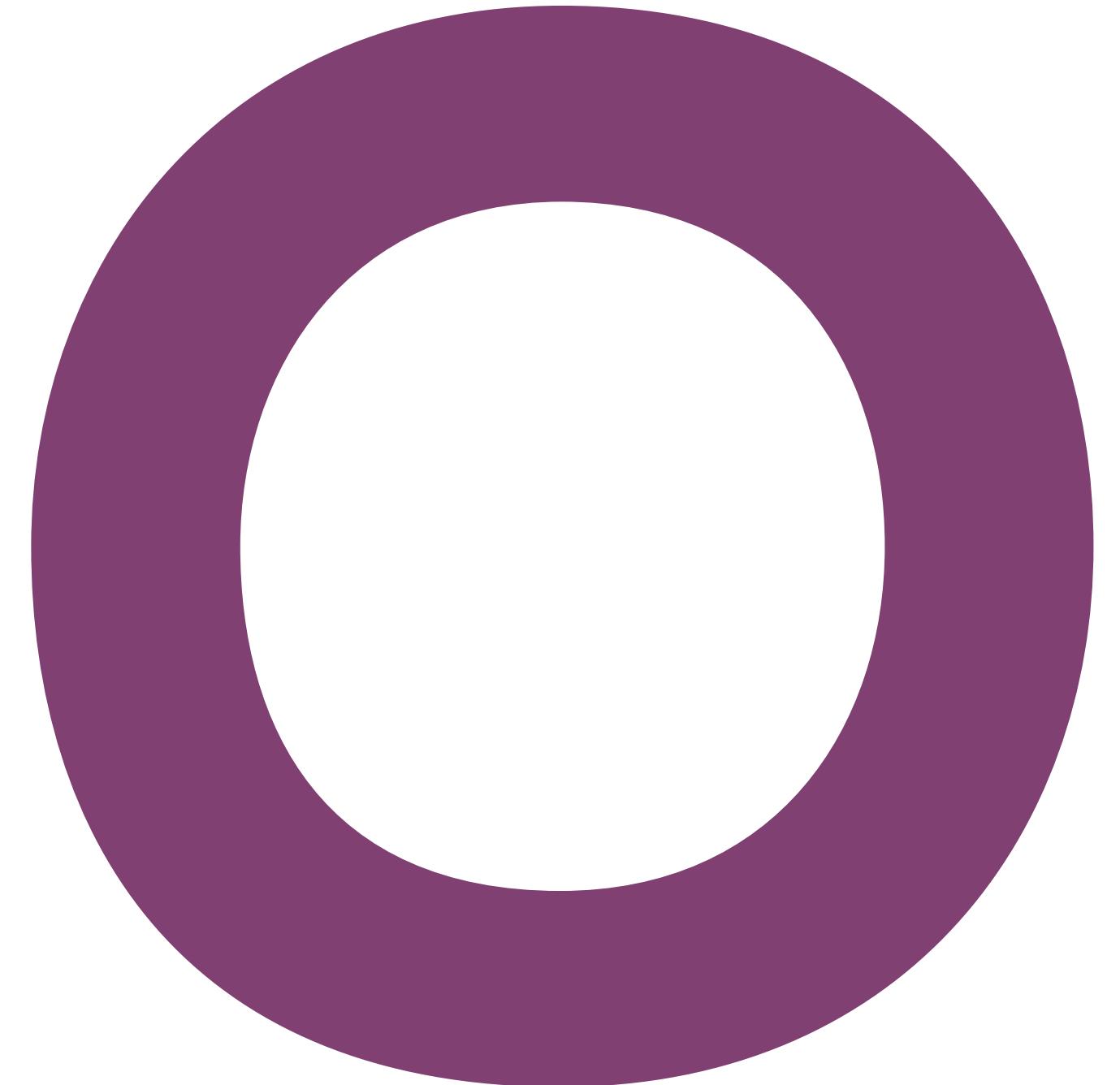
Dreams of a city / A city that wants me to stay forever / **A city where neighbours have my back** / A city that wants me to be with people more than with technology / A city that never breaks my stride / A place that makes it possible to have a home for my family / **A place where my son can ride his bike in the middle of the street and be totally safe** / A city that brings out the best in me / A city that helps my mommy not be so tired / A city that is just as obsessed with the old as it is with the new / A city that invests in creative artists / A city that reminds me to breath / **A city that cares about inclusion more than it does about growth** / A place where I don't need to own a car / A city that can feel urban and tranquil at the same time / A place with plenty of jobs / A city that doesn't look too shiny / A place that doesn't forget about me / **A city without rush hours** / A city that reinvents on-top of itself without losing its soul / **A city that knows the difference between good friction and bad friction** / A city with homes that can move anywhere, even on water / A city that looks like a playground during recess / A city that feels like a reflection of me / A city with robots who clean up my room for me / A place that always feels warm, even if it's -15 / A city that gives second, third, and fourth chances / **A place that opens my mind to new things** / A place that feels old even though it's new...like a retro future city / A city that believes in the value of a weekday siesta / **A city that has enough room for my grandma to live with us** / A place that doesn't make me feel guilty for being grumpy / Everything feels within my grasp / A place that sells the best street food from all over the world / **A city that makes my daddy smile** / A city that always leaves room for the community to create new things / That doesn't need a state of emergency to bring people together / **People I love are within walking distance** / A city that never stops trying / **A city that works for all stages of life** / A future city that has charms of old villages / A city that doesn't try to fix everything / A city that lets me be anonymous when I want to be / A city that gets people off their phones and into the streets / A city that cares more about building the community than condos / **A city that gives more than it takes** / A city that grows hometown

heroes / A neighbourhood that is happy just being itself, without apology / **A future city that doesn't get lost in technology** / A place where I randomly run into friends on the street / A city that attracts the world's most talented artists / A place that helps me feel rooted / **A city that doesn't try to be too perfect** / A city with the best sprinkled donuts / A place that feels like Alice's Wonderland / A city that makes me laugh and dance with euphoria / A place that never makes people wait outside in a long line / **A city that leaves room for beautiful imperfections** / Lets me sing all day long with my friends / A place that feels like a wild forest for me to run in / A place that doesn't force me to have an annoying roommate / A place that doesn't make me worry for my children / **A city that doesn't get spoiled by its own success** / A place that designs knowing we all have abilities that may come and go / **A city that will always feel like home, even if I move away** / A place that cares about the depth of the human to human relationship / A city that births new movements of creativity and philosophy / A place that fills my lungs with the freshest air / A city that can grow and still feel contentment / A city that doesn't force its ideals on me / **Where my sister doesn't have to struggle to get into buildings** / A city that's filled with the sounds of laughing children / **A place that people write songs about** / A city that lets me age more gracefully / **A city that brings me true love** / A city that doesn't make everyone work so much / **A city that gives my kids a worldly view of life** / A city that no matter how bad the day is, makes me feel lucky to be living there / **A city that is as stimulating for my daughters as it is for their grandparents** / A place that has more bikes than cars / **A city that makes winters less of a bummer** / Where I see my kids more than my colleagues / Where I can make whatever I want / Where all my friends want to come and visit / **Where my grandma has as many friends as I do** / Where I can always get a taste of my favourite pastries from the old country / **Where my feet are always warm** / Where people look into each other's eyes more than a screen / Where doors always open for me like I'm a queen / Where new and old can live together / It works perfectly well without a smartphone / **A city that builds character**

Toronto
tomorrow

Toronto Tomorrow

A new approach for
inclusive growth



Overview

Foreword

It snowed heavily in Toronto on March 2, 2019, the weather worsening all day. In 307, our workshop space along the waterfront, we watched the weather reports with a mixture of excitement and worry. That day we had planned to unveil a series of prototypes by a group of Toronto-based designers on, ironically, how to mitigate the impact of bad weather and create outdoor spaces that could remain comfortable for more of the year. Now the weather was striking back. We were ready for the showdown. But we wondered if anyone would be able to see it.

At 3 p.m. the event began — outside. And hundreds of Torontonians were waiting. Then hundreds more arrived. They kept coming. By the end of the day, nearly 800 people from across the city had braved the weather to test our heated pavers as they melted the ice, stand inside the “building Raincoats” as the snow swirled outside, and experience an art installation featuring projections of paintings by community members.

They had questions, ideas, experiences to share, and concerns to raise. They came from all over the city, with different ages, backgrounds, and careers, but they were bound by a commitment to Toronto’s future and a belief that it is possible to make urban life better for everyone. They were ready to be part of the solution and willing to give us a chance to prove we were worthy of being their partner.

We are grateful for the opportunity to continue that conversation through this Master Innovation and Development Plan, a proposal for how the city can transform a small piece of the eastern waterfront into a global model for urban innovation. It reflects 18 months of input from more than 21,000 Torontonians; all levels of government; dozens of meetings with local experts, non-profits, and community stakeholders; and the research, engineering, and design work of more than 100 local firms.

The MIDP includes three volumes. Volume 1 takes a detailed look at the planning concepts and proposed operational systems. Volume 2 offers an in-depth exploration of the urban innovations, organized around key areas like mobility and public realm. Volume 3 provides an explanation of the novel partnership that we hope could provide a model for future ambitious public-private collaborations in the service of improving urban life.

It hasn’t always been an easy journey to this point. And to their credit, Torontonians challenged us at every step — and made the plan better.

While we understood that affordable housing was an important issue, as we listened it became clear that it is among the most critical. We redoubled our efforts and now offer what we feel is a viable path forward for 40 percent below-market housing, supported by new private funding sources.

We heard lots of concerns about privacy. The approach we’ve developed is in direct response to those conversations, vesting the control of urban data in a democratic, independent process that would apply in addition to existing privacy laws in Ontario and Canada. The approach outlined in the MIDP will set a standard for the world.

A third thing that quickly became clear was the importance of connecting the eastern waterfront with mass transit. That pushed us to think about creative ways to accelerate the light rail construction and secure financing, given the scarcity of public resources.

We also heard strongly that Torontonians felt that the vast majority of the eastern waterfront should be developed by local developers. We listened and proposed restricting our development role to a small geographic area to prove the feasibility of the riskiest innovations, then stepping back so others can take the lead.

Every idea and modification has been in service of the bold ambition outlined by Waterfront Toronto: a groundbreaking project that generates extraordinary numbers of jobs and economic benefits for Torontonians, while achieving new

levels of environmental sustainability, pioneering a 21st-century mobility network, producing record numbers of affordable housing, and establishing a new model for urban innovation.

That’s not easy.

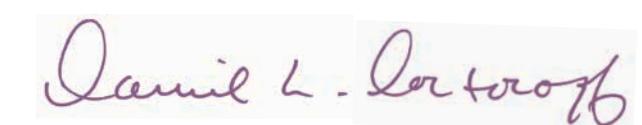
After a year and a half of intensive research, prototyping, design, and planning about these diverse pieces and how they fit together, we are proud to say with confidence that these aspirations are not merely dreams. They can be achieved.

The MIDP represents our best thinking to date on the path to creating the most innovative place in the world that can set a new standard for urban life in the 21st century.

But it is just a step in the process. The plans will continue to evolve and improve through extensive discussions with the public, community stakeholders, and government agencies, and through the formal consultation process led by the City of Toronto.

We are excited and honoured by the opportunity.

Sincerely,



Dan Doctoroff
CEO, Sidewalk Labs
May 2019

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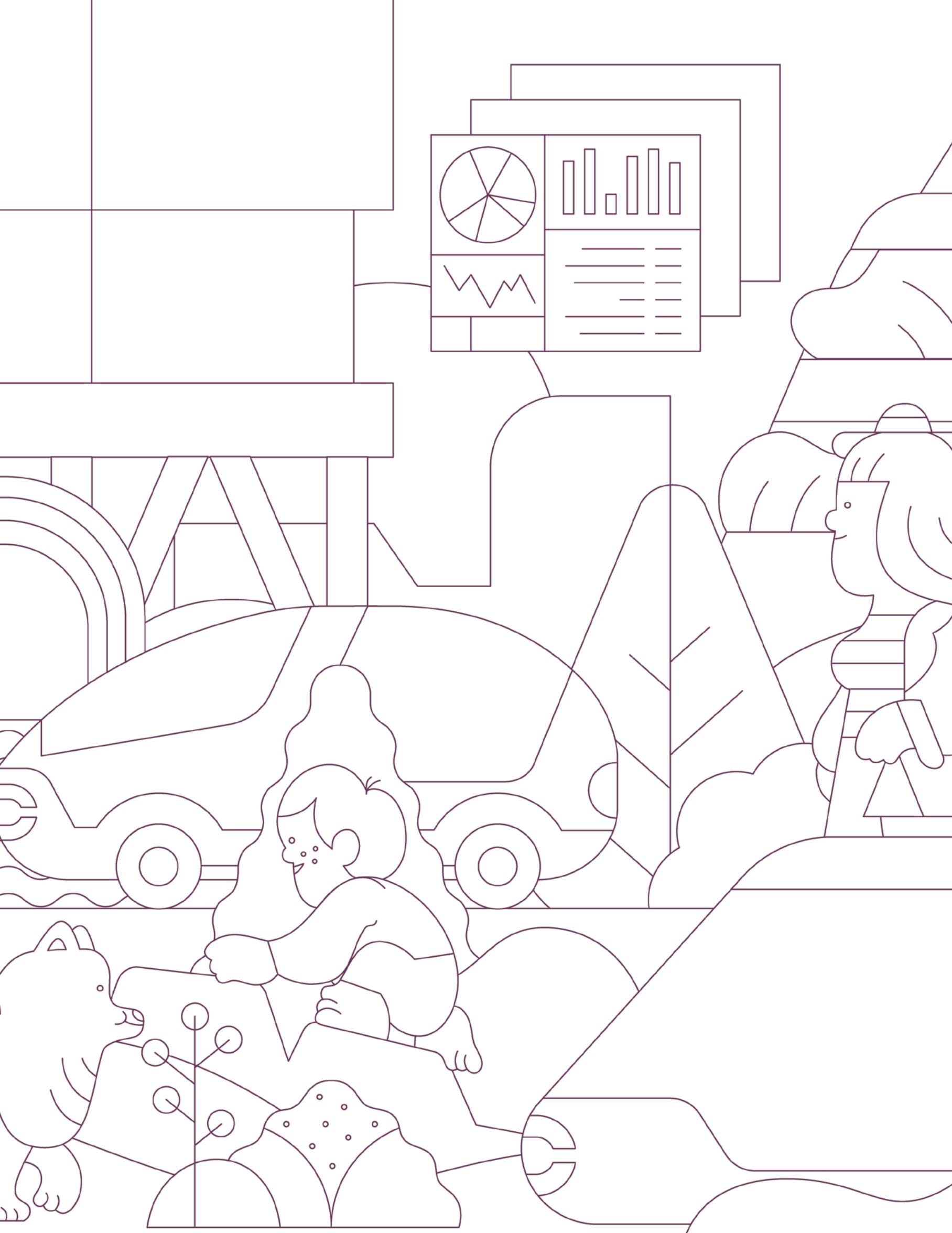
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Overview





Toronto's eastern waterfront presents Waterfront Toronto, the City of Toronto, the governments of Ontario and Canada, and the people of Toronto with an extraordinary opportunity to shape the city's future and provide a global model for inclusive urban growth.

The three-volume Master Innovation and Development Plan (MIDP) is a comprehensive proposal for how to realize that potential. Sidewalk Labs submits this plan for consideration as a work-in-progress meant to be refined by further consultation.

This Overview provides a high-level summary of these volumes and the project as a whole.

Five things to know about the Sidewalk Toronto project

1

This Master Innovation and Development Plan reflects the engagement of tens of thousands of Torontonians and their public officials.

Since being selected Innovation and Funding Partner in October 2017, Sidewalk Labs has solicited an unprecedented range of feedback from residents, researchers, community leaders, and government agencies, including in-person conversations with more than 21,000 Torontonians.

That input has profoundly shaped this proposal, leading to dramatic changes, including a new focus on accelerating light rail extension, rethinking the way buildings are constructed to increase affordability, setting a new standard for data privacy and governance in cities, and scaling back the role of Sidewalk Labs so local third parties can lead most of the real estate and technology development.

2

The successful execution of the highly detailed plan would produce the most innovative district in the world.

Across nearly every dimension of urban life — mobility, sustainability, public realm, buildings, and digital innovation — the plan breaks new ground. That includes the first neighbourhood built entirely of mass timber, dynamic streets that can adapt to a neighbourhood's changing needs, weather mitigation systems, and a thermal grid for heating and cooling.

All together, more than five dozen innovations would be combined in a single place for the first time, creating a global model for combining cutting-edge technology and great urban design to dramatically improve quality of life.

3

The plan shows that inclusive, sustainable growth is achievable.

The innovations are designed to work together to create diverse, thriving, mixed-income neighbourhoods.

A new factory-based construction process would lead to faster and more predictable projects — unlocking billions in private funding that could be applied towards a precedent-setting housing program with 40 percent of units at below-market rates. New mobility initiatives — combined with expansions to public transit and cycling infrastructure — would eliminate the need to own a car, saving a two-person household \$4,000 every year. Advanced energy systems would help create the largest climate-positive community in North America while keeping costs the same, or lower, for residents and businesses.

The resulting place would set a new standard for urban life in the 21st century.

4

The plan would generate an economic windfall for Toronto, Ontario, and Canada.

By its 2040 completion, the project would create 93,000 total jobs (including 44,000 direct jobs) and become a tremendous revenue source for government, generating \$4.3 billion in annual tax revenue and \$14.2 billion in annual GDP.

That is nearly seven times the economic impact projected to occur by that time under more traditional development in the area. But the benefits go beyond dollars. Accelerating the development schedule can also deliver critical public transit infrastructure and thousands of affordable housing units many years earlier than anticipated.

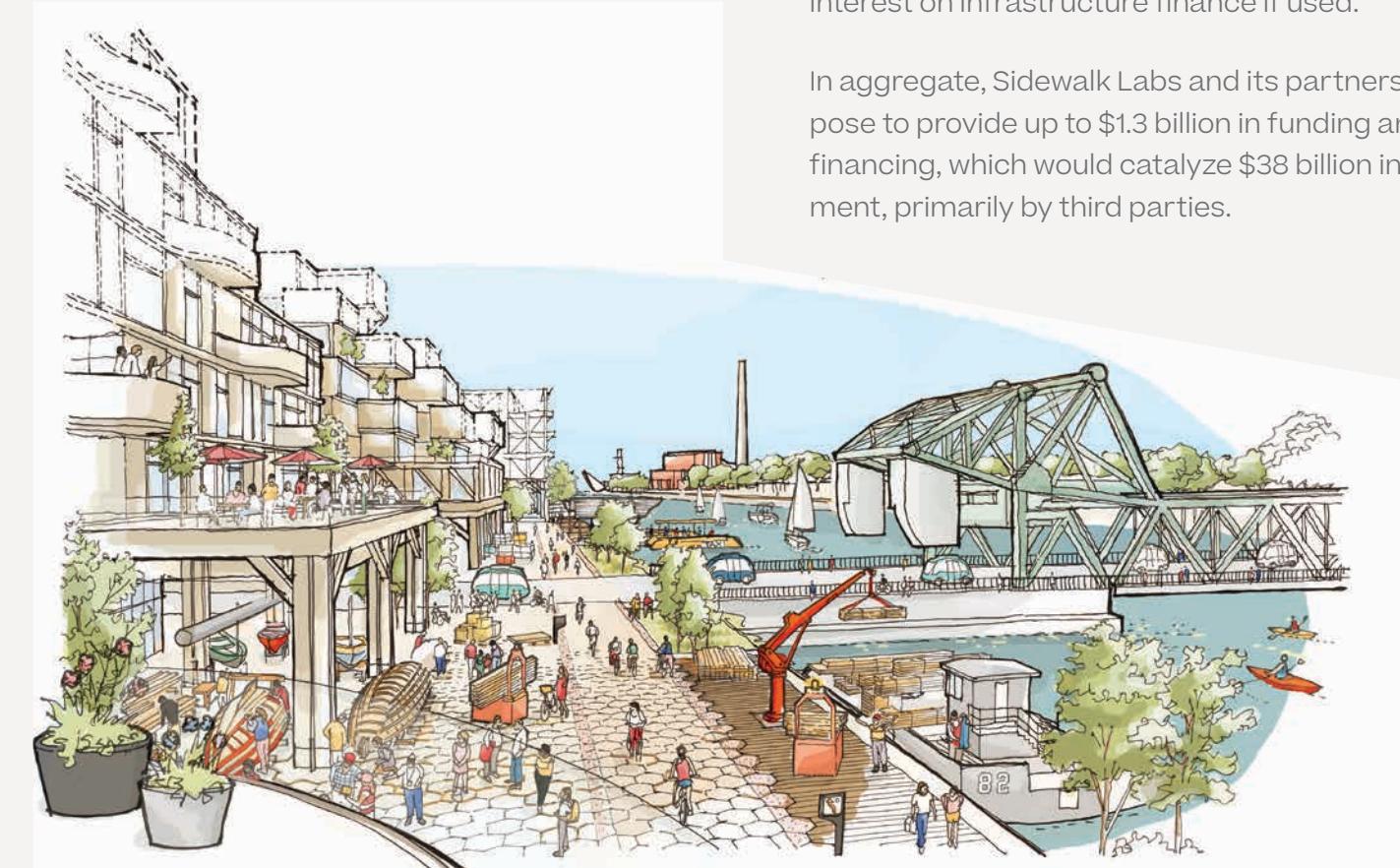
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Sidewalk Labs' proposed role is designed to support the public sector and create the conditions for others to thrive.

This plan proposes a limited role for Sidewalk Labs with government in the lead, and milestones that must be met for each project phase. Working with local partners, Sidewalk Labs would develop less than 7 percent of the eastern waterfront — the minimum necessary to prove the market viability of its innovations and spark economic growth through an innovation campus, featuring a new Google Canadian headquarters and Urban Innovation Institute.

For the rest of the project, Sidewalk Labs would advise on innovation planning, design, and implementation; deploy limited technology (sharing profits with the public sector in certain cases); and provide the option to finance critical infrastructure like the light rail expansion. Sidewalk Labs would earn profits on real estate development, fee income, and interest on infrastructure finance if used.

In aggregate, Sidewalk Labs and its partners propose to provide up to \$1.3 billion in funding and financing, which would catalyze \$38 billion in investment, primarily by third parties.



The Sidewalk Toronto project would help the eastern waterfront reach its full potential for sustainable, inclusive growth.

Summary of the MIDP's three volumes

Informed by more than 18 months of public consultation, the MIDP proposes a comprehensive planning and partnership model that sets a new standard for urban development in the 21st century. It is a work-in-progress meant to be refined by further consultation – not a finished product.

Across three volumes, the MIDP outlines a new vision for how cities can integrate physical, digital, and policy innovations to produce dramatic improvements in quality of life and generate significant economic opportunity. While the MIDP is meant first and foremost as a proposed plan for Toronto, it is also intended to provide a new urban toolkit for the digital age and to spark the imagination of cities tackling the challenges of diverse, equitable, and inclusive growth around the world.



Volume 1: The Plans

Volume 1 begins by outlining a proposed development plan, led by Sidewalk Labs, for the five-hectare Quayside neighbourhood. This plan aims to integrate a wide range of urban innovations to create a true live-work community for Torontonians of all incomes, ages, backgrounds, and abilities.

While focusing on Quayside, Volume 1 also explores a larger geography to achieve the most ambitious quality-of-life targets in a financially feasible manner. This geography is identified as a 62-hectare **River District** consisting of five distinct neighbourhoods: Villiers West, Villiers East, Keating Channel, McCleary, and Polson Quay. Volume 1 describes the role of Villiers West as a catalyst for economic development focused on urban innovation, and features concept plans for the other River District neighbourhoods to demonstrate how the innovative development approach initiated in Quayside and Villiers West would enable Waterfront Toronto, governments, and others to begin revitalizing the eastern waterfront.

Together, Quayside and the River District would form an **Innovative Design and Economic Acceleration (IDEA) District** subject to a special set of regulatory and policy tools to promote innovation and accelerate development. The vast majority of this area (representing less than a third of the entire eastern waterfront) would be developed by third parties. Sidewalk Labs proposes a role as lead real estate developer (with local partners) restricted to two areas, Quayside and Villiers West, undertaken for the limited purpose of proving out the innovative development approach. Together, these areas represent just 16 percent of the proposed IDEA District and less than 7 percent of the eastern waterfront.

Volume 1 closes with a plan for **inclusive economic development** capable of generating up to 93,000 total jobs, \$4.3 billion in tax revenues, and an estimated \$14.2 billion in annual economic output for Canada across the IDEA District by 2040 — all of which could be delivered on a far more accelerated timeline compared to plans in place today to activate the waterfront. These efforts would help the eastern waterfront become a global hub for the emerging field of urban innovation.



Volume 2: The Urban Innovations

Volume 2 provides greater detail on the technology, design, and policy innovations that make it possible to address some of the toughest challenges facing Toronto at this unique moment in time across core areas of urban life.

This volume includes comprehensive visions for **mobility, the public realm, buildings and housing, sustainability, and digital innovation**. While these innovation plans focus on Toronto, they also represent a general toolkit that could be applied in different ways to other growing cities around the world.



Volume 3: The Partnership

Volume 3 describes how the public and private sectors could work together to achieve a set of shared objectives. It includes a proposal for the IDEA District to be led by a public administrator to ensure public accountability as well as a comprehensive innovation strategy that involves a wide array of third parties.

Volume 3 describes the primary roles Sidewalk Labs envisions playing as **Innovation and Funding Partner**, including a role as **lead developer of real estate** (with local partners) and of **advanced systems** (such as essential energy, mobility, or utility infrastructure) — both limited to Quayside and Villiers West; an **advisory role around innovation planning, design, and implementation**; a **limited role in technology deployment**, including a proposal for the public sector to share in profits; and an **optional role in infrastructure financing**.

Volume 3 also outlines financial terms of the proposed transaction, as well as steps towards implementation, including a series of milestones (or “stage gates”) required for the project to advance.

Project Back- ground

Part 1

**Toronto’s Waterfront:
A Historic Opportunity
for Inclusive Growth**

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Part 3

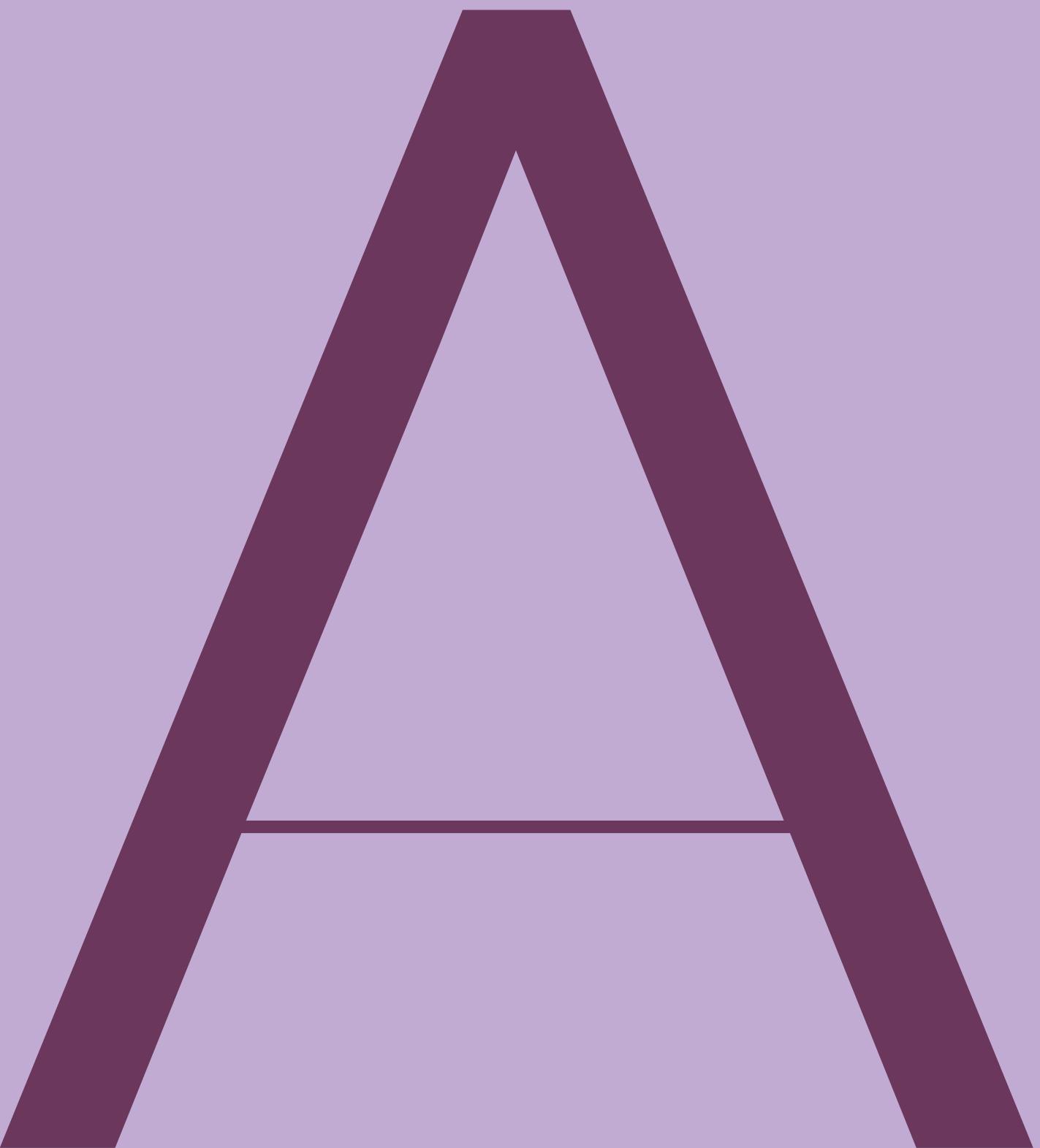
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Sidewalk Toronto Project
and a Robust Public
Engagement Process**

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Part 2

**Seeking a “Unique Partner”
to Help Set New Standards
for City Building**

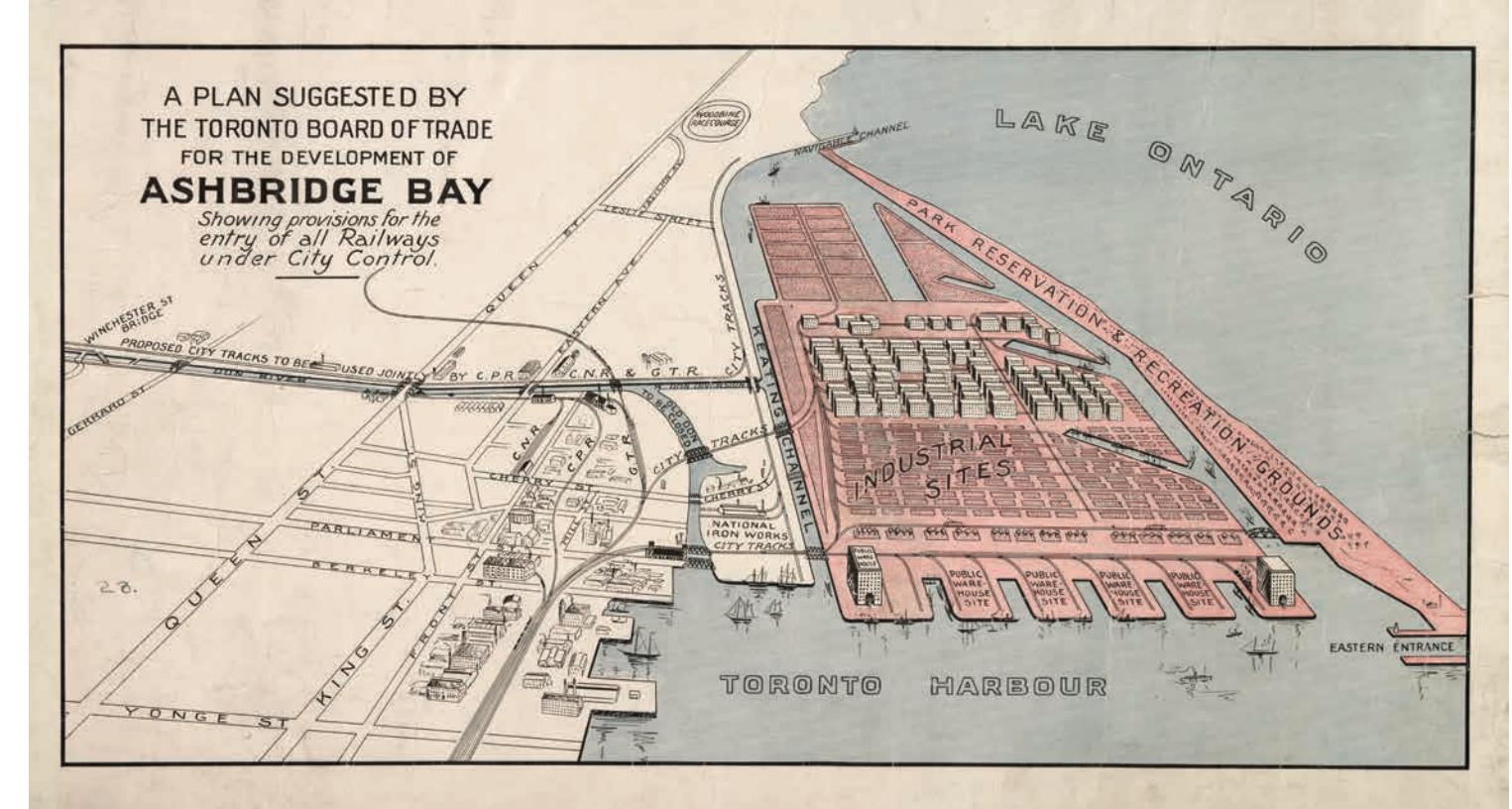
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Part 1

Toronto's Waterfront: A Historic Opportunity for Inclusive Growth

Toronto's success and growth have given rise to new challenges, straining the city's ability to live up to its values of openness and opportunity for all. After a century of efforts to develop the eastern waterfront as a growth outlet, the moment is finally right to realize its potential and show the way forward for inclusive urban development.



The Ashbridges Bay Development Plan — one of the earliest proposals for the eastern waterfront, from the Toronto Board of Trade in 1909 — envisioned Ashbridges Bay as an island encircled by shipping channels with rail-only access.
Credit: Toronto Public Library

For over 100 years, public officials and developers in Toronto have looked to the eastern waterfront to help address the growth challenges of the day. Early last century, they envisioned this area as a new lakefill home for the city's growing industrial base.¹ For a variety of reasons, including economic timing and a lack of supporting infrastructure, this original plan for the eastern waterfront never lived up to its lofty expectations.

After World War II, Toronto's economy shifted away from manufacturing — as was the case in many cities across North America — leaving the waterfront's industrial areas to enter a long period of decline and neglect. Towards the close of the 20th century, Toronto's waterfront remained underutilized and in need of the critical infrastructure necessary for a post-industrial revival, but there was no single entity tasked with creating a cohesive vision for the waterfront's future.

Today, beyond the important Film District, the eastern waterfront is largely a storage ground whose remaining industrial structures serve as a testament to the difficulty of large-scale urban development.

As the 21st century beckoned, public leaders took the first steps towards bringing the long-neglected waterfront to life. This effort began as part of an Olympics bid, with the bid committees strategically locating many proposed venues along the waterfront.² Although the Olympics never materialized, the waterfront's economic potential became a focal point of Toronto's civic imagination, and a new resolve emerged from all three orders of government to revitalize the waterfront.³

This renewed focus ultimately led to the creation of Waterfront Toronto — a public corporation established in 2001 by the Government of Canada, the Province of Ontario, and the City of Toronto.



This aerial view of Toronto's waterfront from circa 1933, looking east towards the Port Lands, shows the industrial area created by filling in Ashbridges Bay marsh. Credit: City of Toronto Archives

Waterfront Toronto: Born to raise the bar on urban development

The three orders of government formed Waterfront Toronto to unlock the social and economic potential of the waterfront by using best practices in urban planning and innovative development approaches – and to advance core public priorities, such as economic opportunity, sustainability, and affordable housing.

Waterfront Toronto has overseen the transformation of nearly **100 hectares** of waterfront. As a proponent of community-led change, Waterfront Toronto was established to work with the people of Toronto to make sure waterfront development serves their needs. Its mission includes the following objectives:

- **Reconnecting** the city with the water's edge as a place that belongs to every Torontonian
- **Creating** not just new buildings but new neighbourhoods where people can live, work, and thrive
- **Catalyzing** economic activity in emerging areas, such as technology
- **Pursuing** groundbreaking solutions to some of Toronto's most pressing issues: urban sprawl, affordable housing, climate change, mobility, and economic growth

Over the years, Waterfront Toronto has made important progress, reviving the waterfront through new approaches to urban design, prioritization of the public realm, and the delivery of critical infrastructure.

Waterfront Toronto has guided roughly 2.5 million square feet of development (completed or planned) and leveraged initial government funding to spur \$4.1 billion in economic output for the Canadian economy.⁴ The agency's achievements also include attracting a privately funded fibre-optic gigabit network, leading the creation of new public transit corridors and active streets, guiding over 36 hectares of parks and public spaces, and helping secure roughly 600 units of affordable housing (completed or nearing completion).⁵

The waterfront revitalization area under Waterfront Toronto's scope is 800 hectares, and to date, the agency has overseen the transformation of nearly 100 hectares of waterfront lands.⁶

A view of the eastern waterfront today

Credit: DroneBoy





Waterfront Toronto case studies

A track record of progress

Since its inception in 2001, Waterfront Toronto has made important progress revitalizing the city's waterfront.

Some of its key projects include:⁷

Corktown Common. Located at the southeasternmost corner of the West Don Lands, Corktown Common serves the role of neighbourhood centrepiece: a 7.3-hectare public park that includes a playground, splash pad, play field, and firepit, situated in naturalized environments such as marshlands and prairies. The park's unique features include its position atop a landform that protects over 200 hectares from flooding. In addition to serving as an important community asset, the award-winning project has been widely recognized, including as a recipient of the Federation of Canadian Municipalities Sustainable Communities Award for Neighbourhood Development in 2014.⁸

Queens Quay West. The waterfront's primary east-west street, Queens Quay West underwent a decade-long transformation, beginning in 2006 with a successful pilot project to reconfigure the street for more pedestrian and cycling traffic. The revitalization enabled easier access to the water, added a double-row of new trees, eliminated elevated curbs, increased the public realm with a wide granite pedestrian promenade, and added a new stretch of the Martin Goodman Trail — altogether making Queens Quay Toronto's first "complete street."

West Don Lands. Located in the elbow where the Don Valley Parkway meets the Gardiner Expressway, the West Don Lands was, by the late 20th century, an abandoned and flood-prone industrial area. A two-year public consultation process resulted in a 2005 precinct plan calling for a forward-thinking mix of residential and commercial spaces, an abundance of park space, and a higher standard for green buildings found in few other parts of Toronto. Following extensive flood-remediation efforts, the first developments were completed prior to the Pan American games in 2015, which catalyzed more recent development and the growth of the area known as the Canary District, today home to the George Brown College student residence and a new YMCA facility. The West Don Lands project, which now includes nearly 500 affordable housing units, has received a number of awards, including the Urban Land Institute's Global Award of Excellence in 2017/18.⁹

Other key projects include the Intelligent Community initiatives and partnership with telecommunications provider Beanfield to promote innovation and digital inclusion; construction of the unique and popular Spadina, Rees, and Simcoe Wave-Deck boardwalks along the shoreline; the redevelopment of the Harbourfront Centre surface parking lot at York Quay into underground parking, the Ontario Square plaza, and the public art installation *Light Cascade*; and the revitalization of Harbour Square Park and the Jack Layton Ferry Terminal at the foot of Bay Street.



Corktown Common
Credit:
Waterfront Toronto



Queens Quay West
Credit:
Waterfront Toronto



West Don Lands
Credit:
Waterfront Toronto

A vision for unlocking the eastern waterfront's potential

In the past few years, development has marched towards the eastern waterfront: an area of more than 300 hectares¹⁰ just southeast of downtown, including a five-hectare parcel called Quayside that serves as a connection point to the city centre.

The eastern waterfront represents the city's last great frontier for downtown growth and the largest underdeveloped parcel of urban land in North America, extending around the inner harbour and encompassing the industrial areas surrounding Parliament Slip, the mouth of the Don River, the Ship Channel, and the Turning Basin.¹¹

In 2017, Waterfront Toronto took a key step towards unlocking the eastern waterfront by securing an extraordinary \$1.25 billion investment in flood mitigation from all three levels of government. By rerouting the Don River, this flood-mitigation project will result in the creation of a new area for development called Villiers Island, which will feature 16 hectares of interconnected parkland along its renaturalized banks and beyond.¹²

When approaching the revitalization of this critical growth outlet, Waterfront Toronto could have used a traditional model: bidding out a series of development parcels, with market-rate condos dominating the mix. But several emerging trends rightly led Waterfront Toronto

“Toronto’s eastern waterfront, with more than 300 hectares (750 acres) of land subject to future revitalization, presents a unique opportunity for governments, private enterprise, technology providers, investors and academic institutions to collaborate on these critical challenges and create a new global benchmark for sustainable, inclusive and accessible urban development.”

Waterfront Toronto RFP No. 2017-13 (March 17, 2017)



Map

Quayside and the eastern waterfront within the Designated Waterfront Area

Toronto's eastern waterfront occupies some 300 hectares of the 800-hectare Designated Waterfront Area just southeast of downtown, with the five-hectare Quayside area serving as a connection point to the city centre.

to choose a different path — one more focused on helping the city address its population growth challenges.

Toronto's success is threatening its inclusivity.

Toronto is rapidly becoming one of the world's most popular and productive cities.

The city boasts an exceptionally diverse population thanks to its welcoming immigration policies, with nearly half its

population foreign-born.¹³ This openness has led people and companies to flock to the Greater Toronto Area (GTA), which is projected to add 2.8 million people by 2041, including nearly 1 million new residents within Toronto city limits.¹⁴ It has top academic institutions, a rich legacy of urban planning, and a booming tech sector — the fourth-largest in North America.¹⁵

But like a lot of global urban centres, Toronto is becoming a victim of its own

Key Term**RFP No.
2017-13**

Waterfront Toronto issued this Request for Proposals in March 2017 to find an “Innovation and Funding Partner.”

success. As the city continues to grow, Toronto has become less and less able to provide the opportunities that powered this growth in the first place.

The result is a widening gap between Toronto’s deep commitment to diversity and inclusion and the city’s capacity for inclusive growth.

This gap is widest when it comes to finding an affordable place to live.

Home prices in the GTA have more than doubled since 2006, far outpacing earnings.¹⁶ Rental prices have ballooned as well.¹⁷ The high demand for urban living has created a geographic disparity known locally as the “Three Cities”:

Toronto’s neighbourhoods are increasingly segregated by income, with wealthy areas downtown, low-income areas forced to the edges, and middle-income pockets that continue to shrink.¹⁸

As households move farther from job centres, traffic congestion has steadily increased, with Toronto now having the second-longest average commute time among North American cities, according to a recent study by the Toronto Region Board of Trade.¹⁹ Rapid transit infrastructure has struggled to keep pace with growth. The vast majority of households across the city own a car, as do nearly half of households downtown,²⁰ despite the high financial cost — let alone other costs of safety, productivity lost to traffic, and pollution.

Add to these challenges the urgency of climate change. The same development patterns pushing families to the fringes are at odds with the type of dense urban neighbourhoods that increase sustainable living. Merely cutting energy use is no longer enough — to make a dent in global

warming, communities must remove carbon from the environment, and do so in an affordable way.

All of these problems have disproportionate impacts on the most vulnerable populations in urban communities.

Recognizing the need for a new type of development.

Given this complex set of urban challenges — starting with affordability and extending to sustainability, inclusivity, economic opportunity, and mobility — Toronto is the perfect place to demonstrate forward-thinking planning and drive the future of urban development in the digital age.

In spring 2017, Waterfront Toronto issued a Request for Proposals (RFP) for an Innovation and Funding Partner that identified the eastern waterfront as a “unique opportunity for governments, private enterprise, technology providers, investors and academic institutions to collaborate on these critical challenges and create a new global benchmark for sustainable, inclusive and accessible urban development.”

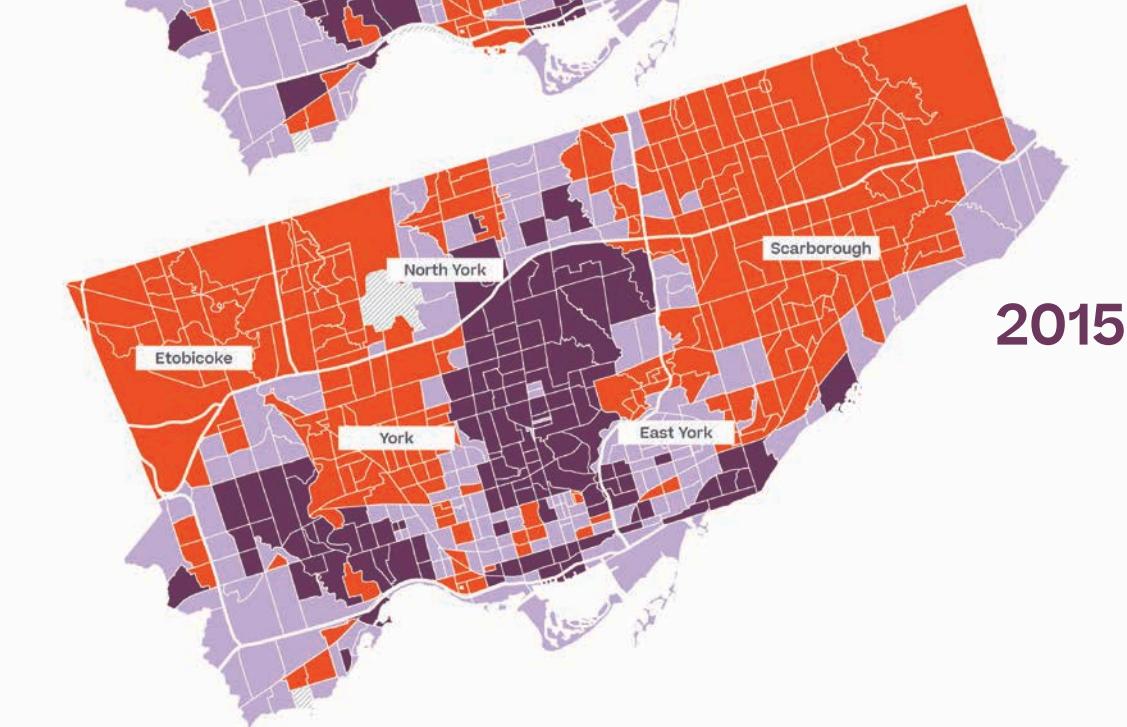
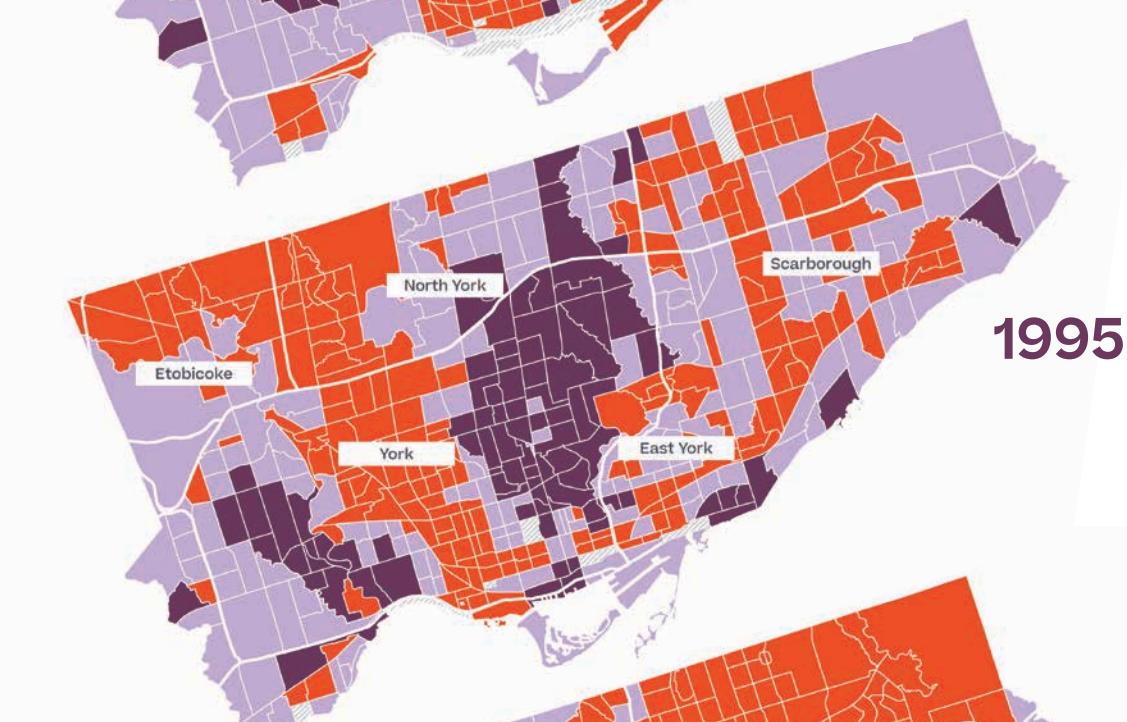
The RFP was a recognition that more of the same development would no longer be sufficient for inclusive growth, given the severity of Toronto’s urban challenges. Traditional development — with its low levels of affordability, lack of public realm, lack of commercial space — would not help meaningfully address emerging challenges around sustainability, inclusion, economic opportunity, and mobility.

Instead, these types of trends would require a different path with a different partner: one that could help devise, finance, and implement a bold vision of urban progress for the eastern waterfront.

Toronto’s fading middle-income neighbourhoods

Since 1970, Toronto’s neighbourhoods have become increasingly segregated by income, with wealthy areas downtown, low-income areas forced to the edges, and middle-income pockets that continue to shrink.

- High-income
- Middle-income
- Low-income



Note on methodology: Average individual income by census tract, or neighbourhood, compared to the Toronto Census Metropolitan Area (CMA) average, which was \$5,756 in 1970, \$28,980 in 1995, and \$50,479 in 2015. Middle-income neighbourhoods refer to average individual incomes that are 20 percent above or below the CMA average, or at 80-120 percent of CMA. High-income refers to 120 percent and above; low-income refers to less than 80 percent.

Source: Statistics Canada Census Profile Series 1971, 1996, 2016; analysis by J. David Hulchanski, Neighbourhood Change Research Partnership.

Part 2 Seeking a “Unique Partner” to Help Set New Standards for City Building

Waterfront Toronto’s RFP sought an Innovation and Funding Partner to help advance a new model of urban development that used emerging capabilities to help tackle the toughest urban growth challenges. After a global competition, Waterfront Toronto selected Sidewalk Labs as this partner, given the company’s unique mission to integrate urban planning, technology, and policy to radically improve quality of life for all.

“Waterfront Toronto is seeking a unique partner, one with invention ingrained in its culture, which can transform conventional business practices and help to establish a benchmark climate positive approach that will lead the world in city building practices.”

Waterfront Toronto RFP No. 2017-13 (March 17, 2017)

The RFP sought proposals for achieving a series of objectives that went far beyond narrow economic goals.²¹

Specifically, the RFP sought a partner to help achieve a series of “ambitious, high-level objectives” around sustainability, inclusion, economic development, and financial feasibility. These objectives included:

- Creating “a globally significant demonstration project that advances a new market model for climate-positive urban developments”
- Establishing “a complete community that emphasizes quality of place, and provides a range of housing types for families of all sizes and income levels within a robust mix of uses”
- Providing “a testbed for Canada’s cleantech, building materials and broader innovation-driven sectors to support their growth and competitiveness in global markets”

→ Developing “a new partnership model that ensures a solid financial foundation, manages financial risk and secures revenue that funds future phases of waterfront revitalization”

Achieving any single one of these objectives would be difficult. Achieving them all in one comprehensive project is a challenge that has eluded large-scale developments in high-demand cities around the world.

For that reason, the RFP recognized the need for this project to become a model for others: a “globally-significant community that will showcase advanced technologies, building materials, sustainable practices and innovative business models.”

The RFP also recognized the potential challenges of realizing all these goals in a neighbourhood the size of Quayside, including a requirement for respondents to describe their “ability and readiness to take the concepts and solutions deployed on Quayside to scale in future phases of waterfront revitalization.”

To fully realize key objectives, the RFP noted that “it may be beneficial to advance the solutions, processes and partnerships proven successful through the Project to subsequent developments on the eastern waterfront.”

Instead of a more traditional plan, which might lead mainly to condo towers, the RFP sought to forge a new model for a complete, mixed-use community, with outsized levels of affordable and below-market housing. Rather than looking to Quayside for incremental improvements over past development, the RFP sought to use the area as a demonstration for how advances in technology and design can yield substantial improvements in quality of life for residents, visitors, and workers. And instead of seeking modest sustainability gains, the RFP sought an extraordinarily ambitious goal: a climate-positive community.

The RFP was a recognition that today’s developers can do far more to improve urban life using new digital and design innovations, seeking out a partner with “invention ingrained in its culture” to help transform conventional approaches to urban development. The RFP also identified the need for “new and innovative partnerships, funding and investment models” in an era of “constrained” government resources.

Thus, the Innovation and Funding Partner would serve as more than the developer of Quayside, but a partner to work alongside Waterfront Toronto to conceive and execute a forward-looking vision for the eastern waterfront — a partner with the right level of ambition, innovation expertise, and financial resources.

Several local and international firms submitted responses to Waterfront Toronto’s RFP, describing their vision, team strength and experience, and financial capacity. Following a rigorous evaluation process, Waterfront Toronto selected Sidewalk Labs as Innovation and Funding Partner.

A new set of capabilities has emerged to address urban challenges

Waterfront Toronto’s RFP emerged at a moment when technology has advanced enough to make genuine breakthroughs on tough urban challenges, if applied with the right level of thought and care.

Cities have always been humanity’s greatest engines of opportunity, invention, and community through their ability to connect so many diverse people in the same place. But they have reached a pivotal moment in their development. The quality-of-life challenges facing Toronto are being experienced by rapidly growing metros around the globe, from New York to San Francisco to London and beyond.

Income inequality is growing, with more and more households unable to afford homes near their jobs.²² Commuters spend hours a day trapped in traffic congestion. Energy consumption must get leaner and cleaner to protect the environment. Downtown neighbourhoods with limited developable space are squeezed for parks, open spaces, schools, health services, and community centres. The proliferation of data and digital devices in cities has left people rightly concerned about their privacy.

While every city faces these problems in its own way, the symptoms are consistent: places that are less livable, affordable, and sustainable — with fewer chances for the broadest diversity of residents to thrive.

As these challenges rise, so too has the opportunity to address them using emerging digital and physical capabilities, including ubiquitous connectivity, artificial intelligence, and sensing tools, as well as new design and fabrication techniques, including the use of robotics.

This suite of capabilities represents a fourth urban technological revolution of the modern era, potentially every bit as transformative for cities as the steam engine, electric grid, or automobile before it. But as the history of those prior revolutions shows, innovation can have great social benefits or significant drawbacks depending on how thoughtfully it is incorporated into urban life.

To fully realize key objectives, the RFP noted the potential need to scale new solutions “to subsequent developments on the eastern waterfront.”

The steam engine gave rise to industry and brought new job opportunities, but it led to terrible smog and poor work conditions. Electricity brought cities 24/7 activity, elevators, and skyscrapers, but it furthered reliance on fossil fuels. The automobile made it easier to get people and goods in and out of cities, but it generated enormous congestion and led households to leave cities for the suburbs.

Applying new technology to cities in a thoughtful way is difficult.

The urban technologies emerging today face an inflection point.

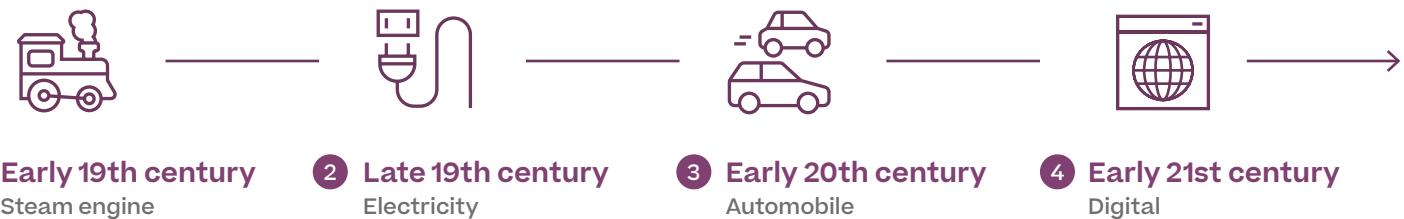
Self-driving vehicles have the potential to make city streets dramatically safer, but only if they always follow the rules of the road. Factory-based construction can meaningfully improve housing affordability and accelerate development, but these savings must support below-market housing programs and robust public policies to reach their full benefit. Digital connectivity can expand job opportunities and encourage innovation, but it must come with a process that protects privacy and the public good.

The lesson from history, as well as from the recent smart cities movement, is clear: technology is not a quick fix for complicated urban challenges. Instead, new advances must be incorporated into the city with great care to improve urban life, not undermine it.

But infusing new capabilities into the urban environment is hard. Cities are complex places. The technologists who produce ambitious solutions do not speak the same language as the urbanists who must find ways to implement them in the public interest — an “urbanist-technologist” divide. These two groups have very different tolerances for risk, different requirements for transparency, and different expectations for how long it should take to get things done.

That is why no single city stands as a new model for a brighter urban future.

The four urban tech revolutions



What makes Sidewalk Labs a unique Innovation and Funding Partner

Sidewalk Labs is an Alphabet company (and a sibling company of Google) founded in 2015 for the very purpose of delivering dramatic improvements in urban life — on the belief that tackling these challenges is possible with careful integration of emerging innovations and people-first urban design. To fulfill that mandate, Sidewalk Labs assembled a unique team from across the worlds of urban planning, urban development, and digital technology.

This diverse team shares a set of beliefs and founding principles about what makes cities great (see sidebar on Page 60), with a company mission “to combine forward-thinking urban design and cutting-edge technology to radically improve urban life.” The team also formed a set of founding objectives, all working towards the goal of creating a district that could set a new standard for urban life:

- Enable a meaningfully superior quality of life for a diverse population
- Establish the world’s most innovative urban district
- Attract and sustain a diverse 21st-century economy, including a cluster focused on urban innovation
- Create a replicable model that can be implemented around the world
- Provide financial viability for long-term investors

Following its formation, Sidewalk Labs entered a period of intensive research and development. This work involved consulting outside experts from around the world to advise on the impact of technology on urban life; evaluating hundreds of emerging urban innovations, from self-driving vehicles to new fabrication techniques to clean energy systems; reviewing 50 years of precedents for innovation districts or “smart city” initiatives; and creating the framework for planning a large-scale district with innovation built into its foundation.

Sidewalk Labs undertook feasibility studies based on this concept with several key assumptions. The district would have to be socio-economically diverse, closely connected to the surrounding metropolitan area, and of sufficient scale to support key infrastructure systems.

Sidewalk Labs' founding principles

People.

Cities are about people. Whenever we improve the human experience, we improve the city. Whenever we ignore it, we make things worse.

Interactions.

Cities serve people by fostering interactions, both planned and unplanned, among individuals, their ideas, and their creations. Whenever cities are divided — by wealth, race, or any other factor — their people suffer.

Opportunity.

Cities are engines of opportunity. They are the most effective tool humanity has for lifting people out of poverty, and for enjoying a high quality of life without destroying our planet.

Community.

The inherent power of cities is that they are shared, which can help everyone realize greater benefits. Cities are ecosystems where people can connect with each other, influence their environment, and contribute to community well-being.

Adaptability.

Cities thrive when they are able to evolve to meet the diverse and changing needs of their residents, workers, and visitors.

Diversity.

Openness to people from all backgrounds and walks of life, from Indigenous people to newcomers, is what keeps even the oldest cities moving forward.

Coordination.

Cities require coordinated actions among people, whether to manage congestion or to preserve public safety. But the most effective coordination prioritizes community-led innovation rather than prescribing solutions.

Based on this analysis, Sidewalk Labs concluded that it could achieve all five founding objectives and create a fundamentally more vibrant, livable, and affordable place: a district that significantly reduces cost of living while providing better housing options (in particular for families), cuts greenhouse gas emissions by at least two-thirds, and gives people back at least an hour of time every day thanks to better transportation options and live-work neighbourhoods leading to shorter commutes.

By the time Waterfront Toronto issued its RFP seeking an Innovation and Funding Partner in spring 2017, Sidewalk Labs had spent more than a year creating this vision and searching the world for the right place to bring it to life.

Toronto — with its devotion to inclusive growth, the challenges it faced, the opportunity along the waterfront, and Waterfront Toronto's shared belief in creating something so much greater than a traditional real estate project — was the perfect match.

Three capabilities unique to Sidewalk Labs

Several attributes make Sidewalk Labs the ideal partner for delivering an urban project to match the ambitions of Waterfront Toronto and the three levels of government it represents. These include a novel approach to innovation drawn from an interdisciplinary team of urbanists and technologists, the benefits of long-term thinking possible with patient capital, and the ability to catalyze economic development.

1

An interdisciplinary approach to urban innovation.

To achieve its core mission of radically improving urban life for all, Sidewalk Labs has developed a cross-disciplinary team that fundamentally differentiates it from a traditional development partner, drawing leading professionals from the diverse disciplines necessary to plan and execute a project of this scope and magnitude, including urban planning, digital technology, policy, architecture, engineering, real estate development, and finance.

Sidewalk Labs has brought together former public servants — many with backgrounds in city government — who are sensitive to urban issues and respectful of the public sector; urban developers, architects, and planners deeply familiar with the practical challenges of creating places that are both appealing and affordable; and some of the most innovative thinkers, specifically technologists sensitive to urban issues.

Collectively, this team has worked on numerous innovative projects in large cities around the world. These efforts include several major initiatives in New York City, including:

- The transformation of Manhattan's Far West Side, unlocked by the innovative financing approach that sparked the city's first subway expansion in 25 years
- The redevelopment of an unused elevated freight track into the celebrated High Line park
- The design of the pioneering sustainability plan called PlaNYC
- The creation or preservation of 165,000 units of affordable housing across the city
- The development of Cornell Tech, a sustainable academic campus focused on technology and entrepreneurship
- The launch of Google's first engineering office outside Silicon Valley, helping to jumpstart New York City's now booming tech ecosystem

Sidewalk Labs also has established a significant Toronto presence, with more than 30 employees working out of a new office and innovation workshop called "307," which was launched in 2018 in a former fish-processing plant in Quayside.

The High Line converted an abandoned elevated rail line into an internationally acclaimed park that has spurred a dramatic economic resurgence in surrounding neighbourhoods. Credit: Sidewalk Labs



An innovative “value capture” financing approach enabled the extension of the 7 train into the new Hudson Yards development on Manhattan’s Far West Side, New York City’s first subway expansion in 25 years. Credit: iStock



Key Term Urban Innovation

is the integration of physical, digital, and policy advances to improve urban life.

This Toronto-based team also includes a mix of civil servants, urban planners, and technologists who have played a role in Toronto’s [West Don Lands](#) and [East Bayfront developments](#), the [Bentway](#) park beneath the Gardiner Expressway, the [Evergreen Brick Works](#) site, the [Eglinton Crosstown](#) rapid transit line, and many other innovative projects. This team has also worked closely with every public-sector development agency, including [CreateTO](#), [Toronto Community Housing Corporation](#), and [Infrastructure Ontario](#).

Together, this team has developed a unique approach to “urban innovation,” broadly defined as the integration of physical, digital, and policy advances into

the urban fabric to improve quality of life in cities. Much more than just the pursuit of isolated efficiencies associated with “smart cities,” urban innovation requires a thoughtful interdisciplinary approach that sits at the intersection of two of the defining trends of the 21st century: global urbanization and technological change.

Sidewalk Labs team members identify innovations that are beginning to be deployed to improve life in cities, drawing inspiration from the cutting-edge work being done by urban planners and designers around the world, as well as from the capabilities being developed by leading technologists. As a subsidiary of Alphabet, Sidewalk Labs has close

This underutilized site on Roosevelt Island was transformed into Cornell Tech, a technology campus that set new sustainability standards and has helped catalyze New York’s tech ecosystem. Credit: Sidewalk Labs



The Bentway reimagined the area beneath the Gardiner Expressway as a vibrant public space connecting multiple neighbourhoods and offering an exhilarating entrance to Toronto’s waterfront with creative year-round programming. Credit: Ken Greenberg



familiarity with many of the technological assets in development by its sibling companies, many of which are highly relevant to urban innovation, ranging from digital infrastructure and geospatial mapping to self-driving vehicles and energy management.

Critically, this approach does not presume that Sidewalk Labs alone would develop all the innovations a city might need. On the contrary, Sidewalk Labs aims to create the open conditions for ongoing improvement — recognizing that the best solutions to urban challenges come not from the top down but rather from the community up.

Of course, in proposing a project that includes digital technology as one tool (among many) to help drive innovation, questions about data collection and management are critical. Sidewalk Labs recognizes that information collected in public space must be put to use for the greater good, protected by a transparent and independent process and robust privacy safeguards, and made publicly accessible for anyone to build on.

2

Access to patient capital that enables a long-term vision.

A second factor that makes Sidewalk Labs unique is that, as a subsidiary of Alphabet, it has an ability to invest in long-term projects.

Sidewalk Labs is a for-profit but mission-driven company backed by Alphabet's patient capital. That profile makes

The benefits of patient capital include:

- More resources for research and development
- An ability to prioritize long-term benefits over immediate profits
- A willingness to fund foundational urban technologies like next-generation stormwater infrastructure

Sidewalk Labs uniquely suited to pursue longer-term returns, conduct far more robust research and development than a typical real estate developer, and build foundational pieces of urban technology that neither the market nor government can or will, with the goal of jumpstarting innovation by others.

For example, there is no significant marketplace to fund next-generation stormwater infrastructure that responds to heavy rain forecasts, or next-generation energy infrastructure that draws electricity when the power grid is cleanest, or next-generation digital connectivity that creates a secure personal network for households or businesses across an entire neighbourhood.

Backed by Alphabet, Sidewalk Labs can explore new services, tools, and financing structures that can bring these ideas to life over the long term.

Alphabet has a demonstrated commitment to taking a long-term view of investing, where warranted. To take just one example, the Alphabet company Waymo, which focuses on self-driving vehicle technology, has been patiently developing its work for more than a decade, and has now completed millions of miles of test driving.

Sidewalk Labs can likewise take a longer view. This longer view is critical to the innovative urban model sought in the RFP, which calls for a longer investment horizon than traditional real estate. Accordingly, this approach requires financial backers committed to seeing it through — to prove out the initial innovations and ultimately achieve economic viability.

This long-term perspective allows Sidewalk Labs to commit more resources to research and development than a typical real estate developer, to invest in hard assets with higher capital requirements than a typical technology company, and to be patient about earning a reasonable return.

3

An uncommon ability to catalyze economic development.

A third aspect that makes Sidewalk Labs unique is its ability to leverage its approach to urban innovation as well as its relationship with Alphabet to create jobs and new industries that lead to inclusive economic growth — recognizing that this approach must benefit everyone by planning for prosperity with equity.

As described further on Page 156 of this Overview, Sidewalk Labs plans to help catalyze an economic cluster focused on urban innovation, building on Toronto's substantial existing leadership in emerging fields of technology and urban design. This effort is anchored by the relocation of Google's Canadian headquarters to the eastern waterfront as part of a new innovation campus. 

See the "Economic Development" chapter of Volume 1, on Page 420, for more details on Sidewalk Labs' proposals for an urban innovation cluster and prosperity with equity.

Google has a well-documented history of acting as a catalyst for economic development when it commits to expand in a region. When it reaches a critical mass of employees in a city, time and again, significant growth follows.

A Sidewalk Labs study of several U.S. cities found that Google's arrival correlated with an increase in office value in the area, as well as an uptick in the local retail and residential inventory of 20 to 108 percent, above and beyond the growth exhibited in each city's central business district.²³ In Chicago, for example, the Fulton Market area experienced a 108 percent increase in office inventory, while growing office space value by 5.7 percent.

More broadly, high concentrations of tech employment in cities have been demonstrated to increase the overall number of non-tech jobs as well, amounting to approximately five new non-tech jobs for every new tech job created.

These efforts would follow initiatives designed to accelerate development through long-term investments in critical infrastructure, such as light rail transit; to implement a general approach to people-first planning that aims to attract talent through a vibrant mix of homes, offices, shops, civic amenities, and open spaces; and to support the creation of an Ontario-based mass timber factory to catalyze an industry centred on this sustainable building material of the future.

Part 3

Launching the Sidewalk Toronto Project and a Robust Public Engagement Process

The Sidewalk Toronto project teams solicited a wide range of feedback from residents, researchers, community leaders, and government agencies across the city. This unprecedented level of preliminary public input — reaching more than 21,000 Torontonians in person to date — helped shape the plan.

Consultation by the numbers
→ ~21,000 people engaged in person during Sidewalk Toronto and 307 events
→ ~280,000 online views of live-streamed events or videos
→ More than 11,000 visitors to 307 since June 16, 2018

After Sidewalk Labs was selected by Waterfront Toronto as Innovation and Funding Partner, the Sidewalk Toronto project launched in October 2017. In fact, this designation merely gave Sidewalk Labs the exclusive right to work with Waterfront Toronto and governmental partners to develop a plan and partnership proposal for creating a new type of community on the waterfront.

Public engagement began shortly after the project launch and occurred alongside this period of intensive planning work. This type of extensive engagement from the outset is critical to designing a plan that truly reflects the aspirations and ideas of Torontonians.

In November 2017, some 530 Torontonians showed up on a chilly evening, packing the St. Lawrence Centre for the Arts to hear about the Sidewalk Toronto project. The live-streamed discussion from this initial Town Hall has since been viewed by over 5,000 people online.²⁴ It was the start of a sprawling conversation that, over the course of the next 18 months, would

To date, the Sidewalk Toronto public engagement program has reached more than 21,000 Torontonians of all ages. Credit: Jenna Wakani



become one of the city's largest-ever public discussions on an urban development — and it is still ongoing.

At that first Town Hall, Torontonians said they wanted a community engagement process that would be inclusive, transparent, frequent, wide-reaching, and meaningful. Soon after, Sidewalk Labs released its participation plan: 13 different programs that would ultimately connect the project with tens of thousands of Torontonians.²⁵

Sidewalk Labs' subsequent outreach has included dozens of community meetings and programs.²⁶ A series of large-scale roundtable meetings helped to keep people informed of the latest project updates and asked them to weigh in on key topics, from the principles guiding the planning process to the initial drafts of the plan for Quayside. A series of public talks brought local and global experts to broaden the conversation on safe street design, housing affordability, accessibility, and sustainable buildings.

The engagement plan included two intensive programs for representative groups of Torontonians. One was the Sidewalk Toronto Residents Reference Panel: a group of 36 residents from every corner of the city and diverse backgrounds. Across six Saturday sessions, spread over nine months and dozens of hours, the panelists received an in-depth look at many aspects of the Sidewalk Toronto project and provided a detailed set of recommendations, helping to shape the plan in the best interests of all Torontonians.²⁷

The other intensive program was the Sidewalk Toronto Fellows program, designed as an opportunity for

12 early-career Torontonians aged 19 to 24 to travel to cities across North America and Europe and learn about waterfront revitalization and the use of technology. The fellows represented a range of perspectives, skills, and educational backgrounds from all over Toronto. They synthesized their learnings and published a report of recommendations that has directly influenced Sidewalk Labs' planning teams.



Sidewalk Labs' Amina Mohamed discusses a student-created model imagining the future of Quayside with visitors to 307. More than 11,000 Torontonians have visited 307 since it opened in June 2018. Credit: Jenna Wakani

elements of the project and "design jams" that provided stakeholders and residents with an opportunity to engage deeply with aspects of the project focused on vertical living, cycling, and the water.

Learning from many voices

In June 2018, Sidewalk Labs opened a Toronto office and innovation workspace in Quayside called 307, housed in a former fish-processing plant in Quayside. All summer long, 307 hosted special events that attracted residents, artists, and innovators to learn more about the Sidewalk Toronto project, engage with early explorations into a variety of urban innovations, and provide valuable feedback.²⁸

Since its opening, 307 has welcomed more than 11,000 people, creating a dynamic and original venue for consultation and exploration.

In the latter half of 2018, Sidewalk Labs reached out to groups whose voices had been missing and brought them to the design and planning table, and also sought to meet people in their own communities.

Teams worked with members of the Indigenous community for a design workshop; engaged seniors in a charrette around housing; travelled to middle schools to ask children and youth for their ideas; and held a series of co-design sessions with members of the accessibility community and with people with lived experience of addiction and mental health challenges, in collaboration with the Inclusive Design Research Centre at the Ontario College of Art and Design University.²⁹

The outreach effort stretched across all ages, including a partnership with the YMCA that led to a kids camp.

Bringing informed scrutiny into the heart of the project was essential. Sidewalk Labs convened six topic-specific advisory boards filled with local experts to challenge and improve the project's assumptions. Project members also held hundreds of one-on-one or small group meetings — including concerted outreach to the business, academic, non-profit, and institutional sectors — and engaged extensively with Waterfront Toronto and public officials at all three levels of government.

This programming was complemented by consultations held by Waterfront Toronto, including Civic Labs that focused on digital

Consultation by the numbers

- **100+ hours spent co-designing with communities**
- **~1,700 total hours volunteered by Resident Reference Panel members**
- **~2,300 total hours committed by Sidewalk Toronto fellows**
- **Worked with 75 experts, across six expert advisory groups**

Consultations were also held with residents and students from the inner suburbs of Rexdale and Scarborough, with the Lived Experience Advisory Group to the City of Toronto's Poverty Reduction Strategy, and with the Toronto Community Benefits Network to explore ways in which the project could drive equity, opportunity, and social inclusion.

Planning teams also commissioned ethnographic research that emphasized the inclusion of diverse voices or voices often missed in the traditional public engagement process for reasons such as geography, awareness, or access. These studies focused on public space, family housing, and community care.

"North of the Water": Generating open space principles.

Sidewalk Labs collaborated with Doblin, Deloitte's consulting practice on human-centred design, and Park People, Canada's leading charity devoted to improving public space, to understand which factors contribute to a sense of belonging in public space. The "North of the Water" research involved 40 Torontonians who had previously not participated in a formal public engagement process, representing 23 different neighbourhoods and a mix of ages and backgrounds.

The work drew from in-depth interviews, "research walks" through public space, and daily diaries. A final report — available on the Sidewalk Toronto website — resulted in six design principles for great, inclusive public space. 

See the "Public Realm" chapter of Volume 2, on Page 118, for more details on this research.

"Living Well on the Waterfront": Understanding health needs.

Sidewalk Labs commissioned the design firm Idea Couture to provide an understanding of the health needs of Torontonians. Twenty residents

and service providers — from a mix of age groups and cultural, professional, and political backgrounds — were interviewed in their homes and communities. Idea Couture and Sidewalk Labs then hosted a co-design charrette at the Centre for Social Innovation in Toronto, with participants from both the public and private sectors, to co-create more than 90 ideas on the future of community care. The resulting report sketched out a concept for a new type of community-based care hub in Quayside.³⁰

"Family Lifestyles": Informing a new housing toolkit.

With SHS Consulting, a Toronto-based housing research firm, Sidewalk Labs conducted research with 25 low- or middle-income couples and families to uncover the housing needs of Torontonians — beyond the typical downtown resident. This work interviewed couples and families from the Toronto core, Etobicoke, and Scarborough in their homes and conducted a three-hour co-design workshop at 307, where families responded to a unit mock-up, tried out digital prototypes, and filled out workbooks. This direct feedback helped the Sidewalk Labs planning teams develop and validate certain concepts in a new housing toolkit.

To date, Sidewalk Labs has heard first hand from more than 21,000 Torontonians.

But the listening does not stop here. Sidewalk Labs will continue learning from Torontonians and incorporating their feedback as the plans for Quayside and the eastern waterfront come to life.



Consultation milestones

Spotlight

November
2017

First Town Hall

More than 530 people attend the Sidewalk Toronto project's first town hall meeting, at the St. Lawrence Centre for the Arts, with another 5,700 more participating via livestream.

February
2018

Public engagement plan release

The Sidewalk Toronto team releases its full public engagement plan, outlining dozens of ways for Torontonians to get involved across a variety of programs.

March
2018

First public roundtable

Waterfront Toronto and Sidewalk Labs host the first public roundtable. Roughly 800 people attend in person, with another 1,700 joining via livestream.

May
2018

Initial data framework and second public roundtable

Sidewalk Labs issues its initial Responsible Data Use Policy Framework, laying out the project's proposed approach to data privacy, stewardship, access, and security, and raises the possibility of a data trust to ensure transparent governance over data issues. Sidewalk Labs presents the framework for feedback at the second public roundtable, which is attended by roughly 400 people, with another 1,300 joining via livestream.

June
2018

Opening of 307

Sidewalk Labs opens a Toronto office and experimental workspace at 307 Lake Shore Boulevard East, welcoming the public to learn about the Sidewalk Toronto project and participate in regular programs held in partnership with local vendors. About 2,000 Torontonians attend.

August
2018

Third public roundtable

Waterfront Toronto and Sidewalk Labs host the third public roundtable, focused on initial thinking for public realm, streets, and buildings. Roughly 460 people attend in person, with another 8,700 joining via livestream.

September
2018

Design jams

Waterfront Toronto hosts three "design jams": full-day sessions for local residents to help shape the project. Themes include vertical living, water connections, and cycling.

November
2018

First look at the plan

Sidewalk Labs releases its Draft Site Plan for Quayside, laying out specific goals for the neighbourhood: 40 percent below-market housing, mass timber construction up to around 30 storeys, a 75 percent reduction in greenhouse gas emissions, and more.

December
2018

Fourth public roundtable

Waterfront Toronto and Sidewalk Labs host the fourth public roundtable. Roughly 400 people attend in person, with another 3,400 joining via livestream.

January
2019

Advisory Working Groups' final meetings

After six months to a year of meetings, the Advisory Working Groups — which include 75 experts from across six critical areas: community services, sustainability, mobility, digital governance, housing, and public realm — meet for the final time.

February
2019

Draft accessibility principles

After participating in 70 hours of co-design sessions with the accessibility community and hosting 14 accessibility-related events, Sidewalk Labs releases a set of draft accessibility principles to guide the planning process for the Sidewalk Toronto project.

March
2019

Unveils new prototypes

At the fourth of a series of Open Sidewalk events at 307, Sidewalk Labs unveils two new prototypes: the modular pavement and building Raincoat systems. About 785 people attend.

May
2019

Reference Panel recommendations

The 36-member Residents Reference Panel releases its 60-page final report. Across six sessions spread over nine months, and a collective 1,728 hours, the residents received an in-depth look at the Sidewalk Toronto project, provided feedback, and helped to shape the plan in the best interests of Torontonians.

June
2019

Draft MIDP release

Sidewalk Labs submits its Master Innovation and Development Plan to Waterfront Toronto and the City of Toronto for consideration.

What we heard: The big themes that emerged during public consultation



For more examples of how public consultation influenced the MIDP, see the “Public Engagement” sections of every chapter in Volume 2.

After each public event, a summary report was produced and posted online, often garnering further comments and interaction. Together, all of these events, consultations, and online postings generated thousands of comments.

Next, the Sidewalk Labs public engagement team sorted through this feedback – all the reports, meeting minutes, session notes, 307 “feedback cards,” and more – and presented it to the planning teams. This process came to characterize the deeply iterative nature of the project, leading from an initial, high-level vision to a detailed final proposal that reflects the shared aspirations of thousands of Torontonians.

Sidewalk Labs has reflected deeply on how this feedback could help the MIDP achieve Waterfront Toronto’s priority outcomes. Throughout all these

consultation touchpoints, several key themes emerged, and each one is reflected in Sidewalk Labs’ proposals throughout the MIDP.

Theme 1: Focus on priority outcomes

Overwhelmingly, Torontonians have expressed a desire for the project to achieve objectives that match Waterfront Toronto’s priority outcomes: job creation and economic development, sustainability and climate-positive development, housing affordability, new mobility (including accessibility to ensure outcomes are available to the broadest diversity of Torontonians), and urban innovations (including data privacy and governance).

“When I think of the environment, I think of the stewardship of our planet. The things we do have ripple effects beyond our own neighbourhood or our city. And we can try to be carbon-neutral but it’s just not possible in the city we have now. We have to use our resources responsibly.”

Fatema C., Regent Park

Two visitors who attended “Open Sidewalk: The Accessible City” chat by the picnic tables outside 307. Credit: Jenna Wakani



How we responded

Achieving the priority outcomes. Sidewalk Labs proposes a new development approach that not only meets Waterfront Toronto’s five ambitious priority outcomes but exceeds them beyond the ability of any traditional developer, across the full scale of the proposed IDEA District (see Page 162 for more):

- Generating \$1.4 billion in private funding for below-market housing, supporting an ambitious housing vision with the potential to create 13,600 below-market units (with additional government support)
- Enabling 77 percent of all trips to be made by public transit, walking, or cycling
- Increasing pedestrian space on streets by 91 percent, as compared to traditional development
- Enabling an open ecosystem for urban innovations to flourish, establishing the eastern waterfront as a global hub for new city solutions
- Setting a new standard for responsible data use in cities by protecting privacy and the public good while still supporting innovation
- Generating 93,000 total jobs (including 44,000 direct jobs) and \$14.2 billion in annual GDP output by 2040
- Creating 2,500 manufacturing jobs and catalyzing the mass timber industry through a new Ontario factory
- Realizing a climate-positive district that cuts greenhouse gases by 89 percent

“I think affordable housing is Toronto’s biggest challenge, and once we put our minds to tackling that, other things will come in its wake. Sidewalk Toronto says there are innovative ways to build pre-fabricated housing so that they can be built faster and less expensively. ... Toronto has a reputation for inclusiveness. I hope it stays that way.”

Shaheen M., Etobicoke, near the subway terminal

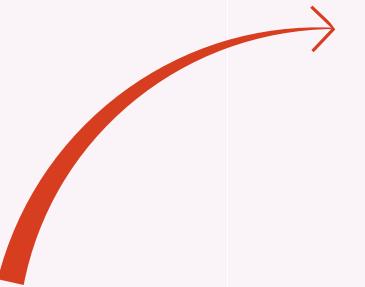


Sidewalk Labs
Director of Public Realm
Jesse Shapins presents
initial ideas for the Quay-
side plan at a session of
the Sidewalk Toronto
Residents Reference
Panel. Credit: David Pike

Theme 2: Be inclusive and make room for all

To create a welcoming, inclusive community, Torontonians urged Sidewalk Labs to plan the Sidewalk Toronto project with a broad diversity of populations in mind. All Torontonians should be able to live in, work in, and visit Quayside and the broader eastern waterfront. As round-table participants noted, services and opportunities in these places should be accessible to people elsewhere across the city.

Additionally, Torontonians want to see a broad group of businesses, non-profit organizations, and innovators actively participate in the new opportunities created by the project — especially Canadian companies and entrepreneurs. Consequently, they want to see open standards (“no technology lock-in”), so multiple parties can develop innovations in response to tastes, trends, and technological advances.



How we responded

Prioritizing affordability.

Planning for a place where people of all ages, abilities, incomes, and backgrounds can thrive and belong means prioritizing affordability. Towards this end, Sidewalk Labs’ proposals include:

- Setting a housing vision that includes 20 percent affordable housing units (with at least a quarter going towards households with “deep” affordability needs) and 20 percent of units for middle-income households
- Creating adaptable spaces, flexible lease terms, co-tenancy options, new operating tools, and a small business incubator program, making it easier for community groups, arts and cultural installations, and startups to occupy ground-floor space
- Going all-electric affordably through a suite of energy innovations, including an advanced power grid that would keep bills comparable to existing ones while reducing greenhouse gas emissions
- Designing an integrated mobility package that would provide access to a full range of affordable trip options, saving households \$4,000 a year by reducing the need to own a car

Ensuring accessibility.

To ensure that the IDEA District is accessible to all Torontonians, Sidewalk Labs’ proposals include:

- Continuing to work with the accessibility community to ensure the physical and digital accessibility of the IDEA District
- Extending public transit and connecting into Toronto’s broader

system, helping the whole city access the waterfront

- Expanding publicly accessible spaces open to all, including a wide range of pedestrian-only streets, wide promenades, parks, plazas, and water spaces

Catalyzing an open ecosystem.

To ensure that Canadian businesses, non-profit organizations, and innovators benefit from the opportunities generated by the project, Sidewalk Labs’ proposals include:

- Identifying appropriate local partners to deliver many of the elements described in the MIDP. The actual business arrangements could take various forms, including but not limited to partnerships, joint ventures, and licence arrangements
- Purchasing third-party technology whenever there are existing companies that have the capability to implement the systems required. Sidewalk Labs plans to give priority to technology local to Toronto, Ontario, or Canada
- Publishing properly protected data in standard formats and making software source code public under free software licences
- Seeding \$10 million to launch a new venture fund focused on Canadian startups

Creating opportunities for all.

To ensure that the opportunities created by the IDEA District are accessible to everyone, Sidewalk Labs proposes to launch a new workforce development program and a construction jobs program for equity-seeking populations.

Theme 3: No tech for tech's sake

Torontonians felt strongly that technology should not be the go-to answer for every problem, but used only if it can demonstrably prove to be a better alternative to an existing solution or approach. They want technology that targets significant urban challenges, not technology for its own sake.

As participants from the first public roundtable pointed out, technology alone does not make a community great, but it can potentially enhance a community. As the Residents' Reference Panel put it: "technology should only exist to serve people."



How we responded

Establishing an independent Urban Data Trust.

Sidewalk Labs proposes a new category of data called "urban data," which includes both personal information and information collected in a physical space in the city, where meaningful consent prior to collection and use is hard, if not impossible, to obtain. Sidewalk Labs proposes that an independent, government-sanctioned entity called the Urban Data Trust manage urban data and establish a transparent process for approving the use or collection of urban data — given its potential to impact people's daily lives.

Ensuring responsible data use.

To ensure that digital technology is being used to help address significant urban challenges, Sidewalk Labs proposes that the independent Urban Data Trust establish a set of Responsible Data Use Guidelines, and recommends that these guidelines include the need to outline a clear beneficial purpose for the proposed use or collection of urban data.

"The challenge is to find ways for technology to help foster a sense of community. That seems utopian but it's possible. ... We can find a way to make it happen. I think Toronto can be a global model for a new kind of technology that helps keep us human."

Annick B., West Hill (Lawrence Avenue East and Kingston Road)



Participants at a public roundtable discussion at 307 give feedback on plans and concepts for the Sidewalk Toronto project.
Credit: David Pike

Theme 4: Make sure the public sector has a strong role

Many participants were unsure about the nature of Sidewalk Labs' relationship with government.

While some were excited about the potential of a private company to improve government responsiveness, others were concerned that the project would lead to the privatization of public services. The Residents Reference Panel noted that, historically, government has not kept up with the rapid pace of technological innovation and may not be able to provide appropriate oversight of the project.

Torontonians stressed the importance of public entities having clear mandates and adequate resources to negotiate with Sidewalk Labs effectively, and then to provide strong ongoing oversight and accountability of the partnership as it unfolds.



How we responded

Defining public- and private-sector roles.

A project of this scope, complexity, and duration requires strong public oversight and a regulatory framework predisposed to new approaches. To ensure this outcome, Sidewalk Labs' proposals include:

- Calling for government to designate a public entity to serve as revitalization lead for the IDEA District, with this public administrator empowered to hold Sidewalk Labs and others working in the district accountable
- Establishing a supporting role for Sidewalk Labs that includes providing advisory services, limited technology deployment, and optional infrastructure financing – doing only what is needed to ensure the MIDP's innovative approaches are properly implemented
- Limiting Sidewalk Labs' role as lead real estate developer (working with local partners) to Quayside and Villiers West, for the purposes of proving out the innovative development approach

“I think I understand the concern about privacy. I share it, too. But in the overall scale I am positive about it, because I think of technology as a tool. Technology does not have a life of its own. It’s humans who decide how it gets used to the benefit or detriment of society. I believe that through proper governance we will strive for good.”

Ray J., Willowdale

A member of the Residents Reference Panel hands over written notes to a facilitator. Public engagement teams presented all feedback to the Sidewalk Labs planning teams and put the information on the project website for anyone to review.
Credit: David Pike



Theme 5: Prove out the concept

Participants were concerned that, as a project proposed by a private American company, Sidewalk Toronto would not actually benefit Toronto or Torontonians. They urged Sidewalk Labs to be mindful of the project's Canadian context, to engage with local experts and companies, to reach out to Indigenous peoples, and to embrace the idea of "nothing about us without us."

Torontonians expressed concern about the potential that a complex, large-scale, long-term plan could fail. They support achieving a big vision through a phased approach: to prove out the development approach in Quayside as a demonstration project, before extending to successive phases.

As one advisory council member noted, Sidewalk Labs must demonstrate its ability to execute, to earn the right to proceed further.

How we responded

Building trust.

To ensure that the Sidewalk Toronto project benefits Toronto, Sidewalk Labs' proposals include:

- Engaging meaningfully by maintaining its significant Toronto presence via 307, its Toronto workspace that houses public events and local employees
- Continuing to solicit input from diverse groups of Torontonians, including the community, Indigenous groups, Waterfront Toronto, the City of Toronto, and other levels of government
- Starting small and working up to larger areas as urban innovations are proven and priority outcomes are achieved
- Proposing to pay the public sector a share of the upside value if Quayside and Villiers West prove more profitable than expected, as well as a profit-sharing model through which the public sector would receive a share of the profits generated by certain technologies first tested and deployed in the IDEA District
- Earning a "performance payment" if (and only if) Sidewalk Labs reaches a series of performance and growth targets directly tied to Waterfront Toronto's priority outcomes

"If we are successful Toronto can be a model for other cities. There are lots of concerns but they can all be managed. We can create standards that are better than what we have now. Let's build it so that people will come and say: 'Wow!'"

Jack G., Sunnyside

Theme 6: Build on what has been done

Over time, Toronto has made progress in developing the waterfront and in trying new ways to solve urban challenges, thanks in large part to the work of Waterfront Toronto. Torontonians emphasized the importance of building on this record and of recognizing and expanding approaches that have been successful.

From Indigenous consultations, Sidewalk Labs was further reminded that this land has a long history that precedes both industrialization and revitalization. Sidewalk Labs is committed to engaging in ongoing conversations and collaboration with Indigenous communities in Toronto, to treating the land with respect and humility, and to sharing peacefully in its resources.

How we responded

Advancing the work of others.

To ensure that Sidewalk Labs is advancing the work of others who have a proven track record along Toronto's waterfront, Sidewalk Labs' proposals include:

- Taking an evolutionary approach that builds on existing planning approaches, including the Villiers Island, East Bayside, and Keating Channel precinct plans and the Port Lands Planning Framework
- Building on Canada's existing timber industry through support for an Ontario-based factory focused on mass timber building parts and a plan to develop Quayside as the world's first all-mass timber neighbourhood

- 
- Advancing Toronto's successful tech ecosystem by creating a new urban innovation campus on Villiers Island, anchored by a new Google Canadian headquarters and a non-profit, applied research Urban Innovation Institute
 - Accelerating the financing of a light rail expansion, building on the extensions identified as critical by existing planning initiatives, such as Waterfront Toronto's Transit Reset efforts
 - Meeting and surpassing the City of Toronto's resiliency framework for flood management and establishing an ecological foundation for new sustainable communities built around spectacular parks and nature

Theme 7: Present a transparent business model

Torontonians highlight transparency as key to gaining public trust, particularly with respect to the financial obligations and benefits in any agreement, initially and over time. The complex and long-term nature of the transaction increases the need for clarity about roles, responsibilities, and how Sidewalk Labs intends to make money.

Common questions around the business model included: Who will own the land? What's in it for you? What's the scale of the project? Will Toronto and Canadian tech companies, real estate developers, or other third parties be involved? And will they be able to work together to solve Toronto's most pressing challenges?



How we responded

Designing a fair transaction. Sidewalk Labs proposes to make money from the real estate development it does, charges on any financing it provides, and, if all goes well, a performance payment considered at a time when the project's success against agreed-upon metrics can be judged. The project's finances and transactional framework are designed to ensure that all project participants, public and private, are treated fairly, and that the public interest is protected.

“I like what Waterfront Toronto has been doing recently.... They’re making spaces to congregate so it feels like a neighbourhood. They understand that it needs to have its own unique flavour, and be more than just condos. That makes me optimistic for Quayside.”

Alex B. L., Yonge-Dundas Square

“People want to live in cities, but things like congestion and transit are problems everywhere. Eventually, the cities that figure out a better way to organize themselves are going to win.”

Jason S., First Chinatown, then Riverdale

Sidewalk Labs' intentions for the Sidewalk Toronto project

Sidewalk Labs' motives for pursuing Waterfront Toronto's RFP and its overall business model have been subject to speculation, even a fair amount of cynicism. Many of these concerns can be addressed upfront with a few clear statements:

Sidewalk Labs is not seeking to sell personal information or use it for advertising. Sidewalk Labs has committed that it would not sell personal information to third parties or use it for advertising purposes. It also commits to not disclose personal information to third parties, including other Alphabet companies, without explicit consent. Finally, Sidewalk Labs has proposed that an independent entity approve proposed collections and uses of urban data in the project area by all parties, including Sidewalk Labs.

In the view of Sidewalk Labs, digital technology is never the end goal, but rather a tool that empowers people to improve quality of life. 



See the “Digital Innovation” chapter of Volume 2, on Page 374, for more details on Sidewalk Labs’ proposals for responsible data use.

Sidewalk Labs is not motivated by a desire to export Canadian talent or intellectual output to the United States. Sidewalk Labs is not an internet company that can exist anywhere. An important part of its business model involves going “all in” on physical places. This proposal seeks to make Toronto such a place. Moreover, Sidewalk Labs has committed to share profits with the public sector of certain technologies first deployed in Toronto.

Finally, Sidewalk Labs is not trying to develop the broader Port Lands.

Sidewalk Labs’ role as a real estate developer would be restricted to two areas, Quayside and Villiers West, and undertaken for the limited purpose of proving out the innovative development approach. Even in those locations, Sidewalk Labs expects to have local partners. In total, Sidewalk Labs proposes leading development (with local partners) on less than 7 percent of the eastern waterfront. (See Page 90 for more details on proposed project roles.)

Sidewalk Labs’ two primary goals are quite simple.

In the view of Sidewalk Labs, digital technology is never the end goal, but rather a tool that empowers people to improve quality of life.

1

Demonstrate the impact of urban innovation on quality of life.

Sidewalk Labs is a mission-driven company. That mission is to combine forward-thinking urban design and cutting-edge technology to radically improve urban life. Sidewalk Labs is motivated to pursue this project by a desire to create places that apply 21st-century concepts in design and technology to achieve improvements in nearly every dimension important to quality of urban life, from creating jobs and reducing the cost of living to increasing mobility and advancing sustainability. This mission calls for an urban district of sufficient scale to demonstrate the value of an integrated approach for achieving measurable benefits on critical priorities.

2

Earn a reasonable return.

Sidewalk Labs is a commercial venture, and although it is mission-driven, it is also a subsidiary of a publicly owned company. Sidewalk Labs has already invested more than \$50 million USD, with no guarantees of being repaid, to develop this MIDP. This investment, however, represents a small share of the overall cost to the company if the project is approved. Sidewalk Labs would seek to earn a reasonable return on its investment.

Submitting the Master Innovation and Development Plan

Informed by its robust engagement process, Sidewalk Labs conducted an intensive planning process over the past 18 months, with input from the local community, Waterfront Toronto, the City of Toronto, and other levels of government. This effort turned Sidewalk Labs' initial ideas, as expressed in the RFP response, into a development plan with the potential to serve as a demonstration for an inclusive community that puts urban innovation to work for better quality of life.

While this planning effort focused on the Quayside neighbourhood and surrounding parts of the eastern waterfront, Sidewalk Labs believes the innovations applied to this project can make an impact in other communities along the waterfront, throughout the city, and around the world.

It is important to note that the opportunity to conduct this planning work came with no guarantee of approval and no exchange of land. On the contrary, Sidewalk Labs, Waterfront Toronto, and the city must all agree to move forward for the project to continue. Sidewalk Labs was willing to stake \$50 million³¹ USD to develop this plan because it believes the resulting plan will not just be “good enough” to meet approval but will demonstrate a new path forward for inclusive urban growth in the digital age.

The result of this process is this Master Innovation and Development Plan (MIDP), submitted by Sidewalk Labs for consideration to Waterfront Toronto and all levels of government. Sidewalk Labs is honoured by the opportunity to present the MIDP, and by the prospect of working alongside Waterfront Toronto and the three levels of government it represents to advance this plan for the benefit of Toronto.

The submission of this MIDP is not the end of the process — far from it. Waterfront Toronto will consult the public on the plan and run an evaluation process. Waterfront Toronto and Sidewalk Labs would then negotiate updates and revisions to the MIDP. Should both parties agree to move forward, individual components would be subject to relevant municipal, provincial, and federal approvals.

Sidewalk Labs is honoured to present this MIDP, and to work towards advancing the plan for the benefit of Toronto.

The Plans

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Part 1 Introduction to the Plans: Geography, Role, and Innovation Approach

Sidewalk Labs proposes a vision — beginning with Quayside — designed to realize and maximize ambitious quality-of-life goals by integrating innovations into the physical development.

Throughout its planning process, Sidewalk Labs has tried to directly respond to Waterfront Toronto's priority outcomes as well as the City of Toronto's Official Plan, which embraces the use of "innovative implementation solutions" to help address tough urban challenges and describes the future city as one where "the private sector marshals its resources to help implement public objectives." Specifically, the Official Plan calls for leaders in the private sector "with the courage to take risks, develop proactive solutions and then follow through."³²

Consistent with these values, the plans and ideas introduced here put forward innovative implementation solutions, aim to leverage private resources to realize public objectives, and advocate for sustainable communities along the eastern waterfront.

To achieve these goals, the MIDP proposes to transform a small portion of the eastern waterfront — less than one-third, to be developed over 20 years — into a 77-hectare IDEA District that represents an innovative new development model for how the private sector can support the public sector in tackling the toughest growth challenges. The IDEA District consists of two phases.

1

Quayside.

The first phase of the IDEA District would be Quayside, a five-hectare neighbourhood that sits at the crucial transition point to the broader eastern waterfront. The Quayside development plan provides the opportunity to lay out the foundations for achieving the priority outcomes,

forming the basis for identifying the required innovations and the critical and advanced infrastructure to make it all happen.

Sidewalk Labs proposes to lead this development, working with local partners, and to take the risk of proving the market viability of a proposed development model that incorporates urban innovations to achieve ambitious quality-of-life objectives.

2A

The River District: Villiers West.

The second phase would be the River District, a 62-hectare area made up of five neighbourhoods surrounding the renaturalized Don River: Keating East, Villiers West, Villiers East, Polson Quay, and McCleary. Extending Quayside's innovations into the River District would unlock opportunities for Waterfront Toronto and the city to fully realize priority outcomes.

(A Keating West parcel of roughly eight hectares that sits between Quayside and Keating East already has approved plans; the private land-owners there can choose to participate in the IDEA District if they want.)

In Villiers West, a parcel of nearly eight hectares, Sidewalk Labs proposes to be lead developer, working with local partners. Villiers West would serve as a catalyst for a new economic cluster focused on urban innovation, anchored by a new Google Canadian headquarters and a new Urban Innovation Institute, and it could further prove out the innovations necessary to achieve Waterfront Toronto's priority outcomes.

Key Terms
Quayside: A five-hectare neighbourhood connecting downtown Toronto and the eastern waterfront.

River District: A 62-hectare area of the eastern waterfront consisting of five neighbourhoods (Keating East, Villiers West, Villiers East, Polson Quay, and McCleary).

IDEA District: A 77-hectare area consisting of Quayside and the River District (with optional participation for the privately held Keating West parcel) capable of maximizing quality-of-life impacts in a financially feasible way.

In total, Sidewalk Labs proposes leading development (with local partners) on less than 7 percent of the eastern waterfront.³³

2B

The River District: Beyond Villiers West.

Planning and development for the River District would be led by Waterfront Toronto and the City of Toronto, working with various development partners. It is Waterfront Toronto's mandate to lead the urban planning, design, infrastructure delivery, and real estate development associated with broader geographies along the eastern waterfront.

Sidewalk Labs proposes that government designate a public entity to serve — or in the case of Waterfront Toronto, continue to serve — as revitalization lead for the IDEA District.

Beyond Quayside and Villiers West, Sidewalk Labs proposes to play a different role across the IDEA District, focusing on three supportive areas:

→ **Planning, design, and implementation.**

In this role, Sidewalk Labs proposes to support Waterfront Toronto's ability to provide cutting-edge infrastructure and development that meets agreed-upon guidelines and standards for innovation, with the goal of realizing key quality-of-life objectives around economic opportunity, affordability, mobility, and sustainability. Building on the Quayside innovations, Sidewalk Labs proposes to work with Waterfront Toronto to prepare a set of "Innovative Design Guidelines

and Standards" that can be used to ensure that all developments in the IDEA District achieve the desired outcomes. Waterfront Toronto would be responsible for working with government to approve them and then ensure their implementation as development proceeds.

→ **Technology support.** In this role, Sidewalk Labs proposes to deploy a limited set of technologies required to achieve key project objectives — defined in Waterfront Toronto's original RFP as "purposeful solutions" — including a dynamic curb that can adjust throughout the day to accommodate vehicle traffic or pedestrian uses, and a standardized mount system that can help catalyze digital innovation by third parties.

→ **Optional infrastructure financing.** In this role, Sidewalk Labs proposes to provide optional support financing critical infrastructure, such as upfront debt service, to help ensure that the city and waterfront can invest holistically in systems that unlock the potential for future development.

These supportive roles reflect Sidewalk Labs' belief that the greatest cities are built from the community up, and that the proposed innovation strategies for achieving public policy goals can only be successful if widely adopted by Toronto's broader development and innovation communities. ☐



See the "Innovation and Funding Partnership Proposal" chapter of Volume 3, on Page 82, for more details on Sidewalk Labs' proposed roles.



Map

The IDEA District and eastern waterfront geography

A public administrator and the three orders of government would determine whether to extend the IDEA District beyond Quayside and Villiers West. At its full anticipated scope, the IDEA District would consist of seven neighbourhoods. The neighbourhood names in the map above were drawn largely from the Port Lands Planning Framework and other city planning documents.

- Eastern waterfront
 - - - IDEA District
 - Phase 1: Quayside
 - Phase 2: River District
 - Optional participation in Phase 2
- Sidewalk Labs develops real estate and advanced systems

A planning approach that integrates innovations into the physical environment

The development of the IDEA District provides a rare opportunity to achieve – and exceed – the priority outcomes established by Waterfront Toronto for the MIDP: job creation and economic development, sustainability and climate-positive development, housing affordability, new mobility, and urban innovation (including robust data privacy and digital governance).

These objectives have proven largely elusive for a variety of reasons. They speak to problems that cannot be solved in a single development and require a scale of coordination that is difficult, if not unprecedented. In some cases, the solutions are contrary to market forces. For many of these challenges, the technology simply did not exist to successfully address the issues.

That has the potential to change today. The scale of the IDEA District offers the opportunity to create a truly transformative experience – at the moment when technology has finally advanced enough to make genuine breakthroughs, if applied with the right level of thought and care. But realizing this opportunity for the betterment of people's lives and urban economies requires a new approach to urban planning and a strong focus on quality-of-life objectives.

Sidewalk Labs' approach to planning centres around providing the physical, digital, and policy conditions for innovation on which an array of third parties can build and explore new solutions to urban challenges, with the goal of achieving long-term quality-of-life goals.

To catalyze this approach, Sidewalk Labs identified the building blocks of a neighbourhood – mobility, public realm, buildings and housing, and sustainability – and explored how urban innovations within these areas could support a new kind of community and infuse flexibility into the built environment.

Many of these advances, from mobility management systems guiding the streets to building systems optimizing energy use, are made possible by connectivity and digital innovation. Sidewalk Labs aims to establish the open foundation for a wide array of third parties to address urban challenges using urban data. To ensure that digital innovation aligns with the public interest, all digital proposals – including those by Sidewalk Labs – would be subject to approval from an independent entity tasked with overseeing a transparent process for responsible data use, which would apply in addition to existing Canadian privacy laws.

Key Term Urban data

Information gathered in the city's physical environment, including the public realm, publicly accessible spaces, and even some private buildings.

No community is complete without a cross-cutting layer of social infrastructure that could provide residents with programs to support health and well-being, education and work opportunities, civic life, and arts and culture. Sidewalk Labs' approach would integrate physical spaces, trusted delivery partners, and digital complements to enable a healthy and engaged community where everyone can grow, thrive, and belong.

Within each of these areas, the planning team incorporated innovations into the development designs with an eye towards achieving Waterfront Toronto's priority outcomes and improving quality of life for all. This goal is reflected in the vision statements for each of the urban innovation areas:



For more details on the urban innovations proposed by Sidewalk Labs, see Section C of the Overview (on Page 162) as well as Volume 2.

→ **Mobility:** A transportation system that reduces the need to own a car by providing safe, convenient, connected, and affordable options for every trip.

→ **Public Realm:** A system of streets, parks, plazas, and open spaces that encourages people to spend more time outdoors, together.

→ **Buildings:** Sustainable buildings that can be constructed and adapted far more quickly and support a lively mix of uses.

→ **Housing:** A program with 40 percent below-market units to improve affordability and expand options for all households.

→ **Sustainability:** A new standard of sustainability that creates a blueprint for truly climate-positive communities.

→ **Social Infrastructure:** Health, civic life, learning, and workforce initiatives and facilities that enable people to thrive.

→ **Digital Innovation:** Catalyze digital innovations that help tackle urban challenges and establish a new standard for the responsible collection and use of data in cities.

Part 2 **Quayside: A Complete Community and a Proving Ground for Innovation**



Responding to the feedback from 18 months of public engagement, Sidewalk Labs proposes a plan for Quayside that would create a diverse live-work neighbourhood, connect to the GTA, generate new economic opportunity for more people, and explore new innovations to dramatically improve quality of life.

The Quayside neighbourhood

This view of the Quayside site plan looks northeast towards the Gardiner Expressway. The plan incorporates a series of innovations around transportation, social infrastructure, housing affordability, digital tools, sustainable infrastructure, building construction,

and public space – with the goal of improving quality of life for Torontonians. It reflects 18 months of public engagement needed to refine these planning ideas and start to achieve Waterfront Toronto's ambitious priority outcomes.





This plan view of Quayside illustrates the neighbourhood's extensive pedestrian pathways, as well as a new grand public space at Parliament Plaza.

The plan for Sidewalk Toronto begins in Quayside, which marks the beginning of the eastern waterfront, at the head of Parliament Slip.

Located just southeast of downtown at the nexus of many key corridors — Queens Quay, Parliament Street, Lake Shore Boulevard East, and the Inner Harbour — Quayside can become a new connection point that draws on the energy of surrounding neighbourhoods and makes the eastern waterfront more accessible to Torontonians and better connected to the city fabric.

Quayside as a live-work community

Quayside would have a dramatically different development profile from conventional waterfront revitalization in Toronto. Left to the market, Quayside would likely align with current zoning for the site,

which calls for primarily residential uses and 20 percent affordable housing.³⁴

In contrast, Sidewalk Labs proposes a more diverse live-work community in Quayside, that can sooner and more dramatically realize the objectives of existing precinct plans designed for the area.³⁵

A cornerstone of Sidewalk Labs' proposed development program for Quayside is that it calls for roughly 33 percent of the site's allowable floor area to be devoted to non-residential uses, encouraging a mix of office space for companies and startups, ground-floor commercial space for retailers and makers, and social space for schools and community groups, in addition to homes.

For Quayside's residential spaces, Sidewalk Labs proposes an unprecedented commitment to mixed-income housing, with 40 percent of housing units at below-market rates.

Key Term

AMR

The City of Toronto defines affordable rental housing as being at or below 100 percent Average Market Rent (AMR). Sidewalk Labs defines "below-market" to include mid-range rental housing at 100-150 percent AMR as well.

This housing vision includes 20 percent of units for traditional affordable housing (a quarter of which Sidewalk Labs would dedicate to "deep" affordability needs, defined by the city as being at or below 60 percent Average Market Rent). The vision further expands affordability to put 20 percent of units towards below-market housing for middle-income households.

In total, the Quayside plan calls for roughly 2,600 residential units, including roughly 1,000 below-market units.

Sidewalk Labs estimates that this live-work approach would also result in major economic development, with more than 3,900 jobs eventually located in Quayside and more than 9,000 new jobs in Ontario overall. (See Page 156 for more on economic development.)

Quayside development table

	Quayside (approximate square feet)	Quayside (program percentages)	Zoning bylaws ³⁶
Total developable space	2.65 million sq ft	100%	3.17 million sq ft
Residential space	1.78 million	67% (of total program)	95% (of total program)
Condo	800,000	45% (of residential)	
Market rental	270,000	15% (of residential)	
Below market	710,000	40% (of residential)	
Non-residential space	870,000	33% (of total program)	5% (of total program)
Traditional commercial space	340,000	39% (of non-residential)	
Loft commercial space (3rd to 12th floors)	70,000	8% (of non-residential)	
Stoa spaces (1st or 2nd floor)	400,000	45% (of non-residential)	
Elementary school	60,000	7% (of non-residential)	

Numbers may not add up due to rounding. All numbers are subject to change based on further consultations and refinement of the plan.

Quayside as a proving ground for urban innovations

Quayside would be a complete community and a great neighbourhood in its own right. It would also serve as a proving ground for what is possible with a new approach to development that integrates new innovations into the physical environment.

As an underutilized and predominantly publicly owned neighbourhood, Quayside presents an opportunity to explore and refine new solutions to pressing urban challenges, from energy use to housing affordability to street safety. The Quayside development plan integrates emerging physical and digital tools beyond those used in the traditional development process, with the ultimate goal of improving people's lives.



Mobility.

The Quayside plan is built around connecting to surrounding neighbourhoods and the rest of the city through a network of people-first streets, walkable street designs, enhanced cycling options, accessibility initiatives, and new mobility services that encourage shared trips. Light rail transit would be extended through the neighbourhood to improve connections with other parts of the city.



Public Realm.

Quayside's public realm consists of an integrated set of parks, plazas, and open spaces designed to draw people of all ages and abilities outdoors year-round, as well as to bring people down to the water. This approach includes flexible lower-floor stoia spaces featuring a lively mix of traditional retailers, pop-ups, production or maker spaces, and community uses — all seamlessly integrated with the sidewalks and plazas to create a vibrant streetscape.



Buildings.

All of the buildings in Quayside are planned to be built with sustainable mass timber through a modular, factory-based construction process. This approach would help catalyze an Ontario-based industry focused on sustainable construction and building technologies. Flexible Loft spaces are designed to accommodate a mix of residential and non-residential uses that can evolve to meet the neighbourhood's changing needs.



Housing.

As described earlier, Quayside's residential program strives towards an unprecedented range of housing options for people of all incomes, blending market- and below-market units throughout buildings and across the neighbourhood. Additionally, a shared equity program aims to expand home-ownership opportunities for middle-income households that might otherwise not be able to afford a large down payment.



Digital Innovation.

Widespread digital infrastructure and ubiquitous connectivity would be incorporated in the plan through a fast and secure fibre-optics network and through standardized mounts designed to enable digital innovation by a range of community and entrepreneurs. These tools are designed to support innovation while also adhering to the appropriate guidelines, policies, and protocols to ensure privacy protection and responsible data use.

Sustainability.

The Quayside plan would result in a low-carbon, resilient neighbourhood with a significant number of environmental innovations, including sustainable building materials and designs, an advanced power grid for electricity, a clean thermal grid for heating and cooling, a smart disposal chain designed to increase recycling, and active stormwater management.



Social Infrastructure.

In Quayside, the proposed development program would include building space for an elementary school co-located with a daycare facility, as well as ground-floor space for evolving community uses, including a neighbourhood centre for health and other care services, a community centre designed to inspire civic engagement, and ongoing educational programs.



Mobility

A transportation system that **reduces the need to own a car by providing safe, convenient, connected, and affordable options** for every trip.

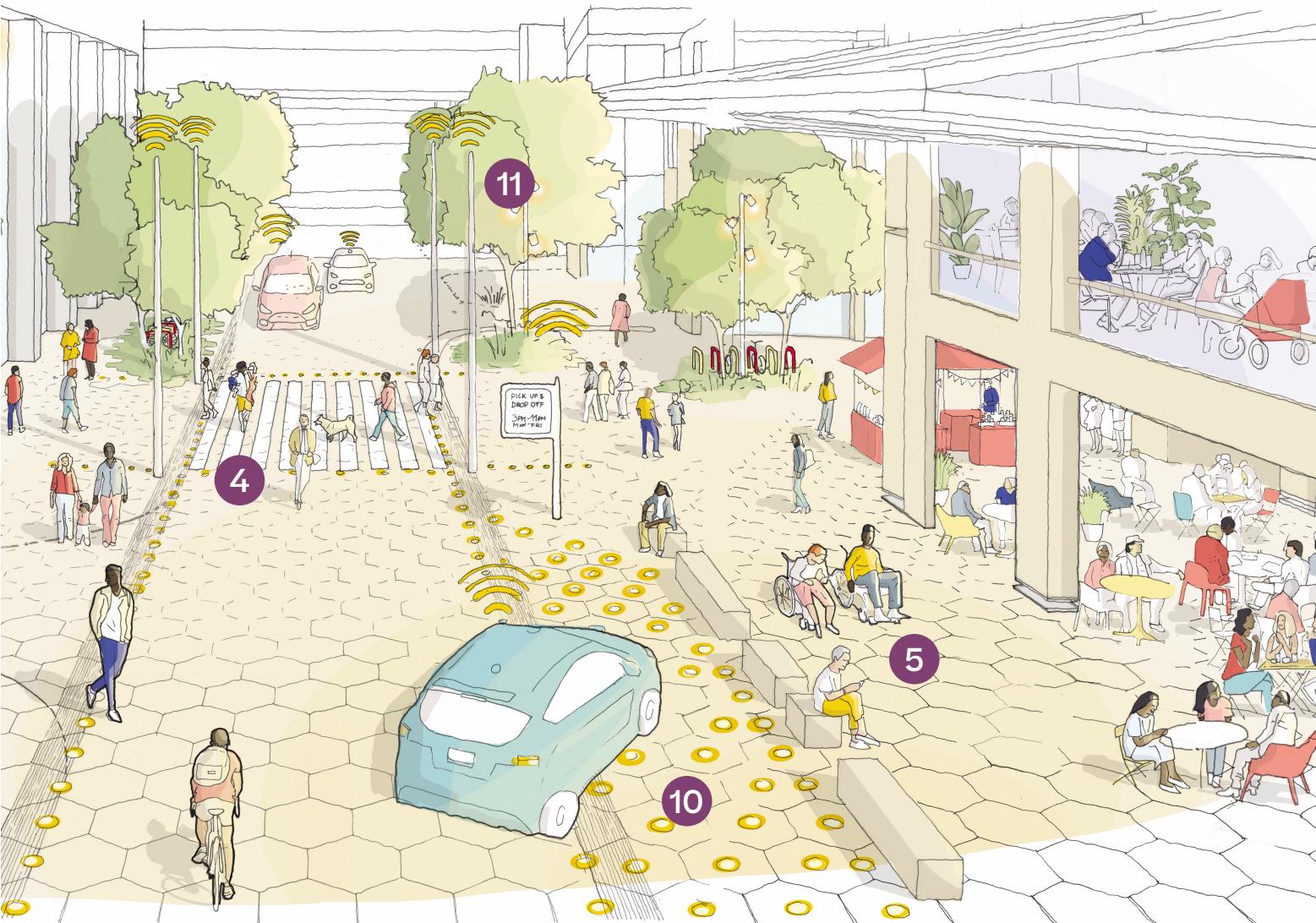
All streets in Quayside (such as Bonncastle Street, shown here) would feature a range of innovations that balance the needs of all users.

The Quayside plan integrates safe street design, innovative policy approaches, and new digital tools to create a balanced set of mobility options and connect into the surrounding city. Extensive accessibility initiatives would help meet the needs of all travellers.³⁷

Anchored around a reimagined Queens Quay, the Quayside plan would support light rail expansion, provide exceptional

bike and pedestrian infrastructure, support new mobility services priced for sharing, and encourage electric vehicles. While designed for safe operation today, Queens Quay would also anticipate the potential benefits of self-driving technology.

Taken together, these mobility initiatives would encourage 73 percent of all trips to be made using public transit, walking, or cycling.



Proposed urban innovations

1

A self-financing light rail transit extension would connect residents to job hubs and draw workers and visitors to the waterfront from all over the city.

2

A vast network of pedestrian and cycling infrastructure featuring wider sidewalks, wider and heated bike lanes, and accessibility elements would encourage walking and cycling and support people using wheelchairs or other assistive devices.

3

New mobility services such as ride-hail, bike-share, electric vehicle car-share, and e-scooters would provide affordable alternatives to private car trips.

4

“People-first” street types would be designed for different speeds and primary uses, including Boulevards and Transitways for public transit and vehicle traffic, Accessways for cyclists, and Laneways for pedestrians.

5

A wide set of accessibility initiatives would include curbless street design, wider sidewalks, heated pavement, wayfinding beacons, and accessible ride-hail vehicles.

6

An integrated mobility subscription package would establish a new pricing model that enables residents and workers to see all their trip choices in real time and pay in one place.

7

A freight “logistics hub” would feature a consolidated shipping centre (housed alongside on-demand storage and a borrowing library) with underground delivery, reducing truck traffic on local streets and improving convenience.

8

A mobility management system would use real-time information to coordinate travel modes, traffic signals, and street infrastructure, and to apply pricing to curb and parking spaces — reducing congestion and encouraging shared trips.

9

A district parking management system would incorporate high-density on- and off-site parking, on-demand retrieval of vehicles, and electric-vehicle charging.

10

Dynamic curbs are flexible street spaces that would provide passenger loading zones during rush hour and public spaces in off-peak times.

11

Adaptive traffic signals would prioritize pedestrians who need more time to cross a street or transit vehicles running behind schedule.



Public Realm

A system of **streets, parks, plazas, and open spaces** that **encourages people to spend more time outdoors, together.**

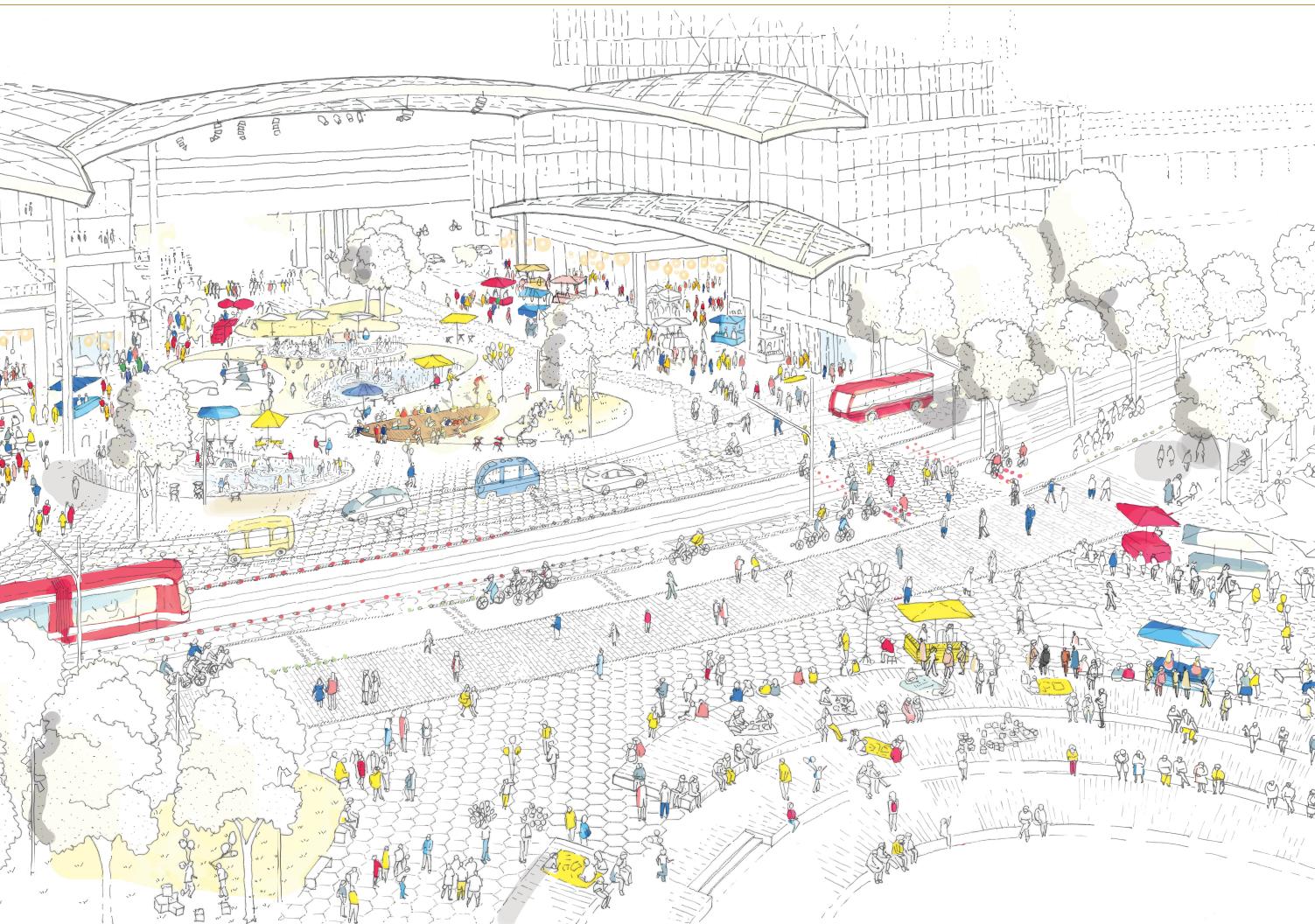
The Quayside plan features an expansive public realm designed to bring together residents, workers, and visitors of all ages and abilities.³⁸

The 6,000-square-metre Parliament Plaza would be surrounded by stoa space and include dynamic water features and an overhead canopy for weather protection in all seasons.

Parliament Slip would provide direct access to the water, and Silo Park would provide a lively mix of recreational facilities.

The heart of Quayside's public realm is Parliament Plaza, a flexible space that incorporates water features, ground-floor markets, and public programming.

Adaptable lower-floor "stoa" spaces can support a wide variety of retail, office, production, and community uses. Outdoor comfort systems could increase the number of comfortable hours by 35 percent, drawing people outside in all seasons.



Proposed urban innovations

1

Quayside's three primary open spaces would be infused with flexibility to encourage year-round use, including a dynamic water feature and performance space at Parliament Plaza, barges on Parliament Slip, and multi-sport fields in Silo Park.

2

An outdoor-comfort system (featuring Raincoats to shelter sidewalks; Fanshells to cover open spaces; and Lanterns to block wind) could dramatically increase the amount of time it is comfortable outside.

3

Flexible ground-floor "stoa" spaces designed to accommodate a wide range of uses beyond traditional retail would ensure that the community has a lively mix of shops, restaurants, cafés, art installations, community gatherings, and maker studios.

4

A leasing platform called Seed Space would help small businesses and other retailers book a wide range of stoa sizes, from anchor-tenant spaces to micro-stalls, for short- or long-term uses.

5

People-first street designs would eliminate curbside parking, widen sidewalks, and increase tree plantings to improve safety and activate street life.

6

Modular pavement – hexagonal pavers that can be replaced or repaired in mere hours by a single person with a handheld machine – would dramatically reduce the amount of time streets spend closed down for road or utility work and increase flexibility of street uses.

7

A proposed entity called the Open Space Alliance would coordinate programming, operations, and maintenance across Quayside's parks, plazas, streets, and water spaces for a more responsive public realm.

8

Shared programming infrastructure, such as projectors and lighting options, would enable the community to program open spaces themselves.

9

A real-time map of public realm assets – including park benches and landscaped gardens – would enable proactive maintenance and keep spaces in good condition.

10

Open access channels located under removable pavers would allow for easy utility access and greater flexibility to incorporate new systems as they are developed over time.

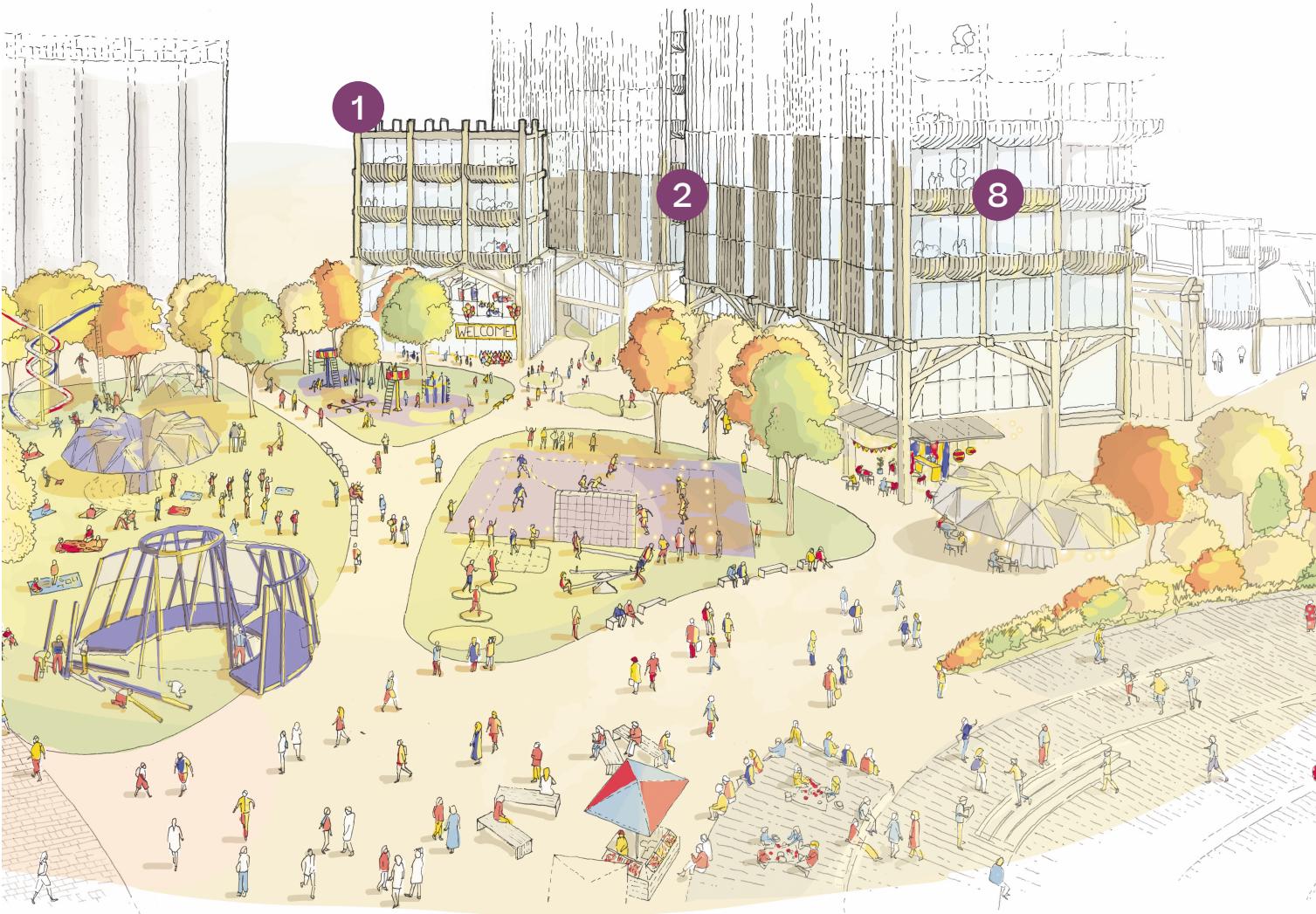


Buildings and Housing

Sustainable buildings that can be constructed and adapted far more quickly, and a new set of financial and design tools that help improve affordability and expand options for all households.

Quayside's innovative approach to buildings and housing would create a neighbourhood that is more inclusive and responsive to community needs.³⁹

The plan calls for mass timber buildings that are just as strong and fire-resistant as steel or concrete but dramatically more sustainable. Mass timber parts would be produced in an Ontario-based factory, accelerating project timelines by up to 35 percent without compromising safety or design excellence.



Proposed urban innovations

1 An ambitious below-market housing program would feature 20 percent affordable housing units (a quarter of which would go towards "deep" affordability needs) and 20 percent middle-income housing units; half of the total proposed housing program would consist of "purpose-built" rentals critical to improving long-term affordability.

2 Quayside would be the first neighbourhood built entirely of "mass timber" — an emerging material every bit as strong and fire-resistant as concrete or steel but far more sustainable — including record-setting buildings of around 30 storeys.

3 An Ontario-based factory would produce mass timber building parts for fast assembly in Quayside, catalyzing a new industry that taps into Canada's vast sustainable forests.

4 Buildings in Quayside would feature adaptable "Loft" spaces designed with flexible floor plates to accommodate residential, commercial, and light manufacturing uses, enabling a true live-work community.

5 A system of flexible wall panels would enable renovations to Loft and residential spaces to occur much faster than normal, reducing vacancies and helping the neighbourhood adapt to market conditions.

6 A proposed "outcome-based" building code system would monitor noise, nuisances, and structural integrity in real time to help a mix of residential and non-residential uses thrive without sacrificing public safety or comfort.

7 Middle-income housing options would include "shared equity" units designed to help households build value in their home without the high up-front cost of a traditional mortgage down payment.

8 Quayside would feature a set of efficient and ultra-efficient units that reduce size to enable affordability while remaining livable through thoughtful design features, such as space-saving furniture, shared building amenities, and access to off-site storage space with on-demand delivery.

9 This approach of "affordability by design" would enable the creation of 87 more units in Quayside than would otherwise exist in a conventional development, creating \$37 million of value that could be applied towards below-market housing.

10 A set of co-living units would feature shared building amenities, such as communal kitchens, to enhance community for a range of residents, including single-person households, multi-generational families, and seniors.

11 In Quayside, 40 percent of housing would consist of family-sized units at two bedrooms or more.



Sustainability

A new standard of sustainability that creates a blueprint for truly climate-positive communities.

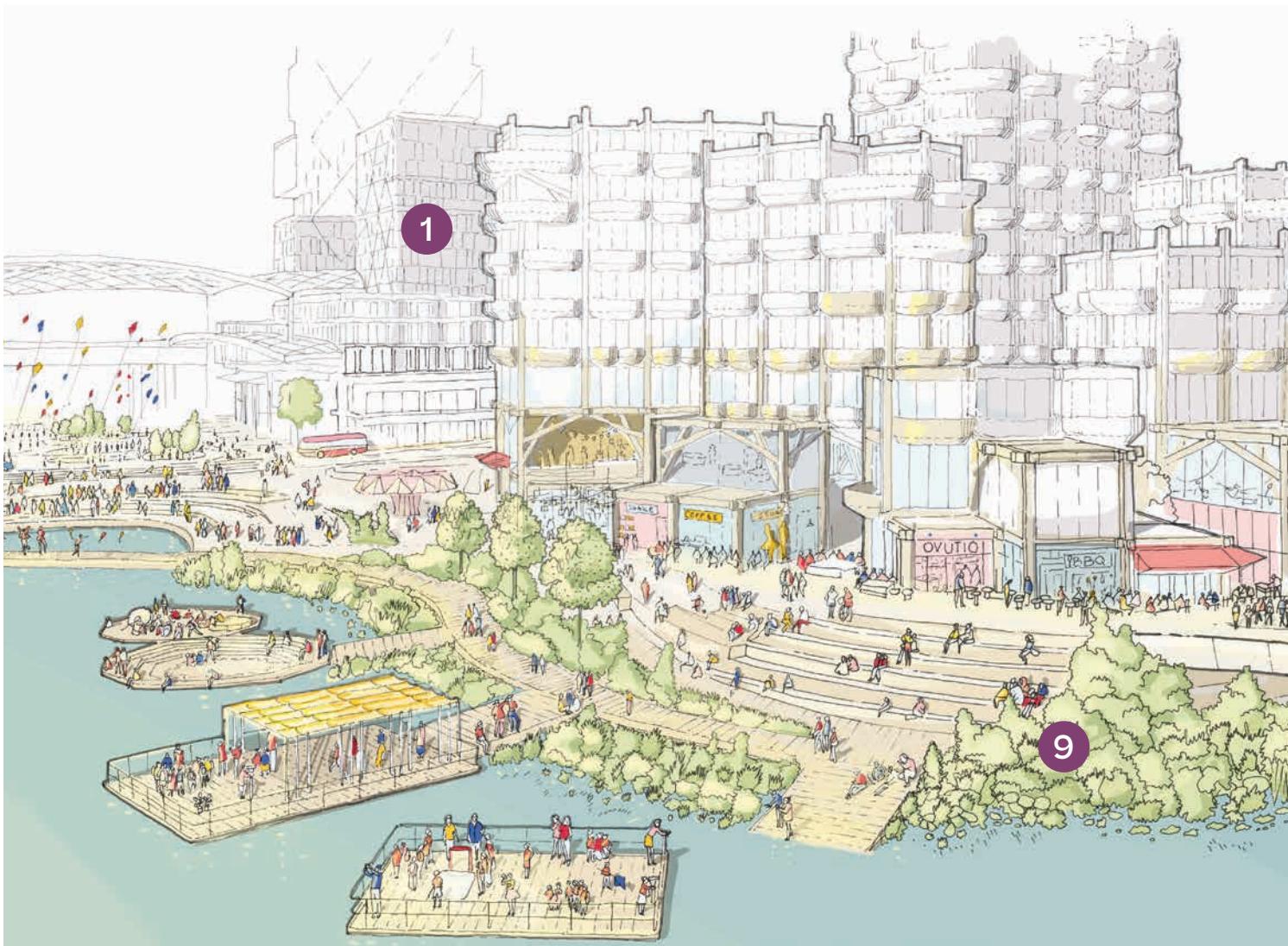
Buildings in the Quayside plan (shown here near Parliament Slip and Cove) would feature ambitious energy-efficient construction, while the public realm would incorporate green infrastructure to manage stormwater.

Following Waterfront Toronto's lead in sustainable development, the Quayside plan would create a nearly carbon-neutral neighbourhood that cuts greenhouse gases by 85 percent from the city average.⁴⁰

It would achieve this outcome through a series of innovations that include relying on clean energy sources for heating and cooling; optimizing energy consumption using digital technology; designing

energy-efficient buildings that meet the Toronto Green Standard Tier 3; increasing recycling with a smart disposal chain; and deploying an active stormwater management system.

Through these initiatives, Quayside would set a new standard of sustainability that takes the first steps towards a climate-positive community on the waterfront.



Proposed urban innovations

1 Low-energy building designs – inspired by the Passive House movement – would achieve Toronto Green Standard Tier 3 rating for energy efficiency and Tier 4 for greenhouse gas intensity.

2 Digital active energy management tools called “Schedulers” would optimize energy systems for residents, businesses, and building operators, ensuring that buildings operate in the most efficient way possible.

3 A district energy system called a “thermal grid” would provide heating, cooling, and domestic hot water by drawing on clean energy sources such as geothermal (underground) energy, building “waste” (or excess) heat, and wastewater heat.

4 An advanced power grid would use solar energy, battery storage, and time-based energy pricing to reduce reliance on the main Toronto Hydro grid during periods of peak demand and make an all-electric community affordable.

5 An innovative utility bill structure would enable residents and businesses to set monthly budgets for energy costs, similar to the way people pay for mobile phone plans today.

6 A smart disposal chain would feature real-time feedback to improve waste sorting and “pay-as-you-throw” chutes to reduce household and business waste.

7

An underground pneumatic tube system would separate waste streams underground, reducing contamination and centralizing trash hauling.

8

An anaerobic digestion facility can convert organic (food) waste into a clean energy source called biogas.

9

An active stormwater management system would rely on green infrastructure to capture and retain stormwater and on digital sensors to empty storage containers in advance of a storm.



Social Infrastructure

Health, civic life, learning, and workforce initiatives and facilities that enable people to thrive.

The Quayside plan allocates a central space called the Civic Assembly as the physical heart of civic life in the neighbourhood – a place to connect with neighbours, engage in cultural activities, access local services, and participate in community decisions.

The Quayside plan would integrate space for social infrastructure from the start, creating opportunities for community organizations and local service providers to activate these spaces, strengthen the community, and help community members thrive.⁴¹ While Sidewalk Labs would not provide any community services, it would work with partners to ensure that critical services are accessible to all populations, including the most vulnerable.

Quayside's social infrastructure could feature a Care Collective dedicated to enhancing health and well-being, a Civic Assembly designed to encourage civic engagement and social cohesion, an elementary school proposed to be operated by the Toronto District School Board, and a collaboration with the Toronto Public Library.



Proposed urban innovations

1

A Care Collective would provide community space dedicated to enhancing health and well-being by co-locating the delivery of health care and community services alongside proactive health programming.

2

A Civic Assembly, adjacent to the Care Collective, would provide neighbourhood access to spaces for community programs, civic engagement, and cultural events.

3

An elementary school, co-located with a childcare centre, would ensure that downtown families have access to basic education and child care needs.

4

A proposed collaboration with the Toronto Public Library (TPL) would explore ways to integrate the library's presence throughout the neighbourhood, resulting in potential pop-up lending services or TPL-developed classes on digital literacy.

5

An online resource called Collab could allow community members to decide on public space programming, giving them a nuanced understanding of trade-offs and community impact.

6

The Sidewalk Works jobs program would bring employers and educators into conversation, prepare workers to acquire in-demand skills, and connect employers with a diverse and talented workforce.



Digital Innovation

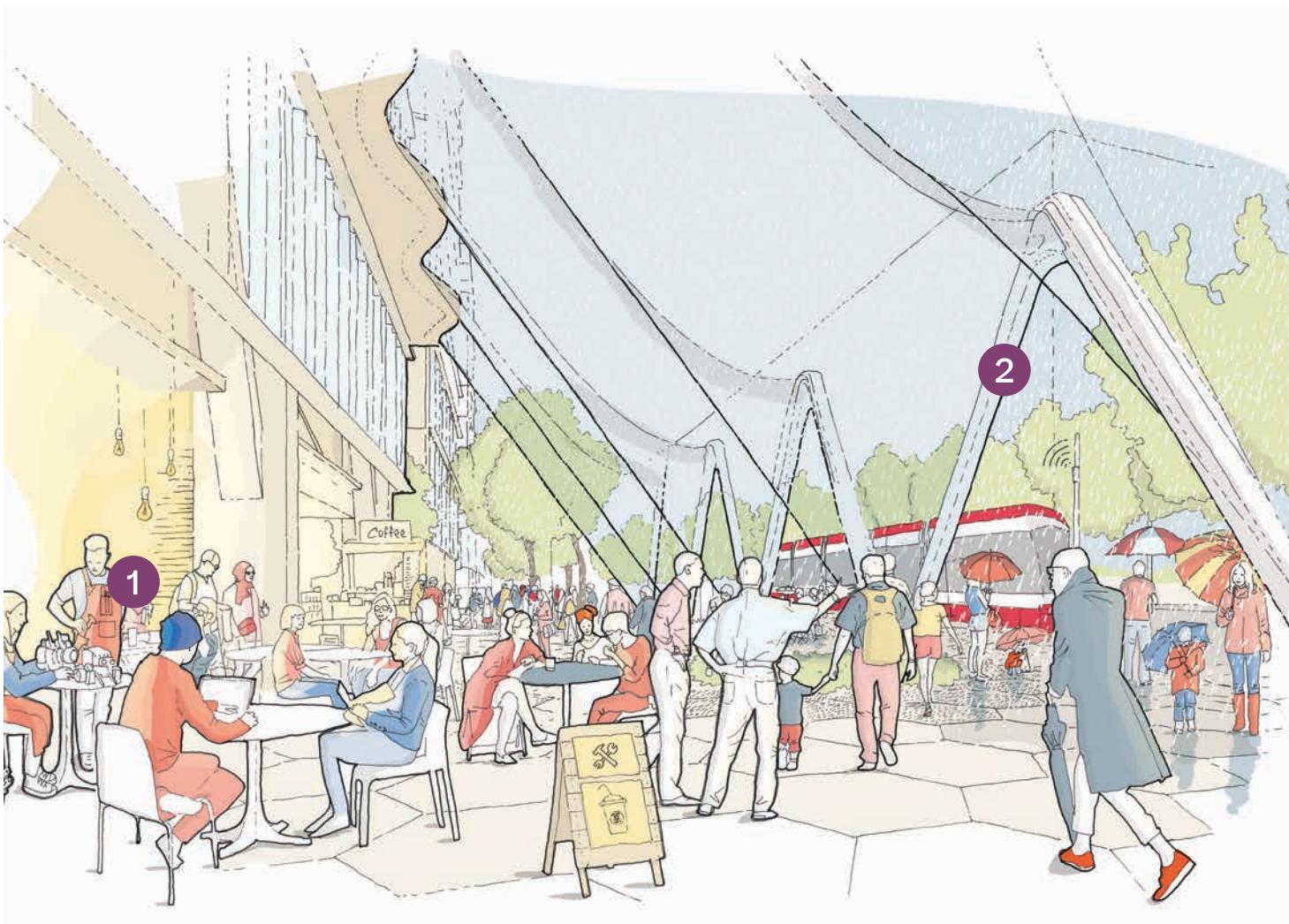
Catalyze digital innovations that help tackle urban challenges and establish a new standard for the responsible collection and use of data in cities.

In Quayside, Sidewalk Labs proposes to take a holistic approach that creates four core conditions for digital innovation to flourish responsibly.⁴²

These conditions include providing more affordable and flexible digital infrastructure, setting data standards that are open and secure, and launching core digital services that others can build on.

The Quayside plan would also serve as a global demonstration for responsible data use in cities by proposing that urban data be controlled by an independent entity called the Urban Data Trust, charged with balancing the interests of personal privacy, public interest, and innovation.

In Quayside (here, a sidewalk cafe beneath a building Raincoat, along Queens Quay East), Sidewalk Labs proposes deployment of super-fast, super-secure Wi-Fi.



Proposed urban innovations

1

A ubiquitous connectivity network – powered by a new Super-PON technology that reaches faster speeds with less equipment – can provide households and businesses with a secure personal network across an entire neighbourhood, indoors and outdoors.

2

Standardized physical mounts connected to power would dramatically reduce the cost of deploying digital innovations, serving as a sort of “urban USB port.”

3

Open, published standards would make properly protected urban data accessible to the community in real time, and make it easy for third parties to build new services or competitive alternatives to existing ones.

4

A best-in-class approach to security and resiliency would be designed to prevent disruptions, rapidly detect them, and rapidly restore functionality.

5

Building on existing privacy laws, a proposed independent Urban Data Trust would oversee the review and approval of all digital innovations that propose to use or collect urban data in Quayside – whether developed by Sidewalk Labs or third parties.

6

The proposed Urban Data Trust would be tasked with establishing clear Responsible Data Use Guidelines that safeguard the public good while enabling innovation, including by making de-identified or non-personal data publicly accessible by default.

7

A publicly transparent Responsible Data Use Assessment would ensure that companies or community members wishing to use urban data do so in a way that has a beneficial purpose and protects privacy.

Pedestrian walkway: Intimate public spaces

A network of pedestrian-only pathways would be lined with a variety of retail, community, and cultural ground-floor stoia spaces, with housing and offices on upper floors to create a true live-work neighbourhood.

As the world's first all-mass timber neighbourhood, Quayside would become a global model for showcasing this sustainable, beautiful building material.



Queens Quay: People-first streets

A redesigned Queens Quay would create expanded pedestrian spaces that benefit from animated ground floors, curbless streets, lush plantings, and outdoor-comfort strategies that make it possible for people to spend more time outside together.

A new modular pavement system with embedded lights and heating would facilitate safe, welcoming spaces that can adapt to changing conditions.



Parliament Plaza: Connecting land and water

A series of water-based play spaces would anchor a grand central plaza designed to draw people down to the water's edge and host a wide range of activities, from concerts to markets to art installations.

The plaza would be surrounded by two-story ground-floor stoia spaces that host diverse programming and blur the line between indoors and outdoors.

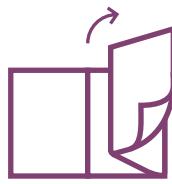


Parliament Slip: Active in all seasons

Framed by lower-scale, intimate buildings, Parliament Slip would offer direct access to the water for activities like kayaking, educational programs,

art installations, and relaxation. A new pedestrian bridge would connect the slip with the stunning new parks of Villiers Island.





Open for full
Parliament Slip
visuals

Outdoor-comfort strategies, such as building Raincoats that extend over the sidewalk and temporary enclosed structures, would support ongoing programming to ensure that the waterfront remains lively and safe year-round.



Exploring larger scales to realize and maximize the impact achieved in Quayside

Quayside can achieve meaningful steps towards Waterfront Toronto's quality-of-life objectives and a new model for urban development. But some of the elements of the Quayside plan cannot reach their full impact at the size of a five-hectare neighbourhood, while others cannot be financed or successfully operated without a certain amount of density to support them.

More importantly, comprehensive planning and scale are necessary to realize and maximize Waterfront Toronto's ambitious priority outcomes: job creation and economic development, sustainability and climate-positive development, housing affordability, new mobility, and urban innovation (including robust data privacy and digital governance).

Consistent with the RFP's recognition of the potential need to explore scale, Sidewalk Labs believes in a phased approach for testing, refining, and demonstrating the impact of core innovations, beginning with a smaller setting and working up to larger areas along the eastern waterfront as project objectives are achieved.

For such reasons, Sidewalk Labs has proposed a concept plan for a wider River District geography that would make it possible to meet or exceed the ambitious priority outcomes in a way that is both financially achievable and replicable in other parts of Canada and around

the world.⁴³ The following initiatives require such scale to realize their intended impact.

1

Attracting new economic and jobs anchors

Sparking an urban innovation cluster.

Quayside can establish the foundation of a district that actively supports innovation, creativity, and exploration, but the River District has sufficient space to accommodate an economic cluster's potential expansion and a sufficient density of housing, retail, and amenities to support tens of thousands of new workers and residents.

Alphabet commits to establishing a new Canadian headquarters for Google on the western edge of Villiers Island, as part of an agreed-upon transaction within the IDEA District. This new headquarters would be the centre and catalyst for a new innovation campus, which would also include a new non-profit applied research institute called the Urban Innovation Institute.

The innovation campus would be a major employment anchor for the revitalized eastern waterfront. In total, Sidewalk Labs

estimates that 10,500 of the 93,000 IDEA District jobs would be focused on urban innovation, creating a new economic engine around this emerging area.

Catalyzing a mass timber industry.

As the world's first entirely mass-timber neighbourhood, Quayside can help demonstrate the feasibility and benefits of this new sustainable building material. But Sidewalk Labs estimates that a larger development area – roughly 6 million square feet – is needed to justify an investment in the factory-based production of mass timber, as well as for such a factory to hit peak efficiency in producing sustainable building components on a predictable timeline that developers can trust.

Extending this approach across the River District could catalyze the creation of a new Canadian industry that capitalizes on the country's abundant green-certified forests, and could support a new modular factory that accelerates construction timelines by up to 35 percent.

2

Supporting advanced infrastructure to achieve climate positivity

Robust energy infrastructure can reduce greenhouse gas emissions by 85 percent in Quayside compared to the status quo. But designing, implementing, and operating the advanced infrastructure systems necessary to achieve climate positivity – which requires exporting clean energy outside a project area – requires a large enough customer base to be effective and financially feasible.

The full proposed IDEA District could catalyze 93,000 total jobs, including 44,000 direct jobs by 2040.

Specifically, to keep Quayside resident energy bills in line with Toronto averages, the advanced power and thermal grids would require a \$19 million supplemental innovation investment based on the current plan, due to factors including the high cost of geothermal exchange and initial electric grid connections, in addition to the poor economies of scale for operating costs.

The River District would provide a large enough area to support these investments, such as a new thermal energy grid for heating and cooling buildings, because the systems scale in a financially sustainable way. With public-sector support, the Sidewalk Toronto project could become the largest, densest climate-positive district in North America and the third largest in the world — establishing a credible path forward for cities to follow.

3

Unlocking significant progress towards housing affordability

To make a significant dent in housing affordability, Sidewalk Labs plans to explore a series of private funding sources that can help support an ambitious below-market vision, including affordability by design (using efficient unit design to create more total units, and thus additional value); the increased value of public land due to factory-built timber construction; and a condo resale fee.

At the Quayside scale, however, only affordability by design would create value (roughly \$37 million) that could be

directed towards a below-market housing program. Generating land value from factory-based construction requires 6 million square feet of delivery output to refine the factory process and reliably accelerate project timelines and reduce project risks for developers. Generating funds from the resale fee requires ongoing condo turnover, and thus additional phases of development.

- Housing affordability by the numbers:**
- **40% below-market vision**
 - **More than \$1.4 billion in private funding at the full IDEA District scale**
 - **Up to 13,600 below-market units (with additional government support) at the full IDEA District scale**

Applying these strategies at the scale of the River District has the potential to generate more than \$1.4 billion for below-market housing. With this approach, and additional government support, the district could include an estimated 13,600 below-market units — helping to address increasingly urgent affordable housing needs.

4

Creating a 21st-century mobility network

Extending the LRT into the Port Lands. Toronto has planned an extension of its public transit network across the eastern waterfront since 2006, but the plans, which could cost as much as \$1.2 billion, remain unfunded.⁴⁴ Sidewalk Labs is proposing, if public funding is not available, that this critical project can be built now and financed through future revenue streams generated by the development made possible by the transit extension.

Sidewalk Labs is prepared to provide financial support to this approach, but it only becomes viable if the new transit lines would serve a sufficient amount of development.

Quayside's proposed development of 10 buildings (roughly 2.65 million square feet) is not large enough to sustainably support the financing of the waterfront light rail. An area the size of the proposed River District (nearly 27 million square feet) could provide enough density to pursue promising self-financing methods for the light rail, such as tax increment financing.

Designing a network of new mobility options.

The limited street network of Quayside (four blocks) can be used to develop new ways to design streets that prioritize people and cyclists, improve the efficiency of how space is allocated as travel patterns shift across a day, and incorporate adaptable features that can respond to new mobility options as they emerge. But streets only have transformative impact when they form a network.

If Quayside's mobility innovations are applied across the River District, there would be opportunities to give residents, workers, and visitors a full set of transportation options designed to meet all of their needs without owning a car, enabling 77 percent of trips to be made through transit or active modes across the IDEA District.

The River District could also showcase the world's first street network designed to integrate self-driving vehicles in a way that supports public transit use, shared rides, and enhanced pedestrian and cycling experiences.

5

Creating the conditions for urban innovation

Quayside is the perfect demonstration site to begin establishing the physical, digital, and policy conditions for urban innovation, enabling researchers, entrepreneurs, private companies, civic organizations, government agencies, and innovators to create countless new services designed to improve urban life.

At the heart of this vision is the ability to create the digital conditions for others to build on. These include:

- Providing more affordable and flexible digital infrastructure, such as ubiquitous connectivity and standardized mounts
- Setting data standards that are open and secure

Creating a trusted process for responsible data use, with a proposed independent Urban Data Trust to oversee and approval the use or collection of urban data

Launching core digital services that others can build on through open access to properly protected urban data

But some of these initiatives require the scale of the River District to realize their full potential.

For example, new advances in fibre-optic technology and network security can build on Waterfront Toronto's progress bridging the digital divide and enable countless new solutions to be developed by a wide array of third parties. But such an advanced network only becomes financially sustainable at the scale of the River District, given the number of residents or businesses needed to recoup the initial investment in core enabling infrastructure.

By planning holistically, and over a large enough area, these conditions would help the IDEA District become an economic engine focused on urban innovation while unlocking transformative quality-of-life improvements for all.

This is the opportunity before Toronto.

By planning over a large enough area, the IDEA District could become an economic engine and unlock transformative quality-of-life improvements.

Part 3 **The River District: Creating an Innovation Ecosystem to Build on Quayside's Impact**

Anchored by the relocation of Google's Canadian headquarters to Villiers West, the proposed River District would consist of five distinct neighbourhoods — together creating a new hub for urban innovation with the potential for global impact.

Key Term
**The IDEA District's
Innovation
Framework**

a modified regulatory framework designed to foster the policy conditions necessary to tackle urban challenges using innovative solutions.

As an extension of the Quayside innovation framework and development approach at scale, Sidewalk Labs proposes Waterfront Toronto and the City of Toronto also apply this approach to a larger geography identified as the "River District," an area spanning 62 hectares with five distinct neighbourhoods: Villiers West, Villiers East, Keating East, McCleary, and Polson Quay.

These neighbourhoods would be carefully stitched into their surrounding environments, including extending the innovation corridor along Queens Quay and into Quayside. They would also be anchored by their common connection to a newly naturalized Don River, a historic \$1.25 billion project that will eliminate flooding in the eastern waterfront and establish an ecological foundation for new sustainable communities built around spectacular parks and nature.

Planning for the River District is guided by the Port Lands Planning Framework, which lays out a vision to transform these industrial lands into an economic and innovation hub that adapts to changing conditions, enjoys ubiquitous connectivity, respects the waterfront context, and creates a network of dynamic new neighbourhoods. Plans for Villiers Island and Keating are further guided by the Villiers Island and Keating precinct plans.

While the investment in the Port Lands Flood Protection Project is extraordinary, it is only a first step. Substantial additional investments are required to fully unlock the area's potential, especially strong transit connections and basic infrastructure. The lack of modern infrastructure and questions over how to finance it create a formidable barrier to any kind of development, let alone the standard-setting communities envisioned by Waterfront Toronto and the City of Toronto in the Port Lands Planning Framework.

"Over the coming decades, the Port Lands will transform from a predominantly industrial district into a modern and vibrant extension of the urban metropolis. ... The Port Lands will be a showcase for innovation and a leader in environmental performance."

— Port Lands Planning Framework⁴⁵



Through a new economic hub on Villiers West and by planning and financing innovative systems across the district, Sidewalk Labs can create the conditions to fully unlock the waterfront's potential.
Credit: DroneBoy

The River District program overall is shaped by the need for enough density to achieve Waterfront Toronto's priority outcomes and make the development financially sustainable.

By moving Google's expanded Canadian headquarters to Villiers West, establishing an Urban Innovation Institute, and planning and financing innovative systems across the district, Sidewalk Labs can create the foundation to attract private development that would fully unlock the waterfront's potential as a global hub for urban innovation and North America's largest climate positive-community.

The River District is an important opportunity for Waterfront Toronto, the City of Toronto, and others to capitalize on the investments proposed by Sidewalk Labs. As Innovation and Funding Partner, Sidewalk Labs would seek to help provide the framework and funding through which this part of the eastern waterfront can finally be unlocked and achieve a vision for revitalization. The River District proposal does not include Sidewalk Labs undertaking detailed planning or leading development in this area. Instead, it aims to help create the conditions that enable both the public and private sectors to make great things happen.

Planning spotlight

How the River District proposal adds value to the Port Lands Planning Framework

Released in 2017 by the City of Toronto and Waterfront Toronto, the Port Lands Planning Framework outlines a high-level vision for the future development of this area over a timeline of roughly 50 years.

By extending the innovative approach to planning initiated in Quayside and leveraging long-term resources, Sidewalk Labs can not only help achieve this vision but help to accelerate it and amplify many of its core components. At nearly 27 million square feet of development, the River District envisions a density with the potential to unlock a public transit expansion, dramatically increase the supply of affordable housing, and generate billions in tax revenue for the economy – achieving city and waterfront objectives years sooner than anticipated by the framework.

Some key areas where the River District proposal adds value to the Port Lands Planning Framework include:

Envisioning Villiers Island as a major economic hub.

The Port Lands Planning Framework identifies Villiers Island as mostly a residential mixed-use area. The River District proposal builds on this foundation by identifying the area as a potential major economic and employment hub anchored around an urban innovation campus, enabling the creation of a true live-work-play community and a significant revenue source for the city.

Preparing for self-driving vehicles.

The framework envisions the creation of a balanced mobility system that emphasizes public

transit, walking, and cycling. The River District proposal complements that approach by designing adaptable streets that anticipate the safe arrival of self-driving vehicles operating as a shared service, dramatically reducing the need for residents and workers to own a car and enabling a significant amount of road and parking space to be reclaimed for public space. Additionally, the potential for self-driving vehicles to operate as electric vehicles is a significant component of the path toward climate positivity.

Developing advanced energy infrastructure.

The framework calls for innovations and infrastructure that can help realize a climate-positive community but does not identify the advanced systems needed to achieve it. The River District proposal introduces a comprehensive approach towards climate positivity through advanced infrastructure systems supported by digital energy management tools as a core part of the overall planning.

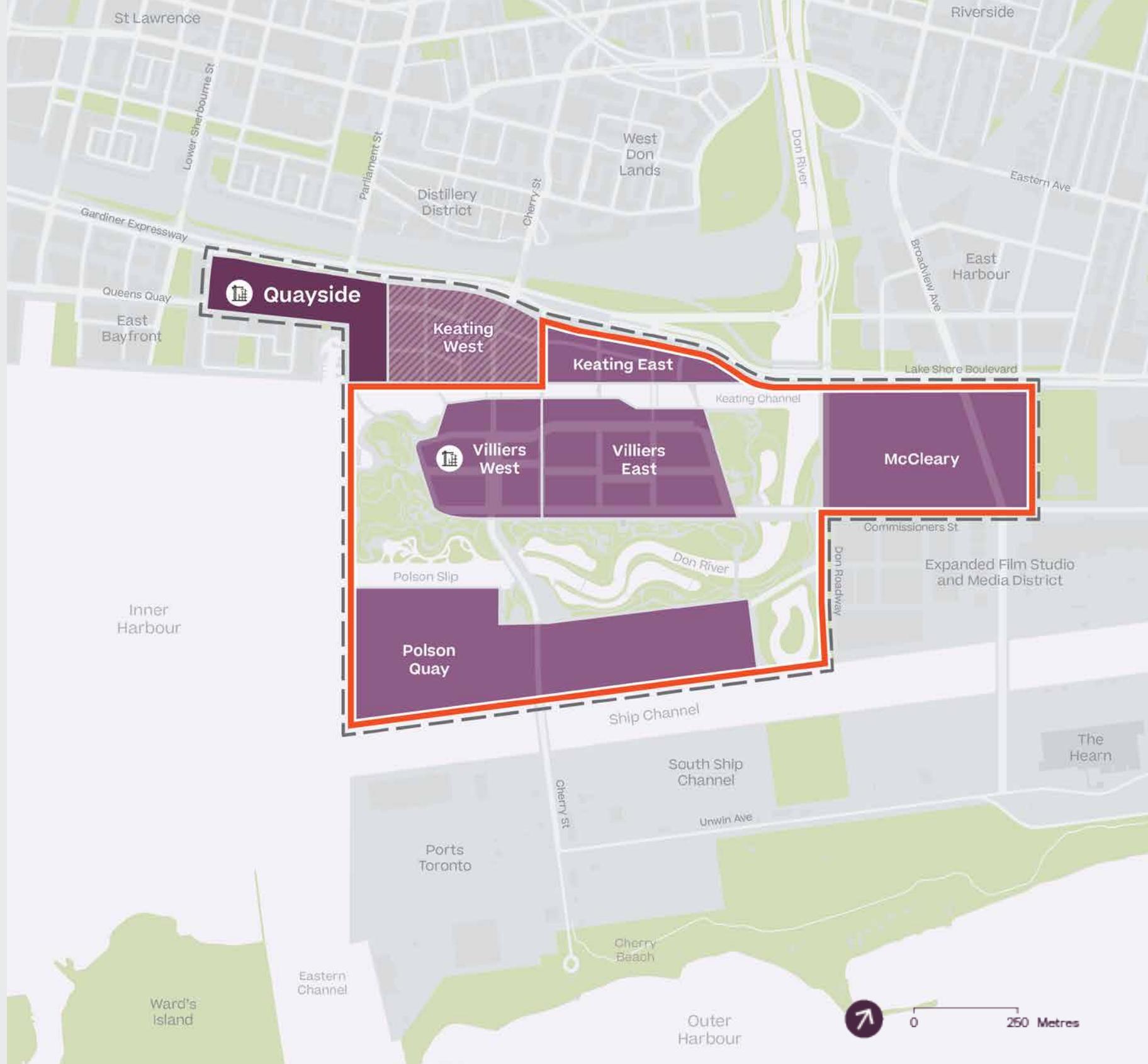
Planning for greater density to unlock a transit expansion and sustainable development.

The River District proposal envisions a greater scale of density than commonly assumed for the Port Lands Planning Framework (particularly in Polson Quay), characterized by a mixture of residential uses alongside non-residential uses such as retail, office, community, and production. Greater density unlocks the ability to finance sustainable infrastructure, such as the transit expansion and improves affordability through the delivery of a significant supply of below-market housing.⁴⁶

Expanding the supply of affordable and below-market housing. The River District proposal strives to exceed current waterfront requirements for housing affordability by promoting a housing vision defined by 40 percent below-market units. This vision targets 20 percent of housing units for middle-income households that currently do not qualify for affordable housing and envisions half of all units being purpose-built rentals to improve long-term affordability. The proposal also outlines paths for developers to support ambitious public goals for affordable housing, including through the use of new financial tools and efficient unit designs that can create new value that can be applied towards below-market programs.

Accelerating the development timeline.

The Port Lands Planning Framework considers the area's evolution across a period of roughly 50 years. The River District proposal leverages private-sector resources to help deliver more than 30 percent more square feet of development on a timeline 10 years faster than the current plan. (The full IDEA District proposal would produce 32.8 million square feet of development by 2040, versus a baseline scenario of 24.4 million square feet by 2050.) The IDEA District has the potential to generate an enormous annual benefit to the Canadian economy, including over 93,000 jobs (with 44,000 direct jobs), \$14.2 billion in annual economic output, and \$4.3 billion in annual tax revenues.⁴⁶



Map
River District geography and roles

- IDEA District
- River District
- Phase 1 Quayside
- Phase 2: River District
- Optional participation in Phase 2
-  Sidewalk Labs develops real estate and advanced systems

Villiers West

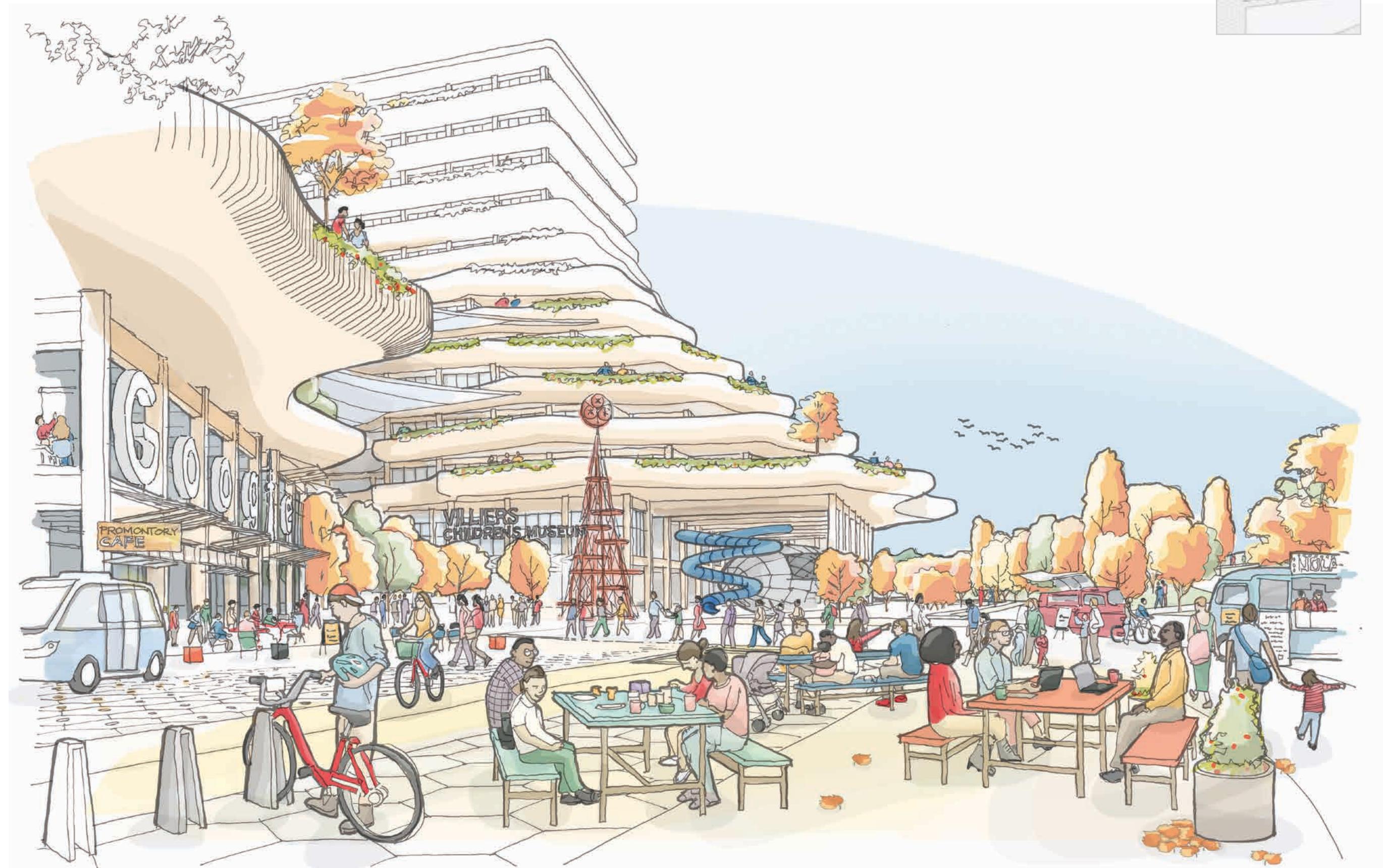


The 7.75-hectare western half of Villiers Island has the potential to catalyze economic development across the region, anchored by the new Google Canadian headquarters and an Urban Innovation Institute designed to connect seamlessly with the new Promontory Park. Sidewalk Labs proposes to act as the lead developer for this area in concert with local development partners.

Alphabet commits to establishing a new Canadian headquarters for Google on the western edge of Villiers Island, as part of an agreed-upon transaction within the IDEA District, to catalyze a new innovation campus and to amplify the area's economic potential. Alphabet would target up to 500,000 square feet, which would be sufficient to accommodate as many as 2,500 jobs, the majority of which would be for Google employees (though actual hiring will depend on market conditions and business requirements).

This campus would also include the Urban Innovation Institute, a new non-profit applied research institute designed to bring together academia, industry, entrepreneurs, advocates, and public agencies to collaborate on tackling urban challenges – developed with local universities and government partners.

Building on progress in Quayside towards Waterfront Toronto's priority outcomes, Villiers West would further serve to prove out innovation concepts for broader application by others across the IDEA District.



This illustration shows the Villiers West innovation campus and Promontory Park.

Villiers West: Building an economic cluster around urban innovation



In Villiers West, Sidewalk Labs plans to help catalyze an economic cluster focused on urban innovation. This effort defines urban innovation as going beyond the mere pursuit of urban efficiencies associated with the “smart cities” movement, towards a broader set of digital, physical, and policy advances that enable government agencies, academics, civic institutions, and entrepreneurs both local and global to address large urban challenges.

Anchored by a new Google Canadian headquarters and an Urban Innovation Institute, this cluster would build on Toronto’s leadership in areas such as artificial intelligence and other technology specialties while supporting the growth — and invention — of new cutting-edge industries.

Villiers Island is uniquely situated to foster this kind of development. The proposed innovation campus would be located on the dramatic western edge, next to a new light rail stop, with enough space to accommodate new companies, start-ups, and institutions as the cluster grows. To the east, thousands of units of housing could be interlaced with retail, community, and cultural spaces, attracting companies seeking a high quality of life for their employees, who would be able to walk to work along the island’s innovative and intimate pedestrian-first street grid.

Extraordinary public spaces would define the entire perimeter of the island. A planned 16-hectare park will curve around the southern edge, culminating to the west in Promontory Park, which will offer spectacular views of the harbour and downtown skyline. To the north,

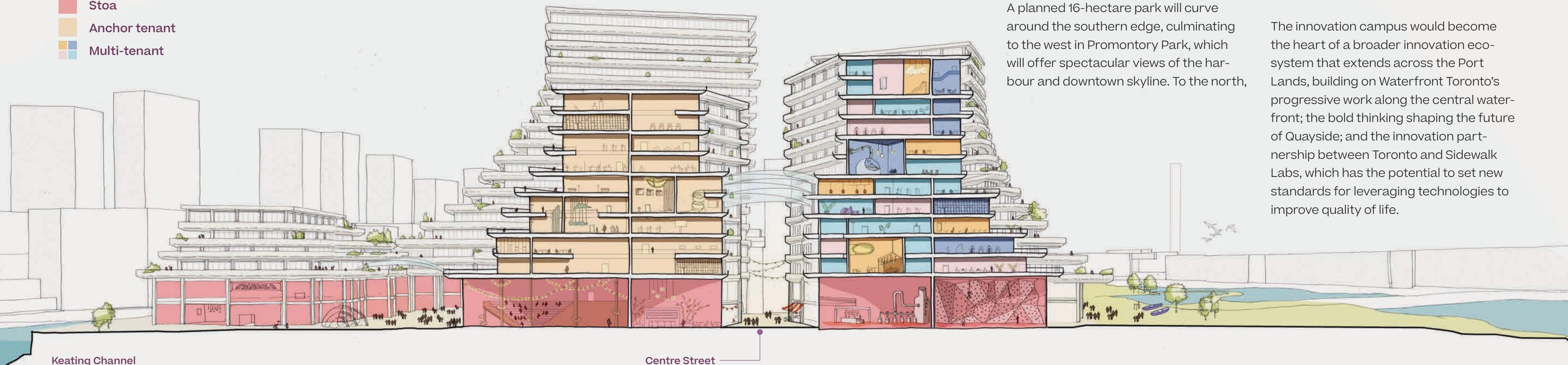
Sidewalk Labs proposes to reinvent the Keating Channel — an artificial waterway lined with a series of industrial buildings — with repurposed historic structures and new pedestrian, public transit, and cycling bridges stitching together both sides of the canal, supporting a new creative economy centred around the arts, production, and exploration.

These diverse experiences could fuel each other, drawing workers and residents united by a shared commitment to exploring new ways of thinking, an excitement about the future, and a desire to be inspired, challenged, and surprised on a daily basis.

The innovation campus would become the heart of a broader innovation ecosystem that extends across the Port Lands, building on Waterfront Toronto’s progressive work along the central waterfront; the bold thinking shaping the future of Quayside; and the innovation partnership between Toronto and Sidewalk Labs, which has the potential to set new standards for leveraging technologies to improve quality of life.

Cross section of the innovation campus

- Stoa
- Anchor tenant
- Multi-tenant



Innovation campus: Active in all seasons

A view of the western edge of the innovation campus (looking west towards downtown).



Villiers West: Stitching this jobs hub into the community

Sidewalk Labs' proposed innovation campus includes four newly created city blocks on the west side of Villiers Island, straddling New Cherry Street, and could total up to 1.6 million square feet of flexible commercial space. Each of the four sites includes the potential for buildings with very large floor plates (ranging from 30,000 to 90,000 square feet) to accommodate the types of open workspaces preferred by innovation economy companies.

The campus would feature a new pedestrian bridge connection to Quayside and have access to the rest of the city through the light rail extension, which would include a new centrally located station.

A key feature of the approved precinct plan is an east-west spine down the middle of Villiers Island called Centre Street, which forms the main connection between the residential community on the east side of the island and the new parks on the west side of Villiers, including Promontory Park, with its spectacular views of the harbour and downtown.

Centre Street would culminate in Promontory Plaza, a flexible space that transitions from mixed-use buildings to the park, supporting diverse programming that spills out from public ground floors. This flexible stoia space would host retail, production, arts, and community uses, with public passageways and interior arcades providing additional ways to move through the site.

The buildings themselves would embrace Sidewalk Labs' adaptable Loft typology, which provides large floor plates for highly flexible uses. The height, bulk, and design features of the buildings would be planned in consultation with Waterfront Toronto and the city to ensure that the innovation campus fits in with the scale of the rest of Villiers Island, which Sidewalk Labs would not be responsible for developing.



Creating a connected innovation campus

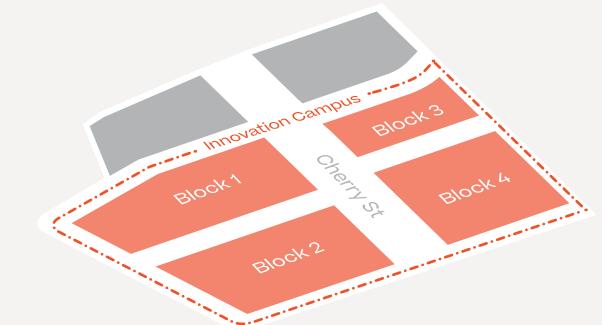
This jobs hub on Villiers West would become a true live-work neighbourhood through a set of features that include a new street network and a light rail connection that provide access to the surrounding city, an extensive park system, and mixed-use blocks.

New public spaces:

- Ⓐ Pedestrian bridge to Quayside
- Ⓑ Promontory Park
- Ⓒ Canoe Cove

New streets:

- Ⓓ Trinity Boulevard
- Ⓔ Cherry Street
- Ⓕ Centre Street
- Ⓖ Commissioners Street



Villiers East



A conceptual illustration of a Villiers East Accessway and plaza, made possible by the IDEA District's innovative approach to development. (Planning for this neighbourhood would be led by Waterfront Toronto and the City of Toronto.)

The 11.5-hectare eastern half of Villiers Island offers an exceptional opportunity to create an inviting, walkable live-work community. In addition to jobs, Villiers East could be filled with affordable housing options, retail and other ground-floor uses, and a new pedestrian-first street network designed to create a series of intimate walkways and courtyards, all encircled by a magnificent new park created as part of the flood protection work.

In this area, and for the rest of the River District, Sidewalk Labs would play a supporting role as innovation and funding partner, while Waterfront Toronto and the City of Toronto work with other partners to undertake development.

Keating East



A conceptual illustration of Keating Channel, looking west, made possible by the IDEA District's innovative approach to development. (Planning for this neighbourhood would be led by Waterfront Toronto and the City of Toronto.)

The planned relocation of the Gardiner Expressway will create the opportunity for a new six-hectare neighbourhood along the reclaimed Keating Channel. The Port Lands Planning Framework envisions the channel as the centrepiece of the surrounding neighbourhoods.

Sidewalk Labs embraces this vision and believes that the spirit of innovation animating the adjacent innovation campus can become a driving programmatic force for the channel. A Keating Channel exploration zone could become a

dynamic, water-focused spine that showcases groundbreaking work across arts, culture, and production.

Taller buildings along the highway could scale down as they approach this intimate waterway, establishing the canal as a unique place in Toronto with vibrant public space and development on both sides of the water. Multiple new pedestrian and bike bridges are proposed across the channel, creating a character similar to the canals of Amsterdam.

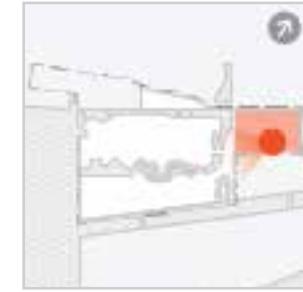
McCleary



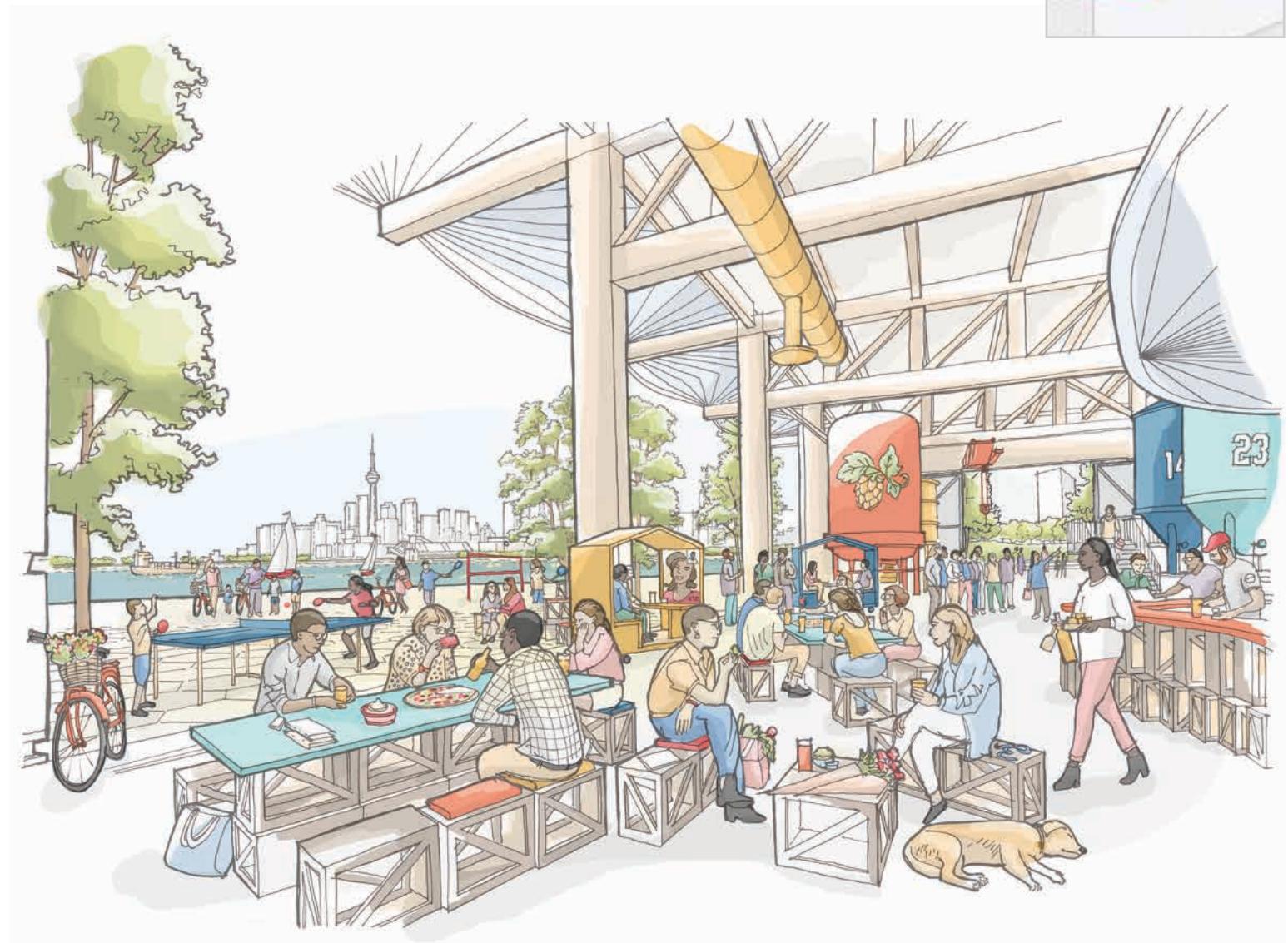
A conceptual view of a future street in McCleary, looking east to McCleary Park, made possible by the IDEA District's innovative approach to development. (Planning for this neighbourhood would be led by Waterfront Toronto and the City of Toronto.)

Consistent with the Port Lands Planning Framework's direction as a mixed-use area focused on production, interactive, and creative industries, the 14-hectare McCleary District could integrate dense housing with commercial space that complements East Harbour and the Film District, such as new economy companies, startups, micro-enterprises, and creative industries.

Located within short walking or biking distance of the Film District, East Harbour, and the innovation campus on Villiers Island, McCleary could become an ideal residential location for people with jobs in the neighbourhood and nearby. In addition, a new light rail stop located on Commissioners Street would ensure access to major transportation hubs and downtown Toronto.



Polson Quay



A conceptual view of Polson Quay, looking north to downtown, made possible by the IDEA District's innovative approach to development. (Planning for this neighbourhood would be led by Waterfront Toronto and the City of Toronto.)

Polson Quay encompasses both the Polson Quay and South River areas identified in the Port Lands Planning Framework. Establishing connections to the rest of the city will be critical to the growth of this 23-hectare neighbourhood, located south of Villiers Island and along the south side of the newly naturalized Don River. As in Villiers Island, a series of bridges in Polson Quay could form important links to the surrounding city, including space

for a light rail extension with a new stop in the centre of the neighbourhood. With these key investments in place, Polson Quay can take full advantage of its geography and dramatic views of the harbour and city skyline to become a place where production, interactive, and creative uses can coexist in an integrated way with housing, commercial activity, community spaces, and an accessible public realm – achieving a unique live-work-make waterfront neighbourhood.

Unique public spaces: Pedestrian bridges

The River District could include unique public spaces such as the Keating Channel, featuring a canal with creative programming along both sides and pedestrian bridges linking neighbourhoods across the water.



Part 4 Committing to Diversity, Equity, and Inclusion

Designing neighbourhoods that everyone can access means planning for the full spectrum of people's abilities, whether physical, digital, economic, social, or cultural. Sidewalk Labs aims to create the conditions that bring people together, not pull them apart, and that provide new opportunities for all.

Neighbourhoods would be designed to support the full spectrum of people's abilities, whether physical, digital, economic, social, or cultural.



Sidewalk Labs has approached its planning for the Sidewalk Toronto project with the following principles in mind:

- **Diversity.** Sidewalk Labs recognizes and honours the vibrant diversity of Toronto, and strives for a place that reflects Toronto's values around diversity — one where people of all ages, abilities, incomes, and backgrounds can thrive and belong.
 - **Accessibility.** Sidewalk Labs prioritizes accessibility of place, transportation, services, and opportunities to ensure the IDEA District is physically, socially, economically, and culturally accessible for all, including residents, workers, and visitors. Sidewalk Labs designs spaces, systems, and services for 100 percent of the population, including people who face multiple barriers.
 - **Affordability.** Sidewalk Labs includes options for housing, retail, programming, and amenities that are affordable for people of all income levels, including those who are low income.
- **Equity of opportunity.** Sidewalk Labs works to identify and remove systemic barriers to participation so everyone can exercise the right to fair and respectful access to economic, social, and cultural opportunities, paving the way for equitable outcomes.
 - **Inclusion.** Designing neighbourhoods that everyone can access means planning for the full spectrum of people's circumstances: physical, digital, economic, social, or cultural. The IDEA District would create the conditions that bring people together, not pull them apart. These conditions can help create an inclusive community — a group of people who share a sense of belonging, trust, safety, and collective stewardship in a place where everyone feels welcome and has an opportunity to flourish and thrive.

Honour strength in diversity

Sidewalk Labs recognizes and honours the range of visible and invisible qualities, experiences, and identities that shape who people are, how they think, and how they engage with and are perceived by the world. These include but are not limited to race, ethnicity, gender, marital and family status, sexual orientation, socio-economic status, age, physical or mental abilities, religious or spiritual beliefs, Indigeneity, immigrant and newcomer status, and political ideologies.

Sidewalk Labs deliberately and thoughtfully strives to develop designs, spaces, services, and programming — in partnership with local institutions — that are welcoming, iterative, responsive, and accessible to a diverse population, including people who face multiple barriers.

Design accessibility for people of all ages and abilities

Sidewalk Labs' commitment to intergenerational communities involves developing a variety of housing types and sizes, pedestrian-friendly streets, and complete communities where people can easily access shops, social services, and community spaces. This commitment is particularly relevant for populations that tend to stay closer to home, including children and seniors.

Sidewalk Labs also plans to establish a host of physical and digital accessibility initiatives co-designed with members of the disability community, including accessible streets, building entrances, and public washrooms, as well as wayfinding tools for people who are visually impaired.



See "The Quayside Plan" chapter of Volume 1, on Page 136, for more details on proposed accessibility initiatives.

These initiatives would aim to meet or exceed existing Accessibility for Ontarians with Disabilities Act (AODA) requirements. They are based on 22 general, physical, and digital accessibility principles developed in collaboration with more than 200 members of the accessibility community in Toronto during 70 hours of co-design sessions.

Create affordability for people of all incomes

A mix of incomes, lifestyles, and life-stages is essential to generating a neighbourhood's sense of community and energy. Sidewalk Labs' proposed housing program has been designed to set a new standard for inclusive communities.

An ambitious affordability vision would target residents across the income spectrum: overall, 40 percent of units would be below-market. This breakdown includes 20 percent of units devoted to traditional affordable housing (at least a quarter of which would go towards households with "deep" affordability needs) and 20 percent of units for middle-income housing.

In contrast to conventional waterfront revitalization in Toronto, often dominated by market-rate condos, a full 50 percent of housing units would be "purpose-built" rentals, improving long-term affordability for the city. A new set of efficient unit designs would reflect a broader effort to make downtown living affordable and meet the evolving needs of Toronto's diverse households.



See the "Buildings and Housing" chapter of Volume 2, on Page 202, for more details on the proposed housing vision.

In addition to expanding housing affordability, the IDEA District would strive to improve the "all-in" affordability of living in the neighbourhood. For example, a mobility subscription package would enable households to forgo car ownership, saving more than \$4,000 a year without sacrificing the ability to get around.⁴⁷ A new approach to affordable electrification would maintain or reduce overall utility costs for households and businesses while achieving more sustainable outcomes.



See the "Economic Development" chapter of Volume 1, on Page 420, for more details on planning for prosperity with equity.

Ensure opportunities for all

Sidewalk Labs believes that a strong plan for economic growth requires an equally strong commitment to inclusion.

Sidewalk Labs plans to take a proactive "community benefits approach," based on community input, to ensure that equitable economic opportunities are open to a wide range of Torontonians. This effort includes creating training and employment opportunities for members of historically disadvantaged and equity-seeking groups, together with employers, community organizations, training providers, and labour.

Building on the Waterfront Toronto Employment Initiative,⁴⁸ Sidewalk Labs plans to work with a range of partners — including Toronto Employment and Social Services, Dixon Hall, Miziwe Biik Aboriginal Employment and Training, and Acces Employment, among others — to provide opportunities in both the construction and tech sectors. The project will set minimum targets, including requiring 10 percent of all construction hours to be worked by members of equity-seeking groups.

While creating meaningful employment in the industries of today is important, so too is helping to cultivate the next wave of local entrepreneurs. Sidewalk Labs envisions a business incubator program developed with a local partner to provide space and support for underrepresented and low-income entrepreneurs, and for small business owners from diverse communities.

Foster an inclusive community supported by robust social infrastructure

Social infrastructure fosters health and well-being, ties together communities, and helps people reach their highest potential.

Proactive planning for social infrastructure — including health, civic engagement, lifelong learning, and arts and culture — is critical to achieving an inclusive community. The IDEA District should be a place that creates and sustains good health for all by enabling proactive, coordinated, continuous, and holistic approaches to health, care, and well-being. It should foster a civically engaged community underpinned by deep social ties and a strong sense of pride and belonging. And it should provide the conditions to explore, produce, and experience creative expression of all kinds.

Sidewalk Labs plans to take a proactive approach to health and well-being that recognizes the social determinants of health. This approach would be reflected through a built environment designed to promote active transportation and infuse nature into the streetscape.



See "The Quayside Plan" chapter of Volume 1, on Page 214, for more details on social infrastructure.

A Care Collective, operated through service-delivery partnerships, would seek to meet the diverse health needs of people in their local neighbourhood.

The IDEA District will also have a central location for community connection and participation that would be the heart of civic life in Quayside: the Civic Assembly, a place to connect with neighbours, learn about what is going on in and around the neighbourhood, share ideas, express creativity, engage in cultural activities, and get technical assistance on digital tools.

Committing to Indigenous communities

Sidewalk Labs will work to reflect and acknowledge traditional and contemporary Indigenous presence in Quayside, and commits to contributing to prosperity and opportunity for local Indigenous communities.

There is a collective responsibility to share in wise stewardship and peaceful care of the land and its resources.

Quayside sits on the treaty lands of the Mississaugas of the Credit First Nation. Today, there is a significant diverse urban Indigenous community in Toronto. Sidewalk Labs acknowledges the urgent need for, and is committed to furthering the goals of, reconciliation with Canada's Indigenous Peoples.

Quayside is close to a number of Indigenous organizations and districts, including a new Indigenous business district on Dundas Street East, which will include an Indigenous Centre for Innovation and Entrepreneurship, Miziwe Biik Aboriginal

Employment and Training, and Anishnawbe Health Toronto, which is developing a new Indigenous Community Hub in the neighbouring West Don Lands.

Over half of the Indigenous people in Canada now reside in urban centres.⁴⁹ This project is an opportunity to model how contemporary city building can contribute to, and support, urban Indigenous prosperity and opportunity. Sidewalk Labs will strive to create opportunity for local Indigenous communities through a number of initiatives. These commitments include:

- **Engagement.** Sidewalk Labs will engage Indigenous communities, including the Mississaugas of the Credit First Nation, in ongoing dialogue to build a mutually respectful relationship and explore potential collaborations.
- **Workforce initiatives.** Sidewalk Labs will work with Indigenous workforce agencies (such as the Miziwe Biik Aboriginal Employment and Training and the Centre for Indigenous Innovation and Technology) on both skills training and job opportunities in construction and tech, and include Indigenous suppliers in diverse procurement strategies.
- **Design and education.** Sidewalk Labs will reflect and acknowledge Indigenous presence on the waterfront. In November, Sidewalk Labs held a design consultation with Indigenous participants, designers, and artists led by Brook McIlroy's Indigenous Design Studio to imagine (among other things) educational opportunities and Quayside's future through the lens of Indigenous design.

For the Sidewalk Toronto project to truly contribute to Indigenous prosperity and opportunity, Indigenous voices must be at the table. Sidewalk Labs is committed to ongoing conversations and collaboration with Indigenous communities in Toronto throughout the development process.

Mississaugas of the Credit First Nation.

The Mississaugas of the Credit First Nation (MCFN), part of the Ojibwe (Anishnabe) Nation, is one of the largest Aboriginal Nations in North America.

MCFN asserts unextinguished title to all water in its claimed traditional territory including Lake Ontario, and any adjacent lands under water or formerly under water. The land on which Quayside will be built are lands covered by Treaty 13/13A Toronto Purchase (1805) between the Mississaugas and the Crown.⁵⁰

As a company proposing a new vision for these lands, Sidewalk Labs intends to engage with, and include, MCFN in the project.

Sidewalk Labs recognizes the aspirations of the MCFN as articulated in their vision statement: "[MCFN] looks to our Anishinabe roots to guide our vision for the future as a strong, caring, connected community who respects the earth's gifts and protects the environment for future generations. Our identity includes our history, language, culture, beliefs, and traditions which we strive to incorporate into the programs and services offered to our community."⁵¹

In partnership with Waterfront Toronto, Sidewalk Labs has started an important ongoing dialogue between project staff, MCFN Chief R. Stacey Laforme, and the MCFN Department of Consultation and Accommodation (DOCA). Sidewalk Labs thanks Chief R. Stacey Laforme, MCFN band councillors, and DOCA staff for their generous time during the development of this MIDP, and looks forward to continued meaningful and respectful conversation. It is Sidewalk Labs' hope that this important engagement improves the environmental, social, cultural, and economic well-being of the city and all the project's stakeholders, including MCFN.

Sidewalk Labs recognizes and honours the vibrant diversity of Toronto, and strives for a place where people of all ages, abilities, incomes, and backgrounds can thrive and belong.

Part 5

A New Economic Engine That Drives Outsized Job Growth on an Accelerated Timeline

Sidewalk Labs' approach to economic development can help Toronto realize the full potential of the eastern waterfront on a significantly expedited time frame, resulting in more than 93,000 total jobs (including 44,000 direct jobs) stimulated by the IDEA District by 2040.

Any comprehensive approach to urban development requires a strong plan for economic growth with an equally strong commitment to inclusion.

In recent years, all three levels of government in Canada have recognized the importance of inclusive growth. These efforts have included federal investment in public transit and affordable housing, community benefit agreements on provincial projects, and social procurement initiatives at the city level. Waterfront Toronto recognized this priority in its RFP, establishing as one of its primary objectives the need "to deliver key economic and social benefits that enable Toronto to compete effectively with other top-tier global cities for investment, jobs and talent."

Waterfront Toronto also identified a focus for this growth: an economic cluster centred around urban innovation, a burgeoning sector whose global market value is projected to top \$2 trillion USD by 2025.⁵² But despite the vast potential for urban innovation to spark economic growth, no one place has put together a holistic plan to become the global hub of this emerging field.

The Sidewalk Toronto project provides a unique opportunity to help meet and exceed government and Waterfront Toronto goals for inclusive growth by generating a new economic engine — one designed specifically to improve quality of life, affordability, and prosperity for residents, workers, and businesses of all sizes. Sidewalk Labs proposes a two-part approach to economic development with the potential to catalyze significant jobs and growth anchored around urban innovation.

First, Sidewalk Labs plans to help boost general economic growth by accelerating development across the underutilized areas of the IDEA District.

Sidewalk Labs' proposed approach for the IDEA District — including significant investments in advancing an innovation framework and in advanced systems and infrastructure — would help the city and Waterfront Toronto unlock the potential of this underutilized area on an accelerated timeline, creating the conditions for significant new economic growth.

Realizing the full potential of the IDEA District begins with early delivery of the planned Waterfront Light Rail Transit extension, which would not only better connect the area with the rest of the city but also with other planned development nearby, including commercial development at East Harbour and the planned expansion of the Film District.

As a next step, the relocation of Google's Canadian headquarters onto Villiers Island as part of a new innovation campus would spark economic activity and draw businesses and talent from around the world. A thoughtful approach to mixed-use development that integrates new innovations to improve sustainability, affordability, and mobility would further attract workers and residents by creating complete communities filled with homes, jobs, shops, community spaces, and parks.

Finally, new affordable housing and workforce development programs help ensure that this approach to prosperity also comes with equity — creating opportunities for Torontonians of all ages, incomes, and abilities, as well as businesses of all sizes.

To plan for prosperity with equity, Sidewalk Labs commits to a robust inclusion program, anchored by an ambitious housing vision that provides 40 percent of units at below-market rates. Building on that foundation, Sidewalk Labs plans to launch a new workforce development program, implement a construction jobs program for equity-seeking populations, and invest in an Ontario-based mass timber factory capable of supporting approximately 2,500 person-years of full-time employment over 20 years.

Second, Sidewalk Labs plans to help catalyze a cluster focused on urban innovation with the potential to spark a new economic engine.

The city's Official Plan articulates the potential for a cluster-based approach to drive meaningful impact in Toronto:

"Today, the real competitive advantage for urban economies lies in the foundations that support growth in economic clusters that bring new wealth to the region: a well-educated, highly-skilled labour force; research and development leading to innovation; access to financial capital; adequate infrastructure, including advanced information and communications networks; a dynamic business climate; an enviable quality of life; and safe, cohesive, congenial and inclusive neighbourhoods."

Consistent with these objectives, Sidewalk Labs' approach to sparking a new cluster for urban innovation along the waterfront draws inspiration from global examples of successful clusters but is specifically designed to address the challenges to improving life in cities today. This approach can shape the future of

the field, create thousands of jobs, and drive economic opportunity well beyond the waterfront.

First, this cluster would be designed to build on top of Toronto's existing innovation ecosystem, including its world-class academic and research institutions and its support from all levels of government, towards promoting related technology industries.

To build on that foundation, Sidewalk Labs would integrate the unique physical, digital, and policy conditions – found nowhere else at scale throughout the world – necessary to help researchers, entrepreneurs, startups, civic organizations, government agencies, and all third parties tackle difficult urban challenges.

Beyond these unique conditions, Sidewalk Labs plans to further spark this cluster through \$10 million in seed funding for a new Urban Innovation Institute focused on applied research for urban innovation as well as \$10 million towards a new venture fund to support local, early-stage enterprises.

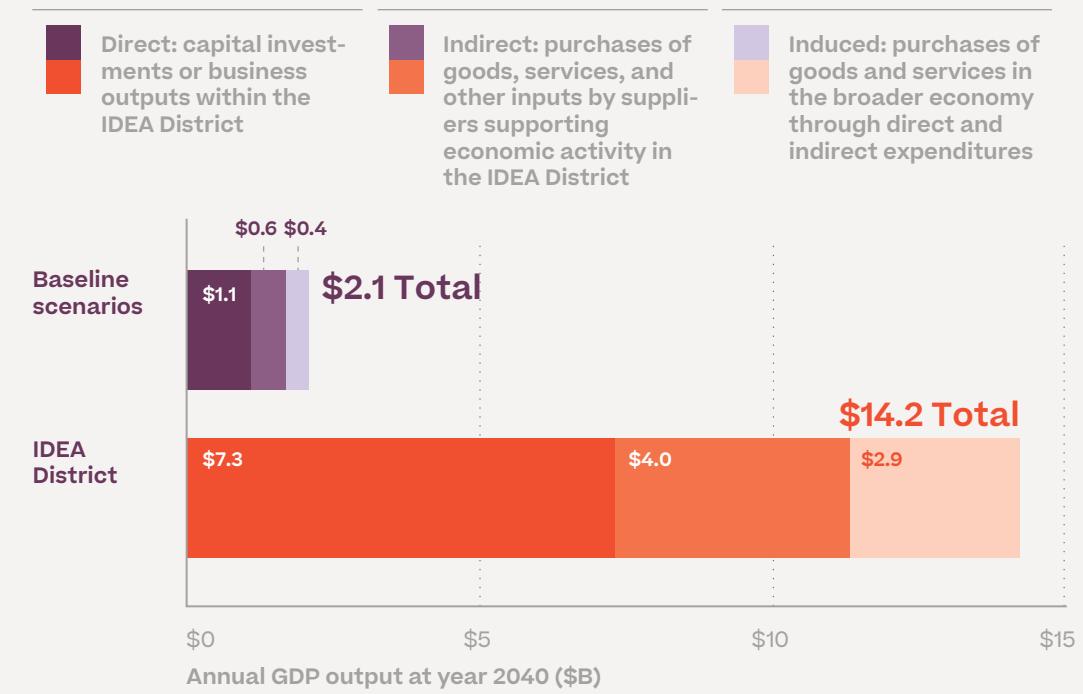
Sidewalk Labs believes the combination of these ingredients would create the conditions for innovation, catalyzing economic activity in Toronto, driving meaningful contributions to the field of urban innovation globally, and drawing innovators from around the world to research, invest, explore, build, and scale ideas that can improve the quality of life in cities.

The IDEA District would help Toronto unlock the potential of this underutilized area on an accelerated timeline, creating conditions for significant economic growth.

The IDEA District's significant economic impact on GDP, tax revenue, and jobs by 2040

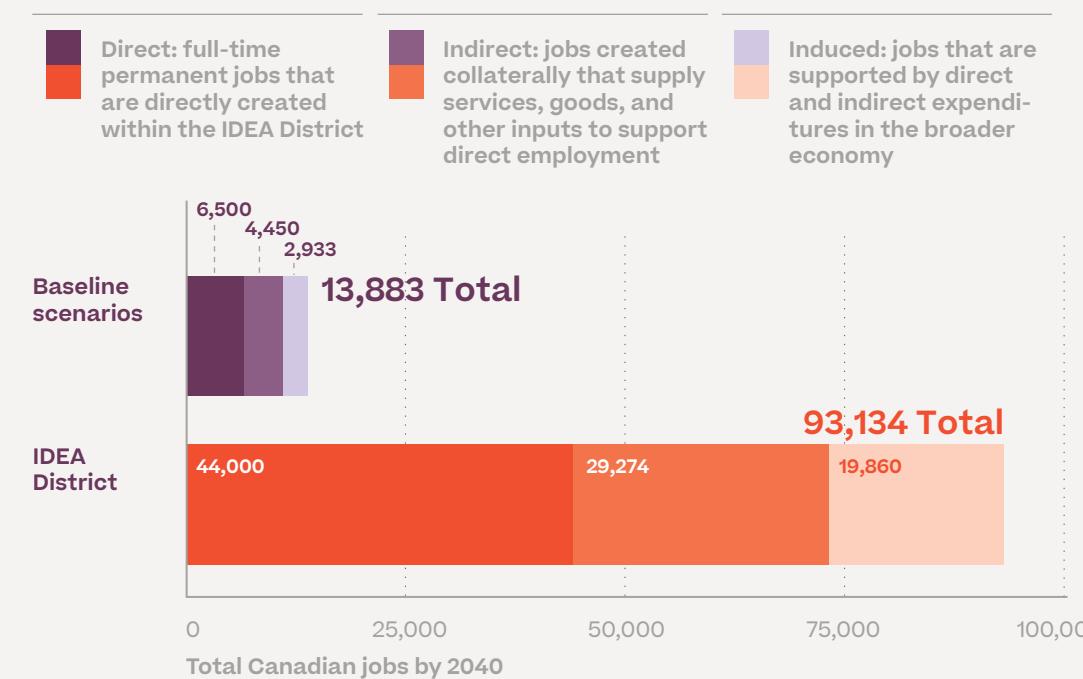
Nearly seven times the annual GDP contribution by 2040

In its analysis, urbanMetrics estimates that, by 2040, the IDEA District would contribute nearly seven times the value to Canadian GDP annually than would result from existing proposals for the eastern waterfront. Sidewalk Labs recognizes that there are many factors that could contribute to increased value aside from the unique conditions established in the IDEA District, such as a potential increase in commercial and residential density. The baseline scenario assumed the densities as currently considered in existing planning documents.



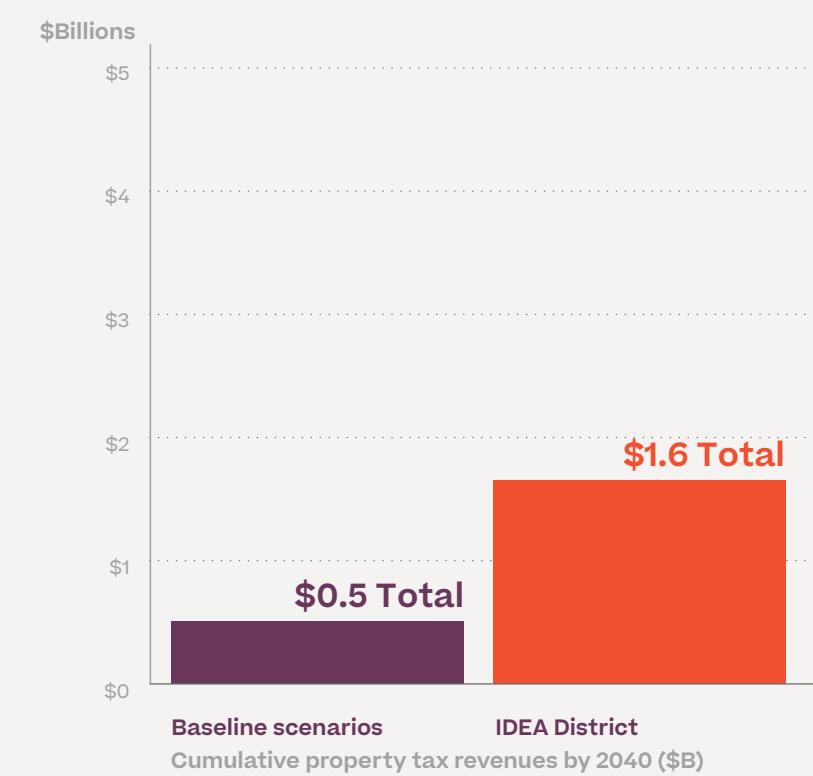
Nearly seven times as many jobs by 2040

Implementation of Sidewalk Labs' plans for the IDEA District could realize significantly greater permanent employment opportunities, achieved on a faster timeline, than existing proposals. In its analysis, urbanMetrics estimates that, by 2040, the IDEA District would stimulate 93,000 jobs – nearly seven times the number of jobs by 2040 that would be realized under the approach currently envisioned in the Port Lands Planning Framework.



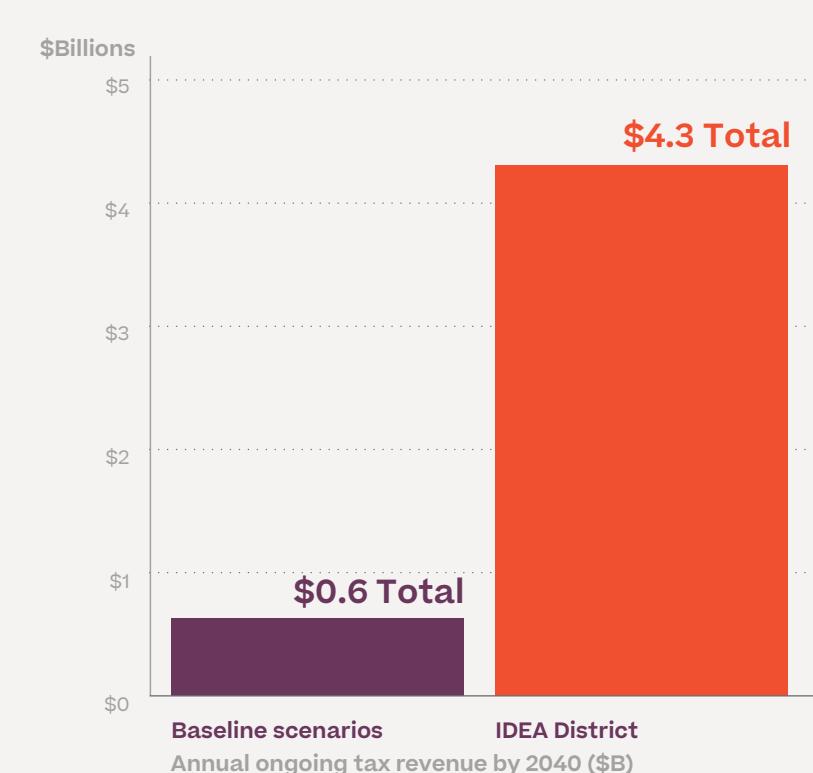
Three times the cumulative property tax revenue by 2040

Accelerating development of the eastern waterfront would allow for a rapid accumulation of property tax revenues generated upon expedited occupancy. In its analysis, urbanMetrics estimates that, by 2040, full buildout of the IDEA District would accrue more than three times the cumulative property tax revenue of that generated under existing proposals.



Nearly seven times the annual ongoing tax revenue by 2040

The urbanMetrics analysis also estimates that overall annual tax revenues generated throughout the IDEA District would be realized at a magnitude nearly seven times that of the baseline scenario by 2040. Importantly, a fully developed IDEA District would have the capacity to produce this annual benefit across municipal, provincial, and federal jurisdictions.



All figures in these charts reflect an economic analysis conducted by urbanMetrics, a leading Toronto-based firm with extensive experience on the waterfront.

Priority Outcomes

Part 1
Striving to Meet
Waterfront Toronto's
Five Priority Outcomes

p164

Part 2
Impact Summary:
Achieving the Ambitious
Priority Outcomes

p166

Part 1 Striving to Meet Waterfront Toronto's Five Priority Outcomes

Waterfront Toronto has stated that its evaluation of the MIDP will focus on goals and objectives developed through a robust and thoughtful process, identifying five “priority outcomes”: job creation and economic development, sustainability and climate-positive development, housing affordability, new mobility (including an emphasis on accessibility), and urban innovation (including robust data privacy and digital governance).

Waterfront Toronto's five priority outcomes



Job creation and economic development.

This priority outcome is anchored around the goal of catalyzing economic growth for Toronto, Ontario, and Canada – particularly, in the words of the RFP, by “providing an environment in which an urban innovation cluster can be established and thrive.” This outcome includes bolstering Toronto’s existing innovation ecosystem, providing opportunities for Canadian firms to scale, and expanding training opportunities and jobs across the socio-economic spectrum.



New mobility.

This priority outcome begins by strengthening connections to the city’s existing public transit network. It also emphasizes the need to rely more heavily on electric vehicles and leverage the future potential benefits of self-driving vehicles. Above all, a successful new mobility plan will reduce the cost and climate impact of transportation options while maintaining or increasing convenience for travellers and goods movement.



Sustainable and climate-positive development.

This priority outcome emphasizes the creation of neighbourhoods with below-zero annual greenhouse gas emissions. Achieving this goal involves either exporting clean energy outside of a project area or actively reducing Toronto’s current greenhouse gas emissions through carbon offsets.



Urban innovation.

This priority outcome aims to tackle complex urban problems, from traffic congestion to energy use, using emerging physical and digital tools. Additionally, Waterfront Toronto identified a series of “must do’s,” some of which apply to this area. Specifically, “must do’s” concerning digital innovation include compliance with all applicable laws and regulations while striving for a new global standard in digital governance. Other requirements involve making data open by default to ensure equitable access by third parties, avoiding vendor lock-in to ensure competition, and enhancing data security and privacy.



Housing affordability.

This priority outcome strives to exceed Waterfront Toronto’s affordable housing requirement (reservation of land sufficient to accommodate 20 percent of new residential units as affordable rental housing) while using minimal reliance on public funding. It also aims to create purpose-built rental housing as well as market ownership units.

Part 2 Impact Summary: Achieving the Ambitious Priority Outcomes

The moment is right for a vision of historic sweep: a comprehensive plan for greater affordability, sustainability, inclusion, and economic opportunity that no city government alone could achieve and that no private developer alone would pursue. The MIDP lays the foundation for achieving — and exceeding — Waterfront Toronto’s ambitious priority outcomes.



The IDEA District would create a global model for inclusive communities that set new standards for sustainability, affordability, and economic opportunity.

After 18 months of intensive planning work informed by robust public feedback, Sidewalk Labs believes the MIDP outlines a new development approach that not only meets Waterfront Toronto’s ambitious priority outcomes — but exceeds them.

To do so, the MIDP proposes to transform a small portion of the eastern waterfront — less than one third, to be developed over 20 years — into a 77-hectare IDEA District large enough to point the way forward on a new approach to inclusive growth.

As described in Section B of the Overview, beginning on Page 90, the IDEA District would consist of two phases. The first phase is a five-hectare Quayside development, which can serve as a demonstration ground for how to integrate urban innovations into the physical environment to achieve significant quality-of-life objectives. The second phase is a larger River District, where those solutions can realize their full impact in a financially sustainable way.

This section provides a high-level overview of how the MIDP would achieve the priority outcomes.

The IDEA District impact: The new bottom line



Climate impact



A climate-positive neighbourhood that cuts greenhouse gases by 89 percent

Housing affordability impact



A housing vision with 40 percent of units at below-market rates, supported by more than \$1.4 billion in new private funding sources

Mobility impact



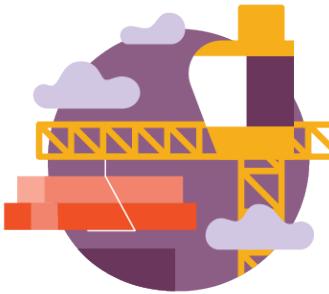
An estimated 77 percent of trips would use public transit or active modes, like walking or cycling

Urban innovation impact

A new innovation campus and economic cluster, with 10,500 jobs (of the 93,000 total) focused specifically on urban innovation

The ability to catalyze digital innovation while protecting privacy and the public good through a new standard of responsible data use





Priority outcome #1: Job creation and economic development

Creating 93,000 total jobs and generating \$14.2 billion in economic impact

The IDEA District could help meet and exceed goals for inclusive growth by generating a new economic engine centred around the emerging field of urban innovation. As estimated by the Toronto-based economic firm urbanMetrics, the full scale of the IDEA District would result in 93,000 total jobs (including 44,000 direct jobs) and \$14.2 billion in economic output for Canada each year (GDP), including \$11.8 billion in Toronto – representing a 178 percent increase in value added to the Canadian economy compared to status quo development at completion.⁵³

This growth is achieved through a two-part approach to economic development. First, Sidewalk Labs plans to accelerate and unlock new development through upfront investments in critical infrastructure, such as light rail, and relocating Google's Canadian headquarters as part of a new innovation campus. Second, Sidewalk Labs plans to help catalyze a cluster focused on urban innovation and is prepared to provide \$10 million in initial seed funding to create (with local partners) an applied research centre called the Urban Innovation Institute.

Additionally, Sidewalk Labs plans to contribute \$10 million to a new venture fund designed to help Canadian companies scale.

Critically, Sidewalk Labs recognizes that its approach to economic development must benefit everyone. To plan for prosperity with equity, Sidewalk Labs commits to robust measures to ensure affordability, accessibility, and opportunity for all, anchored by an ambitious below-market housing vision (see Priority Outcome #3 for more details), as well as a new workforce development program, commitments to physical and digital accessibility, and opportunities for diverse businesses.

Sidewalk Labs also plans to build on the Waterfront Toronto Employment Initiative to ensure training and opportunities for a wide range of Torontonians in emerging areas of urban innovation.



A new Ontario-based factory for off-site mass timber construction would catalyze a new Canadian industry and support an estimate 2,500 annual full-time jobs.

Creating 2,500 manufacturing jobs and catalyzing the mass timber industry

At the full proposed scale, the IDEA District would become one of the largest construction projects in the world.⁵⁴ Canada is poised to become a global leader in a sustainable new construction industry focused on mass timber – engineered wood that is as strong and fire-resistant as concrete and steel, but far more sustainable and far easier to manufacture.

Sidewalk Labs is prepared to catalyze industry growth with an investment to create a new Ontario-based factory for off-site mass timber construction. The domestic supply of mass timber products produced in such a factory would support

an estimated 2,500 annual full-time jobs over a 20-year period, and by accelerating development across the IDEA District, a factory would catalyze an estimated 5.2 million total work hours for all factory-related trades.⁵⁵

All told, between buildings and infrastructure, the project's construction could add more than \$22 billion in value to the Canadian economy and create over 174,000 years of employment by 2040.

Building on the Waterfront Toronto Employment Initiative, Sidewalk Labs has committed to target at least 10 percent of construction hours for low-income and racialized youths, women, and Indigenous people. □



See the "Economic Development" chapter of Volume 1, on Page 420, for more details on the jobs and prosperity plans for the IDEA District.

Job creation and economic development

The project would catalyze **93,000 total jobs**, **\$14.2 billion in annual economic output (GDP)**, and **\$4.3 billion in annual tax revenue by 2040** — all delivered years faster than existing baseline plans.

Proposed innovation or initiative

1 Proposed economic anchors

The proposed economic anchors include a new Google Canadian headquarters and an applied research centre called the Urban Innovation Institute.

2 Venture fund

A new venture fund would support early-stage local enterprises working in urban innovation-related fields.

3 Sidewalk Works jobs program

The Sidewalk Works jobs program would bring employers and educators together to identify real-time needs; partner with educators and trainers on skills development to meet demand; and identify opportunities to further develop a diverse and talented workforce.

4 Community benefits commitments

Community benefits commitments are designed to ensure more equitable access to employment opportunities.

5 Mass timber construction

Mass timber construction in an Ontario-based factory would catalyze a new industry that taps into Canada's vast sustainable forests.

6 Library of building parts

A library of building parts created in a mass timber factory would reduce costs related to materials procurement, design, assembly, and shipping efficiency; reduce waste; and reduce regulatory approval timelines for developers.

Impact at IDEA District scale

- Together, a new Google Canadian headquarters and the Urban Innovation Institute (seeded with \$10 million by Sidewalk Labs) would form the foundation of a 2.7 million square foot innovation campus on Villiers Island, catalyzing an urban innovation cluster.⁵⁶
- Sidewalk Labs' \$10 million initial seed investment (coupled with commitments from other local funding partners) would help startups and small businesses scale and support the region's capacity to retain talent and intellectual property.⁵⁷
- Realized at a district scale and over time, the Sidewalk Works job program could support the development of an inclusive talent pipeline and foster a culture of inclusion in the workplace.⁵⁸
- In alignment with the Waterfront Toronto Employment Initiative, 10 percent of construction hours (including professional, administrative, and technical jobs) would be targeted for low-income and racialized youths, women, and Indigenous people.⁵⁹
- The creation of a local factory would support an estimated 2,500 person-years of full-time employment over a 20-year period and catalyze an estimated 5.2 million total work hours for all factory-related trades.⁶⁰
- A library of factory-made mass timber building parts would accelerate construction by up to 35 percent and enhance project predictability — savings that could be applied towards below-market housing. It could also help reduce project costs by up to 20 percent.⁶¹

7

Sidewalk Digital Fabrication

A digital coordination system called Sidewalk Digital Fabrication would build on existing building information modelling (BIM) tools to help coordinate every part of the proposed mass timber supply chain, from the off-site factory to on-site assembly.

8

"Loft" spaces

Adaptable "Loft" spaces are designed with flexible floor plates to accommodate residential, commercial, and light manufacturing uses, enabling a true live-work community.

9

Flexible wall systems

Flexible wall systems enable renovations to Loft and residential spaces to occur much faster than normal, reducing vacancies and helping the neighbourhood adapt to market conditions.

10

Outcome-based building code

An outcome-based building code system could monitor noise and other nuisances in real time to help a mix of residential and non-residential uses thrive while protecting public safety.

11

"Stoa" spaces

Ground-floor "stoa" spaces are designed to accommodate a wide range of uses beyond traditional retail, ensuring that the community has a lively mix of shops and restaurants, community spaces, maker studios, pop-ups, and small businesses.

12

Small business incubator

A small business incubator would be designed to help those without access to capital open up shop.

13

Seed Space

A digital leasing platform called Seed Space would help small businesses and other retailers book a wide range of stoa sizes for short- or long-term uses, making it easier for small businesses to establish a physical retail presence.



Use of this tool by the entire construction pipeline — developers, architects, contractors, landlords, and others — has the potential to create an unprecedented degree of clarity across the entire development ecosystem, enabling all parties to reduce costs related to uncertainty.⁶²



Broad development of "Loft" spaces could accommodate the full range of live-work needs and respond nimbly as those needs change over time, decreasing vacancy periods by 50 percent compared to traditional spaces and attracting the workers and companies necessary for an innovation cluster to thrive.⁶³



These systems accelerate renovations through features such as low-voltage digital power (which travel over ethernet cables rather than electrical wires) and mist-based sprinkler systems (which are equally effective as traditional sprinklers but need not be embedded in walls).⁶⁴



Realized throughout the IDEA District, an outcome-based building code system could unlock new local economic opportunities by safely enabling a broader mix of uses at both the building and district scales, including production spaces and small-scale industries.⁶⁵



Sidewalk Labs estimates that the costs associated with renovation, such as moving walls and electrical wiring, would decrease by roughly 50 percent with stoa compared to traditional ground-floor spaces — making it easier for businesses of all sizes to launch or expand.⁶⁶



Sidewalk Labs plans to work with partners to help launch this program and would reserve a portion of stoa stalls for this incubator, enabling the cohort to test ideas and sharpen business skills in a low-risk environment.⁶⁷



Seed Space services would make it possible for landlords to take risks on more dynamic tenants who might not be equipped or willing to sign up for a five- or 10-year contract, and to reduce short-term space vacancies and downtime between leases.⁶⁸



Priority outcome #2: Sustainable and climate-positive development

A climate-positive district that cuts greenhouse gases by 89%

Following Waterfront Toronto's lead in sustainable development, the IDEA District would achieve emissions of 0.72 annual tonnes per capita, or an 89 percent reduction from the city's current average.⁶⁹ To get there, Sidewalk Labs proposes a series of energy, green infrastructure, and mobility initiatives that include:

- Providing heating, cooling, and domestic hot water via a new type of district energy solution called a thermal grid that captures a variety of clean energy sources
- Designing an advanced power grid that uses solar energy, battery storage, and real-time energy pricing to reduce the GHG impact of electricity use
- Improving recycling rates via a smart disposal chain
- Actively managing stormwater via green infrastructure paired with digital management systems
- Prioritizing biking, walking, public transit, and electric vehicles
- Reducing truck deliveries on local streets by coordinating freight through a logistics hub
- Reducing overall energy demands through energy-efficient building designs inspired by the global "Passive House" movement
- Eliminating energy waste through digital management tools that help optimize building heating, cooling, and power systems

The IDEA District would achieve emissions of 0.72 annual tonnes per capita, or an 89 percent reduction from the city's current average.



Innovative building designs would reduce energy demands, increase efficiency, and prioritize clean energy sources as part of a broader strategy to achieve a climate-positive district.

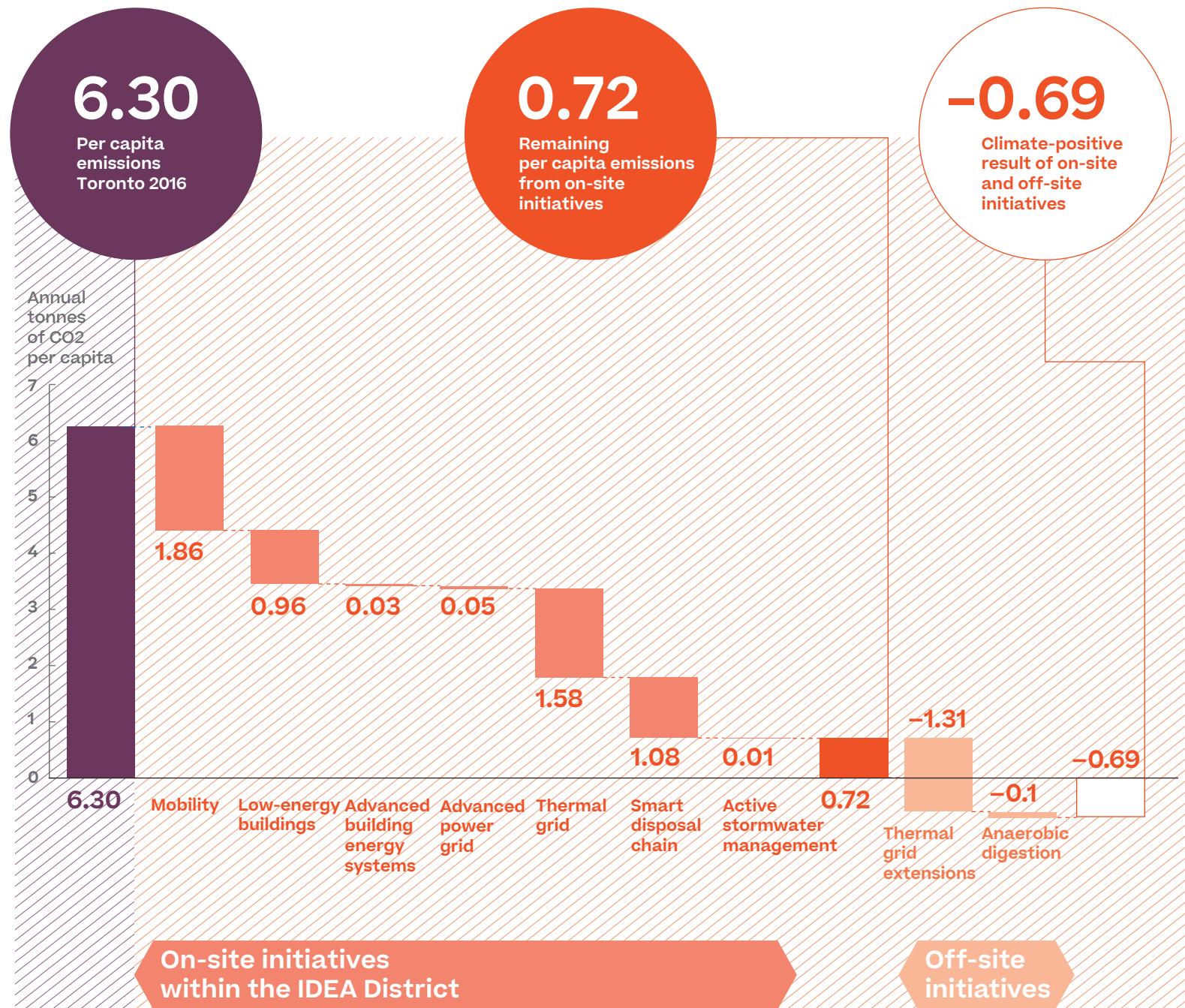


See the "Sustainability" chapter of Volume 2, on Page 296, for more details on the climate-positive vision for the IDEA District.

At the full scale of the IDEA District, it also becomes feasible to create a surplus of clean energy in the project area that could then be exported to buildings in other parts of the city, fulfilling Waterfront Toronto's climate-positive vision by reducing the city's overall emissions. With public-sector support, the Sidewalk Toronto project could become the largest, densest climate-positive district in North America and the third largest in the world — establishing a credible path forward for cities to follow.

The path to achieving a climate-positive district

Sidewalk Labs has proposed a set of on-site and off-site initiatives that, when combined, would produce the largest climate-positive district in North America.



The Sidewalk Toronto project could become the largest, densest climate-positive district in North America.

Sustainability and climate-positive development

The project's sustainability vision would enable the IDEA District to become the **largest climate-positive district in North America** and the third largest in the world — contributing **0.69 annual tonnes of clean energy per capita**.⁷⁰

Proposed innovation or initiative

1 Low-energy buildings

Low-energy buildings — inspired by the Passive House movement — would feature highly insulated building envelopes, airtight exteriors, and balanced ventilation systems designed to reduce energy needs while improving interior comfort.

2 Active energy management tools

Digital active energy management tools called "Schedulers" would optimize energy systems for residents, businesses, and building operators, ensuring that buildings operate in the most efficient way possible.

3 Advanced power grid

An advanced power grid would use solar energy, battery storage, and time-based energy pricing to reduce reliance on the main Toronto Hydro grid during periods of peak demand and make an all-electric community affordable.

4 Thermal grid

A district energy system called a "thermal grid" would provide heating, cooling, and domestic hot water by drawing on clean energy sources such as geothermal (underground) energy, building "waste" (or excess) heat, and wastewater heat.

5 Innovative utility bill

An innovative utility bill structure would enable residents and businesses to set monthly budgets for energy costs.

Impact at IDEA District scale

- Low-energy building designs would reduce GHG emissions by 0.96 annual tonnes per capita (or 15.2 percent) from the city's current average. They would also achieve Toronto Green Standard Tier 3 rating for energy efficiency and Tier 4 for greenhouse gases.
- Schedulers would enable low-energy building designs to achieve their full potential and reduce GHG emissions by 0.03 annual tonnes per capita (or 0.5 percent) from the city's current average.
- The advanced power grid would reduce GHG emissions 0.05 annual tonnes per capita (or 0.8 percent) from the city's current average, while maintaining comparable utility costs.
- The thermal grid would reduce GHG emissions by 1.6 annual tonnes per capita (or 25.1 percent) from the city's current average.
With support from the city, this advanced infrastructure system could also tap a vast reserve of clean energy from the Ashbridges Bay Wastewater Treatment Plant, removing 70,444 annual tonnes of CO₂ per person from areas outside the IDEA District.
- When combined with other strategies for affordable electrification, such as Schedulers, innovative bill structures enable customers to have more predictable utility bills with much cleaner energy consumption.

6 Smart disposal chain

A smart disposal chain would feature real-time feedback to improve waste sorting and "pay-as-you-throw" chutes to reduce household and business waste.

7 Pneumatic tube system

A pneumatic tube system would separate waste streams underground, reducing contamination and centralizing trash hauling.

8 Anaerobic digestion facility

An anaerobic digestion facility can convert organic (food) waste into a clean energy source called biogas.

9 Active stormwater management

An active stormwater management system relies on green infrastructure to capture water and on digital sensors to empty storage containers in advance of a storm.

10 Electric vehicles

A plan to encourage electric vehicles includes a variety of strategies, such as deploying electric ride-hail services, creating charging incentives, and adopting electric self-driving vehicles.

11 Mass timber

An emerging building material called mass timber is just as strong and fire-resistant as steel or concrete yet far more sustainable.

12 Shikkui plaster

A sustainable material called Shikkui plaster would provide fire protection equivalent to drywall with a fraction of the waste.



The smart disposal chain would reduce GHG emissions by 1.08 annual tonnes per capita (or 17.1 percent) from the city's current average. It would also result in a landfill diversion rate of 80 percent.



In addition to helping achieve the greater emissions savings of the smart disposal chain, the pneumatic tube system would remove truck traffic from local streets. Further, it could reduce the need to truck waste to a materials recovery facility for sorting, which currently adds 28 percent to processing costs.



In addition to helping achieve the savings of the smart disposal chain, an anaerobic digestion facility could achieve a carbon offset of 0.1 tonnes per capita through the creation of biogas, helping the district become climate positive.



The active stormwater system would reduce GHG emissions by 0.01 annual tonnes per capita (or 0.2 percent) from the city's current average. It would also achieve Toronto Green Standard's Tier 3 for stormwater retention and reduce stormwater moving into municipal systems by 90 percent.



When combined with public transit, walking, cycling, and new mobility options, this electric vehicle plan would reduce transportation-related GHG emissions by 1.86 tonnes per capita from the city's current average.⁷¹



Mass timber traps 1 tonne of carbon dioxide in every cubic metre of timber, storing carbon that otherwise would have been released back into the air through decomposition. The timber required to build the whole IDEA District would remove the equivalent of roughly 150,000 annual cars from the road.⁷²



The Shikkui system would result in a waste stream that can be recycled as plant-beneficial fertilizer, a far more sustainable alternative to the use of drywall, which generates nearly 12 million tonnes of debris every year.⁷³



Priority outcome #3: Housing affordability

A housing program with 40% of units at below-market rates

The housing vision for the IDEA District is specifically designed to address the housing gridlock facing the city today, providing options and opportunities for more Torontonians on the waterfront.



See the “Buildings and Housing” chapter of Volume 2, on Page 202, for more details on the housing vision for Quayside and the IDEA District.

Meeting the intent of the Central Waterfront Secondary Plan requirement, Sidewalk Labs plans to deliver 20 percent of housing units as affordable housing in Quayside (as defined by the city as being at or below 100 percent Average Market Rent), with at least a quarter of these units going towards households with “deep” affordability needs (defined as households at or below 60 percent of AMR).⁷⁴

To improve long-term affordability, half of all units in Quayside would be purpose-built rentals important for a healthy housing ecosystem.

Recognizing the challenges in the market for middle-income households, the Quayside housing program goes beyond this requirement to include another 20 percent of units for middle-income households (for example, mid-range rentals at 100 to 150 percent AMR). Together, these units create a 40 percent below-market program to help achieve unprecedented new levels of affordability. □

To improve long-term affordability, half of all units in Quayside would be purpose-built rentals important for a healthy housing ecosystem. The other half (far less than in a typical development) would be owned, with 5 percent earmarked for shared equity programs. Finally, the housing program features a variety of housing options, including co-living, family-friendly housing, and efficient units.



The IDEA District housing vision aspires towards 40 percent of units at below-market rates, including a variety of options designed to support families.

If this vision were applied to the full IDEA District, it could include around 6,800 affordable housing units, representing nearly a third of the current annual citywide target for new affordable rental housing units. With additional government support, that vision could help create more than 13,600 total below-market units.

This approach would also achieve the outcome of increasing private funding support over time by generating over \$1.4 billion for below-market housing through 2048, at the full scale of the IDEA District.⁷⁵ These new sources emerge from factory-based construction (which unlocks new land value), efficient housing design (which enables developers to build more units on a given site), and other proposed financial tools (such as a condo resale fee to support mixed-income communities).

Housing affordability

A 40 percent below-market housing vision — supported by **\$1.4 billion in new private funding sources** — could generate more than **13,600 below-market units** across the IDEA District with additional government support.⁷⁶

Proposed innovation or initiative

1 Below-market housing

An ambitious below-market housing program would feature 20 percent affordable housing units (a quarter of which would go towards “deep” affordability needs) and 20 percent middle-income housing units.

2 “Purpose-built” rentals

Half of the total proposed housing vision would consist of “purpose-built” rentals that are critical to improving long-term affordability.

3 “Shared equity” units

Middle-income housing options would include “shared equity” units designed to help households build value in their home without the high upfront cost of a traditional mortgage down payment.

4 “Affordability by design”

An “affordability by design” approach reduces unit footprint while enhancing efficiency, flexibility, and community to enable the creation of more below-market units when compared to traditional development.

5 Factory-based construction

Factory-based construction can accelerate project timelines and enhance cost certainty, enabling developers to pay more for land, with such premiums directed towards below-market housing.

6 Condo resale fee

A condo resale fee of 1 percent would enable market ownership units to support rental economics, which creates an additional source of funding for below-market housing.

Impact at IDEA District scale

- In Quayside, Sidewalk Labs commits to achieving this 40 percent below-market vision, which would create roughly 1,000 below-market units. If applied at the full IDEA District with additional government support, this vision has the potential to create 13,600 below-market units by 2048 (including 6,800 affordable housing units).
- In Quayside, Sidewalk Labs commits to purpose-built rentals for half of its housing program, amounting to roughly 1,300 units. If applied at the full IDEA District with additional government support, this program has the potential to create 17,000 purpose-built rentals by 2048, improving long-term affordability.
- In Quayside, Sidewalk Labs commits to having 5 percent of all units be shared equity units. If this initiative is extended across the full IDEA District, it could increase adoption of an alternative tenure model that can increase affordability for middle-income households.
- In Quayside, affordability by design can generate an estimated \$37 million towards below-market housing. If a 40 percent below-market vision is applied at the scale of the IDEA District, it could generate an estimated \$475 million in value towards below-market housing.
- In Quayside, factory-based construction would be tested and refined, but would require an estimated 6 million square feet to drive value. If a 40 percent below-market vision is applied at the scale of the IDEA District, factory-based construction could generate \$639 million in value towards below-market housing.
- In Quayside, a condo resale fee would be implemented, but would not yet drive value. If a 40 percent below-market vision is applied at the scale of the IDEA District, a condo resale fee could generate \$321 million in value towards below-market housing.

7

Waterfront Housing Trust

A proposed Waterfront Housing Trust would “lock-box” new private funding sources — including land value from factory-based construction and the condo resale fee — for below-market housing.

8

Efficient unit design

Efficient and ultra-efficient units reduce size to enable affordability while remaining livable through thoughtful design features that make the most of their space.

9

Co-living units

Co-living units would feature shared building amenities such as communal kitchens to enhance community for a range of residents.

10

Family-sized units

Family-sized units of at least two bedrooms or more would expand housing options for households of all sizes.

11

Care Collective

A Care Collective would provide community space dedicated to enhancing health and well-being by co-locating the delivery of health care and community services alongside proactive health programming.

12

Civic Assembly

A Civic Assembly would provide neighbourhood access to spaces for community programs, civic engagement, and cultural events to bolster community.

13

Elementary school and daycare centre

Plans for an elementary school and daycare centre would ensure that downtown families have access to basic education and child care needs.

14

Library collaboration

A proposed collaboration with the Toronto Public Library (TPL) would explore ways to integrate the library’s presence, resulting in potential pop-up lending services or TPL-developed classes on digital literacy.



The Waterfront Housing Trust (not administered by Sidewalk Labs) could assemble and disburse funding from a variety of sources for below-market housing within the IDEA District, increasing the predictability and certainty of funding for developers.



Efficient units of all sizes — up to four bedrooms — would create an affordable option for single-person households, families, seniors, and other groups looking for high-quality downtown living with access to community services, public spaces, and neighbourhood amenities.



Integration of co-living spaces could improve affordability while creating more community-focused housing options for seniors, families, and others seeking a stronger sense of community from downtown living.



In Quayside, Sidewalk Labs commits to creating 40 percent of units at family size. If applied at the full IDEA District, this approach could help make downtown living affordable and possible for families that might otherwise leave the city.



To support residents and ensure a complete community, the Quayside plan sets aside a central space for the Care Collective, which would be activated by local partners. If these partners choose, the Care Collective could demonstrate a forward-looking model that could extend throughout the IDEA District.⁷⁷



To support residents and ensure a complete community, the Quayside plan envisions the Civic Assembly as a place to connect with neighbours, access local services, and participate in community decisions. If extended across the IDEA District, it could further enhance social interaction and community engagement.⁷⁸



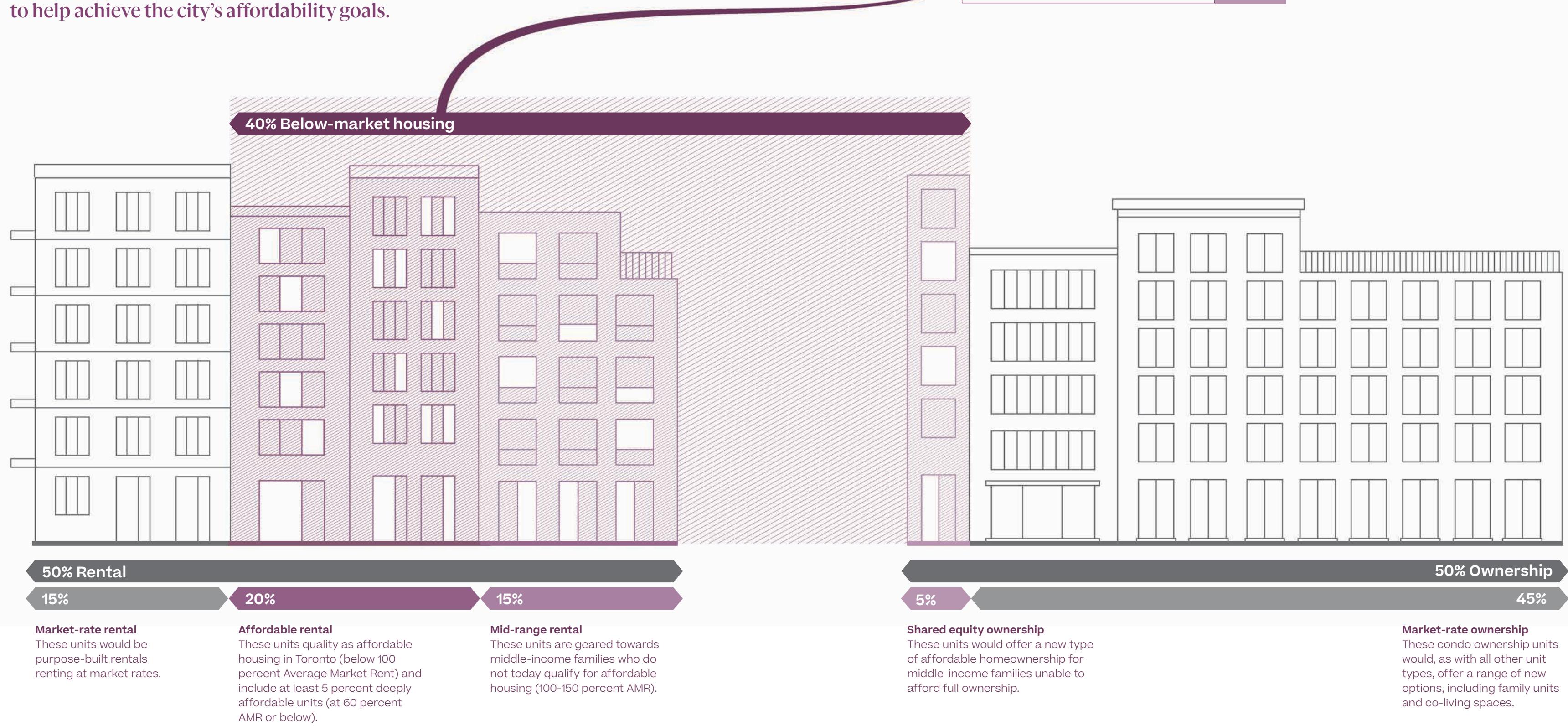
To support residents and ensure a complete community, the Quayside plan proposes to work with the Toronto District School Board to plan for an elementary school; a portion of the space could also be allocated for a childcare facility. Beyond Quayside, this approach would demonstrate the viability of planning a neighbourhood with families in mind from the start.⁷⁹



While Sidewalk Labs has not yet proposed such collaborations beyond Quayside, the scale of the IDEA District provides the opportunity to enable new learning experiences for a broader population.⁸⁰

Achieving a 40% below-market housing program

Sidewalk Labs commits to achieving a 40 percent below-market program in Quayside, which could scale across the IDEA District with government support to help achieve the city's affordability goals.





Priority outcome #4: New mobility

More than three-quarters of all trips by transit, walking, or cycling

Rapid urban growth is making it harder to get around, but support for transit and innovations in mobility management offer opportunities to help people and goods move more easily.

The plans for the IDEA District would support light rail expansion, provide exceptional bike and pedestrian infrastructure, and encourage on-demand mobility services (such as ride-hail) priced for sharing. An integrated mobility package would bundle all these options, making it possible for households to get around conveniently without the need to own a car and saving two-person households an estimated 40 percent on annual transportation spending, or roughly \$4,000 per year.

A new mobility management system could improve safety using real-time traffic management tools, such as adaptive traffic signals that can prioritize pedestrians or transit vehicles. A new approach to urban freight would consolidate all deliveries into a neighbourhood logistics hub and then distribute them via a below-grade tunnel system, reducing truck traffic on local streets, along with noise and air pollution.

Altogether, Sidewalk Labs projects that these initiatives would lead to more than 77 percent of all trips across the IDEA District being made by public transit or active modes (walking or cycling) — more than 16 percentage points higher than in comparable neighbourhoods.⁸¹

A 91% increase in pedestrian space

These expanded mobility options also enable the neighbourhood's streets to reclaim significant amounts of street space for pedestrians, ensuring they are more accessible for more people.

Sidewalk Labs estimates that its street designs could provide at least 91 percent more pedestrian space than a business-as-usual development scenario, thanks to street design features such as “dynamic” curb spots that change between road and public space, the dramatically reduced need for curbside parking that results from shared mobility services, and, in the future, the potential for self-driving vehicles to share a right-of-way with public transit without hindering transit efficiency.⁸²

Applied at the full proposed scale of the IDEA District, a balanced mobility vision would enable the vast majority of trips to occur by walking, cycling, riding public transit, or using a ride-hail service — dramatically reducing the need to own a car.



New mobility

The project would create a safe, affordable, and fully accessible mobility system in which **77 percent of all trips are made by public transit, cycling, or walking; pedestrian street space increases by 91 percent; and households can save up to \$4,000 a year.**⁸³

Proposed innovation or initiative

1 Light rail transit extension

A self-financing light rail transit extension would connect residents to job hubs and draw workers and visitors to the waterfront from all over the city.

2 Pedestrian and cycling infrastructure

A network of pedestrian and cycling infrastructure features wider sidewalks, wider and heated bike lanes, and accessibility elements to encourage walking and cycling and support people using wheelchairs or other assistive devices.

3 New mobility services

New mobility services such as ride-hail, bike-share, electric vehicle car-share, and e-scooters would provide affordable alternatives to private car trips.

4 Mobility subscription package

An integrated mobility subscription package would establish a new pricing model that enables residents and workers to see all their trip choices in real time and pay in one place.

5 "People-first" street types

"People-first" street types are designed for different speeds and primary uses, including Boulevards and Transitways for public transit and vehicle traffic, Accessways for cyclists, and Laneways for pedestrians.

6 Accessibility initiatives

A wide set of accessibility initiatives would include curbless street design, wider sidewalks, heated pavement, wayfinding beacons, and accessible ride-hail vehicles.

Impact at IDEA District scale

- At the full scale of the IDEA District, more than 60 percent of all trips would occur by public transit. The light rail could serve more than 72,900 riders and make 36 percent of jobs accessible across Toronto within 30 minutes — while demonstrating the viability of the self-financing approach.⁸⁴
- At the full scale of the IDEA District, more than 16 percent of all trips would occur by foot, bike, or other low-speed vehicles. Cyclists would be able to reach 100 percent of buildings on a dedicated bike lane or cycling street, compared to roughly 15 percent in a typical downtown Toronto neighbourhood today.⁸⁵
- With the arrival of self-driving technology, applied at the full scale of the IDEA District and coordinated with the city, roughly 7 percent of all trips would occur by ride-hail options, reducing the need to own a car.⁸⁶
- Adopting this package — which would include access to public transit, bike-share, ride-hail, car-share, and other services — would save two-person households an estimated \$4,000 a year if they choose to go car-free.⁸⁷
- These street types would serve as the foundation for the suite of mobility options and innovations proposed by Sidewalk Labs. At the full IDEA District scale, this network would enable people to fulfill all their daily needs within a 15-minute walk while still ensuring that people can get where they need to go.⁸⁸
- These initiatives would ensure that every street meets or exceeds all the requirements of the 2005 Accessibility for Ontarians with Disabilities Act (AODA), making it easier for everyone to get around.⁸⁹

7 Freight "logistics hub"

A freight "logistics hub" would feature a consolidated shipping centre (housed alongside on-demand storage and a borrowing library) with underground delivery, reducing truck traffic on local streets and improving convenience.

8 Mobility management system

A mobility management system would use real-time information to coordinate travel modes, traffic signals, and street infrastructure, and to apply pricing to curb and parking spaces — reducing congestion and encouraging shared trips.

9 District parking management

A district parking management system would incorporate high-density on- and off-site parking, on-demand retrieval of vehicles, and electric-vehicle charging.

10 Dynamic curbs

Dynamic curbs are flexible street spaces that provide passenger loading zones during rush-hour and public spaces in off-peak times.

11 Adaptive traffic signals

Adaptive traffic signals have the ability to prioritize pedestrians who need more time to cross a street or public transit vehicles running behind schedule.

12 Modular pavement

Modular pavement consists of hexagonal pavers that can be replaced or repaired quickly, dramatically reducing the amount of time streets spend closed down for road or utility work and increasing flexibility of street uses.

In Quayside alone, this system would reduce truck trips into the neighbourhood by 72 percent, along with reducing disruption to local roads and surrounding areas — benefits that would increase considerably at the full IDEA District scale.⁹⁰

Such a system could coordinate the entire street network to help achieve transportation goals established by a public entity, such as prioritizing modes that carry the most people, striving towards Vision Zero safety, reducing curbside traffic, and providing cyclists with "green waves" for faster and safer travel.⁹¹

Such a system could dramatically reduce the need for on-site garage or curbside parking, enabling this space to be used for housing, parks, or other uses and encouraging adoption of electric vehicles.

Dynamic curbs would have the capacity to process six times as many curbside pick-ups and drop-offs as a typical one-hour metered curb, and would greatly expand the diversity of uses that could be supported in the public realm.

Adaptive traffic signals could optimize their systems across a wider area, enabling the mobility management system to achieve its transportation objectives.

Over a 30-year period, modular pavement coupled with open access channels would be 13 percent less expensive per square metre than the standard waterfront streetscape in Toronto today by reducing maintenance costs and accelerating utility repair.⁹²



Priority outcome #5: Urban innovation

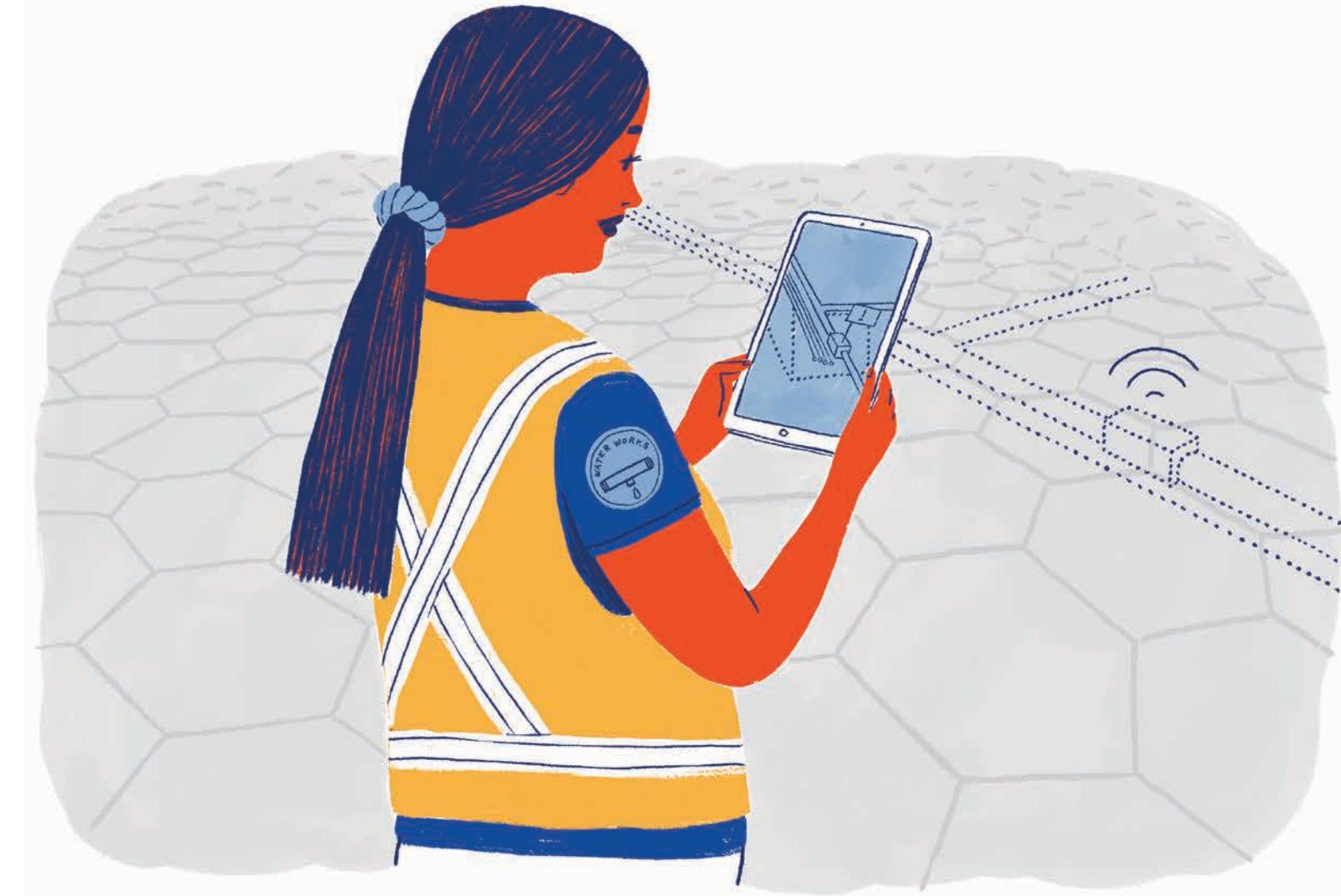
By establishing the physical, digital, and policy conditions for urban innovation, the IDEA District can become a beacon for researchers, entrepreneurs, private companies, civic organizations, government agencies, and innovators from around the globe to create countless new services and products designed to improve urban life.

At the heart of this vision is the ability to create the digital conditions for others to build on. These conditions begin with flexible, affordable digital infrastructure. That includes a powerful ubiquitous connectivity network that leverages new advances to improve speed and security. A standardized mount system would dramatically reduce the cost of deploying innovations and eliminate vendor lock-in.

As with ecosystems such as the World Wide Web, third parties depend on open hardware and software as well as on an agreed-upon set of standards and protocols to successfully deploy their ideas. A set of published standards around open-data architecture, access, and sources would enable third parties to build upon a shared foundation, supported by a common set of security, formatting, and communication standards.

To implement the systems needed to achieve Waterfront Toronto's priority outcomes, Sidewalk Labs plans to purchase third-party technology or partner with third parties to create (or enhance) these systems whenever possible, giving priority to technology that is local to Toronto, Ontario, or Canada. For systems that Sidewalk Labs needs to develop itself because they do not exist in the market, data would be made publicly accessible (with the proper protections, including de-identification), further catalyzing third-party creation.

Above all, Sidewalk Labs understands that realizing the promise of digital innovation in a responsible manner requires an approach to governance that protects privacy and makes the benefits of urban data widely accessible.



The IDEA District would enable innovators from around the world to create new services and products to improve urban life.



For more details on the proposed Urban Data Trust and responsible data use process, see the "Digital Innovation" chapter of Volume 2, on Page 374.

To meaningfully enable responsible data use across the IDEA District, Sidewalk Labs proposes that urban data be controlled by an independent entity called the Urban Data Trust charged with balancing the interests of personal privacy, public interest, and innovation. This independent, government-sanctioned steward would establish a clear process for approving any initiatives that involve the use or collection of urban data for all parties, including those proposed by Sidewalk Labs.

Sidewalk Labs proposes that the Urban Data Trust anchor this process around a publicly auditable Responsible Data Use (RDU) Assessment – an in-depth review that is triggered by any proposal to collect or use urban data – and guided by RDU Guidelines that incorporate globally recognized Privacy by Design principles. 

Urban innovation

Catalyzing urban innovation requires **open digital conditions** that enable third parties to create new solutions using urban data in a responsible way.⁹³

Proposed innovation or initiative

1

Ubiquitous connectivity

A ubiquitous connectivity internet network — powered by a new Super-PON technology that reaches faster speeds with less equipment — could provide households and businesses with a secure personal network across an entire neighbourhood.

2

Standardized physical mounts

Standardized physical mounts connected to power would reduce the cost of deploying digital innovations, serving as a sort of “urban USB port.”

3

Open, published standards

Open, published standards would make properly protected urban data accessible to the community in real time.

4

Urban Data Trust

A proposed Urban Data Trust would build on existing Canadian privacy laws to oversee the review and approval of all digital innovations that propose to use or collect urban data.

5

Responsible Data Use

Clear Responsible Data Use Guidelines (such as making de-identified or non-personal data publicly accessible by default) and a publicly transparent Responsible Data Use Assessment would help ensure responsible innovation.

6

Security and resiliency

A best-in-class approach to security and resiliency would be designed to prevent disruptions, rapidly detect them, and rapidly restore functionality.

Impact at IDEA District scale

- Deployed across the IDEA District, this advanced connectivity would provide the foundation for countless new services and solutions to emerge within the urban innovation cluster. It would also create momentum to deploy lower-cost Super-PON technology, improving the equitable growth of key digital infrastructure.⁹⁴
- The proposed standardized mount system could cut the amount of time it takes to install a device from 30 hours today to two hours, a 92 percent savings of time and cost, enabling a wide array of third parties to deploy urban innovations and preventing vendor lock-in.
- At the scale of the IDEA District, open standards enable a broad range of third parties to build new services or competitive alternatives to existing ones, establishing a core condition for the urban innovation cluster to thrive.⁹⁵
- Over the longer term, once this publicly accountable entity has benefited from many use cases in Quayside, it could have broader coverage — enabling an urban innovation cluster to grow while protecting inclusion, privacy, and the public good.
- Established by an independent entity such as the Urban Data Trust, RDU Guidelines and Assessments would help ensure that urban innovation has a beneficial purpose — not falling into the trap of being tech for tech’s sake — and remains publicly accountable.
- This approach would ensure that urban innovations that use urban data or connectivity remain protected from intentional actions, inadvertent disruptions, or environmental events that could disrupt digital services or infrastructure.⁹⁶

Catalyzing urban innovation also requires **flexible physical conditions**. Many flexible physical elements have been described in other priority outcomes tables, including flexible street elements, active energy tools, and adaptable building spaces. Others are included here.

Proposed innovation or initiative

7

Open access channels

Open access channels located under removable pavers would allow for easy utility access and greater flexibility to incorporate new systems as they are developed over time.

8

Shared programming infrastructure

Shared programming infrastructure, such as projectors and lighting options, would enable communities to program open spaces themselves.

9

Outdoor-comfort system

A proposed outdoor-comfort system (featuring Raincoats to shelter sidewalks; Fanshells to cover open spaces; and Lanterns to block wind) could dramatically increase the amount of time it is comfortable outside.

10

Public realm assets map

A real-time map of public realm assets — including park benches and landscaped gardens — would enable proactive maintenance and keep spaces in good condition.

11

Generative design

A digital planning tool called “generative design” could help planners identify opportunities to achieve development objectives, such as increased daylight, open space access, or density.

Impact at IDEA District scale

- In addition to facilitating utility access, open access channels would provide communities with greater flexibility to respond to changing needs, enabling infrastructure transformations (such as installing a new community garden) or new utility systems (such as a new communications network with higher performance capabilities) to be implemented faster and at a lower cost.⁹⁷
- In Quayside and across the greater geography of the IDEA District, shared public realm infrastructure would empower the community to program public spaces, democratizing placemaking.⁹⁸
- In Quayside, this system would help to increase comfortable hours by 35 percent. Applied throughout the IDEA District, this weather-mitigation system has the potential to double the number of hours it is comfortable to be outdoors each year across key spaces, drawing more people outdoors, together.⁹⁹
- This map would serve as a single repository for information about open spaces and related infrastructure, enabling open-space managers to run operations software on top of it, improving maintenance, issue response, and proactive repairs. For instance, a water pipe sensing system paired with this map could ultimately save up to \$200,000 a year in preventing quotidian water leaks.¹⁰⁰
- Such a tool could help ensure that the wide array of developers, architects, and designers who would be responsible for building out the IDEA District over time would maintain flexibility and creativity in developing new ideas, while at the same time ensuring that their proposals achieve key public interest objectives.¹⁰¹

The Partnership

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A New Type of Partnership to Catalyze Inclusive Growth in the Digital Age

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Part 3
Summary of the Financial Terms

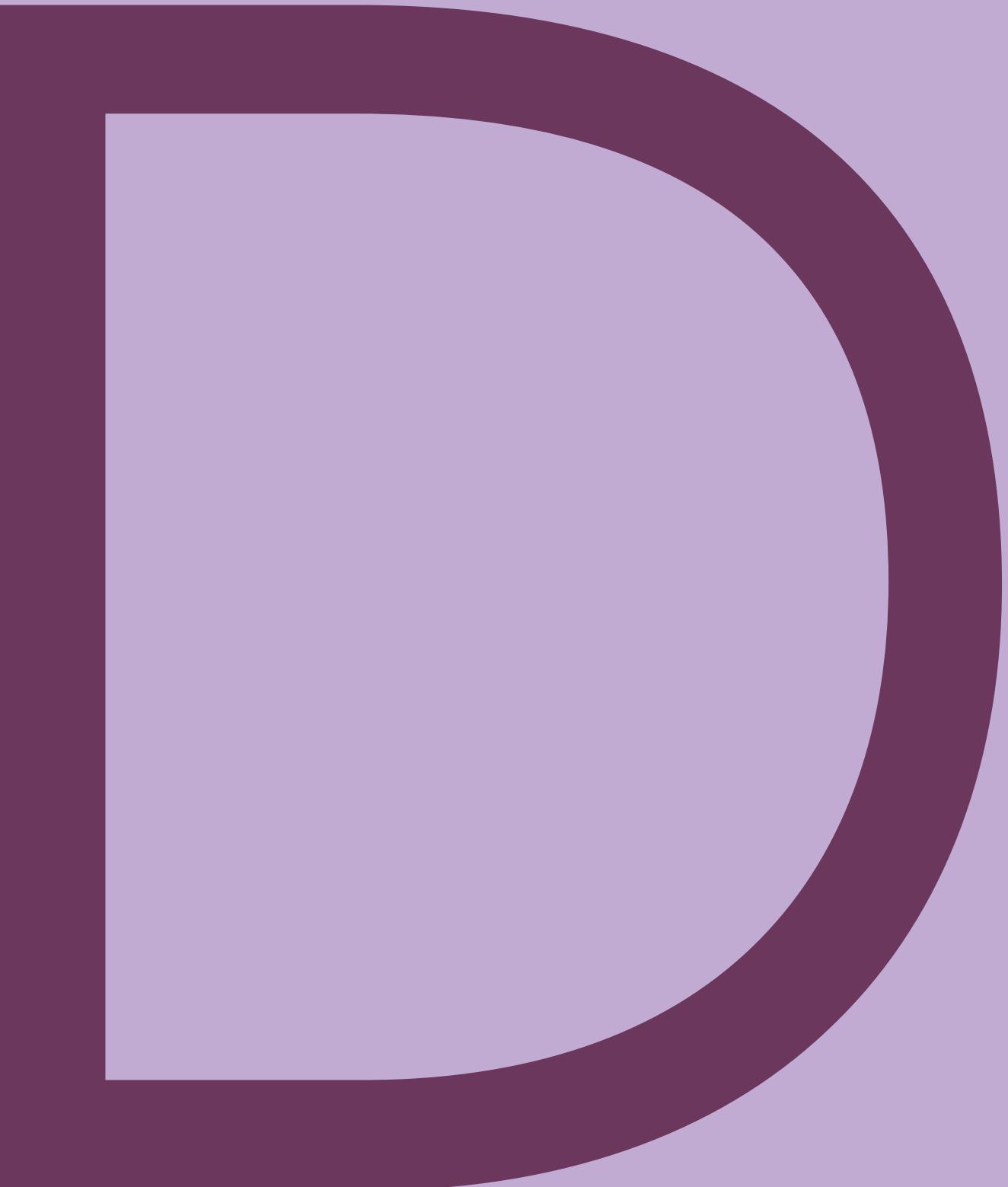
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How the Proposal Reflects the Transaction Principles

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Part 1

A New Type of Partnership to Catalyze Inclusive Growth in the Digital Age

Guided by a core set of transaction principles, the MIDP outlines a groundbreaking public-private partnership, in which the public sector leverages outside expertise, technology, and resources to spur economic growth and deliver extraordinary benefits for the people of Toronto.

“Waterfront Toronto is seeking a world-leading urban innovation and funding partner to help create and fund a globally significant community that will showcase advanced technologies, building materials, sustainable practices and innovative business models.”

Waterfront Toronto, RFP No. 2017-13

Waterfront Toronto’s RFP was an unusual and ambitious approach to the matter most immediately at hand: the development of a five-hectare piece of land at the foot of Parliament Slip, called Quayside. But it was a natural extension of the agency’s work, over two decades, thinking about what Toronto needs — and finding innovative ways to deliver.

With Quayside situated at the doorway to one of the largest underdeveloped areas of urban land in North America, Waterfront Toronto saw an opportunity to achieve a global model for inclusive growth.

This goal simply would not occur if Waterfront Toronto had used the traditional approach of auctioning off parcels of land, one by one, for development. Instead, the RFP recognized that transformational change would require the delivery of an integrated vision capable of addressing urban challenges through new innovations.

The RFP also recognized the potential need for scale to fully realize key objectives, noting that “it may be beneficial to advance the solutions, processes and partnerships proven successful through the Project to subsequent developments on the eastern waterfront.”

At its formation, Sidewalk Labs was charged with the pursuit of a large-scale demonstration project to show, in significant ways, the combined power of cutting-edge technology and forward-thinking planning and design to create better urban communities. For this pilot, Alphabet provided Sidewalk Labs the flexibility to balance the pursuit of substantive policy outcomes and near-term financial results, in order to make an innovative partnership with government work.

It was this mandate that led Sidewalk Labs to respond to Waterfront Toronto’s RFP.¹⁰² The company was honoured to be selected as Innovation and Funding Partner six months later, a role that involved spending \$50 million USD of private capital on an intensive planning process informed by robust public consultation, with no guarantees that what came out of it would be implemented.

Seven principles guiding the proposed partnership

From the start, there was an unusual — and, for some, almost hard to imagine — alignment between the subsidiary of an American tech giant and an innovative revitalization agency in Toronto. Both shared an aspiration to deliver a project that served multiple bottom lines: measured not just in dollars but in the vibrancy and inclusivity of the community it would create, in the solutions it would pursue to address pressing urban challenges, and in the path forward it would illuminate for Toronto and cities around the world.



For more details on the proposed partnership, see Volume 3.

The RFP recognized that realizing ambitious quality-of-life goals would require “new and innovative partnerships, funding and investment models.”

The MIDP is the result of 18 months of planning to deliver that potentially unprecedented project. It is a detailed and executable plan to create a new community on the eastern waterfront that realizes every one of Waterfront Toronto’s priority outcomes and puts forth a vision for what the future of city-building might look like.

But the RFP recognized that realizing these goals would require more than an innovative development plan — it would require “new and innovative partnerships, funding and investment models” that enable the private sector to help support and achieve public-sector priorities.

Sidewalk Labs considered its own objectives and capabilities, and reflected deeply on the objectives detailed in Waterfront Toronto’s RFP, and the feedback it received from the public. Sidewalk Labs distilled this 18-month engagement process into a series of seven transaction principles that seek to harmonize the priorities of Sidewalk Labs with those of Waterfront Toronto and the public at-large:

1

Devise a transaction that would achieve Waterfront Toronto’s priority outcomes. Any proposal must first achieve Waterfront Toronto’s priority outcomes through an innovation approach to both development and partnership: (1) job creation and economic development; (2) sustainability and climate-positive development; (3) housing affordability; (4) new mobility; and (5) urban innovation (including robust data privacy and digital governance).

2

Scale the project to achieve the desired outcomes.

Understanding that making progress on its project objectives could require a scale broader than Quayside, Waterfront Toronto invited proposals at a district scale. Waterfront Toronto recognized that certain promising approaches can only be supported financially or deliver a material public benefit when applied to a broader geography. Ultimately, the project should be scaled such that the public policy outcomes are met and the project can be commercially viable.

3

Phase development to manage risk.

The ability to extend new approaches to innovation beyond Quayside should depend on Sidewalk Labs first hitting milestones that demonstrate it is likely to succeed in future phases.

4

Establish strong public-sector oversight.

No urban project of sufficient scope or complexity can succeed without meaningful public oversight and an administrator capable of moving it forward. This is especially true for projects bringing new ideas and approaches to bear.

6

Use proven approaches where possible.

Deal terms, financing mechanisms, and implementation agreements should rely on existing local precedents whenever possible, to simplify and de-risk the transaction.

5

Structure the role of Sidewalk Labs to leverage its strengths.

The role for Sidewalk Labs should capitalize on its unique combination of strengths, including a multidisciplinary team that spans urban planning, finance, design, and technology; its access to capital and technological resources, including from its parent company, Alphabet; and its willingness to take calculated risks to advance its mission. The flipside is also true: Sidewalk Labs should not take on roles where it does not add special value.

7

Align financial interests.

As with any company seeking to invest in Toronto, it is appropriate that Sidewalk Labs seeks to earn a return on its investment. But the transaction structure must ensure that Sidewalk Labs is financially successful only when the public sector is financially successful and also achieves its objectives.

The transaction structure must ensure that Sidewalk Labs is financially successful only when the public sector is financially successful and also achieves its objectives.

Part 2

Summary of the Proposed Innovation and Funding Partnership

Sidewalk Labs proposes a set of roles as Innovation and Funding Partner designed to support the public sector and create the conditions for others to thrive.

Guided by the core set of principles, Sidewalk Labs proposes a transaction to accelerate the development of the eastern waterfront, accomplish Waterfront Toronto's priority outcomes, and spur economic growth. This proposal strives for a forward-looking public-private partnership, in which the public sector leverages outside expertise, technology, and resources to spur economic growth and deliver extraordinary benefits for the people of Toronto.

As described earlier, the MIDP proposes to realize Waterfront Toronto's priority outcomes on an area of the eastern waterfront that includes Quayside, and a portion of the Port Lands north of the ship channel. The project geography, as a whole, would be known as an Innovative Development and Economic Acceleration (IDEA) District. Sidewalk Labs proposes that government designate a public entity to serve — or in the case of Waterfront Toronto, continue to serve — as revitalization lead for the IDEA District.

Working with local partners, Sidewalk Labs would lead real estate development in Quayside and the Villiers West neighbourhood, on the western part of Villiers Island, where a new Google Canadian headquarters would be located; real estate development across the rest of the IDEA District would be handled by other developers. Sidewalk Labs also proposes to lead the development of a set of advanced systems in Quayside and Villiers West, including sustainability and mobility infrastructure (see sidebar on Page 204).

As Innovation and Funding Partner throughout the rest of the IDEA District, Sidewalk Labs would serve as a catalyst for innovative urban development, bringing expertise, financial resources, economic development assets, and a willingness to invest in a forward-looking, integrated, progressive, and sustainable model for improving urban life. In this supporting role, Sidewalk Labs would provide a variety of services — including advisory services, limited technology deployment, and optional infrastructure financing — to ensure the innovative approaches contemplated in the MIDP are properly implemented.

The project would be carefully phased, starting with the limited geography of Quayside, and requiring the achievement of milestones at each step along the way towards its full implementation. In aggregate, Sidewalk Labs and its partners would invest over \$900 million, in addition to reinvesting over \$2 billion of proceeds received as the project progresses — generating multiples of that in tax revenues for the three orders of government and in economic activity more broadly.¹⁰³

Sidewalk Labs would make money from the real estate development it does, charges on any financing it provides, and, if all goes well, a performance payment considered at a time when the project's success against agreed-upon metrics can be judged. The project's finances and transactional framework are designed to ensure that all project participants, public and private, are treated fairly, and that the public interest is protected.



Spotlight

Proposal explainer

Key partnership terms

Public administrator.

Sidewalk Labs proposes that government designate a public entity to serve — or in the case of Waterfront Toronto, continue to serve — as revitalization lead for the IDEA District.

Lead developer.

The party responsible for delivering horizontal or vertical development to agreed upon specifications and performance standards. To carry out this responsibility, the lead developer would engage third-party development partners, contractors, and operators.

Sidewalk Labs proposes to be lead developer (with local partners) on two parcels: in Quayside, to prove out the innovation approach, and in Villiers West, to further prove out the innovations and to catalyze economic development through a new urban innovation cluster. In total, these areas represent just 16 percent of the IDEA District and 7 percent of the eastern waterfront.

Advanced systems.

These nine urban solutions described in the MIDP are needed to deliver on Waterfront Toronto's priority outcomes. Sidewalk Labs proposes to lead these systems in Quayside and Villiers West. They include:

- Advanced power grid: An advance on typical Toronto Hydro electric service that, among other elements, incorporates rooftop photovoltaic generation, battery storage, and dynamic demand management.

- Advanced stormwater management system: District-scale stormwater management using continuously monitored green infrastructure and active controls to reduce infrastructure needs and enhance public realm.

- Digital communications network: A fibre-optic internet network using Super-PON technology to support ubiquitous internet connectivity.

- District parking management system: A system incorporating space-efficient on- and off-site parking, high-density parking equipment, attendant-based vehicle retrieval, and electric-vehicle charging.

- Dynamic streets: Innovative hexagonal paving that incorporates dynamic lighting and signage, heating to melt snow, and digital infrastructure for traffic management.

- Freight management system: A system allowing most deliveries to arrive at a single freight consolidation centre and sent on to recipients through tunnels using self-driving delivery dollies.

- Mobility subscription package: A specialized, app-enabled mobility service bundle spanning public transit, ride-hail, parking, shared services, and micro-mobility options.

- Pneumatic waste system: A pneumatic waste collection system with a pay-as-you-throw rate structure, a user interface at the chute, and downstream monitoring of contamination to help improve recycling practices.

- Thermal grid: A thermal energy grid that could incorporate geothermal heat exchange, building heat recovery, sewage heat recovery, and other clean energy sources.

Horizontal development/infrastructure.

This term refers to the construction and stabilization of infrastructure, improvements, and services that affect and support multiple real-estate parcels in a given area. These include municipal infrastructure, such as sewers and parks; transit infrastructure, such as a light rail extension; and the advanced systems.

Vertical development.

This term refers to the construction and operation of private residential, commercial, and mixed-use buildings on individual real-estate parcels.

Sidewalk Labs commitments

As Innovation and Funding Partner, Sidewalk Labs makes the following commitments:

Advance a bold innovation agenda.

Sidewalk Labs would apply a range of new solutions to pressing urban challenges. A full list of proposed initiatives can be found beginning on Page 164, but several bear repeating here.

The project would pioneer affordable and sustainable building techniques that can also significantly speed up construction times and reduce construction costs, including factory-built mass timber construction of up to roughly 30 storeys.

New weather-mitigation strategies would make it comfortable to be outside for twice as much time each year in some areas.

Mobility would be profoundly improved, including a subscription package that provides convenient and affordable options for every trip and saves households thousands of dollars a year.

Dynamic streets could reduce traffic congestion, improve comfort and safety for cyclists and pedestrians, and dramatically expand public space.

Cutting-edge energy infrastructure — including through a thermal grid system that uses clean energy to heat and cool buildings, and an actively controlled green infrastructure solution to stormwater management — would result in remarkable levels of sustainability, with the potential to establish the largest climate-positive district in North America.

Develop Quayside as a complete and inclusive community.

In Quayside, Sidewalk Labs would deliver 2.65 million square feet of developed space, with a strong commitment to working with local partners. This would include delivering roughly 2,600 units of housing, half of which would be purpose-built rentals.

More than 40 percent of units would have two or more bedrooms, responding to the acute need for family-size housing.

And the project would set a new high-water mark for affordability, with below-market housing accounting for 40 percent of residential units.

Non-residential uses, such as commercial, office, retail, and community activities, would account for 33 percent of floor space (870,000 square feet), with space for 3,900 full-time jobs. From the outset, Quayside would be designed to be a complete community.

Deliver a major economic development project.

By successfully advancing the plan for Quayside, Sidewalk Labs would earn the right to lead development of the Villiers West urban innovation campus, with a similarly strong commitment to working with local partners.

Alphabet commits to establishing a new Canadian headquarters for Google on the western edge of Villiers Island, as part of an agreed-upon transaction within the IDEA District. Alphabet would target up to 500,000 square feet, which would be sufficient to accommodate as many as 2,500 jobs, the majority of which would be for Google employees (though actual hiring would depend on market conditions and business requirements).

This new headquarters would be the centre and catalyst for a new innovation campus, amplifying the area's economic potential. Based on experience in a variety of other cities, it is expected that the Google tenancy would attract an array of other companies in the Toronto tech ecosystem to locate at the innovation campus.

To further spur the creation of a new innovation campus, Sidewalk Labs would provide \$10 million in initial seed funding for an Urban Innovation Institute, a new applied research institution modelled on the success of Cornell Tech in New York — but focused on developing urban innovations — working in partnership with local post-secondary institutions. This institute would be designed to bring together academia, industry, entrepreneurs, advocates, and public agencies to collaborate on tackling urban challenges.

Sidewalk Labs would also commit \$10 million to a new venture fund (side-by-side with other institutional funding partners, including one or more local venture firms) that would invest in local startups focused on urban innovation.

Serve as lead developer of advanced systems.

In both Quayside and Villiers West, Sidewalk Labs would serve as lead developer of a range of advanced systems. Among other responsibilities, this role would include identifying and overseeing sophisticated third-party operators and partners.

These systems are essential to achieving Waterfront Toronto's priority outcomes, especially sustainability and new mobility;

to delivering the innovative development model proposed in the MIDP; and to proving the practical and financial viability of these advanced systems in the broader marketplace.

Serve as a technical partner and advisor.

From the outset, Sidewalk Labs would provide a suite of technical advisory and management services to expand sustainable economic growth and use innovative strategies to address urban challenges in the eastern waterfront.

This role would include preparing the technical specifications and performance requirements to guide innovative development; integrating new solutions and strategies for achieving public objectives at the project planning stage; and, if the project extends to later phases, assisting in procuring partners and operators for advanced systems, such as an advanced power grid, a new stormwater management system, and dynamic streets.

This role would start in Quayside and expand to the broader geography upon accomplishing a series of project milestones.

Deliver essential technology.

To achieve core project objectives, Sidewalk Labs proposes to identify key technology products on the market for use in the project. Sidewalk Labs would foster an urban innovation ecosystem open to entrepreneurs and inventors from across Canada and around the world, and work with the governments to design a structure to support Canada's capacity to build and retain intellectual property locally.

Sidewalk Labs would also develop a limited number of services or products that do not exist in the current market but are needed to advance Waterfront Toronto priorities and improve digital infrastructure — identified by Waterfront Toronto in its RFP as "purposeful solutions." These would be provided by Sidewalk Labs at cost.

For certain technologies that Sidewalk Labs develops and deploys at scale in connection with the project, Sidewalk Labs also proposes to share 10 percent of the profits with the public sector.

Provide optional financing for critical infrastructure.

Adequate provision of public transit is key to the IDEA District's economic success. If needed, Sidewalk Labs is prepared to explore various options with government to facilitate the financing of the light rail to ensure this critical project can move ahead in the near term.

Sidewalk Labs would also offer optional financing support for municipal infrastructure (such as parks and sewers) needed for the development of the IDEA District.

Key Term

Sidewalk Infrastructure Partners (SIP) is a new company created by Sidewalk Labs to finance next-generation infrastructure systems that can help unlock sustainable development. See Volume 3 for more details.

Finally, to achieve Waterfront Toronto's objectives beyond Quayside and Villiers West, Sidewalk Labs could help to facilitate the financing of advanced systems through Sidewalk Infrastructure Partners (SIP), a company it formed for the purpose of investing in next-generation infrastructure systems.

Catalyze \$29 billion in third-party investments.

In total, Sidewalk Labs would catalyze up to \$3.9 billion in real estate investments in Quayside and Villiers West.¹⁰⁴

Optional financing for municipal infrastructure, transit, and advanced systems would total up to \$1.6 billion, from Sidewalk Labs and third parties. A series of targeted investments would spur economic growth, including a tall timber factory and a venture fund targeting Canadian startups. This capital would come from various sources, including outside investors and asset-level debt for both real estate and infrastructure. It would include an estimated \$900 million investment from Sidewalk Labs and its local development partners; an additional \$400 million of financing that Sidewalk Labs would offer to the public sector as an option to expand the LRT and deliver municipal infrastructure; and additional capital (equity and debt) that Sidewalk Labs expects to enable for the delivery of advanced systems.

These investments would enable more than \$29 billion in additional third-party real estate investments and catalyze a project that, when fully implemented across the IDEA District, would substantially exceed Waterfront Toronto's priority outcomes, realizing 93,000 total jobs (including 44,000 permanent jobs); up to 34,000 units of housing (including 13,600 units of below-market housing, if the Quayside housing vision is extended to full IDEA District with additional government support); and an 89 percent reduction in GHG emissions that provides a new model for climate-positive development.

Proposed public-sector commitments

To enable these commitments, Sidewalk Labs seeks the following public-sector commitments:

Governance: Designate a district administrator.

A project of this scope, complexity, and duration requires strong public oversight and a regulatory framework predisposed to new approaches. Building on Canada's success with targeted geographic governance strategies, the proposal calls for government to designate a public entity to serve — or in the case of Waterfront Toronto, continue to serve — as revitalization lead for the IDEA District with certain additional powers.

A carefully targeted package of regulatory reforms and development standards would apply in the IDEA District. Under this approach, this public administrator would be empowered to hold Sidewalk Labs and others working in the district accountable for performance, steer innovation strategy, and oversee the governance structures needed to manage new district systems.

Financial: Align on fair terms.

The proposal incorporates several key financial terms. First, Sidewalk Labs expects to purchase (or long-term lease) the land in Quayside and Villiers West from Waterfront Toronto at a price such that the innovation risk and cost would be borne by Sidewalk Labs, but that also fairly accounts for the heightened public policy outcomes required, such as levels of sustainability and affordability unprecedented in any commercial development.

Second, Sidewalk Labs expects to be reimbursed, over time, for its advisory and implementation services and repaid for optional financing or credit support for transit and municipal infrastructure. The financing would be repaid at a fixed annual rate of return at market rates, to be negotiated — with a commitment from Sidewalk Labs to work with government, pension funds, and other institutional investors to develop transaction structures to reduce the rate as low as possible while still attracting the necessary financing. With funds expected from several sources, Waterfront Toronto would repay financing fronted by Sidewalk Labs and other partners; cover Waterfront Toronto's ongoing operations; and reimburse expenses Sidewalk Labs incurs to deliver technical and advisory services.

Finally, Sidewalk Labs is seeking performance payments for serving as a catalyst to accelerate development across the eastern waterfront and deliver on Waterfront Toronto's priority outcomes. The amount of this fee would be negotiated in closing the transaction, and earned if (and only if) Sidewalk Labs reaches a series of performance and growth targets directly tied to Waterfront Toronto's priority outcomes.

The proposed financial structure is designed to align the interests of Waterfront Toronto, Sidewalk Labs, and the public; to compensate Sidewalk Labs for serving as a catalyst for a new approach to urban development; and to account for the special challenges underlying the project, such as an extended repayment timeline and complexities associated with integrating next-generation systems that are new to Canada or the market.

This structure includes a proposal to pay the public sector a share of the upside value if Quayside and Villiers West prove more profitable than expected; an approach where Sidewalk Labs only begins to earn performance payments after Waterfront Toronto and the public sector reach their objectives; and a profit-sharing proposal, through which the public sector would receive a share of the profits generated by certain technologies first tested and deployed in the IDEA District.

Collaboration spotlight

Sidewalk Labs' approach to partnering with local firms

Sidewalk Labs recognizes the value of local partners in delivering on the vision of the MIDP and achieving Waterfront Toronto's priority outcomes. Toronto has a vibrant local development community, including developers eager not only to build projects on the waterfront, but to embrace new, sustainable ways of building and to advance innovative approaches to design.

Sidewalk Labs proposes to lead the development of real estate and advanced systems of a portion of the eastern waterfront, initially at Quayside and potentially expanding to Villiers West with the achievement of project milestones. This constitutes the extent of Sidewalk Labs' vertical development, representing 16 percent of the IDEA District and 7 percent of the eastern waterfront overall; if Sidewalk Labs is successful, its role in the IDEA District would then shift to serving solely as a catalyst for sustainable development by others. Just as importantly, Sidewalk Labs is committed to seeking capable local partners to participate in the vertical development of Quayside and Villiers West, the development of horizontal infrastructure, including traditional and advanced systems, and other project areas. By adding local knowledge, knowhow, and relationships, these local businesses would supplement Sidewalk Labs' skillset and lead to a better overall project. This extends to Canada's sophisticated base of investors, including pension funds, that could invest capital for real estate, infrastructure, and other project elements. Whether specifically stated or not, Sidewalk Labs is committed to identifying appropriate partners to deliver many of the elements described in the MIDP.

Concurrent with the negotiation of the transaction and seeking public approvals, Sidewalk Labs therefore intends to identify appropriate local partners to participate in various aspects of project delivery. The actual business arrangements could take various forms, including but not limited to partnerships, joint ventures, and licence arrangements.

A public administrator would be empowered to hold Sidewalk Labs and others working in the IDEA District accountable.



Spotlight

Public and private commitments of the proposed Innovation and Funding Partnership

Commitments from Sidewalk Labs

- Vertical development of Quayside to deliver a new model for using cutting-edge design and technologies to improve urban life.
- Vertical development of the Villiers West Urban Innovation Campus to further prove out the innovations initiated in Quayside, spur economic development, and cultivate an urban innovation cluster.
- Horizontal development of the advanced systems for Quayside and Villiers West needed to deliver on Waterfront Toronto's objectives.
- Deployment of Sidewalk Labs' technologies (e.g., "purposeful solutions"), along with sharing the profits associated with certain technologies with the public sector.
- Optional financing at a fixed interest rate for enabling infrastructure, including credit support for Waterfront East LRT extension; financing for municipal infrastructure; and funding "supplemental innovation investments" to make the advanced systems financially viable in the early phases.
- Major economic development investments, including a new Canadian Google headquarters on Villiers West, a tall timber factory, seed funding for an Urban Innovation Institute (\$10 million), and a venture fund (\$10 million) focused on Canadian startups.
- Payment to Waterfront Toronto of a share of upside value, above an agreed-upon threshold, from the Quayside and Villiers West proceeds.
- 15-year agreement to provide ongoing technical, advisory, and management services for planning, design, and implementation in the IDEA District, including for advanced systems and certain other horizontal infrastructure.

The proposal involves a set of mutual commitments for an incremental, multi-phase project to establish the eastern waterfront as a global leader in using cutting-edge technology and design to achieve significant progress in tackling urban problems.

Public-sector commitments

- Partnering with Sidewalk Labs to implement a comprehensive innovation and development strategy, with corresponding fees.
- Establishment of the IDEA District with a public administrator, including regulatory adjustments to enable critical infrastructure and innovative strategies.
- Disposition of land for Quayside and Villiers West at price that accounts for additional Waterfront Toronto requirements.
- Source a limited number of Sidewalk Labs' products (at cost) to enable prototyping and deployment at scale, with corresponding IP sharing provisions.
- Payment of performance payments upon Sidewalk Labs achieving a series of negotiated growth and performance targets.

In total, Sidewalk Labs would catalyze up to \$3.9 billion in real estate investments in Quayside and Villiers West.

Part 3

Summary of the Financial Terms

In aggregate, Sidewalk Labs and its partners propose to invest over \$900 million, in addition to reinvesting over \$2 billion of proceeds as the project progresses. Sidewalk Labs believes the financial terms of the proposal demonstrate the viability of the approach, the inherent creation of value, and alignment of interests — and commits to making the terms of any eventual transaction entirely transparent.

Overall, the transaction seeks to reflect Sidewalk Labs' final transaction principle: to align the interests of Sidewalk Labs, Waterfront Toronto, its stakeholders, and the public. The proposed transaction meets that goal, delivering substantial economic value to the public sector while enabling Sidewalk Labs to earn a reasonable and justified return for its multiple roles, and providing flexibility to government in how the project is implemented — particularly related to infrastructure financing.

The transaction and the economic activity it would generate would deliver enormous value to the City of Toronto, the Province of Ontario, and the people of Canada at a scale far greater and a pace far faster than the baseline scenario, as shown through analyses commissioned by Sidewalk Labs and conducted by urbanMetrics, a Toronto-based economic impact consultancy.¹⁰⁵

In its entirety, the proposal contemplates leveraging private-sector resources to deliver over 30 percent more square feet of development on a timeline at least 10 years faster than the current plan. Under an optimistic baseline scenario, the IDEA District geography would see 24.4 million square feet of development by 2050.

By contrast, implementing the MIDP would produce 32.8 million square feet of development a full decade ahead of schedule, by 2040.¹⁰⁶ This accelerated development would include a significantly (almost two times) larger commercial component — catalyzed and made economically viable by the relocation of Google's Canadian headquarters to an innovation campus on Villiers Island — that employs more people, generates greater tax revenue, and adds more to the Canadian GDP than would a more single-use, residential neighbourhood.

According to the analysis by urbanMetrics, in total, the project would generate approximately \$4.3 billion in annual municipal, provincial, and federal tax revenues; \$14.2 billion annually in Canadian GDP; and 93,000 total jobs (including 44,000 permanent jobs) by 2040. These benefits are summarized in the top table on Page 214.

This impact represents \$2.8 billion more in annual tax revenues, a \$9 billion increase in GDP, and over 27,000 more permanent jobs than the baseline scenario at completion, which assumes development proceeds based on the current set of government-created planning documents for the project geography (including zoning where it exists, precinct plans, and the Port Lands Planning Framework).

The proposal would deliver over 30 percent more square feet of development on a timeline at least 10 years faster than the current plan.

Estimated economic impact of the IDEA District over baseline in 2050

	Baseline scenario	IDEA District	Improvement over baseline
Tax revenues (annual)*	\$1.5 billion	\$4.3 billion	+\$2.8 billion (+187% increase)
GDP (annual)	\$5.1 billion	\$14.2 billion	+\$9.0 billion (+178% increase)
Direct job growth	17,000	44,000	+27,000 (159% increase)

Note: The above figures are from an economic analysis and report provided by urbanMetrics to Sidewalk Labs, which presented tax and GDP figures in 2019 dollars. This analysis from urbanMetrics includes Keating East in the total tax revenue calculations, while Sidewalk Labs' property tax analysis excludes Keating East, for which incremental property tax revenues have already been pledged to other projects.

* Annual tax revenues include personal tax, corporate tax, property tax, and other taxes. Other taxes include: Federal Trading Profits, Federal Gas Tax, Federal Excise Tax, Federal Duty Tax, Federal Environmental Tax, Federal Air Transportation Tax, Federal Sales Tax, Import Duties, Federal Taxes on Production, Provincial Environment Tax, Provincial Gallon Tax, Provincial Trading Profits, Provincial Gas Tax, Provincial Amusement Tax, Other Provincial Consumption Taxes, Provincial Sales Tax, Provincial harmonized Sales Tax, Provincial Taxes on Production, Municipal Amusement Tax, Municipal Sales Tax and Municipal Taxes on Production.

Beyond these broader benefits, Sidewalk Labs' analysis suggests that the project would increase and accelerate the receipt of three major municipal revenue streams: property taxes, city fees and development charges, and land proceeds from the sale of public land within the project area (see the bottom table on Page 214).

The value created for the public sector on this accelerated timeline results from a series of upfront investments in innovation from Sidewalk Labs (described further on Page 218), and the implementation of the robust public-private partnership described earlier.

In aggregate, Sidewalk Labs and its partners would make an estimated \$900 million investment, in addition to reinvesting over \$2 billion of proceeds received as the project progresses. This total does not include an additional \$400 million of potential financing that Sidewalk Labs

would offer as an option to the public sector as part of the broader transaction for the LRT expansion and municipal infrastructure delivery, nor the almost \$1.2 billion in total capital (equity and debt) that Sidewalk Labs expects to enable for the delivery of advanced systems. It also does not include construction financing that Sidewalk Labs would secure as part of its proposed real estate development at Quayside and Villiers West.

The table on Page 216 summarizes the sources and uses of funds for the entire \$39 billion project, identifies where Sidewalk Labs is providing funding or financing (including optional financing offered to the public sector), and shows the estimated third-party real estate investment expected to follow — over \$29 billion, which Sidewalk Labs projects will be the total amount of money invested by others to develop the entirety of the IDEA District beyond Quayside and Villiers West.

Municipal revenue streams over baseline by 2050

	Baseline scenario	IDEA District	Improvement over baseline
City property taxes (cumulative)	\$1.6 billion	\$2.8 billion	+\$1.2 billion (+75%)
Development charges (cumulative)	\$2.1 billion	\$3.8 billion	+\$1.7 billion (+81%)
Total proceeds from the sale of public land	\$0.9 billion	\$2.4 billion	+\$1.5 billion (+167%)
Total	\$4.6 billion	\$9.0 billion	+\$4.4 billion (+96%)

Note: The above figures are adjusted for inflation.

The project would increase and accelerate the receipt of three major municipal revenue streams, including property taxes.

Sources and uses for the Sidewalk Toronto proposal

Uses (Preliminary Analysis for Indicative Purposes)	Uses (\$M)	Sources (Preliminary Analysis for Indicative Purposes)	Sources (\$M)	Sidewalk Labs (and Partners) Funding & Financing Support (\$M)
Real Estate (Quayside + Villiers West ONLY)				
Hard Costs ^A	2,840	Sidewalk Labs (and Partners) Equity Investment ^B	595	595
Soft Costs (incl. design, contingency, G&A, land payment, taxes, interest, and fees) ^C	1,090	Sidewalk Labs (and Partners) Equity Investment in Below Market Housing ^B	110	110
		Construction Financing	735	
		Reinvested Proceeds (Reinvested Equity)	2,405	
		Government Affordable Housing Grants ^D	85	
Total Real Estate Uses	3,930	Total Real Estate Sources	3,930	705
LRT				
Total Capital Costs ^E	430	Debt Financing (backed via value capture mechanism) ^F	430	
		Traditional Government Funding ^G		
Total LRT Uses	430	Total LRT Sources	430	
		Optional Sidewalk Labs Credit Support to Fill Timing Gap in Funding ^H		100
Municipal Infrastructure (IDEA District)				
Total Capital Costs	2,340	Traditional Government Funding ^{G,I}	150	
		Municipal Infrastructure Contribution - Muni (excludes Roads) ^J	1,860	
		Additional Public Sources	330	
Total Municipal Infrastructure Uses	2,340	Total Municipal Infrastructure Sources	2,340	
		Optional Sidewalk Labs Credit Facility to Front-End Infrastructure ^H		300

Note: The above figures are adjusted for inflation.

A Inclusive of above-standard costs incurred by Sidewalk Labs as part of the innovation agenda.

B "Sidewalk Labs (and Partners) Equity" refers to equity from Sidewalk Labs and potential local development/capital partners.

C Additional density, which would increase all costs related to the project, could also enable a larger land payment.

D Reflects existing government affordable housing programs.

E Total capital cost for LRT includes the portions of Segments 2 and 4 within the IDEA District, as well as Segments 5 through 7, as defined in Chapter 2 of Volume 3.

F Third-party debt (or government bonds) could be repaid by incremental property taxes or other source identified by the public sector.

G Use of traditional government funding could decrease or eliminate reliance on value capture mechanisms.

H Credit support to be provided in exchange for a fixed market-rate return, to be negotiated.

I Includes sitework and shoreline for Quayside and Villiers West.

J Municipal infrastructure contributions are paid by vertical developers to fund the project's municipal infrastructure, in an amount up to the credit received against city fees and development charges; if municipal infrastructure contributions are not sufficient to fund the entirety of the required infrastructure, additional sources such as land proceeds or traditional government funding would need to be utilized; excludes municipal infrastructure contribution to roads.

Uses (Preliminary Analysis for Indicative Purposes)	Uses (\$M)	Sources (Preliminary Analysis for Indicative Purposes)	Sources (\$M)	Sidewalk Labs (and Partners) Funding & Financing Support (\$M)
Advanced Infrastructure (IDEA District)				
Total Capital Costs	2,670	Third-party Financing, incl. Equity + Debt (potentially SIP)	1,165	
		Local Infrastructure Contribution - BAU Horizontal Costs	330	
		Local Infrastructure Contribution - BAU Vertical Costs	645	
		Municipal Infrastructure Contribution - Roads	485	
		Sidewalk Labs Equity (Supplemental Innovation Investment) ^K	45	45
Total Advanced Infrastructure Uses	2,670	Total Advanced Infrastructure Sources	2,670	45
Additional Investments				
Tall Timber Factory	80	Sidewalk Labs (and Partners) Equity ^B	90	90
Venture Fund	10			
Total Additional Investments Uses	90	Total Additional Investments Sources	90	90
Additional Investments without Direct Return				
MIDP Investment	65 ^L	Sidewalk Labs Equity	75	75
Urban Innovation Institute	10			
Total Additional Investments without Direct Return Uses	75	Total Additional Investments without Direct Return Sources	75	75
Total Uses	9,535	Total Sources	9,535	915 (1,315 with optional financing)
Third-Party Real Estate (IDEA District, excluding Quayside and Villiers West)				
Real Estate Uses ^M	29,130	Third-Party (Non-Sidewalk Labs) Equity + Debt	29,130	
Total Third-Party Real Estate Uses	29,130	Total Third-Party Real Estate Sources	29,130	
Total Uses with Third-Party Real Estate	38,665	Total Sources with Third-Party Real Estate	38,665	

K Size of innovation investment reflects current equity injection necessary at Quayside and Villiers West to achieve business as usual user utility rates.

L MIDP Investment reflected in CAD; equivalent to stated commitment of USD \$50M.

M Third-party real estate costs reflect Sidewalk Labs' internal projection of the third-party real estate catalyzed in the broader IDEA District by the project; at this geography, Sidewalk Labs will not have development rights or control over vertical development.

Core to achieving the project's objectives is the delivery of two early-phase real estate development projects in Quayside and Villiers West at an estimated combined total cost of \$3.9 billion. These two projects, totalling approximately 5.4 million square feet (or 16 percent of the IDEA District's proposed 33 million square feet), would be the proving ground, where Sidewalk Labs would over-invest to demonstrate the impact and prove the financial viability of its innovations.

The first substantial investment Sidewalk Labs would make if the MIDP is approved would be in the acquisition of Quayside. Sidewalk Labs proposes to pay a purchase price that accounts for existing requirements (such as Waterfront Toronto's requirement of setting aside sufficient land to accommodate 20 percent affordable housing) and MIDP proposals (such as the use of less than the maximum allowable density, enabling the use of sustainable mass timber).

That purchase price would not account for an estimated \$115 million investment, realized through foregone profit, that Sidewalk Labs would make in Quayside to pilot the innovation agenda, creating an anticipation of subpar returns for that initial phase. Specifically, Sidewalk Labs projects that approximately half of the \$115 million would be used to fund the additional 20 percent below-market housing units, with the other half funding a series of other innovations, such as the flexible ground-floor stoas that enable more community uses and retail diversity.

The purchase of the land and the additional \$115 million would be part of a \$2 billion (total capital, including equity and debt) real estate project in Quayside that would be undertaken by Sidewalk Labs

and local development partners. Sidewalk Labs anticipates that its investment in innovation in Quayside would result in subpar returns for this first phase of real estate development, but that the economics of a second phase in Villiers West would result in a blended real estate return in line with market expectations for real estate development.

As with Quayside, Sidewalk Labs believes that the acquisition or lease price for land at Villiers West should reflect the basic requirements that would be attached to it, as well as value that is created by Google locating its new Canadian headquarters there. That price would be part of a roughly \$1.8 billion (total capital, including equity and debt) investment in the development of Villiers West.

There are other, less central roles that Sidewalk Labs proposes to play, all of which are intended to advance the innovation agenda laid out in the MIDP. These roles and revenue sources are summarized in the table on Page 220.

These include as contractor for the delivery of infrastructure systems on a fee-for-service basis; developer of technology that would be deployed at-cost in the project area, and which would be eligible for profit sharing arrangements with Waterfront Toronto; seeder, with no associated revenue, of an Urban Innovation Institute; investor in the aforementioned Canada-focused venture fund and Ontario-based mass timber factory, which would be self-contained investments generating returns if successful; and, at the option of Waterfront Toronto and government, investor in a waterfront light rail, municipal infrastructure, and advanced infrastructure systems, all of which would be similarly self-contained.

The project's impact would represent \$2.8 billion more in annual tax revenues, a \$9 billion increase in GDP, and over 27,000 more permanent jobs than the baseline scenario at completion.

Summary of Sidewalk Labs' potential sources of revenue

To provide clarity and transparency regarding Sidewalk Labs' business model in Toronto, the following table identifies each potential revenue stream related to the project.

	Role / Revenue Opportunity	Description
1	Real estate	In delivering Quayside and Villiers West, Sidewalk Labs expects to receive revenue from the sources traditionally associated with real estate projects: rental revenue, income from the sale of condominiums, and income from the sale of individual buildings.
2	Technology deployment	The limited number of its own technology products that Sidewalk Labs deploys in the project would be provided at cost. For technologies that Sidewalk Labs develops and deploys at scale in Toronto that meet the testbed criteria, Sidewalk Labs proposes to share 10 percent of the profits with the public sector when that product is sold in other cities.
3	Advisory services	Advisory services provided to Waterfront Toronto by Sidewalk Labs in its role as Innovation and Funding Partner are proposed to be paid back, at cost, to Sidewalk Labs.
4	Implementation services (municipal infrastructure)	Third-party operators would compensate Sidewalk Labs directly for its role as lead developer of advanced systems in Quayside and Villiers West. This includes reimbursement for the costs to prepare the preliminary designs, plans, and specifications issued with the procurement documents for certain systems, as needed. In Quayside and Villiers West, third-party operators would also pay Sidewalk Labs an advanced system development fee applied as a percentage of project costs specified upfront in the procurement documents. This fee would vary based on the degree of Sidewalk Labs participation required.
5	Implementation services (advanced systems)	For work managed by the public administrator in Quayside and Villiers West, and thereafter, Sidewalk Labs would receive a lower percentage (2 percent) of related soft costs for supporting the public administrator in integrating municipal infrastructure with advanced systems infrastructure.
6	Venture fund seed funding	This investment, likely to be undertaken with partners, would have stand-alone economics and the same potential upside and risks as typical venture investing.
7	Mass timber factory	This investment, likely to be undertaken with partners, would have stand-alone economics and the same potential upside and risks as other investments in manufacturing.
8	Optional LRT financing	In the event government elects to utilize Sidewalk Labs' optional LRT financing, Sidewalk Labs would receive revenue that reflects a market return for the magnitude and risk associated with the agreed-upon financing structure.

	Role / Revenue Opportunity	Description
9	Optional municipal infrastructure financing	In the event government elects to utilize Sidewalk Labs' optional municipal infrastructure financing, Sidewalk Labs would receive revenue that reflects a market return for the magnitude and risk associated with the agreed-upon financing structure.
10	Optional advanced systems financing	In the event a SIP financing package was utilized to implement an advanced infrastructure system, SIP would receive revenues related to the operation of that system, to provide SIP an opportunity to achieve a standard market return associated with the financing of a project of such magnitude and risk.
11	Performance payment	In the event of final stage-gate achievement and delivery of success for the overall project, as defined through a series of metrics agreed upon in the Implementation Agreements, Sidewalk Labs expects to receive revenue in the form of a performance payment. This payment would compensate Sidewalk Labs for catalyzing the acceleration of development within the IDEA District, and its achievement of performance targets tied to Waterfront Toronto's priority outcomes.

For certain technologies, Sidewalk Labs proposes to share 10 percent of the profits with the public sector when that product is sold in other cities.

Part 4

How the Proposal Reflects the Transaction Principles

The transaction proposed here will be subject to consultation, negotiation, and revision before approval by the boards of Waterfront Toronto and Sidewalk Labs, and, where applicable, the three orders of government. What follows is a brief discussion of why Sidewalk Labs believes that the MIDP, even in its draft form, reflects the transaction principles — and thus presents a new type of partnership that can help catalyze inclusive growth in the digital age.

The MIDP delivers on Waterfront Toronto's priority outcomes

Transaction Principle 1:
Devise a transaction that would achieve Waterfront Toronto's priority outcomes

In December 2018, building on objectives outlined in the RFP, Waterfront Toronto introduced a set of priority outcomes for the MIDP: job creation and economic development, sustainability and climate-positive development, affordability and inclusivity, new mobility, and urban innovation (including robust data privacy and digital governance).

The MIDP outlines detailed plans to achieve significant gains in each of these areas:

→ Job creation and economic development: An estimated 93,000 total jobs and \$14.2 billion of annual GDP impact to the Canadian economy by 2040 — nearly seven times Toronto's current projections for a baseline development scenario during this same time period — as well as roughly 174,000 short-term construction jobs.

→ Sustainability and climate-positive development: A climate-positive community that would generate 89 percent fewer greenhouse gas emissions per capita than downtown Toronto, contributing 0.69 annual tonnes of clean energy per capita back to the city.

→ Housing affordability: A vision for a 40 percent below-market housing program, with the potential to create more than 13,600 below-market units, supported by \$1.4 billion in new private funding sources along with additional government support.

→ New mobility: Roughly 77 percent of trips would use public transit or active modes (cycling and walking), and “drive alone” trips would be reduced by more than 16 percentage points compared with what would happen in a standard development.

→ Urban innovation: The project would give rise to an Urban Innovation Institute, a venture capital fund focused on Canadian entrepreneurs, digital infrastructure and open standards to create highly hospitable conditions for startups, and an independent Urban Data Trust to ensure privacy and the protection of the public interest.

Geographic scale is necessary to achieve priority outcomes, but Sidewalk Labs' role is limited

Transaction Principle 2: Scale the project to achieve the desired outcomes

The MIDP's nuanced approach to the issue of geographic scale balances the pursuit of Waterfront Toronto's priority outcomes with the protection of existing plans and industries and the importance of ensuring that the IDEA District consists of neighbourhoods built by many.

First, the proposed approach recognizes that the scale of Quayside alone is not sufficient, in and of itself, to achieve the RFP's objectives and Waterfront Toronto's subsequently articulated priority outcomes, and that the deployment of innovations at broader scale may be necessary to achieve those goals. This was expressly anticipated, repeatedly, by the RFP and in the subsequent City of Toronto staff report about it, and has become apparent in myriad ways during the planning process.

For example, in pursuit of climate positivity, the development of Quayside alone cannot justify the cost of the infrastructure systems and other approaches essential for dramatically reducing GHG emissions, such as an advanced power grid and a thermal energy grid. This

costly infrastructure becomes affordable across a larger area as a result of the cumulative benefits of smarter energy management; new and increased sources of clean energy; economies of scale in infrastructure development and maintenance; and a larger customer base across which to spread the costs of setting up and administering a business.

To meet Waterfront Toronto's specific call to deliver housing for middle-income residents, above and beyond traditional affordable housing requirements, the MIDP proposes several new private sources of value, including factory-built timber construction and a condo resale fee, that can help deliver on the aggressive affordable and below-market housing targets called for in the MIDP. But Quayside cannot support the estimated 6 million square feet of buildable area needed to catalyze the wood construction supply chain. A condo resale fee would likewise require time and unit resales to generate value to redeploy towards the below-market housing program.

Following through on the RFP's mobility objectives, the MIDP proposes a set of convenient options for every trip that reduces or eliminates the need for households to own a car. But while Quayside's four blocks can serve as an effective

demonstration project, the solutions offered in the plan only begin to meaningfully affect mobility patterns when linked to a larger street and transit network. Additionally, Quayside alone is not large enough to support the financing of the proposed LRT extension, a major, new public work; the density across a larger area is needed to cover the projected cost. As part of an integrated mobility package at the scale of the IDEA District, the new mobility options could reduce solo car trips by more than 16 percentage points and save a two-person household that goes car-free roughly \$4,000 a year.

The RFP called for the development of an urban innovation cluster, which would seek to use Quayside as a focal point for technology firms, academic institutions, and nonprofits dedicated to improving urban life and advancing sustainable technology. The MIDP would deliver jobs at all skill levels, including through the establishment of the Sidewalk Works program, which would build an inclusive talent pipeline and support on-site employers in filling real-time needs; broadening the construction workforce by targeting at least 10 percent of construction hours for racialized youth, women, and Indigenous people; and catalyzing a mass timber factory, which would support an estimated 2,500 person-years of full-time employment over a 20-year period. But delivering on this promise and creating new jobs requires a critical mass of space, resources, and investment, and a holistic approach to economic development that extends into broader geography.

This need for scale is achieved by applying the ideas and innovations in the MIDP to an area that extends beyond Quayside to Villiers Island, Keating Channel, McCleary, and Polson Quay: the IDEA District. This geography has been defined with particular sensitivity to existing plans and important industries in certain parts of the Port Lands. For that reason, the IDEA District — which represents the project area at its fullest scale, amounts to less than a third of the eastern waterfront — leaving undisturbed the Film and Media Studio District, East Port, and all areas south of the Ship Channel.

At the same time, the MIDP recognizes that Sidewalk Labs' role need not remain constant over the lifespan of the project and entirety of the geography, and that it is in no one's interest for Sidewalk Labs to shoulder development responsibilities across the IDEA District. In other words, the question of how much geographic area is necessary to achieve Waterfront Toronto's priority outcomes can be treated separately from the question of how much geographic area is necessary for Sidewalk Labs to develop.

The company's deepest involvement, including in real estate development, is most critical in the project's initial phases in order to prove out concepts, which in many cases will require an over-investment. Sidewalk Labs would be responsible for real estate development only on Quayside and the western part of Villiers Island, the first part of the River District that would be developed. Villiers West would be home to a new Canadian headquarters for Google, which the company is willing to locate there as a catalyst for

Key Term**Innovation Design Standards and Guidelines (IDSG)**

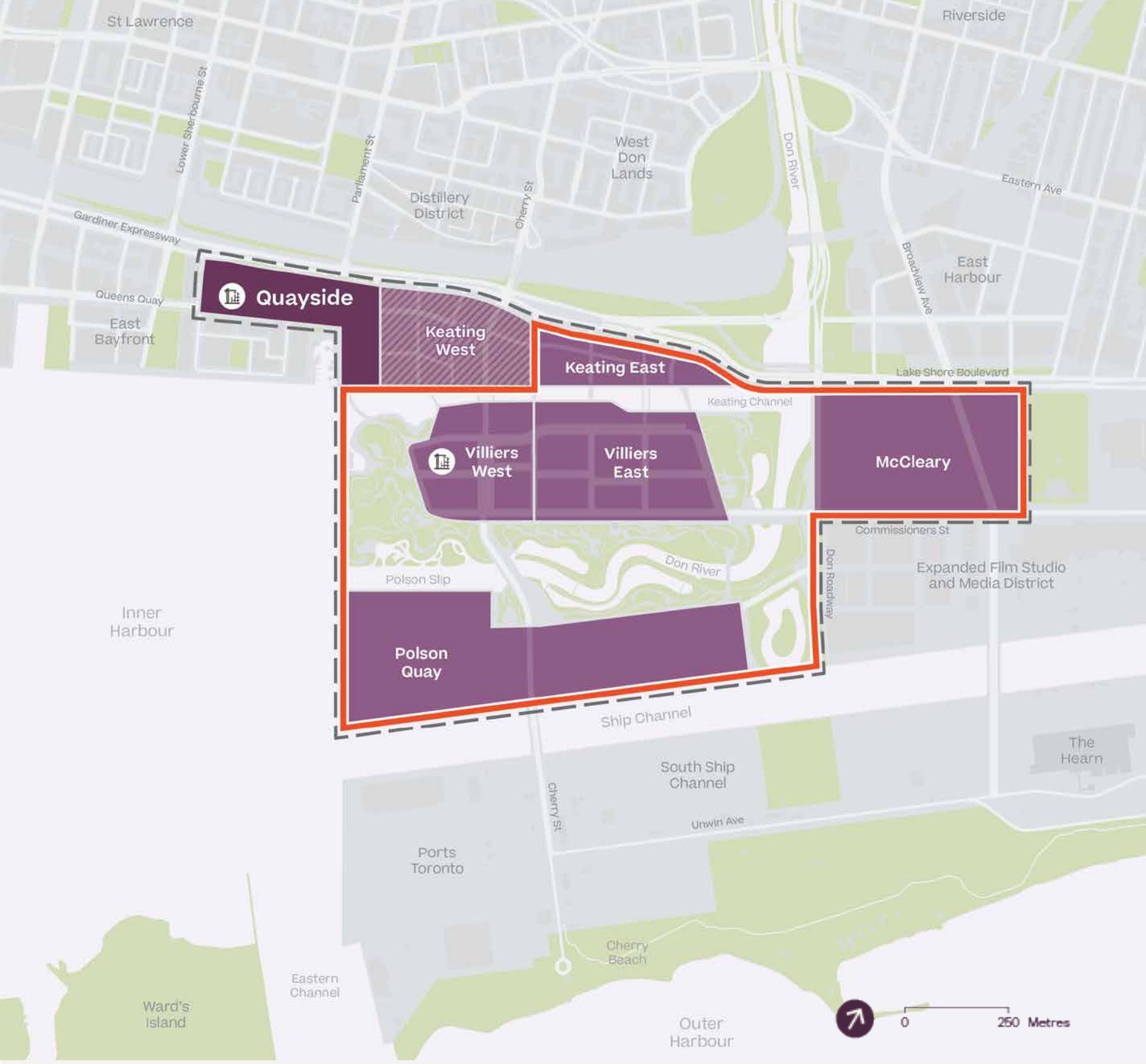
A series of enhanced requirements for new developments in the IDEA District arising out of Waterfront Toronto's priority outcomes.

economic development on the eastern waterfront as part of an agreed-on transaction within the IDEA District. Sidewalk Labs' real estate development would constitute 16 percent of the IDEA District and just 7 percent of the broader eastern waterfront, and would itself be built in conjunction with one or more local partners that would contribute both expertise and capital.

Beyond Quayside and Villiers West, Sidewalk Labs' role would be more limited, with solutions proven out in Quayside applied to new development across the IDEA District with the project's Innovation Design Standards and Guidelines. That approach ensures that the IDEA District would, indeed, be a place built by many.

Both the contours of the IDEA District and the tiered involvement of Sidewalk Labs at different geographies are depicted in the map on the opposite page.

Sidewalk Labs' more limited role beyond Quayside and Villiers West ensures that the IDEA District would, indeed, be a place built by many.



Map

Sidewalk Labs' role across phases of the IDEA District

- IDEA District
 - River District
 - Phase 1: Quayside
 - Phase 2: River District
 - Optional participation in Phase 2
- Sidewalk Labs develops real estate and advanced systems

Evidence-based milestones must be met before each phase of the project may advance

Transaction Principle 3: Phase development to manage risk

While scale is critical to achieve Waterfront Toronto's objectives, the three orders of government — along with Torontonians involved in the MIDP consultation process — expressed reservations about committing to the project substantial lands beyond Quayside from the get-go, before the solutions proposed in the MIDP have even begun to be tested. There is an openness to the incremental expansion of the project over time, but only on the basis of evidence of success at each step along the way.

These two imperatives — the need for scale beyond Quayside, and the importance of incremental, evidence-based decision-making about questions of scale — have led Sidewalk Labs to propose a “stage-gated” approach, in which each phase of the project would proceed only after Sidewalk Labs has met its obligations and strategies have been proven viable in the prior phase.

This phased approach protects the public interest and provides for course correction and off-ramps should the project begin to fall short, while at the same time creating a straightforward path to its expansion across a broader geography, as Waterfront Toronto contemplated, should it prove successful.

Specifically, the MIDP proposes that Sidewalk Labs must satisfy milestones before moving from planning development of Quayside (Stage 1) to construction of Quayside (Stage 2), to planning development of Villiers West (Stage 3), to construction of Villiers West (Stage 4), and, later, before Innovation Design Standards and Guidelines jointly developed by Sidewalk Labs and the public administrator are applied to the broader IDEA District (Stage 5).

If and only if the broader IDEA District meets agreed-upon performance targets, Sidewalk Labs would receive performance payments in Stage 6 — returns on investment above and beyond revenues tied to specific components of the project (such as real estate development on Quayside and Villiers West).

The MIDP puts government in the driver's seat

Transaction Principle 4: Establish strong public sector oversight

The MIDP contemplates innovative, fundamentally different approaches to the development and operations of a new part of the city. In addition, the MIDP explores new policies that may be imposed, and old policies that may be waived, within the IDEA District, in order to accelerate innovation and deliver on Waterfront Toronto's priority outcomes. Rather self-evidently, this different approach to development calls for a different approach to governance — one tailored to implement the project vision in the project area, specifically.

At the same time, real concern was voiced throughout the public consultation process that while an innovative public-private partnership and the establishment of new and different governance structures might help achieve Waterfront Toronto's priority outcomes, government should not and must not give up its responsibility for protecting the public interest and driving a project of this size and significance.

As a result, under the MIDP's proposals related to governance and partnership, the IDEA District would be led by a public administrator (which could be Waterfront Toronto or another government entity, extant or new). This public administrator would oversee various management and operational entities, and lead land disposition and planning efforts as well as the delivery of traditional, or “municipal,” infrastructure.

Sidewalk Labs' role as Innovation and Funding Partner would be established by contract with Waterfront Toronto and/or the public administrator, to whom Sidewalk Labs would be accountable. The table on Page 232 details all the proposed roles and responsibilities for public and private sectors.

Sidewalk Labs would provide innovation, funding, and implementation support

Transaction Principle 5: Structure the role of Sidewalk Labs to leverage its strengths

With government leading development and oversight of the IDEA District, the MIDP proposes a role for Sidewalk Labs that capitalizes on its own unique combination of strengths, including a team that spans urban planning, technology, policy, architecture, engineering, development, and finance and its exceptional technological resources; its access to patient capital that is able to take a long-term view of investing, where warranted; and its ability to serve as an economic catalyst.

In any of its proposed roles, Sidewalk Labs would in no way hold an interest in — or any encumbrance on — any lands beyond Quayside and Villiers West.

Sidewalk Labs would support and advise the public administrator on achieving innovation objectives, providing advisory, technical, and management services to implement the MIDP's innovation strategy.

Its role as lead real estate developer in Quayside and Villiers West (with local partners) would serve to prove out concepts for broader application by others across the IDEA District.

Sidewalk Labs would serve as lead developer of advanced infrastructure systems, assuming responsibility for identifying operators and partners to implement the advanced power grid, thermal grid, and the other systems identified as vital to the success of Quayside and the Villiers West urban innovation campus, and to achieving the priority outcomes identified by Waterfront Toronto.

Finally, Sidewalk Labs would identify or develop critical urban technology solutions, including a small number identified as “purposeful solutions.” Building off Sidewalk Labs’ technological expertise and assets, the resulting products would incorporate enhanced privacy protections and use published standards to avoid technology “lock-in.”

In the execution of these roles, the MIDP proposes that Sidewalk Labs shoulder a disproportionate share of the cost of upfront innovation — and receive its compensation in later stages.

While Sidewalk Labs proposes to focus on the roles where it can add the greatest value, the converse is equally important: others should lead areas where they can uniquely contribute.

For example, Sidewalk Labs proposes to provide optional financing support to advance the Waterfront East LRT extension but would not construct, own, or operate it. This approach holds true across all aspects of the project, including technology and other horizontal

The MIDP proposes that Sidewalk Labs shoulder a disproportionate share of the cost of upfront innovation — and receive its compensation in later stages.

infrastructure. It is especially evident with real estate development, where Sidewalk Labs only proposes to lead vertical development in Quayside and Villiers West, to prove to the private market that its innovation approach is commercially viable and that its inclusive economic development plan can thrive. The expectation is that other developers would lead all other vertical development.



Spotlight

Proposed roles and responsibilities within the IDEA District

This page summarizes the MIDP's proposal for roles and responsibilities of the public administrator, Sidewalk Labs, the three orders of government, real estate developers, and other third parties.

	Role	Waterfront Toronto or Public Administrator	City, Province, and Government of Canada	Sidewalk Labs	Real Estate Developers	Third-Party Vendors (i.e. technology, construction, and consultants)
1	IDEA District Oversight and Administration	Public administrator of the IDEA District with oversight for district management entities.	Enabled by government. Relevant city agencies would be core stakeholders of management entities.	Not applicable	Not applicable	Not applicable
2	Land Use and Development Planning (Precinct Plans, Infrastructure and Transportation Master Plans, Precinct-Level Infrastructure Plans, Bylaw and OPA)	Lead Planning Entity	Traditional roles - IDEA District planning documents would require standard set of approvals.	Contracted to provide technical expertise and implementation services related to planning and advanced systems, including the IDSG.	No change from current (except for application of IDSG to public parcels sold for private development).	Not applicable
3	Infrastructure Financing	Contribute to municipal infrastructure funding, including through land proceeds in structure laid out in the 2006 MOU.	Enable city fee and development charge credits, municipal infrastructure contributions, and local infrastructure contributions; enable LRT financing through TIF or identify alternate funding source.	Provide optional financing for municipal infrastructure (as front-end agreements). Provide optional credit support for LRT. Enable optional financing for advanced systems through newly formed company.	Pay (1) reduced DCs; (2) additional municipal infrastructure contributions (combined with (1), that roughly equal standard city fee and development charge obligations); and (3) local infrastructure contributions, equal to the cost of avoided systems (like traditional gas).	Participate in normal course of business.

	Role	Waterfront Toronto or Public Administrator	City, Province, and Government of Canada	Sidewalk Labs	Real Estate Developers	Third-Party Vendors (i.e. technology, construction, and consultants)
4	Infrastructure Delivery	Manage construction of municipal infrastructure. Co-lead LRT delivery, in coordination with TTC.	Co-lead LRT delivery, in coordination with Waterfront Toronto. At Quayside and Villiers West, this would include serving as lead developer of a range of advanced systems and leading the design of certain municipal infrastructure.	Partner with public administrator to play various roles. At Quayside and Villiers West, this would include serving as lead developer of a range of advanced systems and leading the design of certain municipal infrastructure.	Shoulder a reduced infrastructure burden for vertical development due to public administrator's comprehensive infrastructure program.	Contractors would compete to construct municipal infrastructure. Operators would compete to deliver advanced systems.
5	Real Estate Development	Lead RFP process for publicly-owned parcels, subject to IDSG.	Traditional roles — IDEA District would require standard set of approvals and permissions.	Lead vertical development of Quayside (for R&D purposes) and Villiers West (for economic development purposes), working alongside local partners. Prepare the IDSG.	Partner with Sidewalk Labs in delivery of vertical development at Quayside and Villiers West. Bid on, or proceed with, development of the 83.6 percent of IDEA District not vertically developed by Sidewalk Labs.	Contractors would compete to deliver vertical real estate. Other vendors would compete to deliver products and components.
6	Technology Deployment	Establish Innovation Framework.	Traditional roles (where applicable).	Identify technical solutions for use in connection with the project. Develop and deploy a limited number of solutions that do not yet exist in the market.	Conduct business as usual. No obligation to purchase or use Sidewalk Labs' products.	Third-party technology firms would compete to deliver the vast majority of technology products used in the project area.

The MIDP builds on proven approaches to waterfront development and financing

Transaction Principle 6: Use proven approaches where possible

Over the past 18 months, Sidewalk Labs was encouraged to apply strategies, tools, and practices that have already proven successful in Canada and beyond. Rather than reinvent the wheel, the MIDP seeks to build on what has worked. This principle informed the proposal for an IDEA District, which builds on Waterfront Toronto's existing authorities and Canada's success with geographically-targeted development strategies, and guided the MIDP's proposals to use self-financing mechanisms to achieve project goals.

Governments at the federal, provincial, and city level have long recognized that the Toronto waterfront is an area of uncommon scope and promise that calls for a comprehensive, geographically-specific strategy. Years ago, this recognition inspired the creation of Waterfront Toronto "to oversee all aspects of revitalization of Toronto's waterfront."

But Waterfront Toronto is just one example of Canada's remarkable success with innovative strategies to spur the revitalization of struggling or underdeveloped urban areas. Other examples include the pioneering use of Business Improvement Areas, Canada Mortgage and Housing Corporation's turnaround of Granville Island in Vancouver, Toronto's experimentation with a new approach

to zoning and economic development in Two Kings, and Toronto's novel use of a Community Improvement Plan to revitalize Yonge-Dundas Square.

What these strategies have in common is the recognition that a smart, targeted approach to development in a particular geographic area — in which certain restrictions are adjusted and, in return, developers and others are expected to achieve priority outcomes — can jumpstart development, ensure that social needs are met, and pay other dividends. That is what this project, generally, and the proposed IDEA District specifically, seeks to accomplish, setting out a comprehensive vision and a specific set of rules and incentives for spurring innovation and development across a defined but limited geography within the eastern waterfront.

This interest in proven approaches extends to the MIDP's proposals to finance the roads, transit, and other municipal infrastructure that the project requires through existing Canadian project financing strategies. These include using development and other developer-paid charges for infrastructure; reinvesting the proceeds from the sale of public lands in the area; and other self-financing mechanisms.

Together, these strategies aim to deliver a project that is largely self-contained and self-financed:

1

City fee and development charge credits, municipal infrastructure contributions, and local infrastructure contributions.

In Toronto, city fees, development charges, and for certain projects, other developer contributions are typically assessed to pay for the municipal infrastructure required to support the infrastructure needs associated with new development. For example, Waterfront Toronto has used such fees — including a local area improvement charge specified in the East Bayfront Zoning Bylaw — to fund local infrastructure in East Bayfront.

The MIDP proposes that such charges and fees be directed to finance critical infrastructure in the IDEA District (along with proceeds from the sale of public lands). Because these charges are slow to materialize, the MIDP proposes that Sidewalk Labs finance certain pieces of infrastructure in anticipation of those charges through the use of a "front-ending agreement," a common mechanism to address this timing gap.

2

Land proceeds reinvestment.

By selling public land incrementally over time and investing the proceeds in local area development, a city can use the growth potential of land to fund development. Waterfront Toronto has used this approach since 2006, relying, in part, on the authorities contained in its memorandum of understanding (MOU) with the City of Toronto.

In concert with Infrastructure Ontario, Waterfront Toronto used this strategy to develop the West Don Lands, leveraging provincial lands to fund the costs of the new infrastructure, remediation, and land-use approvals necessary to enable development. Reinvesting land proceeds also represented another part of Waterfront Toronto's approach to funding East Bayfront. And the Harbourfront Corporation used this strategy to enable development of approximately 36 hectares along Toronto's central waterfront; the corporation obtained land-use approvals, delivered enabling infrastructure, and later sold the lands to repay an initial federal investment.

The MIDP proposes joining proceeds from the sale of public lands with the aforementioned fees and charges to fund infrastructure necessary to support development of the IDEA District.

The MIDP envisions that the public administrator would have control over the disposition of public lands within the IDEA District (akin to the authorities the City of Toronto has already granted to Waterfront Toronto in their 2006 MOU) and the authority to apply the proceeds to finance the overall development and innovation strategy.

3

Incremental property tax.

Tax increment financing (TIF), known elsewhere in Canada as a Community Revitalization Levy (CRL), directs a share of the increase in property tax revenue within a project area to fund major infrastructure, like transit.

For example, Calgary, Alberta has used a CRL financing strategy to advance the Rivers District Community Revitalization Plan. Since 2007, this approach has enabled \$396 million in infrastructure funding, attracting nearly \$3 billion in planned private development to downtown Calgary. As a result, residential property assessments reportedly increased from \$328 million to about \$1.2 billion and non-residential assessments jumped from \$647 million to \$1.8 billion.¹⁰⁷

In another example from Alberta, Edmonton will use a 20-year CRL financing strategy to fund several projects in the Capital City Downtown CRL Plan.¹⁰⁸ TIF and similar strategies are commonplace for funding major projects across the United States, including Hudson Yards (New York, New York), Mesa del Sol Development (Albuquerque, New Mexico), and Lincoln Yards (Chicago, Illinois).

Toronto's Official Plan has acknowledged the value of TIF, specifically commanding the strategy as a way to "invest without direct cost to the municipal taxpayer."¹⁰⁹

Consistent with this, the MIDP observes that the funding challenges associated with the construction of a waterfront

LRT might be addressed through the use of TIF, and that it should be available in Ontario and, more specifically, to the public administrator of the IDEA District.

Public and private sectors would share in the value they jointly create

Transaction Principle 7: Align financial interests

The overall deal structure requires Sidewalk Labs to meet evidence-based milestones at each phase of the project in order to advance to the next phase and the potential for financial upside that comes with it. On an overall basis, this aligns Sidewalk Labs' interests with the substantive and financial interests of the public sector.

In addition, the MIDP proposes two specific mechanisms by which public and private sectors would share in value created by the project, in order to protect the public interest, properly incentivize private investment, and to align the interests of Sidewalk Labs and its public partners around shared goals.

Key Term
Implementation Agreements would be developed following approval of the MIDP. These contracts, which would involve Sidewalk Labs, Waterfront Toronto, and, in certain cases, government, would govern all aspects of the transaction.

First, Sidewalk Labs has carefully considered the question of how the public sector might share in profits realized later from technologies that were made possible because of this project. The MIDP proposes a two-pronged test to distinguish technologies used in the project that would be developed by Sidewalk Labs in the normal course, even were the project not to proceed, from those that arise because of the conditions created by Sidewalk Labs' public partners. For a product that passes that test, the MIDP proposes that the public sector receive 10 percent of profits over a 10-year period following the sale of the product to a second customer.

In the process of considering this proposal, Sidewalk Labs was unable to find any precedent for this kind of profit-sharing arrangement with government. In and of itself, it would represent an innovative approach to the public and private sectors partnering not only to create technology, but to jointly reap the proceeds from success.

Second, the MIDP proposes that Sidewalk Labs be eligible for a performance payment that would fairly compensate the company for its role in accelerating development on the eastern waterfront aligned with Waterfront Toronto's priority outcomes, generating billions of economic activity for the city, province, and country, and producing substantial revenue for the governments that would otherwise go unrealized.

This payment would recognize the overall risk and resulting upfront costs assumed by Sidewalk Labs, and would be conditional on Sidewalk Labs' achievement of its final stage gate and the success of the overall project, as defined through a series of metrics to be agreed upon in the **Implementation Agreements**.

The concept of a performance payment is logical for this project not only because of its uncertain outcome but because Sidewalk Labs has structured the business model, in response to feedback from a range of stakeholders, in ways that limit its opportunity for upside elsewhere – by forgoing revenue streams that might be less directly connected to the public interest or sought by more conventional companies.

Sidewalk Labs limits the amount of real estate the company would develop to two small pieces of the overall project; seeks no real estate interest in the remainder of the IDEA District; puts urban data under the control of an independent entity; makes a number of constraining unilateral commitments with regard to the commercialization of data; and does not seek special tax subsidies.

It also reflects the unusual nature of certain early investments Sidewalk Labs will have made with no direct opportunity for a return, including its spending to develop this plan (acting as seed funding for the project), to subsidize advance infrastructure systems at the Quayside and Villers West scale in order to prove their viability while maintaining reasonable user rates, and offer advisory services at cost.

In short, this financial structure is designed to align the interests of Waterfront Toronto, Sidewalk Labs, and the public; to compensate Sidewalk Labs for serving as a catalyst for a new approach to urban development; and to account for the special challenges underlying the project, such as an extended repayment timeline and complexities associated with integrating next-generation systems that are new to Canada or the market.

The amount of this fee would be negotiated in closing the transaction, and earned if (and only if) Sidewalk Labs reaches a series of agreed-upon performance and growth targets directly tied to Waterfront Toronto's priority outcomes. The exact terms, magnitude, and source of this fee would be determined in future negotiations with Waterfront Toronto and its government stakeholders in advance of the execution of Implementation Agreements and approval of the project.

In short, this financial structure is designed to align the interests of Waterfront Toronto, Sidewalk Labs, and the public.

A Vision of the Waterfront in 2050: A Global Model for Inclusive Growth

The planning vision outlined in this MIDP has the potential to generate more than 93,000 total jobs, catalyze more than \$14.2 billion in economic activity by 2040, create more than 13,600 below-market homes, and set a replicable new standard for climate-positive communities. It would make the waterfront a global hub for urban innovation — and help Toronto live up to its ideals for diversity and opportunity.

When all these things come together — a people-first approach to planning and economic development; new digital, physical, and policy innovations addressing big urban challenges; and a new partnership model that blends public objectives with private resources — the results can be transformative. Deployed at the full scale of the proposed IDEA District, this plan has the potential to achieve the ambitious quality-of-life objectives that Waterfront Toronto, and the City of Toronto, have aspired towards for years.

This planning work was paid for by Sidewalk Labs with no promises of approval, because as a company, Sidewalk Labs believes there is no better opportunity in the world to show the way forward for the future of cities.

If together we can shorten commutes for hard-working households and give people back time to spend with their friends, family, and community ...

If we can point the way towards relieving the affordability crisis and make life downtown possible for everyone ...

If we can create a new standard of sustainability that shows the path to a healthier planet ...

If we can convince all the strivers that their best chance to build the next great global innovation sits right on the shores of Lake Ontario ...

If we can demonstrate that cities need not choose between their commitments to inclusion and their hopes for economic growth in the digital age ...

— then the world will take notice of this new model created in Toronto.

But even if and when a version of this plan is approved by Waterfront Toronto and all levels of government, the MIDP is just the beginning.

In the end, it is the City of Toronto — its people, its civic leaders, its academic and cultural institutions, its tech ecosystem, its business and real estate communities, and its public agencies — that will make this project a success.



Endnotes

General note: Unless otherwise noted, all calculations that refer to the full IDEA District scale are inclusive of the entire proposed geography, including Quayside and all currently privately held parcels (such as Keating West). Unless otherwise noted, all currency figures are in Canadian dollars.

Charts note: Sources for the charts and figures in this chapter can be found in the accompanying copy for a given section; otherwise, the numbers reflect a Sidewalk Labs internal analysis. Additional information can be found in the MIDP Technical Appendix documents, available at www.sidewalktoronto.ca/midp-appendix.

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35. See the "Quayside Plan" chapter of Volume 1, on Page 70, for more details on the residential and non-residential development plan.
36. For more information on the proportions of residential and non-residential use for Quayside compared to city bylaws, see the accompanying "Planning Policy Justification Report" in the MIDP Technical Appendix.
37. See the "How It Works: Mobility" section of the "Quayside Plan" chapter in Volume 1, on Page 102, for a thorough examination of the proposed transportation network and mobility systems in Quayside.
38. See the "How It Works: Public Realm" section of the "Quayside Plan" chapter in Volume 1, on Page 146, for more information on public realm improvements and innovations proposed for Quayside.
39. See the "How It Works: Buildings and Housing" section of the "Quayside Plan" chapter in Volume 1, on Page 168, for details on building construction, housing types, and affordability programs planned for Quayside.
40. To learn more on the sustainability initiatives proposed for Quayside, turn to the "How It Works: Sustainability" section of the "Quayside Plan" chapter in Volume 1, on Page 198.
41. Consult the "How It Works: Social Infrastructure" section of the "Quayside Plan" chapter in Volume 1, on Page 214, for more information on social infrastructure in Quayside.
42. See the "How It Works: Digital Innovation" section of the "Quayside Plan" chapter in Volume 1, on Page 230, for more information on digital innovation proposals for Quayside.
43. For more details on the impacts of scale, consult the "River District" chapter in Volume 1, Page 263.

Endnotes

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- 48.** Waterfront Toronto, *Waterfront Toronto Employment Initiative*. Brochure, July 2013.
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- 55.** For more information on the economic potential of a mass timber industry, consult the "Sidewalk Toronto Economic Impact Analysis" section of the MIDP Technical Appendix. For details on mass timber construction, see the "Buildings" sections of the MIDP Technical Appendix.
- 56.** For more details on Google's proposed campus in the IDEA District and the creation of an Urban Innovation Institute, see the "Economic Development" chapter in Volume 1, beginning on Page 438.
- 57.** For more details on the venture fund proposal, see the "Economic Development" chapter in Volume 1, on Page 488.
- 58.** For more on the Sidewalk Works program, see the "Economic Development" chapter in Volume 1, on Page 455.
- 59.** Waterfront Toronto, *Waterfront Toronto Employment Initiative*. July 2013. See the "Economic Development" chapter in Volume 1, Page 452, for more on Sidewalk Labs' commitment to employment for equity-seeking groups.
- 60.** For more on the proposal to establish a mass timber factory, see the "Buildings and Housing" chapter in Volume 2, Page 220.
- 61.** For more on the accelerated timelines resulting from factory construction, see the "Buildings and Housing" chapter in Volume 2, Page 208. For more on the library of parts, see the "Quayside Plan" chapter in Volume 1, Page 181, as well as the Buildings section of the MIDP Technical Appendix.
- 62.** For more on Building Information Modelling, see the "Buildings and Housing" chapter in Volume 2, Page 233.
- 63.** For more details on the Loft space concept, see the "Buildings and Housing" chapter in Volume 2, Page 238.
- 64.** For more on flexible wall systems, see the "Buildings and Housing" chapter in Volume 2, Page 246.
- 65.** For more on the proposed outcome-based building code system, see the "Buildings and Housing" chapter in Volume 2, Page 251.
- 66.** For more on the flexibility of sto space, see the "Buildings and Housing" chapter in Volume 2, Page 242.
- 67.** For more details on the proposed small business incubator, see the "Public Realm" chapter in Volume 2, Page 166.
- 68.** For more on the Seed Space platform, see the "Public Realm" chapter in Volume 2, Page 165.
- 69.** Additional details on emission reductions in the IDEA District can be found in the "Sustainability" chapter in Volume 2, Page 296, as well as the "Sidewalk Toronto Greenhouse Gas Model - Path to Climate Positive" section of the MIDP Technical Appendix.
- 70.** Unless otherwise noted, each of the initiatives in this table are further detailed in the "Buildings and Housing" chapter of Volume 2, beginning on Page 202.
- 71.** For more on the proposed Care Collective, see the "Quayside Plan" chapter in Volume 1, Page 220.
- 72.** For details on the proposed Civic Assembly, see the "Quayside Plan" chapter in Volume 1, Page 224.
- 73.** For more on the Quayside elementary school, see the "Quayside Plan" chapter in Volume 1, Page 228.
- 74.** For more on the role of electric vehicles in Quayside and the IDEA District, see the "Mobility" chapter in Volume 1, Page 228.
- 75.** For projections regarding modes of travel in the IDEA District, see the "Modelling and Transportation Analysis" section of the MIDP Technical Appendix.
- 76.** For more information on pedestrian space in Quayside and the IDEA District, turn to the "Public Realm" chapter in Volume 2, Page 126, as well as the "Streets for People" section of the MIDP Technical Appendix.
- 77.** Each of the initiatives in this table are further detailed in the "Mobility" chapter of Volume 2, beginning on Page 24. Where endnoted in this table, additional information is also available in other chapters or in the MIDP Technical Appendix.
- 78.** See Page 262 of the "Buildings and Housing" chapter in Volume 2 for more details on the affordable housing proposal for Quayside and the River District.
- 79.** For a breakdown of new private funding sources for affordable housing created through this proposal, consult the "Buildings and Housing" chapter in Volume 2, Page 280.
- 80.** For more information on light-rail ridership and its employment accessibility benefits, consult "Enabling Rapid Transit" section of the MIDP Technical Appendix.
- 81.** Consult the "Active Transportation" and "Modelling and Transportation Analysis" sections of the MIDP Technical Appendix for details on active modes of transportation.
- 82.** To understand projections regarding the use of ride-hailing services and their associated cost savings, consult the "New Mobility" section of the MIDP Technical Appendix.
- 83.** Consult the "New Mobility" section of the MIDP Technical Index for pricing and savings information regarding mobility as a service.
- 84.** Consult the "Streets for People" section of the MIDP Technical Appendix for more details on street types.
- 85.** More information on accessibility initiatives are available in the "Quayside Plan" chapter of Volume 1, Page 136.
- 86.** Consult the "Freight" section of the MIDP Technical Appendix for more details on the logistics hub.
- 87.** Consult the "Mobility Management" section of the MIDP Technical Appendix for more details on active traffic management.
- 88.** Consult the "Public Realm" chapter of Volume 2, Page 136, as well as the "Cost Comparison of Modular Pavement vs. Typical Waterfront Streetscape" section of the MIDP Technical Appendix, for more details on modular pavement.
- 89.** Each of the initiatives in this table are further detailed in the "Digital Innovation" chapter of Volume 2, beginning on Page 374. Where endnoted in this table, additional information is also available in other chapters or in the MIDP Technical Appendix.
- 90.** Consult the "Building the Backbone of Connectivity" section of the MIDP Technical Appendix for additional details on super-PON technology and ubiquitous connectivity.

Endnotes

95. See also the “Catalyzing Digital Services” section of the MIDP Technical Appendix for more on open standards for data.

96. See the “How Quayside Will Make Data Work for Toronto - And Protect It” section of the MIDP Technical Appendix for more on open data resiliency and security.

97. See the “Public Realm” chapter in Volume 2, Page 137, for more on open access channels.

98. See the “Public Realm” chapter in Volume 2, Page 182, for more on shared public infrastructure.

99. Turn to the “Public Realm” chapter in Volume 2, Page 167, as well as the “Outdoor Comfort Development Standard” section of the MIDP Technical Appendix, for more on weather-mitigation systems.

100. Consult the “Public Realm” chapter in Volume 2, Page 186, for more on real-time maps.

101. See the “Public Realm” chapter in Volume 2, Page 140, for more on generative design.

102. The Vision sections of Sidewalk Labs’ original RFP submission are available online at the Sidewalk Toronto website, sidewalktoronto.ca/documents/.

103. For more detail on this and other financial investments and commitments by Sidewalk Labs, consult the “Development Appendix” section of the MIDP Technical Appendix.

104. Consult Volume 3 for more information on real estate and infrastructure investments.

105. The urbanMetrics report can be found in the “Sidewalk Toronto Economic Impact Analysis” section of the MIDP Technical Appendix.

106. For a more detailed comparison of this Master Innovation and Development Plan against the baseline scenario, see the “Economic Development” chapter in Volume 1, Page 426.

107. City of Calgary. *Rivers District Community Revitalization Plan*. April 2007.

108. City of Edmonton. *Capital City Downtown Plan*. July 2010.

109. City of Toronto, *Toronto Official Plan and Amendments*. Consolidated June 2015. Chapter 5, page 15.

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