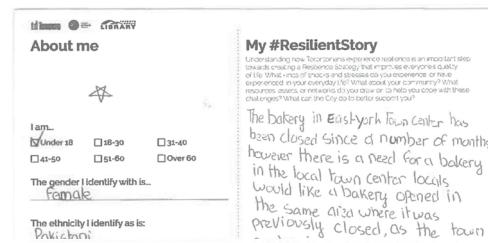
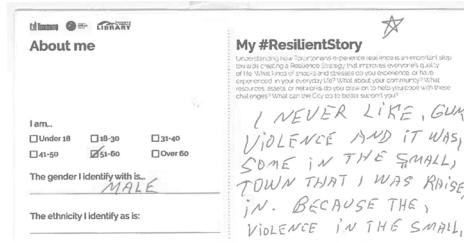
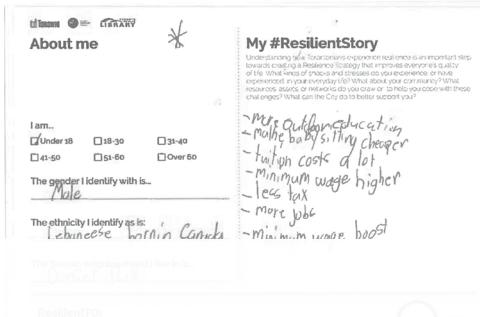
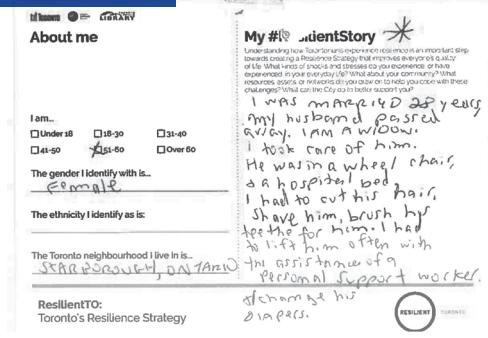
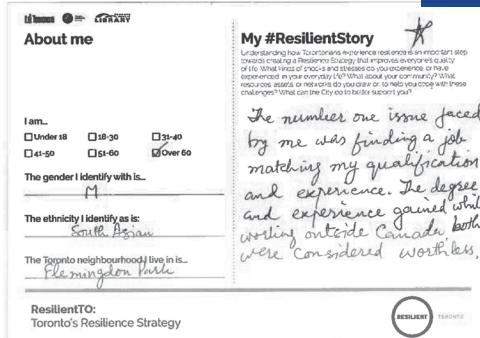


TORONTO'S RESILIENCE STRATEGY





A SHARED, COMMUNITY VISION FOR A MORE RESILIENT TORONTO.

A RESILIENT TORONTO IS...

A place where residents feel empowered to help shape their communities and where government works in deep collaboration with the people it represents to advance an agenda of fairness and prosperity for everyone.

A place where we each feel connected to the natural world, and where we think about the now as well as far into the future.

Connected to long-term climate and sustainability practices that are embedded in how we do things, and allow us to adapt to an uncertain, changing climate.

Home. A place where housing is a right, and every resident has a safe, decent, and affordable place to live.

Where residents of Toronto will know the history of Indigenous people on these lands, past and present, and are committed to knowing about, understanding, and acting on Truth and Reconciliation, for themselves and the City as a whole.

A place that creates space for diversity and recognizes every resident's right to the city.

Easy to move around in, whether by foot, on a bicycle, in a car, or by transit, with multiple options that are efficient, safe, and affordable for every resident.

A city of connected communities, where residents feel heard, share common goals, and have broad empathy and understanding for one another.

A place that is led by brave and caring people who reflect the diversity of the communities they represent.

A place where every resident can
THRIVE.



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PLANTING VEGETABLES AT A CHILDREN'S GARDEN ON THE DANFORTH

1 EXECUTIVE SUMMARY



THIS IS TORONTO'S FIRST RESILIENCE STRATEGY. IT SETS OUT A VISION, GOALS, AND ACTIONS TO HELP TORONTO SURVIVE, ADAPT AND THRIVE IN THE FACE OF ANY CHALLENGE, PARTICULARLY CLIMATE CHANGE AND GROWING INEQUITIES.

Building the Resilience Strategy was a collective effort. We've engaged over 8,000 Torontonians in conversations about resilience face to face, over the phone, on social media, at City Hall, in libraries, in parks, and in people's homes.

They told us they want a city where every resident can thrive, where diversity is nurtured and residents have empathy for each other. One where long-term, "all my relations" thinking is considered in every decision. One where residents know the history of Indigenous peoples and are committed to taking action for Truth and Reconciliation. One that is efficient, safe and affordable, and led by brave and caring leaders who reflect the communities they serve.

We have developed a set of 10 goals and 27 actions to deliver on this vision. They are organized into

three focus areas: people and neighbourhoods, infrastructure, and leadership for a resilient city. Taking action in each of these focus areas will help us achieve the vision.

Making Toronto more resilient requires a focus on equity. We know that residents experience resilience differently based on which neighbourhood they live in, and who they are, including in terms of their race, income, and gender. We also know that access to safe and liveable homes and reliable infrastructure is not equitably distributed across the city. For example, apartment towers, where one in three low income families live, are disproportionately vulnerable to extreme heat and power shortages. And we know that vulnerable residents are much less likely to participate in civic processes or see themselves reflected by government. While Toronto is already making exciting strides towards resilient neighbourhoods and infrastructure, more can be done towards realizing resilience across the city.

Toronto's Resilience Strategy builds on a wealth of existing and planned efforts to make Toronto more resilient. It delivers where there are gaps, brings a resilience lens to existing work, and intends to shape future plans coming to Toronto in the coming years.

This Strategy is meant to light a spark – to drive action at the City and from business, academia, non-profit organizations, and residents to build a city where everyone can thrive.

LETTERS OF SUPPORT



CITY MANAGER / Chris Murray

Toronto is Canada's leading economic engine and one of the world's most diverse and livable cities. As the fourth largest city in North America, Toronto is home to over 2.9 million residents whose diversity of backgrounds and experiences strengthen our great city. This number is going to increase substantially over the next 20 years as we continue to attract residents, businesses and top talent from around the world.

It is vital that Toronto continues to be a great place to live, work and play for current and future generations, and that we strive for greater resilience. Climate change poses a grave threat to all cities around the globe. Toronto is experiencing more frequent heatwaves, flooding, extreme cold, and other severe weather. Residents and businesses face sustained pressure from stresses such as affordability, congestion, and aging infrastructure. It is imperative we act now to prepare for and adapt to the changing climate.

Toronto's Resilience Strategy presents an approach to building a more resilient Toronto. It leverages our current strengths and existing initiatives to build resilience, such as the City's Tower Renewal Program, Poverty Reduction Strategy, and climate change mitigation strategy, TransformTO. It also identifies where improvements are needed, and proposes a number of actions to do so – such as improved resilience for vulnerable residents in aging apartment towers and low-rise housing. The Strategy will enable the City to better understand our enterprise risk and exposure and appropriately scope our responses through an integrated approach.

I would like to extend my thanks to everyone who has participated in the development of the Resilience Strategy. With the support of 100 Resilient Cities, pioneered by the Rockefeller Foundation, the City established a Resilience Office to undertake research and drafting of this Strategy. The Strategy is a culmination of extensive public engagement, collaboration of experts across City divisions, agencies and corporations as well as external partners and stakeholders, led by Toronto's Chief Resilience Officer, Elliott Cappell. The work undertaken by the Office produced not only this Strategy and renewed partnerships, but has also resulted in our public service being more knowledgeable about resilience and given us resources to support the ongoing application of a resilience perspective to our work.

Just as our city has an exciting future ahead of us, I am confident in our ability to identify and address the challenges facing Toronto. I look forward to continuing our discussions with other international cities on our common goals, leveraging each other's experiences and sharing our strategies. With the support from our network and partners, City Council, the public, and our excellent public service, I am confident we will make Toronto a more equitable, liveable, prosperous and resilient city.

Chris Murray

CHIEF RESILIENCE OFFICER / Elliott Cappell

I am incredibly excited and thankful to share Toronto's first Resilience Strategy with you. The Strategy is the result of an exciting collaboration that spans over 80 organizations, 8,000 Torontonians, and every neighbourhood in Toronto.

Cities around the world are engaging with resilience, ranging from racial equity in Boston, to migration in Byblos, to seismic risk in Wellington. In Toronto, we focused on the intersection of two of our biggest challenges: climate change and equity.

I grew up in Toronto, but the city today hardly resembles what I remember. The pace and scale of change in this city is unique: a 'hotter, wetter, wilder' climate; incredible growth and change in our built environment; and a globalized population where more than half of Torontonians were born outside of Canada. Toronto is growing unlike any other city in the world.

However, as the city grows, there are neighbourhoods and residents that are not benefitting enough. Toronto has more cranes in the sky than any city in North America, yet nearly one in five Torontonians lives in an aging apartment tower. Many neighbourhoods are booming, but more than half of the neighbourhoods in this city are now 'low-income'.

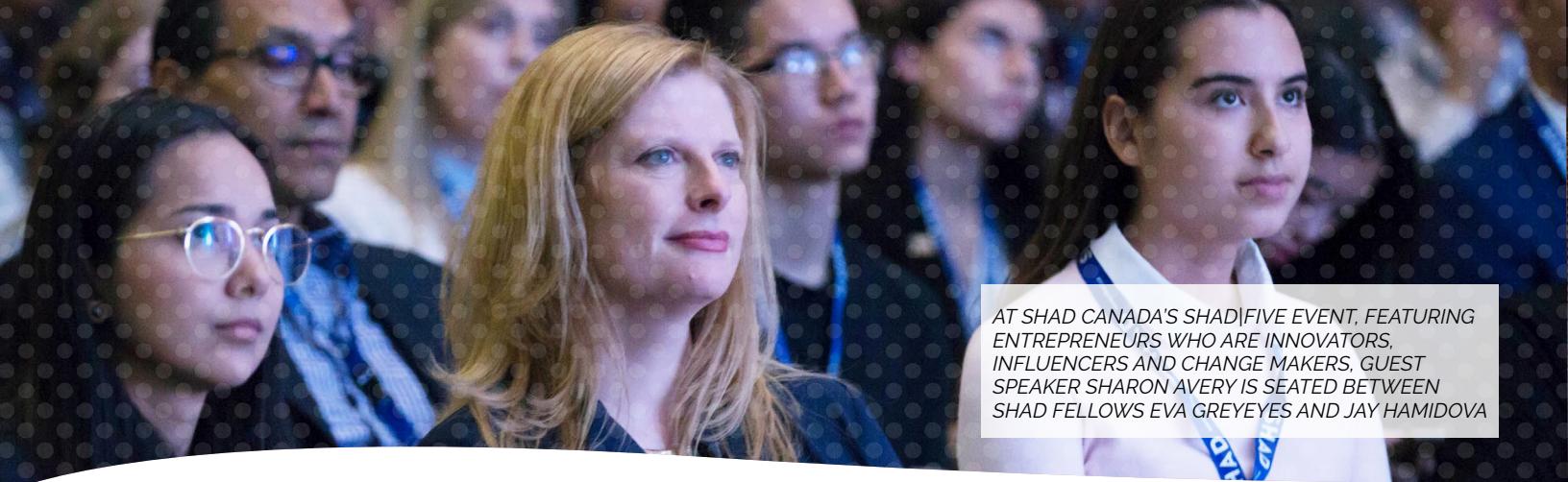
Our analysis shows there is a clear overlap between those who are not benefitting enough from growth and those who are vulnerable to the impacts of climate change.

The inherent connection between resilience and equity is fundamental to our Strategy.

Housing affordability was also an important part of many, if not most, of the conversations we had in developing this strategy. Affordability is a major issue undermining equity; and affordability is exacerbated when basements flood, or when heatwaves make apartments unliveable. That is why two of our four priority actions focus on housing.

Resilience is a process - you are never 'resilient enough'. This is not the City's first investment in resilience, but we called this Toronto's 'first' Resilience Strategy on purpose. As the city continues to change, learn, and grow, our resilience challenges will also change. From artificial intelligence to migration, the changing nature of work to an aging population, we need to keep investing in resilience; to continue participating in this process. I hope that beyond this first Strategy, the City and our partners will take up resilience and use it to continue building a Toronto where everyone can thrive.

Elliott Cappell



AT SHAD CANADA'S SHAD|FIVE EVENT, FEATURING ENTREPRENEURS WHO ARE INNOVATORS, INFLUENCERS AND CHANGE MAKERS, GUEST SPEAKER SHARON AVERY IS SEATED BETWEEN SHAD FELLOWS EVA GREYEYES AND JAY HAMIDOVA

HEAD OF STEERING COMMITTEE / Sharon Avery

As chair of the Resilience Steering Committee I have come to see that resilience is, without a doubt, our most powerful weapon against the chronic stresses we face here in Toronto - entrenched and growing poverty, the inequities that perpetuate it – and the acute shocks that exacerbate them. This past year, in particular, two events brought home the latter for us.

Working with the City on the #TorontoStrong effort this year was a wakeup call. When the van struck on Yonge Street we were not prepared. We did our best to support those most directly impacted as quickly and respectfully as we could. But we had no ability to reach beyond the immediate victims to meet the needs of bystanders and neighbours who were also deeply affected. Some of them had supports to help them deal with PTSD and other impacts. Others were left on their own with no roadmap or support system in place. The same was true for the Danforth shooting.

The second example, the 650 Parliament Street fire, reminded us how our most vulnerable are doubly victimized when accidents and extreme weather strike. We've asked ourselves since: What are the similarities and differences between our response to a mass act of violence and an accident or natural disaster? Why was there an outpouring of generosity following the van attack and the Danforth shooting but less so following the fire and the flood on Parliament Street?

I find myself with more questions these days than answers. But I am clear on two things. The work of the Resilience Office had a powerful impact on Toronto Foundation. It helped bring the weight of the global to our local work and it gave focus and new relationships to what we do in neighbourhood improvement areas across Toronto. What I am also sure of is that the City must continue the work it started on resilience.

The Resilience Strategy offers a central, linked up mechanism for the City and all its stakeholders to align in the face of our many challenges. The Rockefeller Foundation was prescient when it created this program and there is a growing community of interest and expertise on how to prepare the cities of the future to weather all that will come.

On behalf of all the members of the Resilience Steering Committee, I would like to encourage the City and our partners to take up the vision and actions in the Resilience Strategy. Excellent progress has been made in a very short time but there is much work still to be done to ensure that Toronto is equipped to withstand the inevitable and growing challenges we will face in the months and years to come.

Sharon Avery

GLOBAL CHIEF RESILIENCE OFFICERS, RESILIENCE PRACTITIONERS, AND 100 RESILIENT CITIES STAFF AT THE GLOBAL RESILIENCE SUMMIT IN 2017. PHOTO COURTESY OF THE ROCKEFELLER FOUNDATION



100 RESILIENT CITIES

On behalf of the 100 Resilient Cities (100RC) team, I want to congratulate Mayor Tory and the City of Toronto on the release of Toronto's Resilience Strategy - the first of its kind in the city. Toronto is an important and dynamic city, the largest in Canada and the 4th largest in North America. The city has been consistently recognized as one of the world's most livable cities, in part because of its vibrant arts and cultural scene, beautiful neighbourhoods, safe communities, stable economy, and presence of world-leading companies. People flock to Toronto from around the world bringing their talents, their traditions, and their dreams, and the city celebrates its vast array of cultures within its communities.

Like any major metropolis, Toronto faces significant social, cultural, environmental and economic challenges, despite its many strengths. The challenges themselves are complex and diverse, just like Torontonians. Equity, housing affordability, mobility and the effects of climate change were key themes brought forward through an extensive consultation process during the development of the Strategy. The City must act boldly and that's why the Strategy is such an important milestone for the City and for our partnership.

At the heart of Toronto's first Resilience Strategy is a vision of a more connected city, and central to that is the intersection of equity and climate action. Toronto has become a city divided among racial and socioeconomic lines, and barriers to opportunity persist. Toronto's first Resilience Strategy boldly prioritizes vulnerable populations, as they are disproportionately impacted by the

shocks and stresses the city faces, including those related to climate change.

Through the Strategy, Toronto has brought forward exciting resilience initiatives. This includes a program to develop 10 Neighbourhood Resilience hubs across the city through a partnership with local Millennial and Gen-X philanthropists. New hazard mitigation planning, specifically for flood and extreme heat, will focus on reducing the impacts of future disasters while prioritizing vulnerable communities. The Vertical Resilience project enables wide scale deep retrofits of apartment towers to help a large population of Torontonians build resilience - an ambitious undertaking that will require forward thinking and creative partnerships.

The strength of Toronto's first Resilience Strategy comes from the voices of the thousands of people who worked collaboratively and brought their personal stories to identify the city's vulnerabilities, and to propose ambitious but practical actions. By taking thoughtful and bold actions today that address its chronic stresses and future shocks, Toronto will remain a global leader in city building, and thrive in the face of its resilience challenges.

While this strategy is a major milestone, the real work of implementing its actions begins today. 100RC commends the City of Toronto for bringing this strategy to fruition and embedding the principles of urban resilience into the fabric of the city. We are very honoured to have been a part of Toronto's resilience journey.

Michael Berkowitz
President, 100 Resilient Cities

Toronto's Resilience Context

Home to a diverse population of more than 2.9 million people, Toronto is Canada's most populous city and the fourth largest in North America. It is a global centre for business, finance, arts, and culture, and is consistently ranked as one of the world's most livable cities. For thousands of years before colonization, it was a place where many Indigenous communities would meet to trade, exchange ideas, and solve resilience challenges; today, Toronto continues to be a place for creating innovative solutions to resilience challenges.

However, Toronto has experienced a surge of growth over the past 20 years which has brought new opportunities and challenges. Through extensive public and stakeholder engagement, Torontonians identified six top resilience challenges facing the city, and proposed 'where we want to be' to overcome these challenges:



EQUITY

People have access to the things they need to thrive.



CLIMATE AND ENVIRONMENT

Coordinated large scale climate mitigation and adaptation efforts.



CIVIC ENGAGEMENT

Everyone is engaged in decision making, and we have a high level of trust in government.



COMMUNITIES AND NEIGHBOURHOODS

Silos are broken down and we work together to solve problems locally.



HOUSING

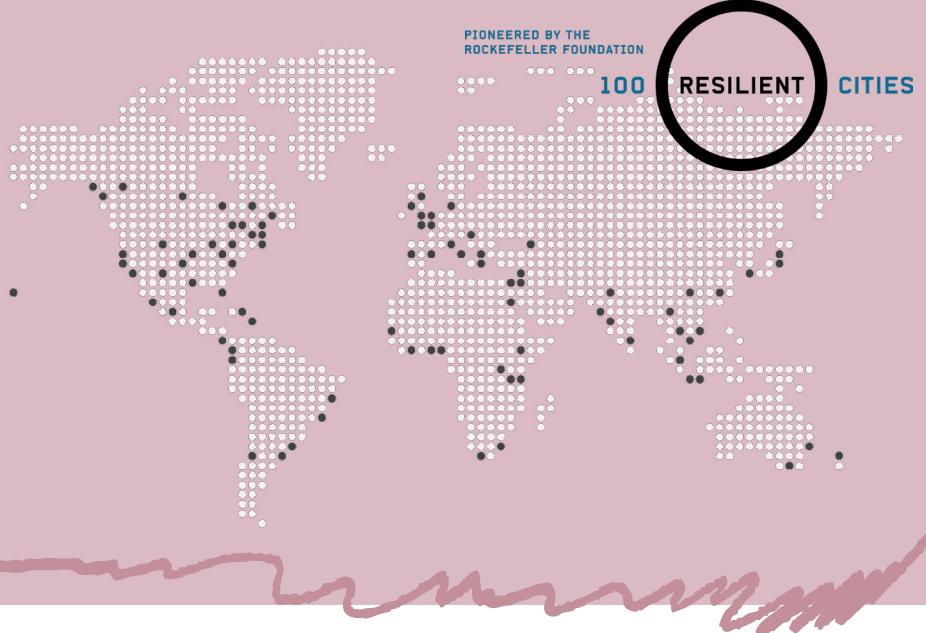
Diverse housing solutions ensure broad housing affordability.



MOBILITY

We have multiple reliable, affordable, accessible, and safe mobility options.

The development of this Strategy was supported by 100 Resilient Cities, pioneered by the Rockefeller Foundation. 100 Resilient Cities is a global network of cities that supports a view of resilience that includes not just the shocks — earthquakes, fires, floods, etc. — but also the stresses that weaken the fabric of a city on a day-to-day or cyclical basis. Supporting cities in 47 countries, 100RC has worked with the City of Toronto to leverage the resources and best practices of the network. Over the coming years, there are opportunities to further strengthen this relationship during the implementation of this Strategy.



Here's how the Strategy is organized:

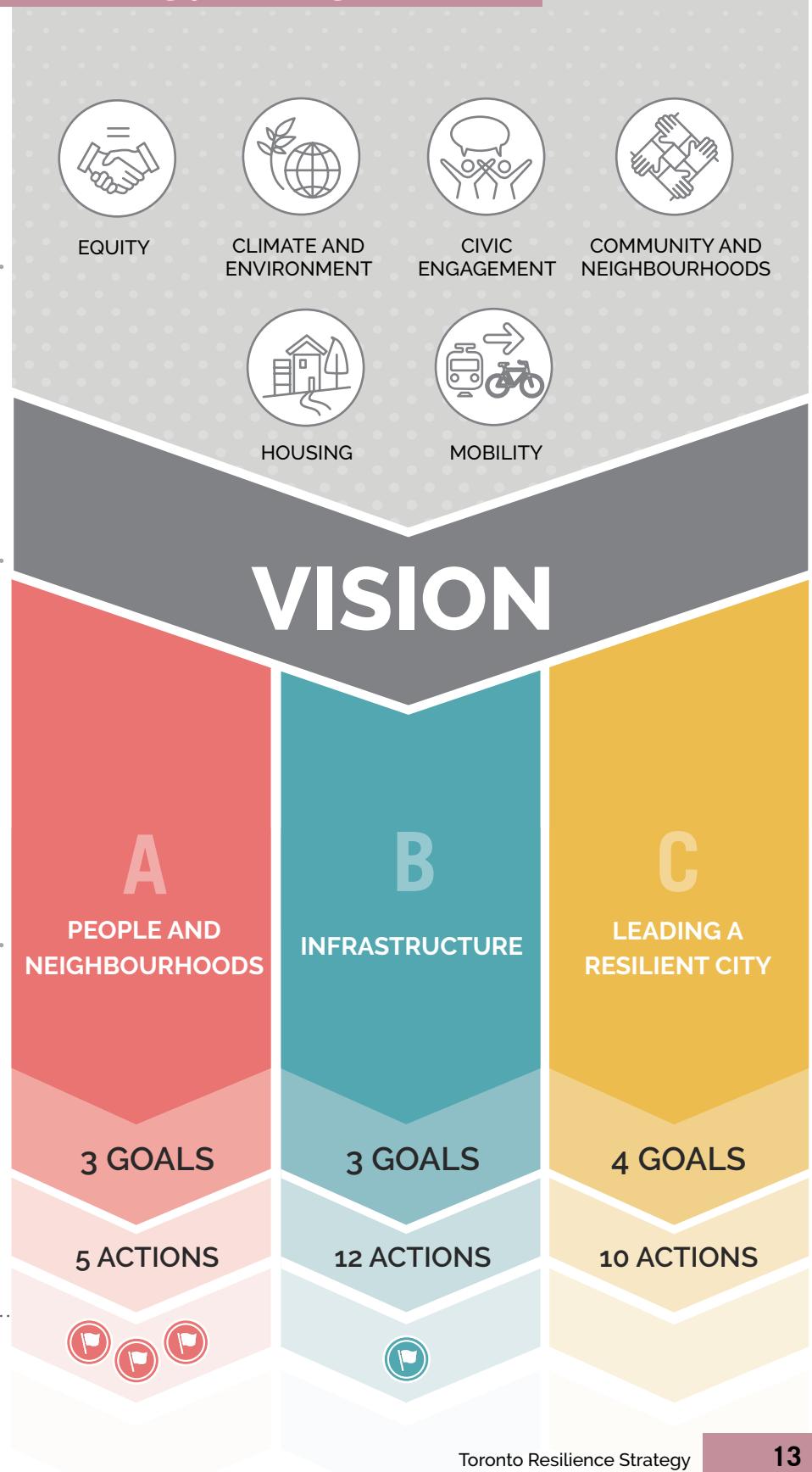
Resilience challenges describe Toronto's resilience context

The community-led vision articulates our aspirations for a resilient Toronto

The Strategy is organized into three focus areas to achieve our vision



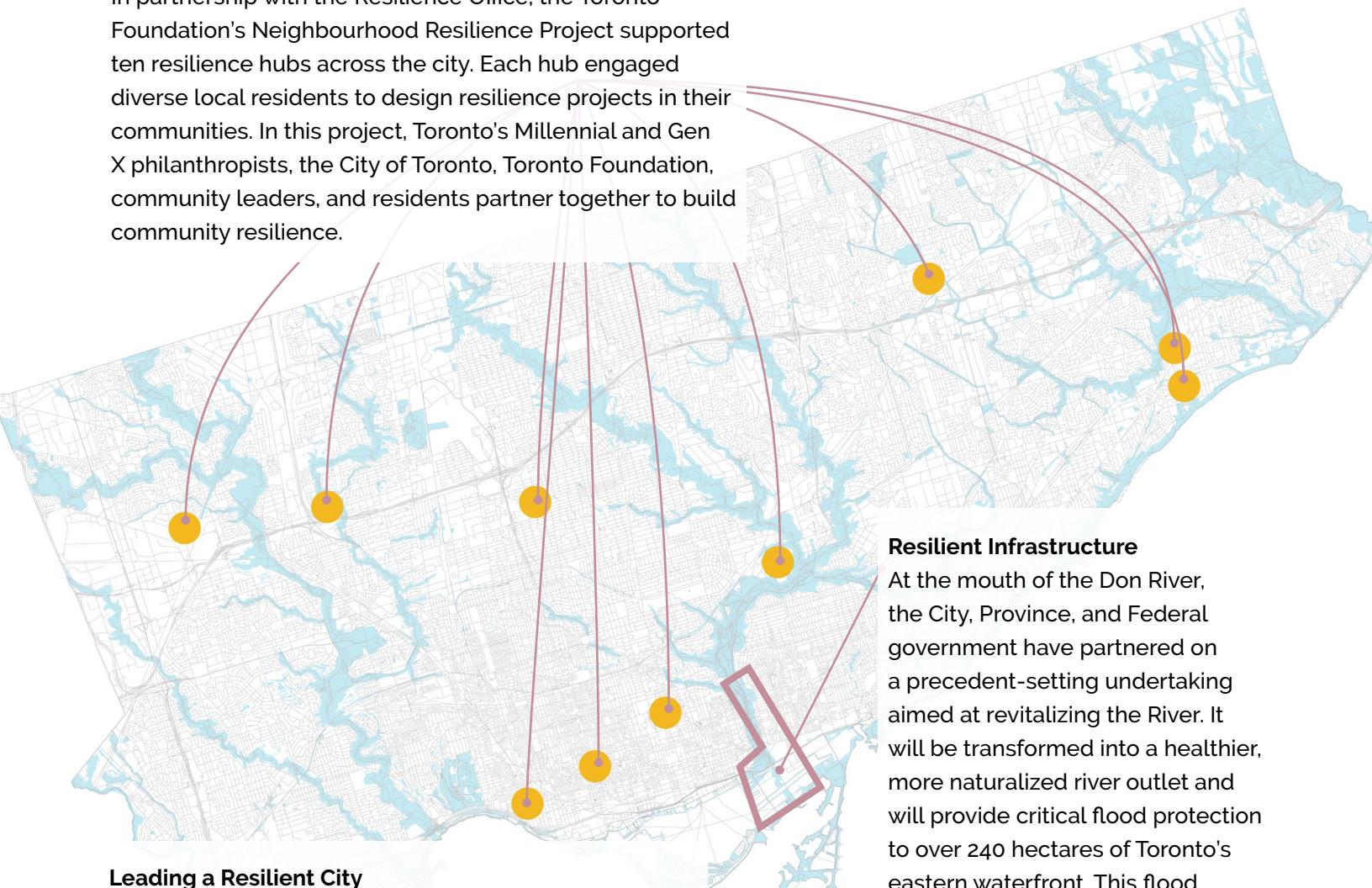
including 3 priority actions in Focus Area A, and 1 priority action in Focus Area B



Toronto is home to some of the most exciting resilience-building initiatives in the world, including:

Resilient People and Neighbourhoods

In partnership with the Resilience Office, the Toronto Foundation's Neighbourhood Resilience Project supported ten resilience hubs across the city. Each hub engaged diverse local residents to design resilience projects in their communities. In this project, Toronto's Millennial and Gen X philanthropists, the City of Toronto, Toronto Foundation, community leaders, and residents partner together to build community resilience.



Leading a Resilient City

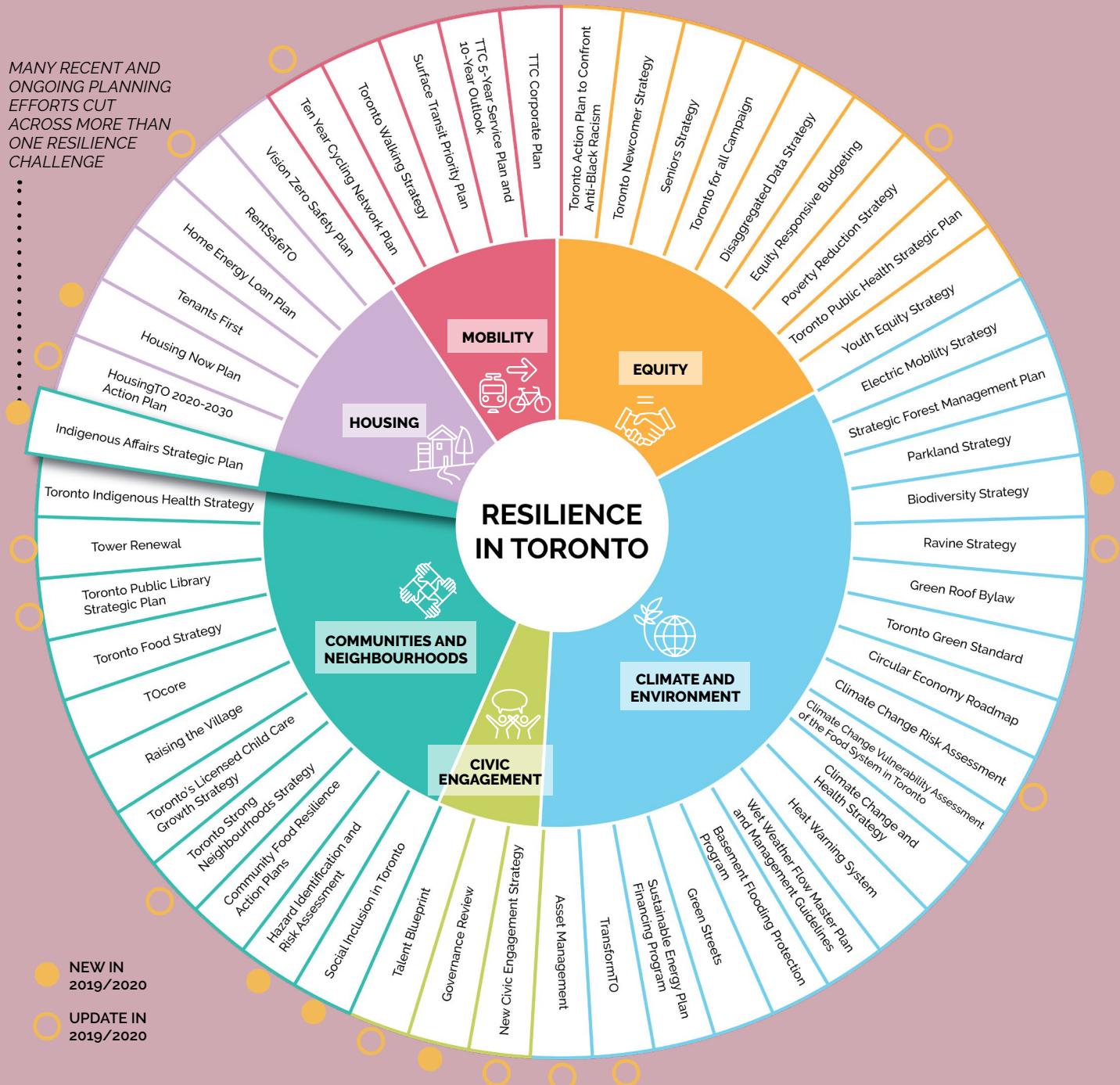
The City of Toronto's online Equity Lens tool guides staff through an equity analysis to identify and address barriers that may be experienced by equity-seeking communities and Indigenous peoples in accessing City services. The Lens can provide valuable information at any stage in the process and can be used by individual employees or incorporated into team meetings or brainstorming sessions.

Resilient Infrastructure

At the mouth of the Don River, the City, Province, and Federal government have partnered on a precedent-setting undertaking aimed at revitalizing the River. It will be transformed into a healthier, more naturalized river outlet and will provide critical flood protection to over 240 hectares of Toronto's eastern waterfront. This flood protection project also supports wider revitalization of the Portlands, such as the development of the climate-positive Villiers Island and flood protection of the future East Harbour neighbourhood.

Building on Toronto's momentum

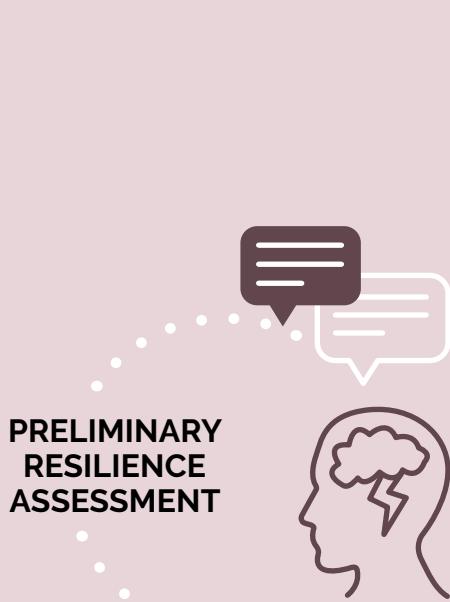
The City, residents, communities, industry, academia, and other partners are also taking action to make Toronto a more resilient city. At the City of Toronto alone, there are at least 50 major plans being delivered that advance the vision of a more Resilient Toronto:



An inclusive, city-wide, and international process

Building the Resilience Strategy was a collective effort over a two year process. We've engaged over 8,000 Torontonians in conversations about resilience, whether in person, over the phone, on social media, at City Hall, in libraries, in parks, or in people's homes. We also leveraged experience from cities around the world, including Sydney, Rotterdam, Milan, Boston, and Los Angeles, plus our Canadian peers Montreal, Calgary, and Vancouver.

JUNE – DECEMBER 2017



220+ WORKSHOP PARTICIPANTS
400+ ONLINE SURVEY RESPONSES

SHOCKS AND STRESSES

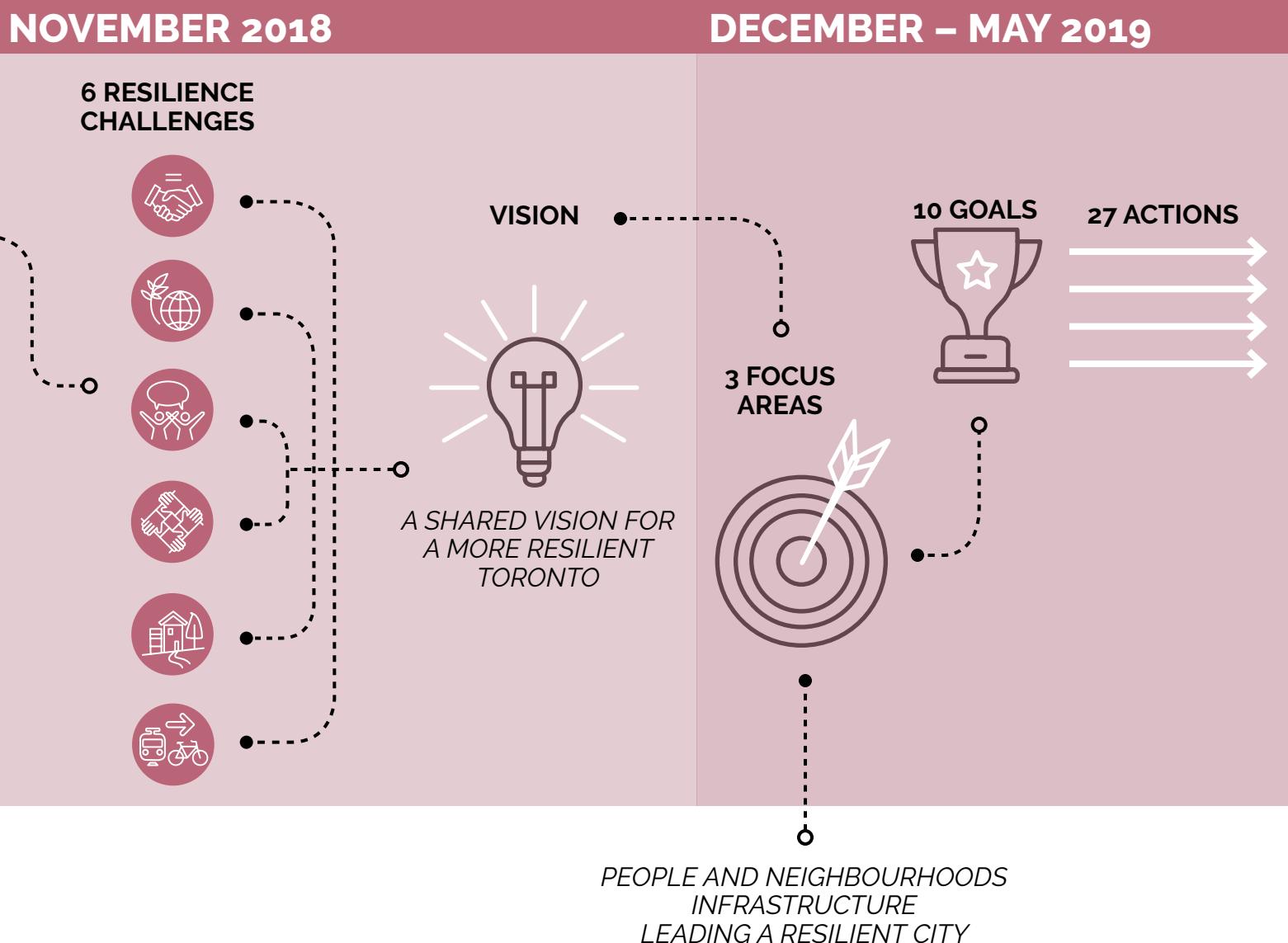


JANUARY –

16 THEMES

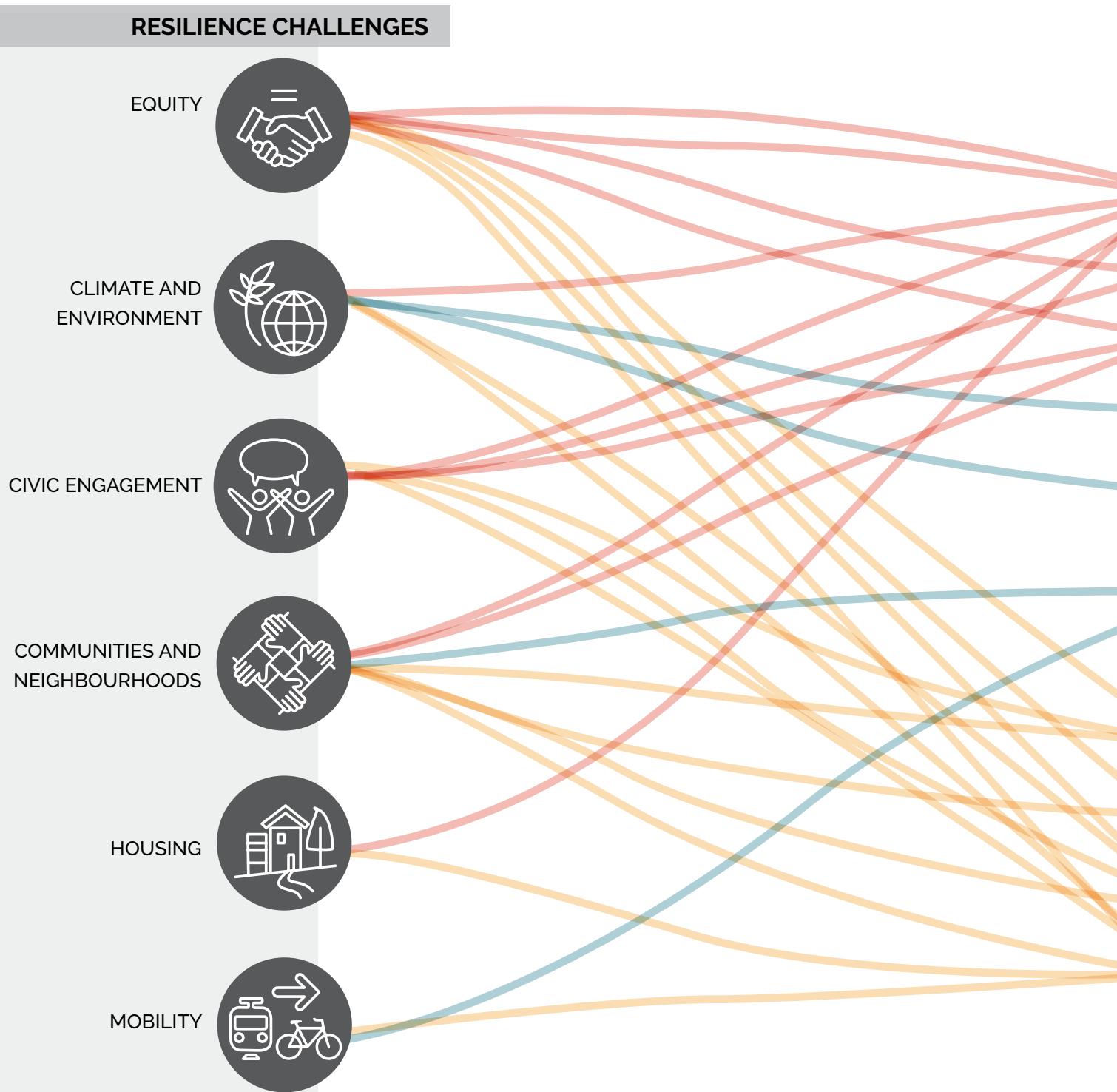
155 ISSUES

400+ WORKSHOP PARTICIPANTS
200+ SHORT STORIES
500+ SURVEY RESPONSES
6,000+ TELEPHONE TOWN HALL PARTICIPANTS



A strategy in three focus areas

The Resilience Strategy is organized into three focus areas, with goals that directly address Toronto's resilience challenges and achieve the vision. The diagram below shows the interconnections between our focus areas, goals, and resilience challenges.



GOALS	FOCUS AREAS
<ul style="list-style-type: none"> 1. Toronto has resilient, safe, affordable homes 2. Communities take action to improve resilience in their neighbourhoods 3. Poverty is eliminated and equity is improved 	A
<ul style="list-style-type: none"> 1. Toronto is more resilient to climate change, including the hazards of flooding and heat 2. Infrastructure and buildings are resilient to a changing climate and reduce greenhouse gas emissions 3. Toronto has multiple reliable, affordable, and safe mobility options that reduce the amount of time it takes to get around 	B
<ul style="list-style-type: none"> 1. Civic engagement and trust in the City improve, and leadership better reflects Toronto's diversity 2. The City prioritizes the most vulnerable people and highest risk in decision-making 3. Indigenous communities have a leadership role in building resilience 4. Institutionalize resilience into the City's decision-making and take leadership on resilience 	C

02

WHAT IS RESILIENCE?

Urban resilience is the capacity of individuals, communities, institutions, and systems within a city to survive, adapt, and thrive in the face of the chronic stresses and acute shocks they experience.

What is a shock?

A shock is a sudden sharp event that threatens the immediate well-being of a city. In Toronto, we face potential shocks due to flash storms that lead to flooding, heatwaves, blizzards and cold snaps, and power outages.

What is a stress?

A stress is chronic, meaning it plays itself out day after day. Stresses can weaken the fabric of our city, and impact our ability to bounce back in response to a shock. In Toronto, these stresses include growing economic inequality among residents, a worsening housing crisis, difficulty getting around, and ageing infrastructure.

ENJOYING EDWARDS GARDENS,
PHOTO BY JAMIE LYNCH, SUBMITTED
TO THE SNAP & SHARE PHOTO
CONTEST, 2014

TO SURVIVE,

we need to help residents, communities, households, businesses, and the City prepare to bounce back from unexpected shocks, which can stretch emergency services and leave lasting impacts on those affected. Further, we know that income, mobility, age, disability, location, and English-language skills play a central role in determining how people prepare for, are affected by, and bounce back from shocks, so we need to prioritize preparing our most vulnerable residents.

TO THRIVE,

we need to ensure that all Torontonians can benefit equally from a more resilient and prosperous future. The ability to thrive is rooted in the opportunity for residents and communities to all start from the same place. Growing economic divides across our neighbourhoods erode our social cohesion in ways that will become harder and harder to overcome in a climate changed world. To thrive, we need to confront our uncomfortable histories and promote prosperity through new relationships with neighbourhoods and residents that often find themselves outside of the decision-making process.

TO ADAPT,

we need to adjust city-wide practices to prepare for the challenges of the 21st century, including a changing climate and a rapidly-growing city that has become more unequal over time. We need to adapt in ways that put the needs of the most vulnerable members of our society first, because they are usually affected the most by both shocks and stresses.

Building resilience is about transforming the fabric of our city so that we can all work together to meet the challenges of the 21st century and share in a more prosperous future for everyone.

Equity and Resilience

Advancing equity is a core component of building resilience. The ability of a city to survive and thrive in the face of challenges is as much about the strength of its communities and neighbourhoods as it is about the design and management of its infrastructure and buildings.

Equity is distributing opportunities and resources by accommodating different needs and removing barriers in order to level out unfair and unjust outcomes so that all individuals can benefit. Advancing equity is a core component of building resilience. The ability of a city to survive and thrive in the face of challenges is as much about the strength of its communities and neighbourhoods as it is about the design and management of its infrastructure and buildings.

Equity was also, by far, the top theme that emerged from engagement with residents, who shared that things like a lack of affordable and stable housing, a lack of reliable transit, concern about community safety and loss of life, and discrimination in finding employment, all impact their ability to be resilient.

Equity, vulnerability, risk and resilience.

On the afternoon of August 21, 2018, a catastrophic failure in the building's electrical system ignited a fire inside 650 Parliament Street, an ageing apartment tower in Toronto's downtown St Jamestown neighbourhood. The fire grew quickly in intensity, sending thick clouds of smoke throughout the building, forcing it to be evacuated.

Though firefighters were able to get the fire under control without any loss of life, all of the building's approximately 1,500 residents were told they could not come back – for months. Many of the residents of 650 Parliament, like Sameia Bashir (read more about Sameia on page 27), were relative newcomers to Canada, living on low incomes, and without a dense network of family and friends to rely on in their time of need. Many were refugees, still experiencing the trauma that brought them to Canada, and now newly traumatized and scared. For months, hundreds of these displaced residents bounced around from hotel room to hotel room, feeling stressed and paying out of their own pockets for expenses that many could not afford, despite support from the City and community organizations.



I think resilience is definitely a social justice issue. Some communities are at greater risk than others, so it's harder to be as resilient. Personally [through] my photography, I think seeing the city react to trauma, whether other problems or resilience related, definitely has changed how I ... see the people who live in it.

– MARIA RIO, TORONTO-BASED STREET PHOTOGRAPHER

This story helps illustrate the strong link between equity and resilience. 40% of families living in towers are low income. Apartment buildings are also home to many newcomers and seniors. These groups may be more heavily impacted by shocks because they may not have the resources to pay for a hotel room or a social network of family and friends with an extra room. People living in apartment towers are also often more exposed to shocks. Apartment buildings that are poorly maintained are at greater risk of failure,

and even the best-maintained buildings may be at risk from shocks, like storms or other extreme weather, since people in towers cannot always easily exit the building and many do not have back-up power that allows residents to shelter in place (learn more about towers and resilience on page 75).

Inequities increase both the way a person is impacted by a shock, and a person's exposure to a shock.

Not all communities will be affected equally by climate change. Equity-seeking groups face an unequal distribution of opportunities and resources, and therefore face greater challenges preparing for, responding to, and recovering from climate shocks and stresses.

The City recognizes the following equity-seeking groups:

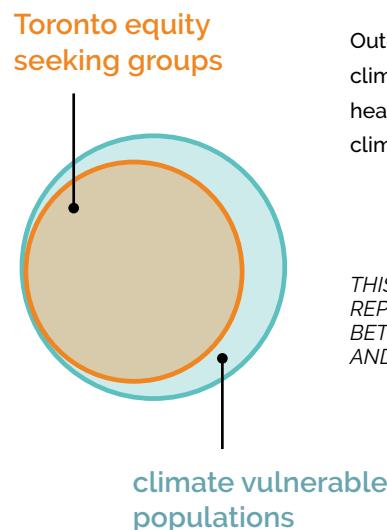
- Immigrants & refugees
- Persons with disabilities
- Persons with low income
- Racialized groups
- Lesbian, gay, bisexual, trans, queer & Two-Spirit (LGBTQ2S) communities
- Undocumented individuals
- Vulnerable seniors
- Vulnerable youth
- Women

The City recognizes other groups that face inequities:

- Indigenous peoples*
- Victims of violence
- Persons who are homeless or under-housed
- Residents in Neighbourhood Improvement Areas

There are also groups that are not always equity-seeking groups, but are more vulnerable to climate change, according to academic literature:

Outdoor workers are more exposed to climate change. People with pre-existing health conditions are more sensitive to climate change.



THIS DIAGRAM IS A SIMPLIFIED REPRESENTATION OF THE OVERLAP BETWEEN EQUITY-SEEKING GROUPS AND CLIMATE VULNERABLE GROUPS

*While Indigenous peoples in Toronto face inequities, they are not listed as an equity-seeking group. Indigenous peoples are the original inhabitants of what is today Toronto, and have a special status recognized under section 35 of the Constitution. Many believe that Indigenous peoples do not seek equity but rather reconciliation and a restoration of the health, wellness, self-determination and sovereignty, which were eroded through historical and ongoing colonization.

There are many other examples. Black Torontonians, for instance, are more likely to commute using public transit and have longer commute times than average (learn more on pages 62-63), and so are more likely to be impacted by a disruption in the transit system. Indigenous people are overrepresented in the homeless population that sleep outdoors, and so are more vulnerable to heat waves and extreme cold weather (learn more on page 55).

Resilience takes into account both risk (exposure or likelihood of experiencing a shock or a stress) and vulnerability (how you are impacted by a shock or a stress).

See pages 52-53 for more detail on equity in Toronto.

Inequity impacts the entire city's resilience.

Inequity impacts the entire city's resilience. When certain groups are at higher risk to shocks and stresses or are more vulnerable, the entire system is stressed because those groups experience more shocks and stresses, and experience them with greater intensity. Deep inequities polarize a city, making residents more segregated, less trusting of each other and of government, and less able to agree on solutions to the biggest challenges.

A resilient city prioritizes equity: "All my relations" thinking

It makes sense to prioritize resources and preventative action for communities that are the most vulnerable and at highest risk in resilience-building efforts.

A focus on equity is aligned with an "all my relations" Indigenous worldview. While different Indigenous communities have diverse sets of knowledge, many local Indigenous communities and communities across Canada share a teaching that could be translated in English as "all my relations". According to Thomas King, 'all my relations' "reminds us of the extended relationship we share with all human beings*. But the relationships go further, the web of kinship to animals, to the birds, to the fish, to the plants, to all the animate and inanimate forms that can be seen or imagined. More than that, "all my relations" is an encouragement for us to accept the responsibilities we have within the universal family by living our lives in a harmonious and moral manner". The Resilience Strategy's focus on equity is guided by the "all my relations" teaching.

In practice, the link between resilience and equity means the City should:

- Provide support and enable communities facing inequities to take resilience action;
- Work hard to include the voices of equity-seeking and other vulnerable groups in decision making, and ask on an ongoing basis 'who is missing from the room?';
- Design policies and programs to address the needs of those most vulnerable to and at risk of shocks and stresses; and
- Prioritize measuring the impacts of programs on equity-seeking groups during program evaluations

*FROM "ALL MY RELATIONS: AN ANTHOLOGY OF CONTEMPORARY CANADIAN NATIVE PROSE" BY THOMAS KING (1990)



OCASI
Ontario Council of Agencies Serving Immigrants



MY GENDER LIVES HERE.



My body does not define my gender.

NOT HERE.

Images from the

Toronto For All
Campaign

LEARN MORE AT WWW.TORONTOFORALL.CA



Homeless men
need shelters.

I need those
shelters built
somewhere
else.



Which
Toronto
do we want
to be?

I ACKNOWLEDGE

the land I am standing on today is the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples and is now home to many diverse First Nations, Inuit and Métis peoples. I also acknowledge that Toronto is covered by Treaty 13 signed with the Mississaugas of the Credit, and the Williams Treaty signed with multiple Mississaugas and Chippewa bands.



Tkaronto is built on sacred land that is part of an agreement between Indigenous peoples and then extended to allied nations to peacefully and respectfully care for it. By personally making a land acknowledgement you are taking part in an act of reconciliation, honouring the land and Indigenous heritage, which dates back over 10,000 years.



TorontoForAll.ca



GO BACK
TO WHERE YOU
CAME FROM.

WHERE,
NORTH YORK?



MUSLIMS ARE
PART OF TORONTO.

OCASI
Ontario Council of Agencies Serving Immigrants



Toronto Resilience Strategy



TorontoForAll.ca #TorontoForAll



Resilient Stories

To learn more about resilience, we asked Torontonians to share their lived experiences through stories.

Our Resilient Stories campaign was at the heart of the entire process to develop the Strategy. It included a campaign to collect people's stories online, on postcards, through conversations with communities, and through the development of short films, for which we provided a small number of micro-grants. By asking people to share their stories, we recognized that complex resilience challenges can ultimately be boiled down to simple everyday experiences.

For example, a lack of access to housing may be described through residents' stories of spending years on an affordable housing waitlist. Creeping poverty and inequality may be described through stories about the lack of access to affordable, healthy foods. Ice storms and heatwaves may be described in stories about coping mechanisms for long stretches without power.

These everyday experiences helped us gain insight into the big city-wide challenges that this Strategy aims to tackle.

Video Campaign

We used videos to shed some light on how Torontonians from different walks of life and different communities experience resilience in their everyday lives. This included seven community-produced films, financed through micro-grants provided by the Resilience Office and showcased on page 27.

All films can be accessed on Youtube through our website at toronto.ca/resilience.



Resilience Is

This film, produced by the Resilience Office, tells the story of MJKO, an organization that works with youth in Parkdale to build resilience through sport.



Resilient People: Joe, Husam & Keosha

This series of resilient stories is the work of filmmaker Mike Regis, who won an Artsworks Grant that supports youth employed in Communications. It features three Torontonians from diverse backgrounds sharing their stories of resilience.





Resilient People: Mihret

This Resilient Story comes from Silent Voice, a Toronto-based organization that offers community and family-based support to Deaf children and adults in American Sign Language. The film tells the story of Mihret, a deaf refugee from Eritrea, and how Silent Voice helped her and her family to build their resilience.

Resilient People: Nellys

This Resilient Story comes from the folks at the Mennonite New Life Centre, and features Nellys Garcia, an artist who came to Toronto from Venezuela. In it, Nellys talks of the challenges of being a newcomer in Toronto.



Lotherton Village in 2018

Resilient Communities: Lotherton

This Resilient Story comes from the folks at Village Bloggurls, a weekly girls' leadership and media production/literacy program housed at the North York Community House in Lotherton, a private development near Lawrence Heights. The film explores the resilience challenges and opportunities faced by the residents of this low-income community.



Sameia Bashir
Member, Community Resilience to Extreme Weather (CREW)

At around 12 or 1 o'clock

Resilient Communities: St. Jamestown

This Resilient Story comes from local filmmaker Gregory Greene and the folks at CREW (Community Resilience to Extreme Weather). It follows some of the people affected by this summer's fire at 650 Parliament Street as they struggle to bounce back from that significant shock, and outlines how CREW is helping.

Resilient Organizations: Davenport-Perth & Second Harvest

This Resilient Story comes from the folks at the Davenport-Perth Community Health Centre and follows the volunteers who make their Community Dining Program - a partnership with Second Harvest - possible. Through the program, the Centre provides free nutritious meals to one hundred or more members of the community.



Building resilience through food security: Scadding Court

This film features a series of short conversations with friends and staff of the Scadding Court Community Centre, as they discuss the meaning of resilience and the importance of more resilient food systems.

#MyResilientStory Postcard Campaign

The postcard campaign was another way we collected peoples' stories of resilience, which yielded more than 200 responses from Torontonians from all walks of life. Here are two of the Resilient Story postcards:

 LIBRARY

About me

I am...

Under 18 18-30 31-40
 41-50 51-60 Over 60

The gender I identify with is...
female

The ethnicity I identify as is:
White - European

The Toronto neighbourhood I live in is...
Ehch Don Mills Rd / North York

ResilientTO:
Toronto's Resilience Strategy

My #ResilientStory

Understanding how Torontonians experience resilience is an important step towards creating a Resilience Strategy that improves everyone's quality of life. What kinds of shocks and stresses do you experience or have experienced in your everyday life? What about your community? What resources/assets or networks do you draw on to help you cope with these challenges? What can the City do to better support you?

I survived being evicted from my home of 25 years with support of family, friends & church members.

 TORONTO

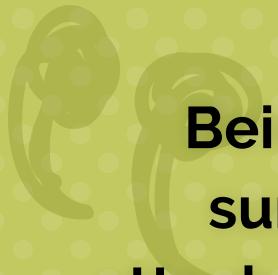
Neighbourhood Resilience

Torontonians experience resilience is an important step towards creating a Resilience Strategy that improves everyone's quality of life. What kinds of shocks and stresses do you experience or have experienced in your everyday life? What about your community? What resources/assets or networks do you draw on to help you cope with these challenges? What can the City do to better support you?

About one year ago, there was a shooting in our neighbourhood. Some one was shot inside of my FAVOURITE PIZZA store. The community came together and looked out for everyone and kept them updated. The community came together and donated money to the pizza store and

ResilientTO:
Toronto's Resilience Strategy

the family of the victim so that they could overcome this unfortunate situation.



Being black is a struggle on a day to day to survive because there is so much stigma attached to the colour of your skin and living in a neighbourhood that has been labeled as a high risk neighborhood for things such as gun violence and poverty. As a mother of black children, it is something that I have to live with every day knowing that my kids are been stigmatized by police, the very people that should be protecting them, abusing them because they have power, knowing that they will get away with it because they are in control and the system will back them.

- KINGSTON-GALLOWAY-ORTON PARK RESIDENT

A Global Resilience Movement

With the development of its first ever Resilience Strategy, Toronto joins a community of cities spanning the globe that are putting resilience at the centre of their efforts to plan for the physical, social, and economic challenges of the 21st century. Established in 2013 by the Rockefeller Foundation, 100 Resilient Cities (100RC) supports a view of resilience that includes not just the shocks – like heatwaves, floods, and power outages – but also the stresses that weaken the fabric of a city on a day-to-day basis.

Since 2013, the 100RC network grew to span 97 cities in over 50 countries, across 6 continents and 21 languages. By joining the global network, Toronto gained access to an active community of practice that included over 17,000 members, allowing the city to move to the forefront of a movement that will come to define the 21st century. The network has enabled cities to leverage more than \$4.5 billion in new funding from the public, private, and not-for-profit sectors and successfully catalyzed culture change in local governance.

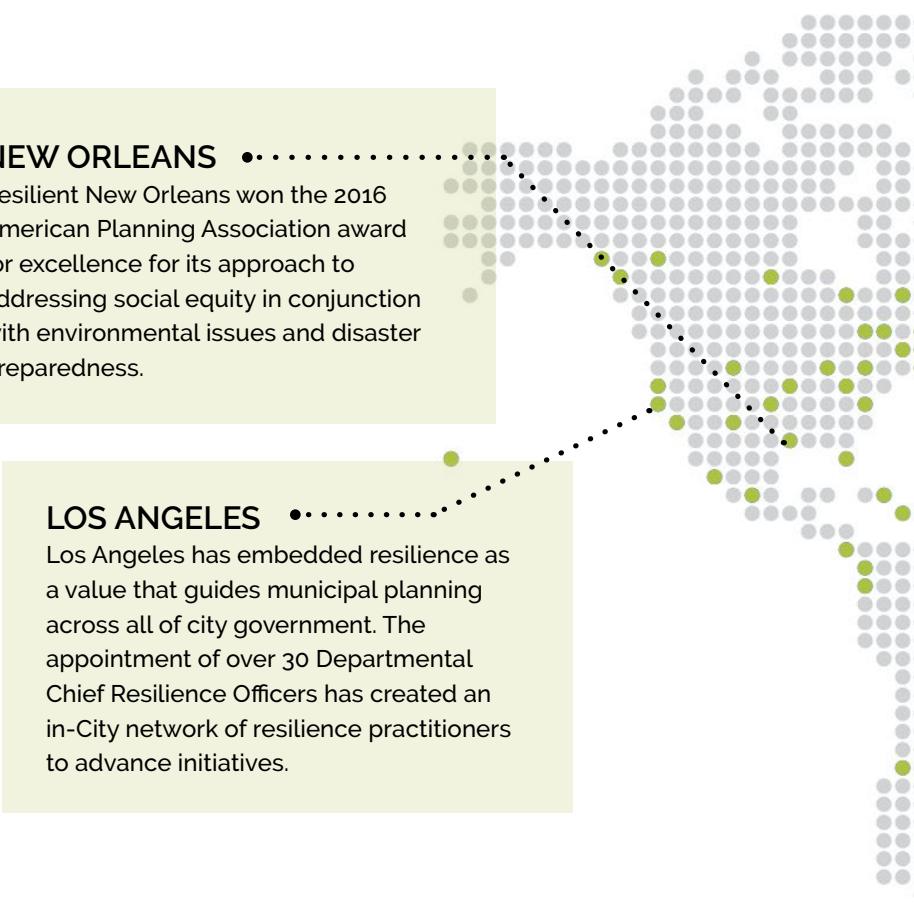


NEW ORLEANS

Resilient New Orleans won the 2016 American Planning Association award for excellence for its approach to addressing social equity in conjunction with environmental issues and disaster preparedness.

LOS ANGELES

Los Angeles has embedded resilience as a value that guides municipal planning across all of city government. The appointment of over 30 Departmental Chief Resilience Officers has created an in-City network of resilience practitioners to advance initiatives.



Toronto joined the 100RC network in 2016, and through its participation is committed to demonstrating global leadership in resilience while responding to the conditions that make Toronto unique. Here are some of the more notable initiatives to come out of the 100RC network:

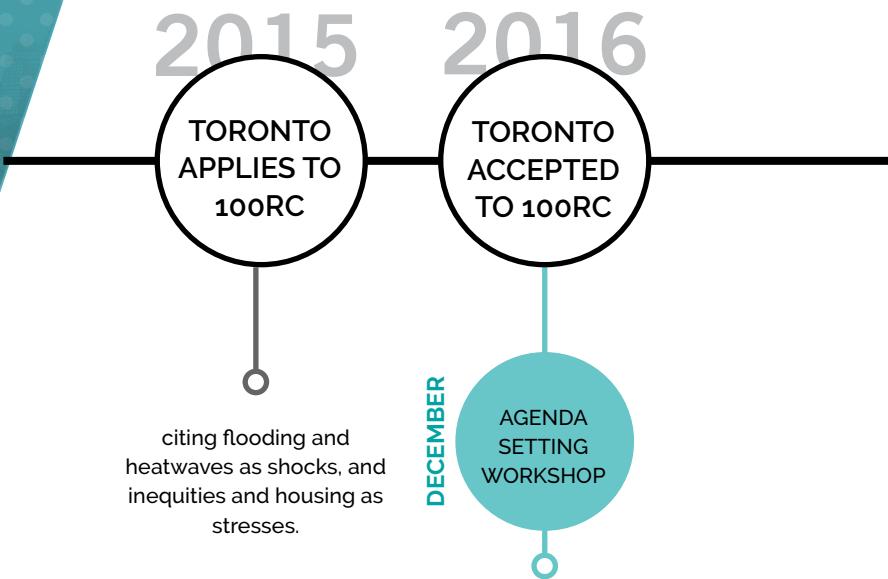


03 STRATEGY PROCESS



VISION AND PRINCIPLES
WORKSHOP, SEPTEMBER 2018

THE AGENDA SETTING WORKSHOP
WAS HELD IN DECEMBER 2016
AND WAS ATTENDED BY 120+
SENIOR CITY STAFF AND OTHER
STAKEHOLDERS, INCLUDING MAYOR
JOHN TORY.



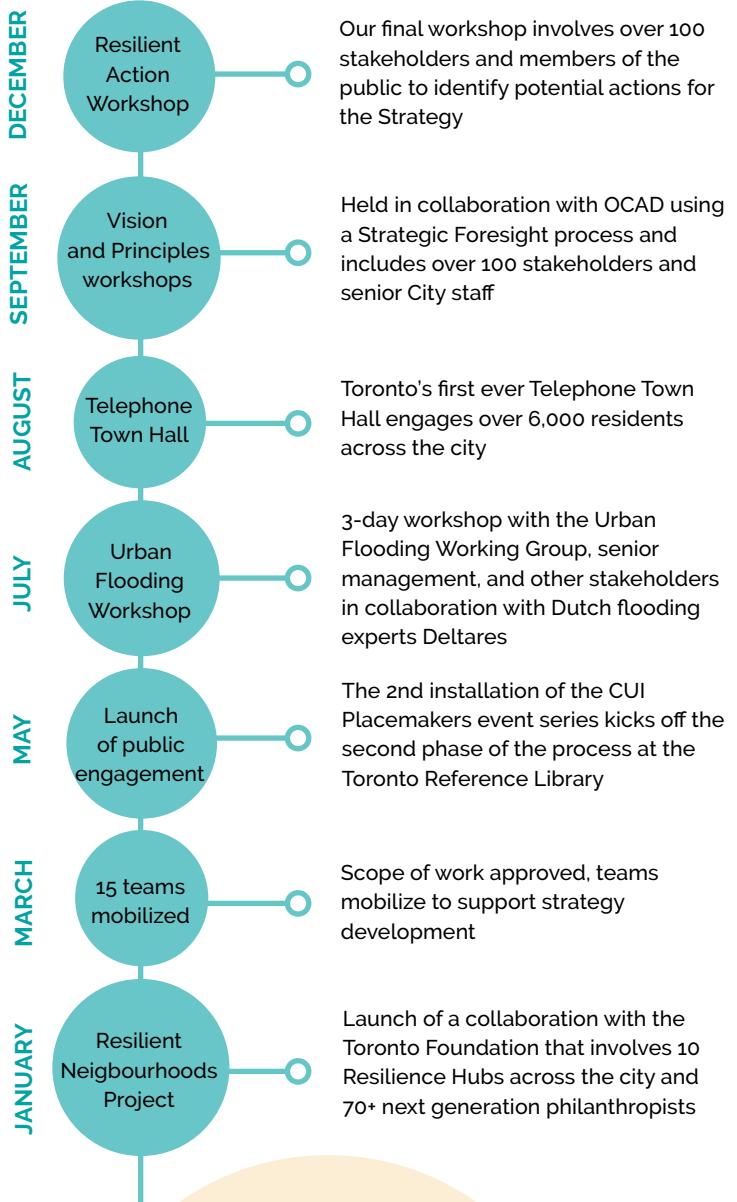
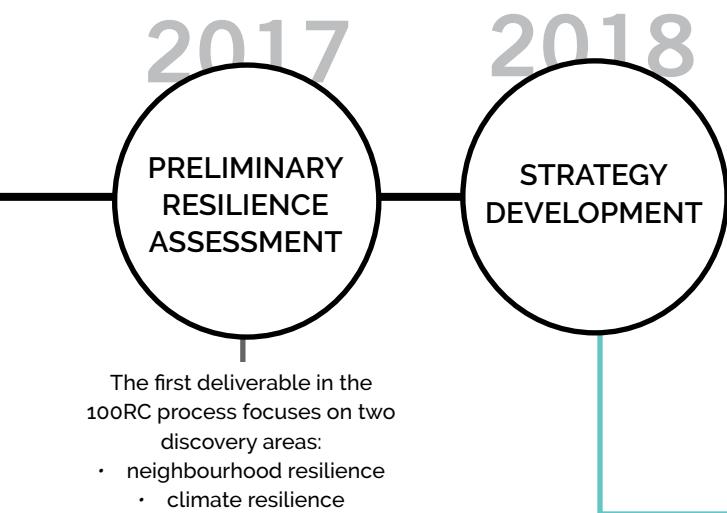
which highlights:

- equity, climate change, transit, and housing are top of mind concerns for participants;
- Toronto's strategy needs to be informed by lived experience and integrate the voices and perspectives of diverse stakeholders; and
- there is need for greater integration and collaboration between and across all sectors that typically operate in silos.





VISION AND PRINCIPLES
WORKSHOP, SEPTEMBER 2018



THE KICKOFF TO OUR SECOND PHASE OF WORK WAS HELD IN COLLABORATION WITH THE CANADIAN URBAN INSTITUTE AND THE TORONTO PUBLIC LIBRARY AND HIGHLIGHTED STORIES OF RESILIENCE, DECEMBER 2018



Resilience in Action

Toronto's Resilience Strategy builds on a wealth of existing and planned efforts to make Toronto's people and neighbourhoods, built environment, and decision-making processes more resilient. These are some of the City's existing resilience strategies and programs. While most tackle many of Toronto's resilience challenges, each one is associated with the challenge on which it has the biggest impact. The Resilience Strategy delivers where there are gaps in these plans, brings a resilience lens to some of the existing work, and intends to shape future plans coming to Toronto in the coming years.



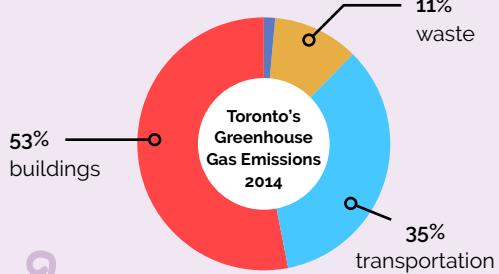
TO Prosperity: Toronto Poverty Reduction Strategy

TO Prosperity is a concrete, 20-year plan that was unanimously approved by City Council in 2015 to make Toronto a city with opportunities for all by 2035. Like the Resilience Strategy, it identifies worrying trends that show that income disparities have grown significantly over the last 50 years and makes the case that we cannot be a prosperous city with one in five adults and one in four children living in poverty. An updated Action Plan will be presented in 2019.



The Toronto Food Strategy

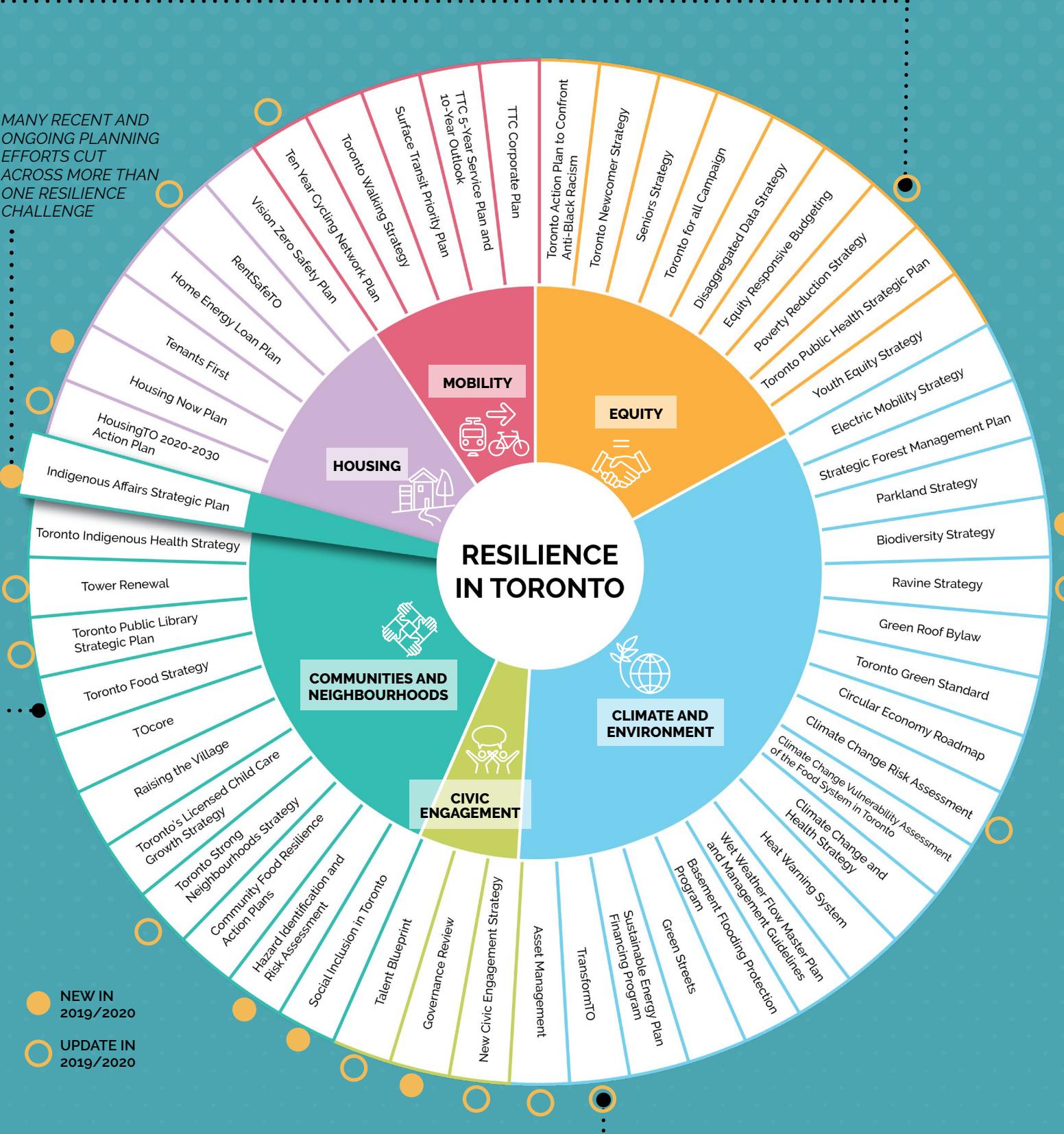
Food plays a powerful role in promoting health, as well as building strong and diverse communities, protecting the environment, and strengthening the economy. The Toronto Food Strategy, led by Toronto Public Health, aims to move the needle towards a sustainable food system that positively impacts human and environmental health. It aligns with the growing international, national, and regional food movements and the increasing recognition of the important role of cities in promoting healthy, sustainable food systems. These movements are a response to a food system that creates deep inequities, and threatens the health and environment of communities around the world. The Toronto Food Strategy uses a multi-sectoral approach to build capacity internally at the City level and to facilitate collaboration with external partners to accomplish change.



TransformTO: Climate Action for the Healthy, Prosperous Toronto

TransformTO is Toronto's climate action strategy to reduce greenhouse gas emissions by 80% by 2050. TransformTO will reduce local greenhouse gas emissions, improve our health, grow our economy, and improve social equity. The Resilience Strategy makes recommendations to integrate climate resilience into TransformTO's existing short- and long-term strategies in the 2020 to 2023 action plan being delivered in 2019.

MANY RECENT AND ONGOING PLANNING EFFORTS CUT ACROSS MORE THAN ONE RESILIENCE CHALLENGE



Building Momentum Across the Region

This Strategy is also influenced by work going on outside the City government. Community groups, non-profit organizations, and industry leaders are doing work to better understand Toronto's resilience and take action to strengthen it. This is just some of the leading resilience work going on across the region, organized by the Strategy's three focus areas.

TORONTO FOUNDATION

The *Neighbourhood Resilience Project* supported ten resilience hubs across the city to harness local residents to design resilience projects in their communities, funded by more than 90 Millennial and Gen X philanthropists. Learn more on page 14 or visit <https://torontofoundation.ca/vision2020/>



TORONTO FOUNDATION

The **#TorontoStrong** fund was created to distribute the generous outpouring of over \$4 million donated to support the 41 victims and families of the 2018 Yonge Street van attack and Danforth shooting.

RESIDENTS SHOWING THEIR SUPPORT, PHOTO BY TORONTO STAR

TORONTO & REGION CONSERVATION AUTHORITY

The **Sustainable Neighbourhood Action Program** (SNAP) aims to accelerate the implementation of environmental improvements and renewal at the neighbourhood scale in older urban areas. It takes an integrated approach to overcome urban retrofit challenges and address a broad range of objectives with locally tailored solutions.

YMCA OF GREATER TORONTO

The YMCA is working to ensure their existing and new **Centres of Community** (health and fitness centres) are resilient safe havens for the public in the event of extended power outages or other emergencies (more on page 152).

BUILDING OPERATORS AND MANAGERS ASSOCIATION TORONTO

BOMA Toronto released a **Technical Guidance Note** to help owners and managers of commercial real estate in Toronto consider resilience and the potential risks imposed by extreme weather.

CUI PLACEMAKERS EVENT,
HELD IN SEPTEMBER 2017

CANADIAN URBAN INSTITUTE (CUI)

The CUI held the **Placemakers** speaker series to allow for informed, high-quality conversation among residents and city-builders about solutions for the built environment that balance human, ecological, and economic impacts.

EVERGREEN

Evergreen launched **Future Cities Canada**, a collaborative platform for accelerating innovation to build regenerative, inclusive cities of the future, supported by the McConnell Foundation, TD Bank, Maison de l'innovation sociale, and Community Foundations of Canada.

FUTURE CITIES SUMMIT,
NOVEMBER 2018

UNIVERSITY OF TORONTO

The **School of Cities**, founded in 2018, convenes urban-focused researchers, educators, students, practitioners, and the general public to explore how to make cities more sustainable, prosperous, inclusive, and just.

UNITED WAY OF GREATER TORONTO

The **Strengthening Community Assets and Local Economies (SCALE) Lab** in 2018 explored ideas to build inclusive local economies in the inner suburbs.

WELLESLEY INSTITUTE

The Wellesley Institute asked “what does it cost to Thrive in the GTA?” and created the *Thriving in the City* framework to defines individuals’ needs across physical, mental, social, and economic dimensions of health and well-being. Learn more at <https://www.wellesleyinstitute.com/publications/thriving-in-the-city-what-does-it-cost/>



LEGEND



PEOPLE AND NEIGHBOURHOODS

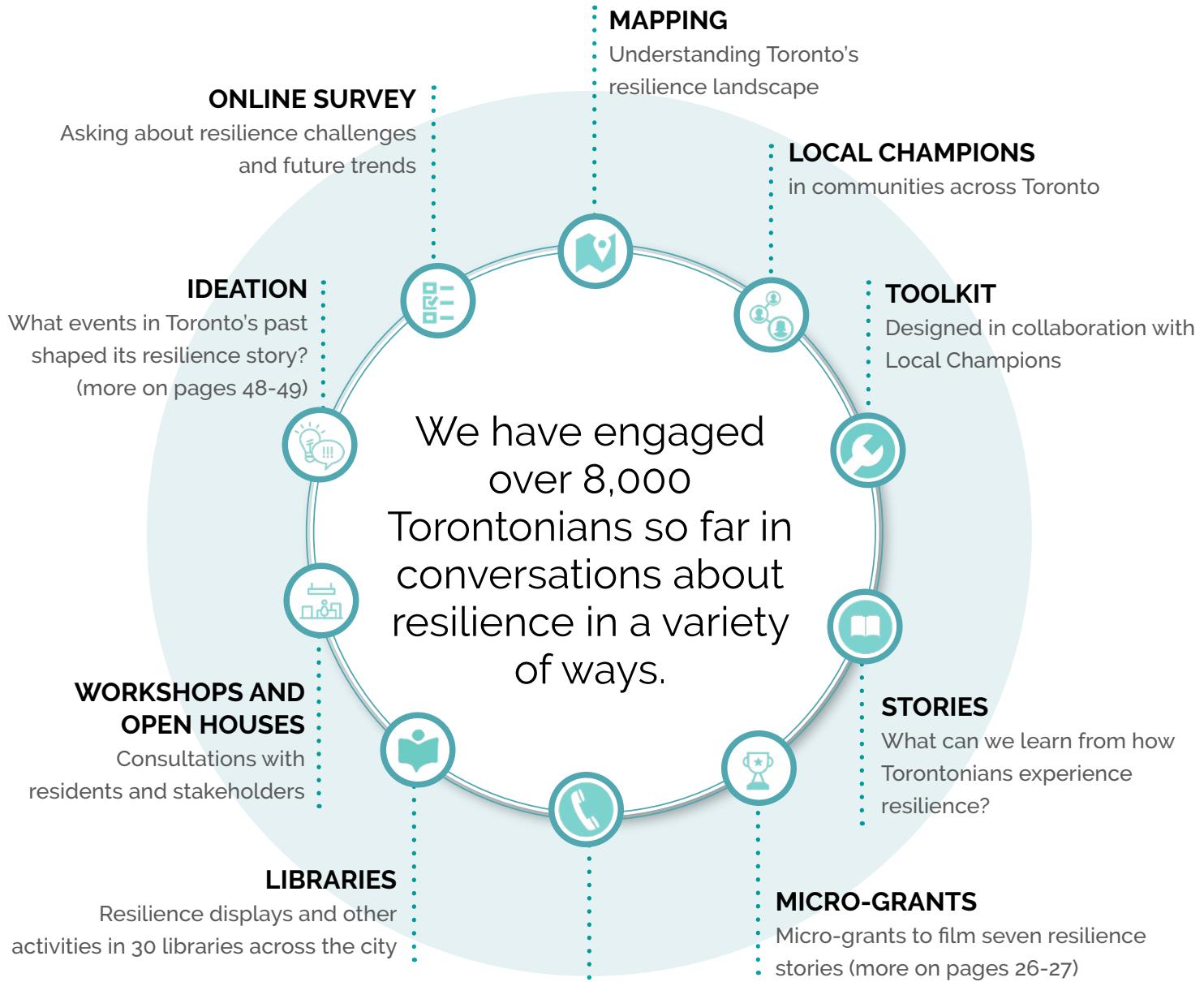


INFRASTRUCTURE



LEADING A RESILIENT CITY

Engagement and Research



VISION AND PRINCIPLES
WORKSHOP, SEPTEMBER 2018



"This broad consultation could turn into inspiring action with residents."

- FROM THE VISION AND PRINCIPLES WORKSHOP IN SEPTEMBER 2018

400+
workshop participants

174,573
social media impressions

26,216+
social media engagements

8,000+
total participants

250+
resilient conversations

6,360+
town hall participants

900+
survey responses

8
working groups



MISSISSAUGA OF CREDIT RIVER ELDER
GARRY SAULT AT THE WAR OF 1812
COMMEMORATION EVENT AT FORK YORK

Engaging in Conversations across Toronto

Exploring Toronto's resilience poses a challenge: in a city of over 2.9 million, how do we harness and integrate diverse perspectives on resilience to prepare for the future? Our answer to this question led us in three directions, described below and mapped out on the right.

Resilience Conversations: Resident-designed consultation

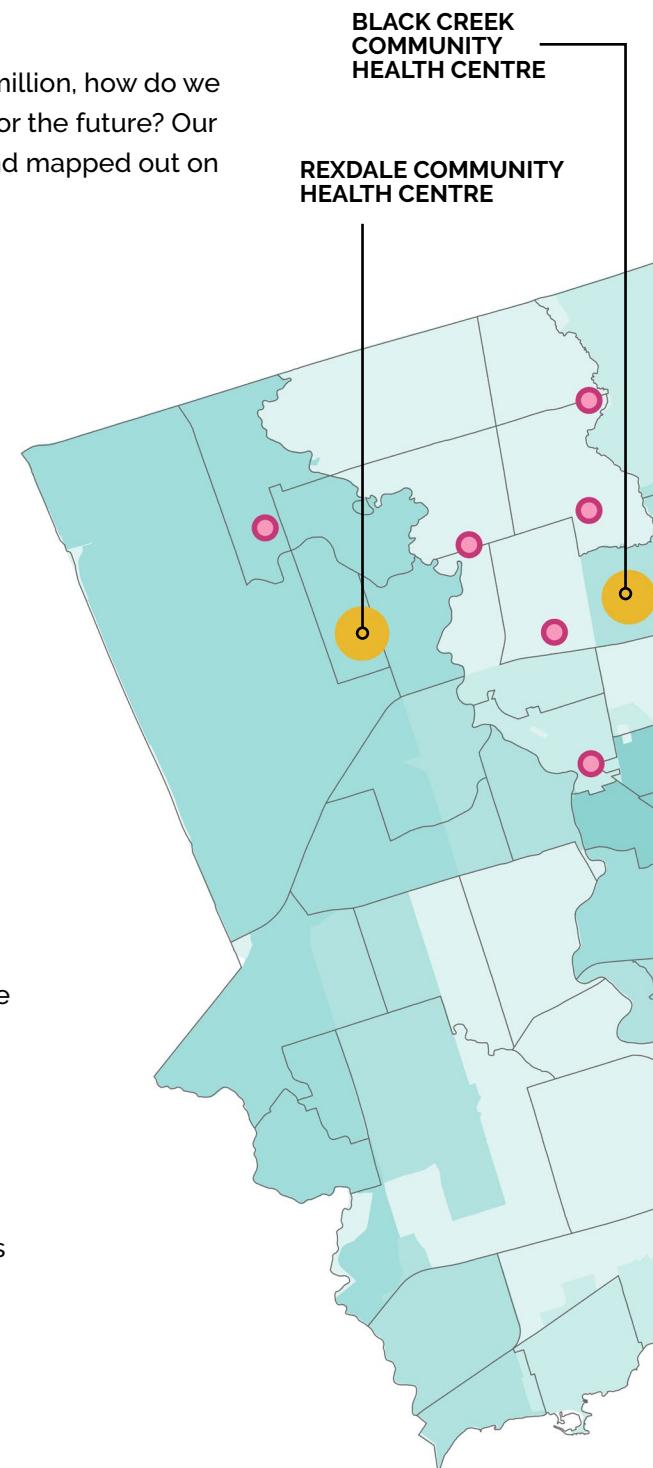
We pushed the boundaries of participatory policy making by co-designing an engagement process with residents. The Resilience Office co-developed a neighbourhood outreach plan with seven Local Champions, who led conversations in seven neighbourhoods (learn more on page 86). The Resilience Office also held an eighth conversation in Lawrence Heights. The conversations are mapped on the right.

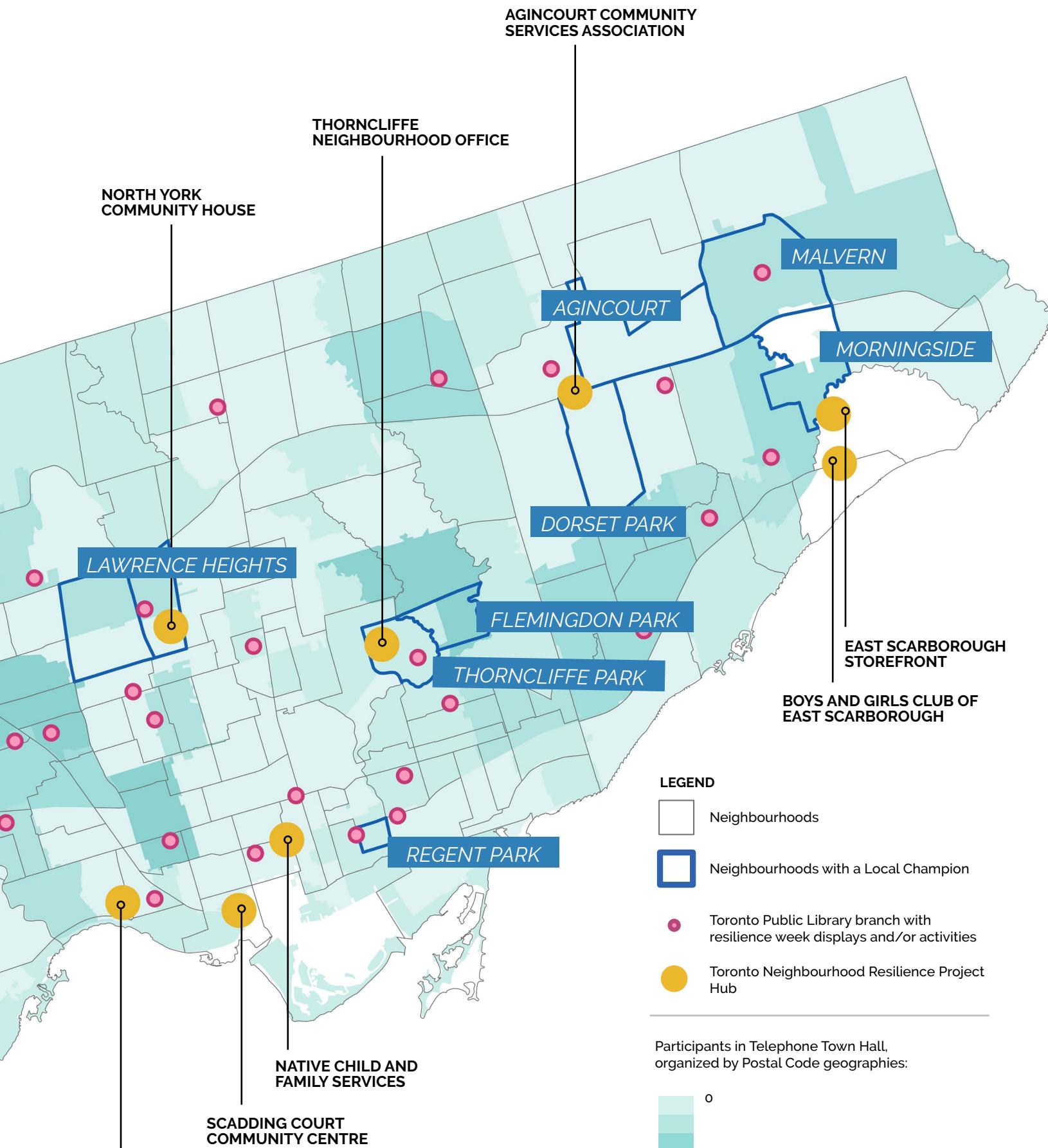
Fostering a civic dialogue

We focused on fostering a true civic dialogue. In addition to the Resilience Conversations, we held a Telephone Townhall and a series of events called the Placemakers Series. All of these events were focused on connecting residents with city leaders and thinkers to share ideas and build relationships. We focused on hearing from residents who have been historically underrepresented in City consultations. For example, we worked to ensure residents from across Toronto (not just downtown) could participate in the Telephone Town Hall, as mapped on the right.

Neighbourhood Resilience Hubs

The Toronto Foundation's Neighbourhood Resilience Project supported ten resilience hubs across the city. Each hub hosted a conversation with diverse local residents to design resilience projects in their communities. The projects were then supported financially by more than 90 of Toronto's Millennial and Gen X philanthropists, who collectively pledged more than \$500,000 to support the work. The resilience hubs are mapped on the right.





Engagement in a Global Resilience Network

Through Toronto's participation in a global resilience network, the City has connected with other cities across the country and around the world. The City of Toronto has worked with more than 50 cities in this process to both learn from their experiences and share our lessons. Toronto's partners in this process have included 100 Resilient Cities, C40, the Dutch Government, and other relationships developed through events such as the Global Resilience Summit in 2017. The map highlights just a few examples of how Toronto has learned from and contributed to the global urban resilience movement.

Montreal, Vancouver, Calgary – The four Canadian cities (including Toronto) in the network have shared ideas and collaborated to build momentum nationally on resilience. We attended Montreal's Strategy launch in June 2018, the first Resilience Strategy in Canada.

Los Angeles – LA
participated in our 'Emergency Management and Resilience' study, and inspired our work with their actions to improve preparedness through community collaboration.

New York – NY
New York hosted the 2017 Global Resilience Summit, where we worked with more than 50 cities. New York also participated alongside Montreal in our 'What Makes a Resilient City' event.

Boston – We participated in an exchange with 8 cities on the relationship between equity and resilience, hosted by Boston. Boston placed racial equity at the centre of their Resilience Strategy, which inspired our approach to equity and resilience.

Manchester – Manchester, along with Paris, Melbourne, and Boston, supported Toronto with lessons learned for the establishment of the TorontoStrong Fund.

Rotterdam – Toronto participated in the C40 Adaptation Academy, hosted by the City of Rotterdam. We integrated the lessons from the Academy into our climate resilience work. We studied Rotterdam's experience closely in the development of our urban flooding actions.

Milan – We participated in an exchange with 8 cities on nature-based solutions, hosted by Milan. Milan has an ambitious suite of green and blue infrastructure initiatives. We applied the lessons from the Milan exchange to our actions on green and blue infrastructure.

Melbourne – We worked closely with Melbourne to understand their Community Resilience Framework, which inspired our actions on resilience at the neighbourhood level.

USING PLAYING CARDS WITH INTERNATIONAL PRECEDENTS TO SPARK DISCUSSIONS ON TORONTO'S OPPORTUNITIES RESILIENT ACTIONS WORKSHOP, DECEMBER 2018

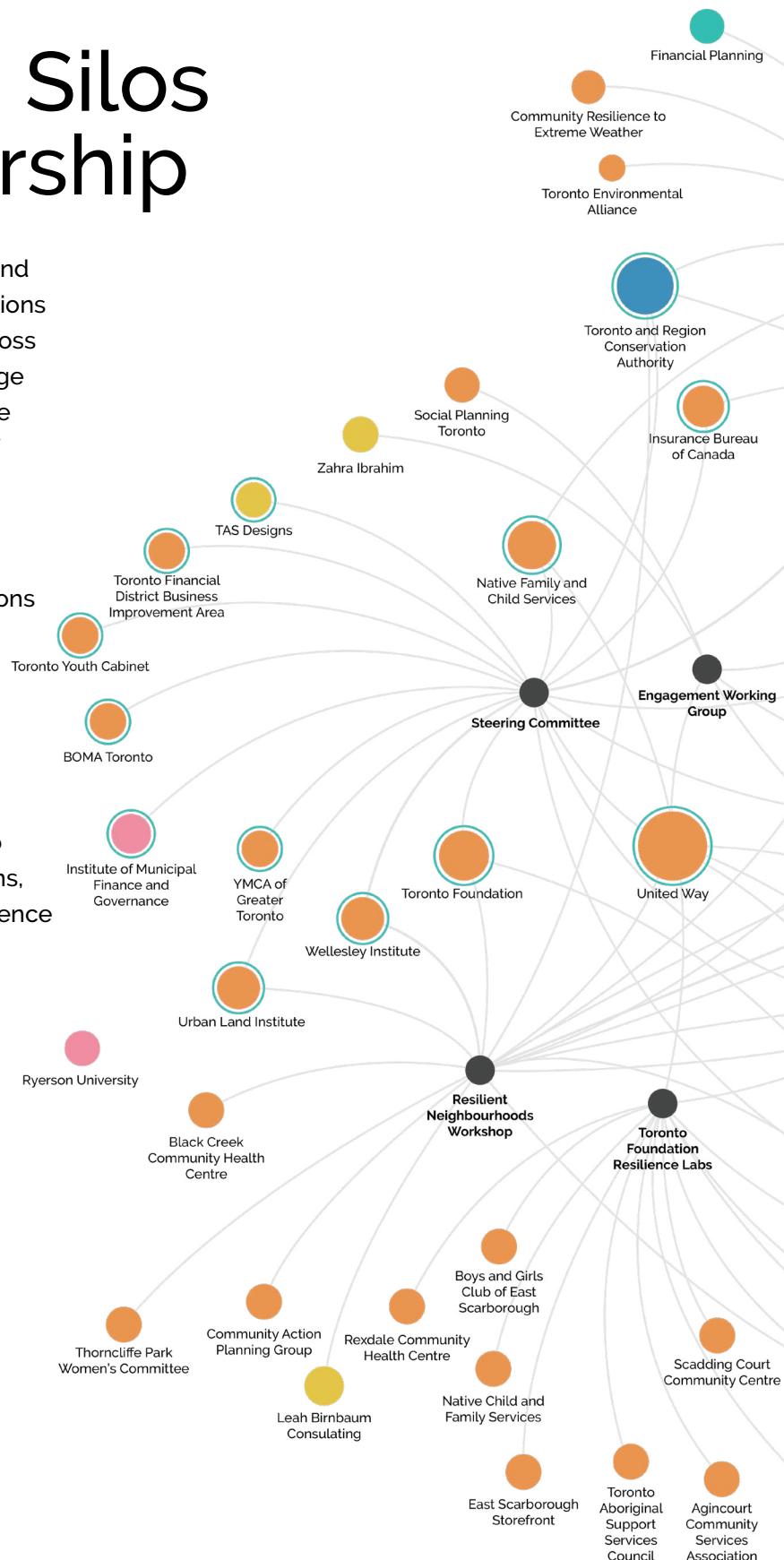
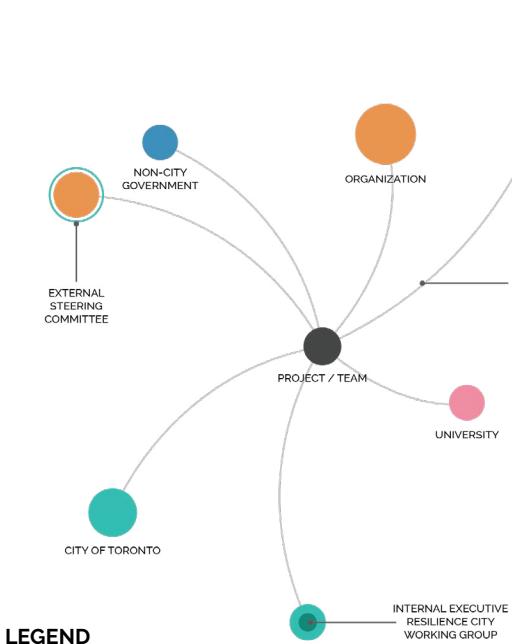
Breaking Down Silos through Partnership

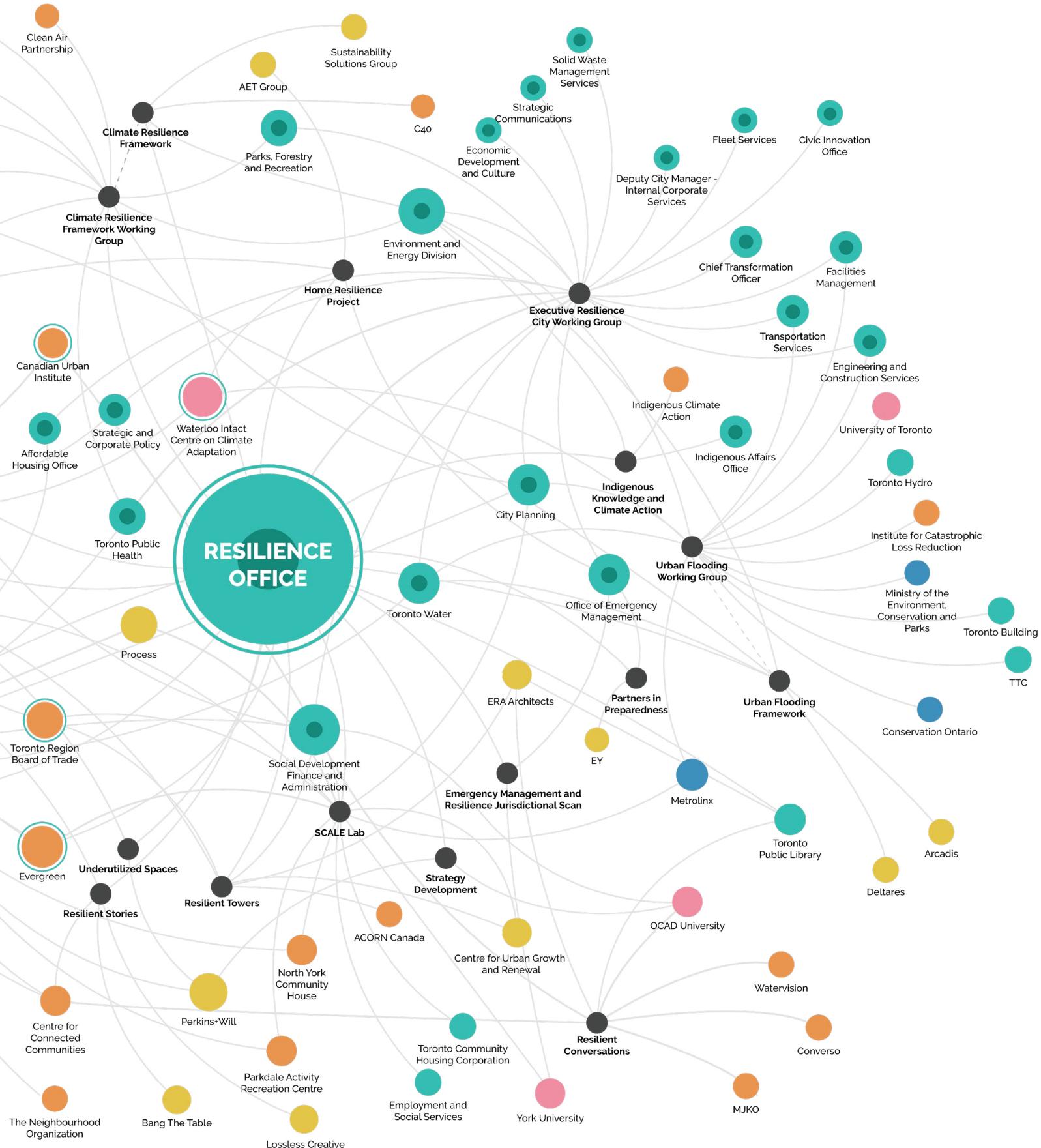
Building resilience is fundamentally about creating and expanding partnerships. To find and implement solutions to Toronto's biggest challenges, we must partner across City divisions, silos, disciplines, and sectors. This image maps out the partnerships the Resilience Office made with 82 organizations to deliver 19 projects as part of creating the Resilience Strategy.

We worked with:

- 27 City divisions, agencies, boards, and corporations
- 33 non-profit organizations
- 13 companies
- 5 universities
- 4 non-City of Toronto government bodies

We used this map to look around the room, ask "who is not here", and invite them to be a part of discussions, plans, and projects on resilience. We challenge resilience leaders across Toronto to do the same.





04 RESILIENCE IN TORONTO

Toronto Today



2.9 MILLION
People Live in Toronto (July 2017)



2ND Largest Financial Centre in North America



2.9 MILLION

People Live in Toronto (July 2017)



100

Public Library Branches, one of the world's busiest library systems



3RD Largest Tech Hub in North America



5

World Renowned Universities



4TH Largest City in North America



17%

of Toronto's land area is made up of ravines

DATA RETRIEVED FROM VARIOUS CITY OF TORONTO REPORTS, TORONTO PUBLIC LIBRARY, AND TORONTO GLOBAL.

70,000
Indigenous peoples live
in Toronto

42%
of Indigenous adults
in Toronto speak an
Indigenous language

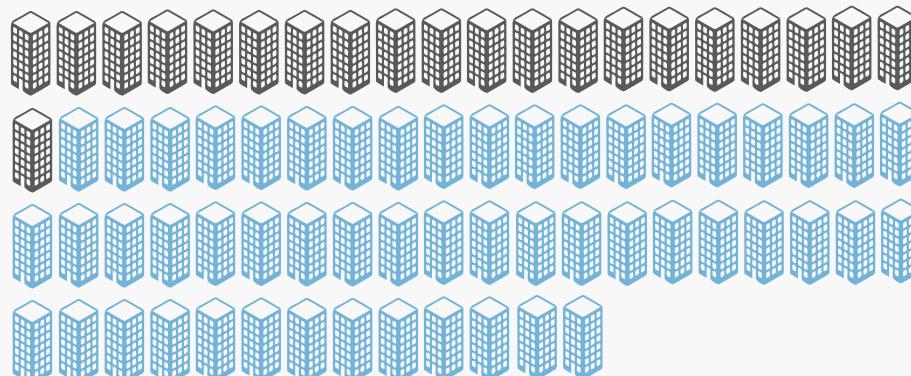
51.2%
of the population was
born outside of Canada

51.5%
of the population identify
as a visible minority

DATA RETRIEVED FROM INDIGENOUS AFFAIRS OFFICE (CITY OF TORONTO);
"OUR HEALTH COUNTS TORONTO" SURVEY (2018); "2016 CENSUS:
HOUSING, IMMIGRATION AND ETHNOCULTURAL DIVERSITY, ABORIGINAL
PEOPLES BACKGROUNDER"

It was summer of 1995 when we came to Canada. I had no idea what challenges we were going to face. After a week, I started to feel culture shock. That was the first time I encountered different cultures. It was very strange for me to meet or see different faces and nationalities.

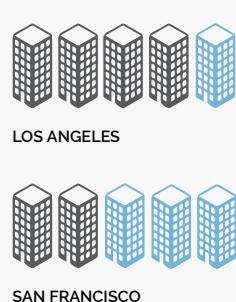
Buildings Under Construction or Planned



- 10 BUILDINGS UNDER CONSTRUCTION
- 10 BUILDINGS PLANNED

ROUNDED TO NEAREST 10; DATA FROM EMPORIS.COM AND INCLUDES ALL BUILDINGS

In 2018, Toronto had **212** buildings under construction, with an additional **519** buildings planned.



Toronto's Resilience Story

We can learn a lot about our city's approach to building resilience from our past. In creating this Strategy, we asked residents, stakeholders and partners to share moments in Toronto's history that have contributed to its resilience. Here is some of what we heard.



DESTRUCTION CAUSED
BY HURRICANE HAZEL

HURRICANE HAZEL

"Hurricane Hazel blew through Canada on October 15, 1954, causing 81 deaths and over \$1 billion in damage. In the aftermath, the region fundamentally changed how it planned for flooding, including expropriating flooded lands for use as park lands."



TORONTO STAR COVER STORY ON THE BATH HOUSE RAIDS

GREAT FIRES

"In 1904, a fire destroyed most of Downtown Toronto, sparking new requirements for fire-resistant buildings."

AFTER THE GREAT FIRE,
WELLINGTON STREET



19
04

19
54

19
81

BATH HOUSE RAIDS

"The Toronto Police raided four city bathhouses and arrested more than 250 gay men. The significant community response resulted in the first Pride Parade and a City inquiry into the actions of the police."

"My son was supposed to be delivered at North York General Hospital, but it was closed due to the outbreak...I went to a different hospital and had to enter a big white tent to be assessed before entering. Every mom of a "SARS baby" born in spring 2003 has a story...but our inconveniences were nothing compared to what the front line workers and those that were inflicted with SARS faced."

SARS

20
03

TORONTO PURCHASE

"In 1787, the British Crown and the Mississaugas of the Credit River met to arrange the purchase, exchanging 250,808 acres of land that became most of today's Toronto and York Region for money and other items. The agreement was in dispute for over 200 years, culminating in a historic 2010 decision in which Canada agreed to pay \$145 million for the lands."

20
10

INDIGENOUS RESILIENCE AND TORONTO AS A MEETING PLACE*



INDIGENOUS FLAGS AT CITY HALL

The Toronto area is the traditional territory of many First Nations, including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples, and was inhabited for at least 11,000 years. Long before European contact, the Humber River was one part of a major portage route, the Toronto Carrying Place Trail, and was one of the fastest inland routes through what is now southern Ontario. This made the portage a very important and desirable area for meeting, trading and exchanging information and ideas. It was a place where many Indigenous communities likely met to discuss solutions to the resilience challenges of their time.

* DEVELOPED BASED ON JOHNSON, JON (2013). THE INDIGENOUS ENVIRONMENTAL HISTORY OF TORONTO, "THE MEETING PLACE".

19
18

BLOOR VIADUCT

"The Bloor Street Viaduct was built with the capacity to hold a subway decades before Toronto had a subway...this was infrastructure with a long term vision."

19
67

CARIBANA

"The festival was introduced to Canada by immigrants from the Caribbean. Following a Carnival format, this event is very important for preserving and expressing our Caribbean identity."

19
92

YONGE STREET UPRISING

"On May 4, 1992, following the acquittal of an off-duty white police officer who shot and killed 22-year-old Black man Raymond Lawrence, the Black Action Defence Committee took to Yonge St. for a peaceful protest. Homeless youth, Indigenous youth, other minorities as well as white allies joined in. The event brought to light the Black communities' struggles against anti-black racism in Toronto."

20
03

BLACKOUT

"The infamous northeast blackout of 2003 left 10 million people without power in Ontario."



1967 EXCERPT FROM THE GLOBE AND MAIL, SPOTLIGHT ON THE FIRST CARIBANA FESTIVAL

Toronto's Resilience Challenges

The six resilience challenges represent Toronto's most pressing issues affecting our resilience, and the most significant opportunities for improving resilience.

They came from extensive public and stakeholder engagement that began, through the Preliminary Resilience Assessment with identifying ten acute shocks and chronic stresses that currently affect Toronto's resilience the most: flooding, heatwaves, blizzards and cold snaps, power outages, emergency preparedness, poverty and inequities, access to housing, ageing infrastructure, getting around, and long-term municipal financial stability.

In the next phase of the consultation process, residents told us which of these challenges affected them the most, and identified additional

trends and challenges that affect their resilience. This culminated in a half-day stakeholder workshop that collected hundreds of additional inputs. In total, residents brought forward 155 issues through the consultation process that influence lives in Toronto right now, from the cost of education to homelessness, data privacy, and Indigenous rights.

We categorized these 155 issues into 16 themes and ranked them by intensity, a measure of how important each was to participants in our online survey, how many times they came up at our stakeholder workshop, and how long participants spoke about them. The six highest-intensity themes were then refined through further public consultation at an Open House in December 2018. The six resilience priorities inform the Vision and Principles of the Strategy, as well as the Focus Areas and Actions.



EQUITY



CLIMATE AND ENVIRONMENT



CIVIC ENGAGEMENT



COMMUNITIES AND NEIGHBOURHOODS



HOUSING



MOBILITY

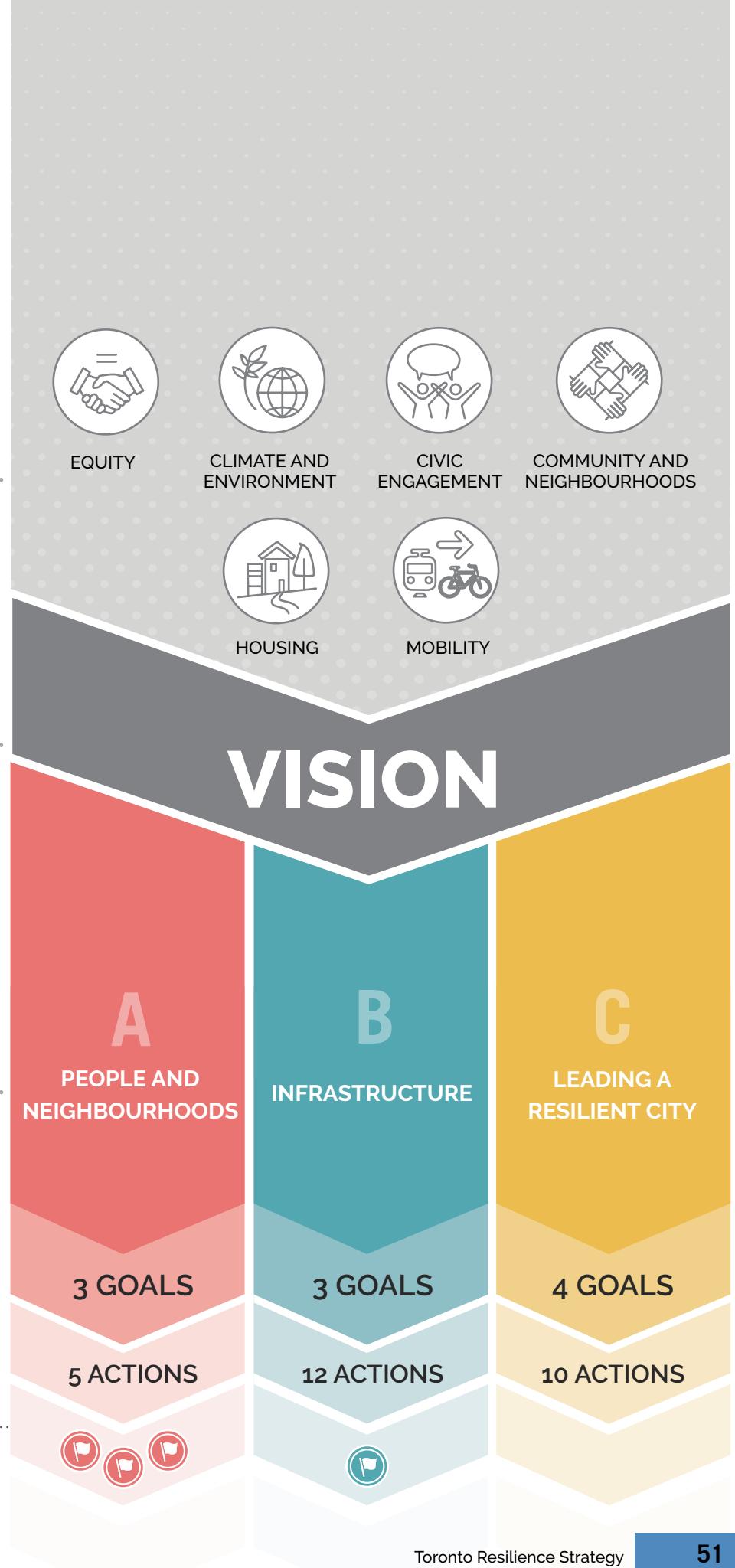
Resilience challenges describe Toronto's resilience context

The community-led vision articulates our aspirations for a resilient Toronto

The Strategy is organized into three focus areas to achieve our vision



including 3 priority actions in Focus Area A, and 1 priority action in Focus Area B





Equity

This challenge is about a fairer and more just Toronto that ensures equitable life outcomes for all residents, through the policies we advance and the increased access and shared prosperity they promote, and the ways we make space for racialized, newcomer, queer, and Indigenous residents to substantively shape and direct the City's future.

WHAT WE WANT TO CHANGE

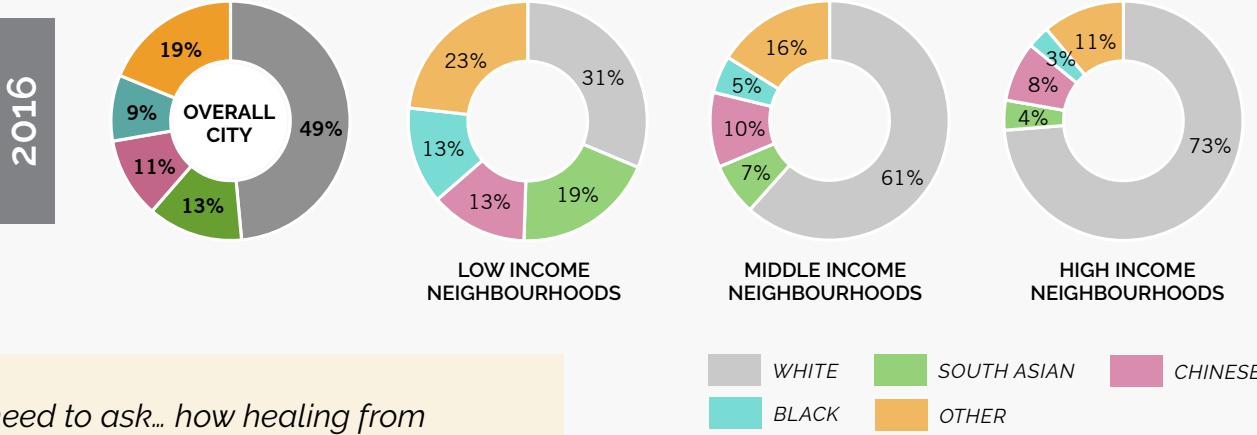
Unequal access to resources, funding and opportunities, polarized ideologies, and lack of awareness of vulnerability.

WHERE WE WANT TO BE

People have access to the things they need to thrive. Communities have greater ownership over decision-making that affects them, including the way resources are distributed. There is broad empathy and understanding. Deliberate efforts are being made towards reconciliation.

Ethno-cultural Segregation in Toronto

Over the past 50 years, segregation in Toronto by race and income has worsened, even as diversity has increased. Torontonians of different backgrounds are increasingly not living side by side and Toronto's non-White residents are disproportionately concentrated in low-income neighbourhoods, as shown in the graphs below.



We need to ask... how healing from intergenerational traumas is a necessary aspect of reintegrating how we live with everything around us.

- FROM THE INDIGENOUS CLIMATE ACTION REPORT ON INDIGENOUS KNOWLEDGE AND CLIMATE ACTION (2018)

NOTE: THIS ANALYSIS IS BASED ON DATA FROM THE SELF-REPORTED "POPULATION GROUP" QUESTION IN THE GOVERNMENT OF CANADA 2016 CENSUS ([QUESTION 19 AT HTTPS://WWW12.STATCAN.GC.CA/CENSUS-RECENSEMENT/2016/REF/DICT/POP127-ENG.CFM](https://www12.statcan.gc.ca/census-recensement/2016/REF/DICT/POP127-ENG.CFM)). THE "OTHER" CATEGORY PRESENTED IN THE PIE CHARTS INCLUDES OTHER POPULATION GROUPS THAT ARE CATEGORIZED BY STATISTICS CANADA AS VISIBLE MINORITY GROUPS. THIS ANALYSIS DOES NOT INCLUDE INDIGENOUS PEOPLES.

2016 CENSUS, AVERAGE INDIVIDUAL INCOME, ANALYSIS COURTESY OF NEIGHBOURHOOD CHANGE RESEARCH PARTNERSHIP, UNIVERSITY OF TORONTO - DAVID HULCHANSKI AND RICHARD MAARANEN

Toronto residents don't have equal opportunities to be healthy.

29%

of Toronto children under the age of 18 live in low income families

If all income groups in Toronto had the same health status as the highest income group, there would be...

932

fewer premature deaths per year

62,111

fewer people living with diabetes between 2003 - 2012.

DATA RETRIEVED FROM "THE UNEQUAL CITY 2015: INCOME AND HEALTH INEQUITIES IN TORONTO," – CITY OF TORONTO

As a single parent I am not able to save and have access to the same opportunities as high income earners...I rely on attending community events for support, to be with like-minded individuals who live in the same community, and who experience the same issues... I am interested in creating a program within my neighbourhood to deal with these challenges.

- MALVERN RESIDENT

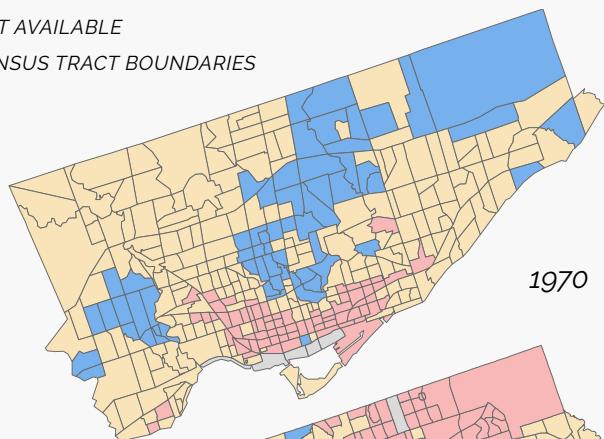
Income Segregation in Toronto

Income segregation by neighbourhood

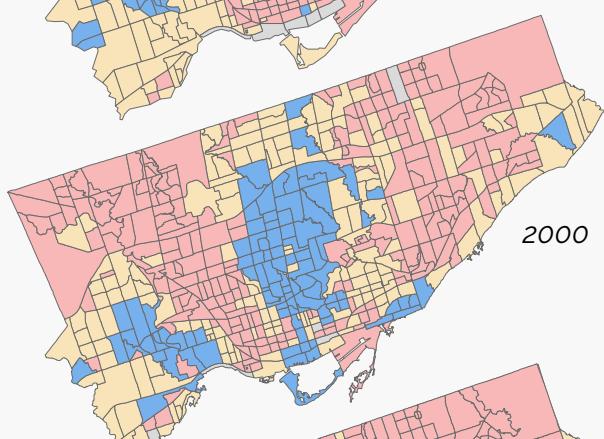
increased 56% from 1990 to 2015. Also, there

are more low and high income neighbourhoods now in Toronto than there were in 1970 and fewer middle income neighbourhoods. High income neighbourhoods are earning a larger share of Toronto's total income relative to their population size than in past.

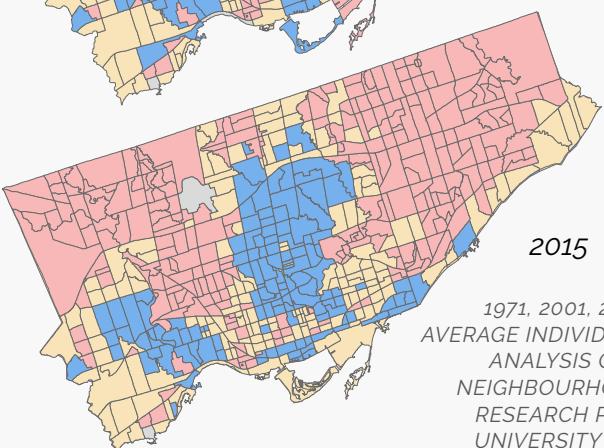
- █ HIGH INCOME (20% PLUS ABOVE AVERAGE)
- █ MIDDLE INCOME (20% ABOVE TO 20% BELOW AVERAGE)
- █ LOW INCOME (20% PLUS BELOW AVERAGE)
- █ NOT AVAILABLE
- CENSUS TRACT BOUNDARIES



1970



2000



2015

1971, 2001, 2016 CENSUS,
AVERAGE INDIVIDUAL INCOME,
ANALYSIS COURTESY OF
NEIGHBOURHOOD CHANGE
RESEARCH PARTNERSHIP,
UNIVERSITY OF TORONTO
- DAVID HULCHANSKI AND
RICHARD MAARANEN



Climate and Environment

This challenge is about the use and protection of natural resources, preparedness from weather events, our values around the natural world, and our relationship with the natural and built environments.

WHAT WE WANT TO CHANGE

A short-term view of natural resources, consumption habits, inconsistent sustainability efforts, and no clear plan to adapt to a changing climate. Climate change leaves the most vulnerable members of our society at the greatest risk of harm.

WHERE WE WANT TO BE

A connection to the environment, an understanding of our effects on the natural world, including our contributions to climate change. Coordinated, large scale climate mitigation and adaptation efforts. We work with the Indigenous community in Toronto to incorporate Indigenous worldviews into our approach to environment. We prioritize protection of the most vulnerable residents.

Toronto is getting **HOTTER, WETTER, AND WILDER.**

Toronto's Future Weather: Past, Present, and Future



VERY HOT DAYS
(+30°C) PER YEAR

RECENT PAST
1976-2005

12.2
days



ANNUAL
PRECIPITATION
(MILLIMETRES)



HEAVY
PRECIPITATION DAYS
(+20 MILLIMETRES)

IMMEDIATE FUTURE
2021-2050

30.7
days

786
mm

6.6
days

NEAR FUTURE
2051-2080

54.9
days

817
mm

6.9
days

854
mm

7.8
days

DATA FOR THE TORONTO MUNICIPALITY, RETRIEVED FROM THE CLIMATE ATLAS CAN BE ACCESSED AT [HTTPS://CLIMATEATLAS.CA/DATA/CITY/458/ANNUAL_PRECIP_2060_85](https://climateatlas.ca/data/city/458/annual_precip_2060_85)





Last winter, the temperature was almost -23 degrees C. The water pipes had frozen and burst, making the water system shut down. This problem affected not only me, but all building residents. Suddenly, I had had an idea: I took a bucket to the balcony and filled it with snow and then put it on the stove to make water. Snow turns into water. After that I used this water for mopping, dish washing, and in the bathroom. There was a functioning bathroom across the street in Target so many people went there to get water or use the bathroom... other people went to local mosque to get water...you can only imagine what the poor people had to face when going out in this freezing and terrible weather. This incident has had a lasting effect on me, and ever since, I keep a bottle or can of water always stored in the house.

- THORNCLIFFE PARK RESIDENT



120

estimated deaths per year
caused by extreme heat

16,000

homes were without power due to a
rain storm in August 2018

78%

of Torontonians express
concern about climate
change affecting the city.

Indigenous peoples have essential, far-reaching knowledge and practices that are missing today, grounded in the laws of the land and Natural and higher laws...the nature of the relationship [between the City and Indigenous communities] needs to change in relation to climate work, from one that still reflects colonial domination to one that moves into a process of collaboration. After all, climate and other environmental catastrophes are intimately related to colonialism

- FROM THE INDIGENOUS CLIMATE ACTION REPORT ON INDIGENOUS KNOWLEDGE AND CLIMATE ACTION, 2018. LEARN MORE ON PAGE 138, ACTION C.3.1

DATA RETRIEVED FROM THE "CITY-WIDE CLIMATE PERCEPTIONS STUDY," PREPARED FOR THE CITY OF TORONTO, 2018



Civic Engagement

This challenge is about power and civic life: the things that influence the ways we make decisions, whose voices are included in decision-making, how we approach leadership, and people's commitment to community.

WHAT WE WANT TO CHANGE

A lack of diversity of those in power positions, inequity in decision-making power, and low levels of trust and civic engagement, both with government and within communities.

WHERE WE WANT TO BE

Diverse communities share common goals and see themselves in their elected representatives; there is increased engagement both within communities and in government decision-making, accountable and transparent leadership, and high levels of trust in government.

RESILIENT ACTIONS WORKSHOP,
DECEMBER 2018

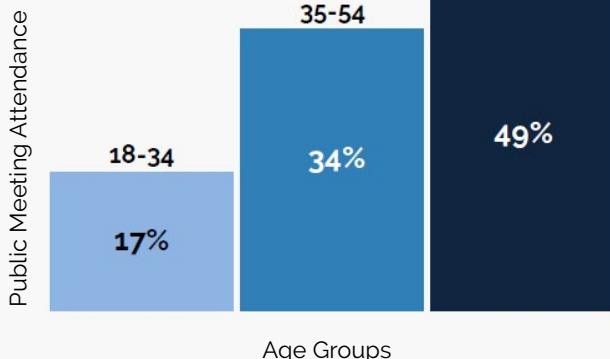


In 2013, City Planning administered a survey of Toronto residents to better understand who was attending their public meetings.

The survey indicated that work needs to be done to better engage Toronto's uniquely diverse communities.

Understanding who attends public meetings & who is being reached

DATA RETRIEVED FROM CITY PLANNING SURVEY – 2013 (CITY OF TORONTO)



Owners

2.1x

more likely to have participated than renters

English speakers

2x

more likely to have participated than those who speak other languages at home

People over 55

3x

more likely to have participated than 18-34 year olds



Race, class, gender – among a few – plague my capabilities daily.

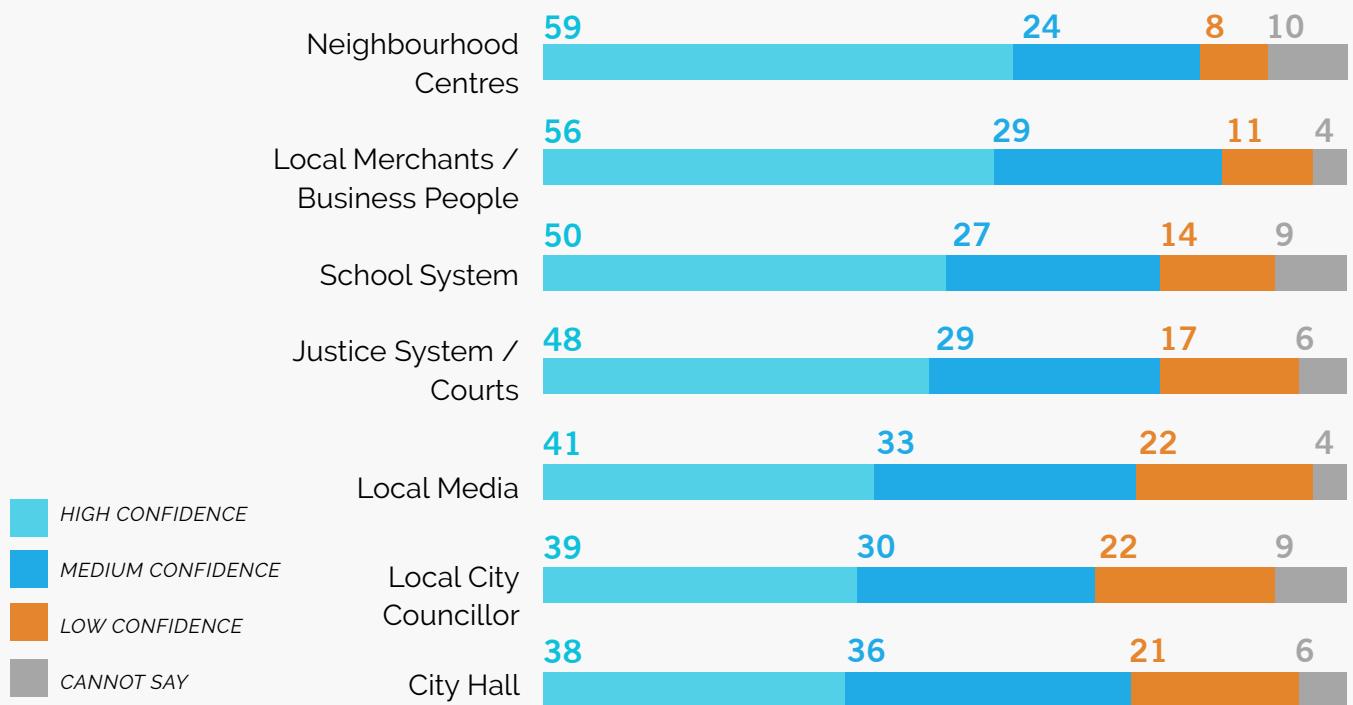
I cope by refusing to remain silent and trying to find ways with like-minded people to develop a community to regain a sense of empowerment. To find my purpose and share my story. The City needs to begin by looking at the individuals in positions of power. It goes beyond acknowledging. When racialized individuals do not see people like them in positions of power, we lose hope and our sense of self and well-being is compromised. We need to be granted the same opportunities and seen beyond our skin.

- TORONTO RESIDENT

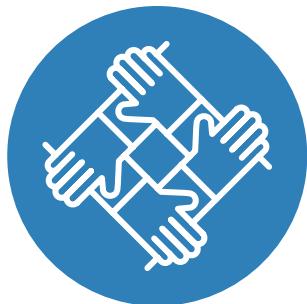


Residents are divided as to whether they feel confident in their public service and City Councillors.

Confidence in Local institutions (%)



DATA RETRIEVED FROM TORONTO SOCIAL CAPITAL STUDY, 2018 – TORONTO FOUNDATION,
ENVIRONICS INSTITUTE, TORONTO'S VITAL SIGNS



Communities and Neighbourhoods

This challenge is about the role that residents and neighbourhood networks play in shaping the city's future: Our ability to work together, collaborate, and coordinate in the face of challenges by building on local strengths and assets and aligning with the supports and partnerships.

WHAT WE WANT TO CHANGE

A community that is not fully resourced or equitably integrated into the city. Certain communities and residents lack the supports necessary to thrive.

WHERE WE WANT TO BE

Connected communities where people feel a sense of trust and belonging. Residents have a fair stake in shaping the future of their neighbourhoods and the city at large. Silos are broken down and organizations and government work alongside residents to address the diverse needs of neighbourhoods.

Neighbourhood Conversations with Local Champions

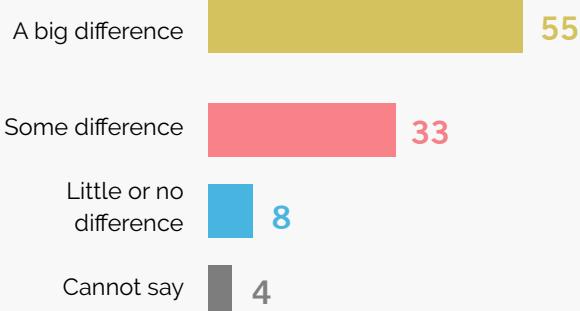
"Resilience challenges are not just about inequality but also about political representation, the accountability of City systems, and spending on neighbourhoods."

"Neighbourhood resilience should rely on local crisis intervention teams that have the capacity to intervene in the case of flooding as well as gun violence. Neighbourhood resilience can only be realized if local organizations hire residents of the neighbourhood at all levels because building resilience requires personal connection and around-the-clock commitment."

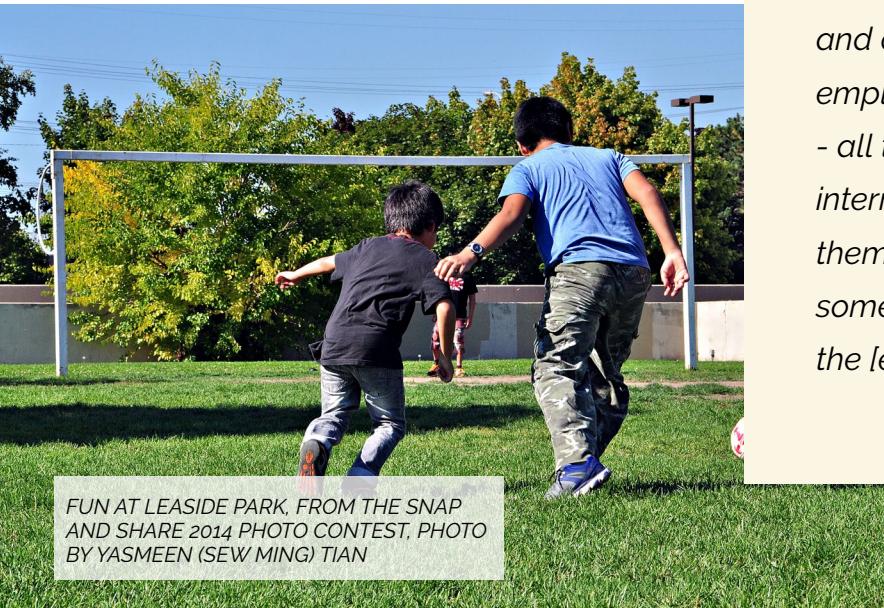


KEY FINDINGS OF THE "RESILIENT CONVERSATIONS" SERIES COMPLETED IN THE SUMMER/FALL OF 2018

How Much Difference can People Working Together Make in Addressing Problems in your Community?



DATA RETRIEVED FROM TORONTO SOCIAL CAPITAL STUDY,
2018 – TORONTO FOUNDATION, ENVIRONICS INSTITUTE,
TORONTO'S VITAL SIGNS



We are on the outskirts and we feel like we always get everything last. We don't want to be forgotten. We need education for our children and adults. We need employment here. We all work downtown. Our travelling one way is an hour and half. We are travelling packed into unreliable transit cars and buses. Why aren't the same opportunities for salaried employees downtown here? Why aren't there good jobs nearby? A lot of [people] don't own vehicles and can't afford [them]. Ageism is a problem for employment opportunities. The younger people - all they want them for is volunteer hours or interns and they don't want to properly employ them. Once they hear Malvern it's a block. I know someone that had to get a PO Box to get a job so the [employer] didn't know they lived in Malvern.

- SCARBOROUGH RESIDENT

PMy story is I live alone. Both my kids live 5,000 miles away. So it is important for me to stay healthy and connect with people in my neighbourhood. I do this by becoming a volunteer in my neighbourhood. As a result I have met and made connection with a group of people who support and empower me. I am always busy with community events and have no time to worry about loneliness and depression.

- KINGSTON-GALLOWAY RESIDENT



Housing

This challenge is about equity of access to housing, housing affordability, and the limits and opportunities for housing.

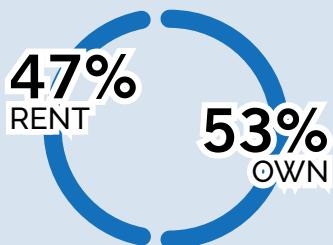
WHAT WE WANT TO CHANGE

Inequity of housing access and a lack of housing options that are affordable, leading to a very high cost of living, unsure futures, and homelessness.

WHERE WE WANT TO BE

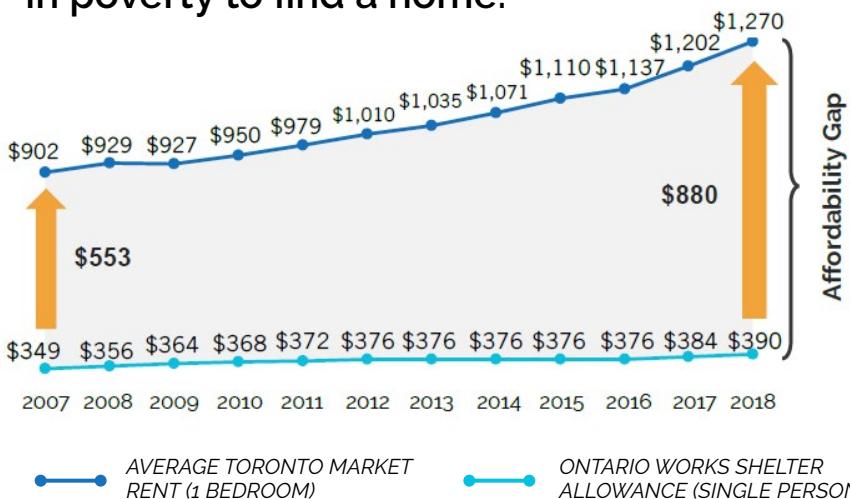
Diverse, creative housing solutions that ensure broad housing affordability, and an acknowledgement that housing is a human right.

Toronto is a city of renters and owners.



...Both are becoming out of reach
for the average household.

It is increasingly difficult for people living
in poverty to find a home.

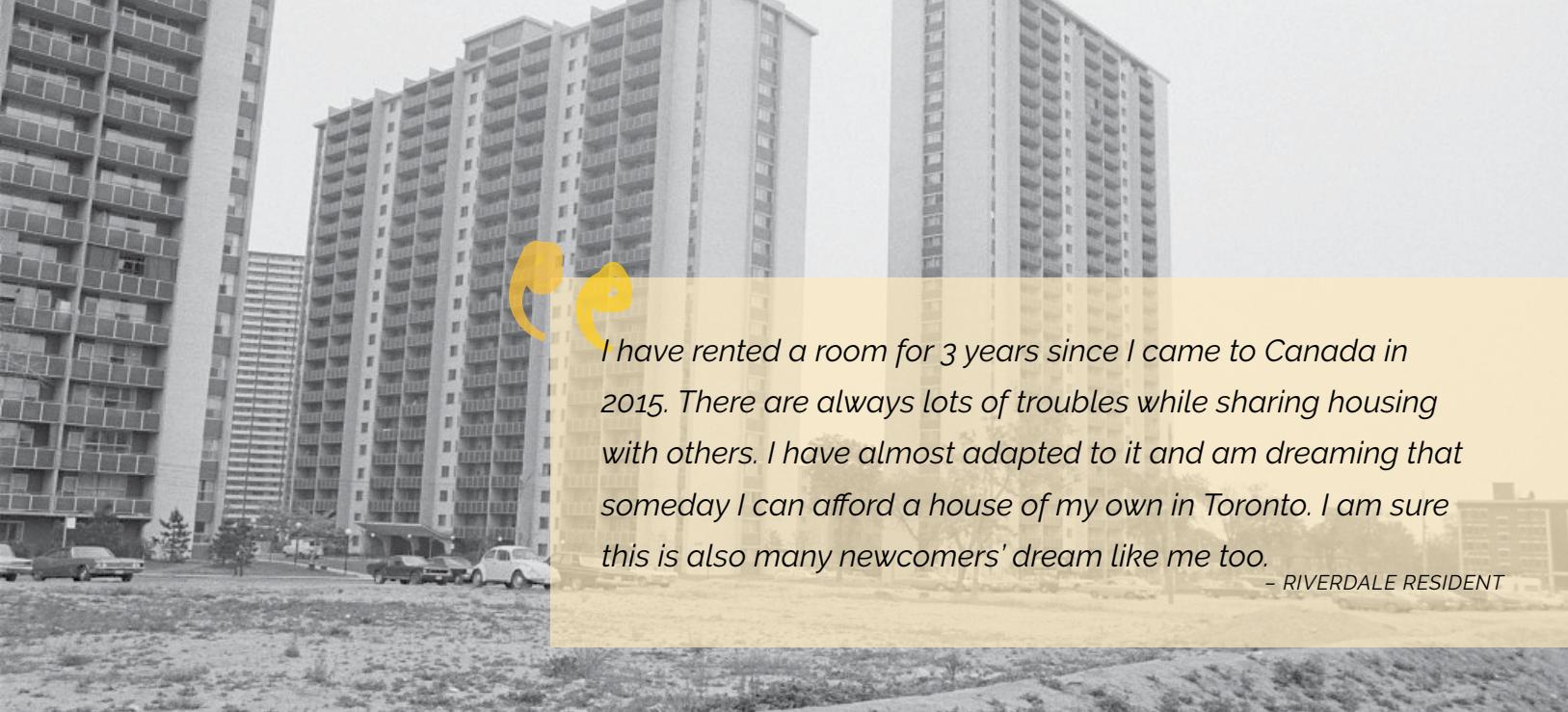


DATA RETRIEVED FROM CMHC HOUSING MARKET PORTAL (2019) AND CITY OF TORONTO (2018).

1 in 3

Over one in three Indigenous adults in Toronto were precariously housed or experiencing homelessness in 2018, compared to 1 in 25 Canadian adults who have experienced homelessness or insecure housing in the past 5 years.

DATA FROM "OUR HEALTH COUNTS TORONTO REPORT, HOUSING AND MOBILITY," 2018, WELL LIVING HOUSE



I have rented a room for 3 years since I came to Canada in 2015. There are always lots of troubles while sharing housing with others. I have almost adapted to it and am dreaming that someday I can afford a house of my own in Toronto. I am sure this is also many newcomers' dream like me too.

- RIVERDALE RESIDENT

46.7%

of tenant households (renters) were spending 30% or more of their income on shelter in 2016.

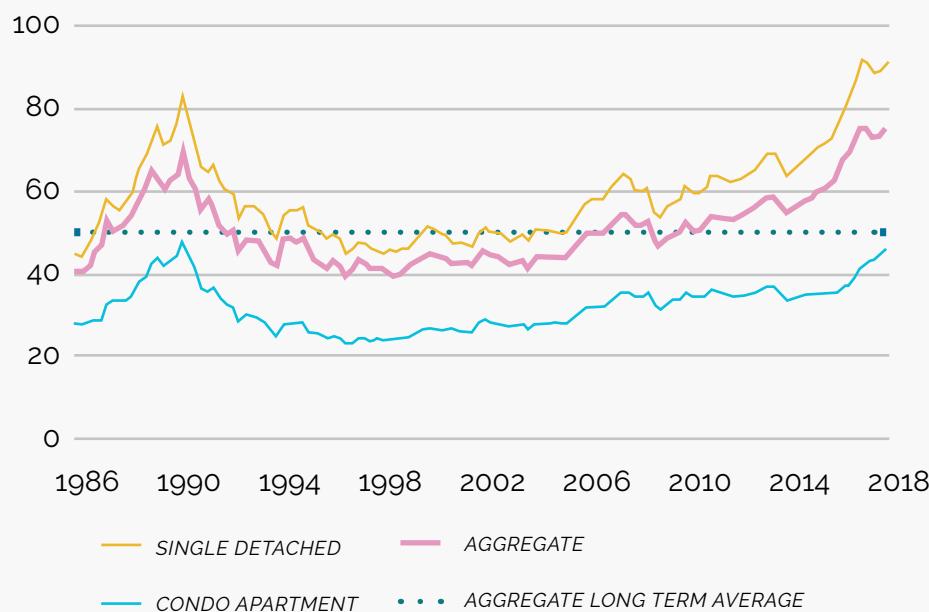
1.1%

of private sector rental housing is vacant. A healthy vacancy rate is considered to be 3% or above.

19%

of households are living in overcrowded conditions.

Ownership costs as % of median household income



DATA FROM STATISTICS CANADA (2016), AS RETRIEVED FROM "HOUSING, IMMIGRATION AND ETHNOCULTURAL DIVERSITY, ABORIGINAL PEOPLES BACKGROUNDER", CITY OF TORONTO: CANADIAN RENTAL HOUSING INDEX AND CMHC RENTAL MARKET SURVEY

DATA FROM RBC HOUSING TRENDS & AFFORDABILITY REPORT, SEPTEMBER 2018



Mobility

This challenge is about how we move around the city, how we access transit, and the infrastructure that supports movement.

WHAT WE WANT TO CHANGE

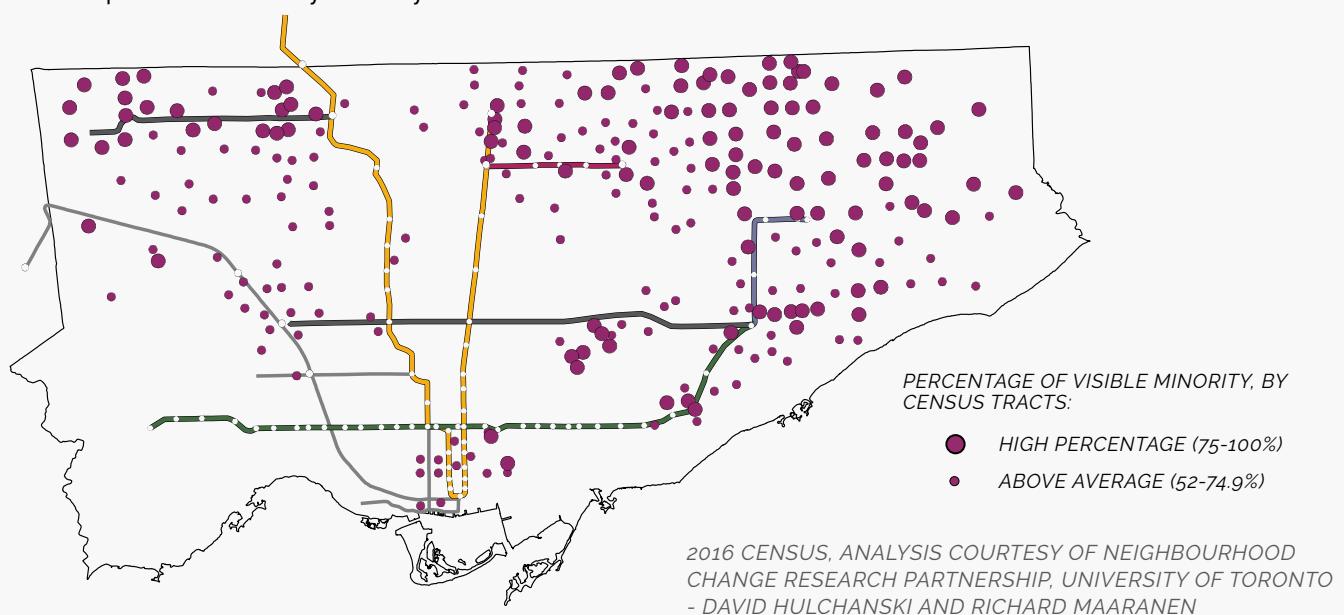
Congestion, long commutes, and slow progress on transit and active transportation expansion.

WHERE WE WANT TO BE

Multiple reliable, affordable, accessible, and safe mobility options that reduce the amount of time it takes to get around. Redundancy and climate resilience increase reliability and reduce crowding; short trips are made by foot, bike, or transit, and we achieve Vision Zero.

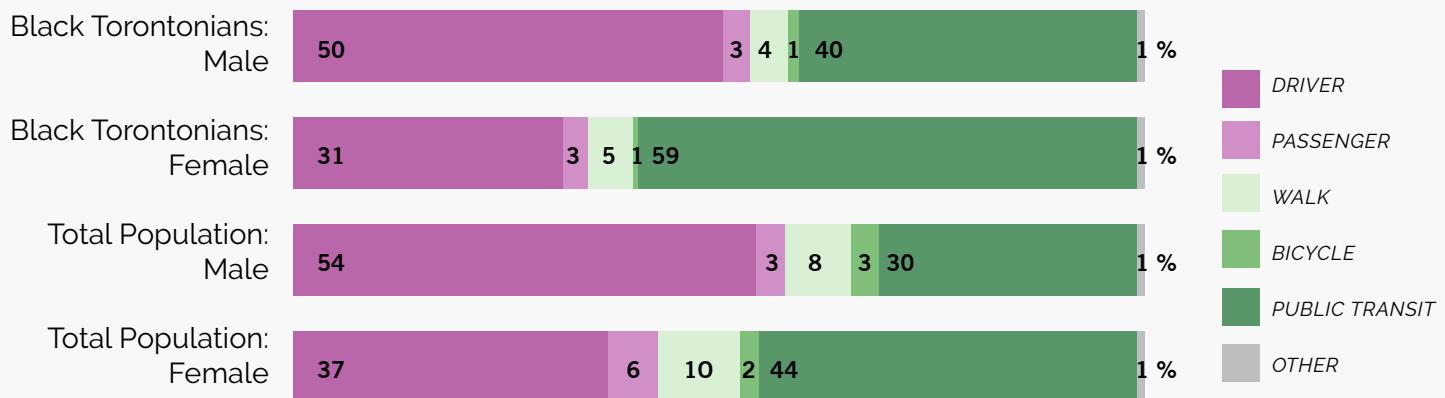
Unequal access to mobility options

Neighbourhoods outside the city's core are still heavily reliant on cars to get around, partly because they lack the mix of safe, reliable mobility options. At the same time, racialized and newcomer residents are increasingly concentrated in these same communities. They face longer commutes, and enjoy less access to jobs and services than other Torontonians, which impact their ability to truly thrive.

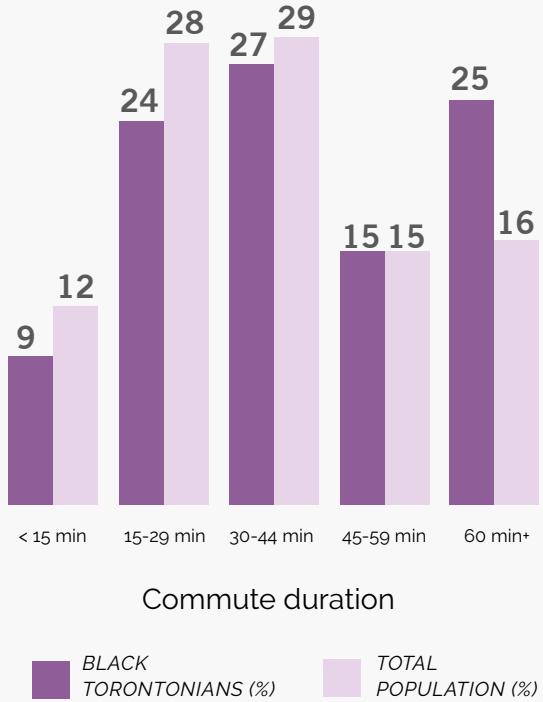


Commuting – Main mode and duration

Black Torontonians are more likely to take transit to work and face longer commute times than average.



DATA RETRIEVED FROM STATISTICS CANADA: TARGET GROUP PROFILE OF VISIBLE MINORITY POPULATION



In Scarborough we have a lack of good transit. We have been promised a LRT network, which if it was built would connect Malvern to Scarborough especially for our young people who need better transit to bring jobs to our community. Our community is seen negatively throughout Toronto, so to improve all neighbourhoods in Toronto, we could have a neighbourhood [celebrated] a month, where different neighbourhoods in Toronto are highlighted. Get positive stories of each community over the year to connect to our neighbours. That should be created so people can connect.

- MALVERN RESIDENT



05

VISION

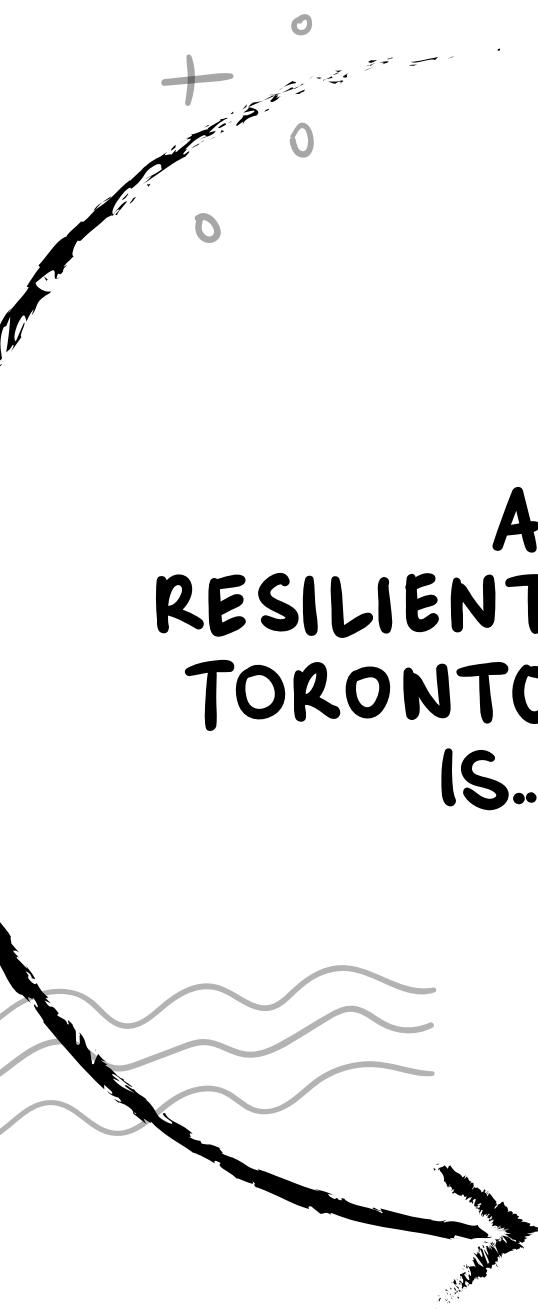


We developed the Vision through an extensive program of public and stakeholder consultation that began with a conversation with Torontonians about how they experienced resilience, both as individuals and as members of communities. These conversations informed an intense half-day workshop with stakeholders representing not-for-profit organizations, universities, charities, businesses, government agencies, and other City of Toronto Divisions, who were asked to work together to articulate Toronto's resilience challenges as well as a desired future for the city in relation to its current state.

These conversations led to the development of a Vision statement, which was then refined through further consultation with Torontonians. It is a shared community vision of what a truly resilient Toronto looks like, and its statements reflect the kinds of outcomes we hope to make progress towards through implementation of the Strategy's Actions, combined with the actions of our partners, residents, and businesses.

*RESILIENT ACTIONS WORKSHOP HELD
IN THE TORONTO REFERENCE LIBRARY,
DECEMBER 10 2018*

A SHARED, COMMUNITY VISION FOR A MORE RESILIENT TORONTO.



A place where residents feel empowered to help shape their communities and where government works in deep collaboration with the people it represents to advance an agenda of fairness and prosperity for everyone.

A place where we each feel connected to the natural world, and where we think about the now as well as far into the future.

Connected to long-term climate and sustainability practices that are embedded in how we do things, and allow us to adapt to an uncertain, changing climate.

Home. A place where housing is a right, and every resident has a safe, decent, and affordable place to live.

Where residents of Toronto will know the history of Indigenous people on these lands, past and present, and are committed to knowing about, understanding, and acting on Truth and Reconciliation, for themselves and the City as a whole.

A place that creates space for diversity and recognizes every resident's right to the city.

Easy to move around in, whether by foot, on a bicycle, in a car, or by transit, with multiple options that are efficient, safe, and affordable for every resident.

A city of connected communities, where residents feel heard, share common goals, and have broad empathy and understanding for one another.

A place that is led by brave and caring people who reflect the diversity of the communities they represent.

A place where every
resident can

THRIVE.

06

ACTIONS



Resilience is complex and building a resilient city will take time. In this Strategy, action has been organized into three Focus Areas: People & Neighbourhoods, Infrastructure, and Leading a Resilient City. Each contains a series of Goals (all of which tie directly back to the Vision statement), and specific Actions, which are the specific projects required to realize each goal. The Actions outlined in the following pages are the most critical efforts Toronto must address to achieve resilience. These Actions represent realistic and practical aspirations, and are designed to realize co-benefits that build upon existing collaborations both within the City and with external partners.

PEOPLE AND
NEIGHBOURHOODS

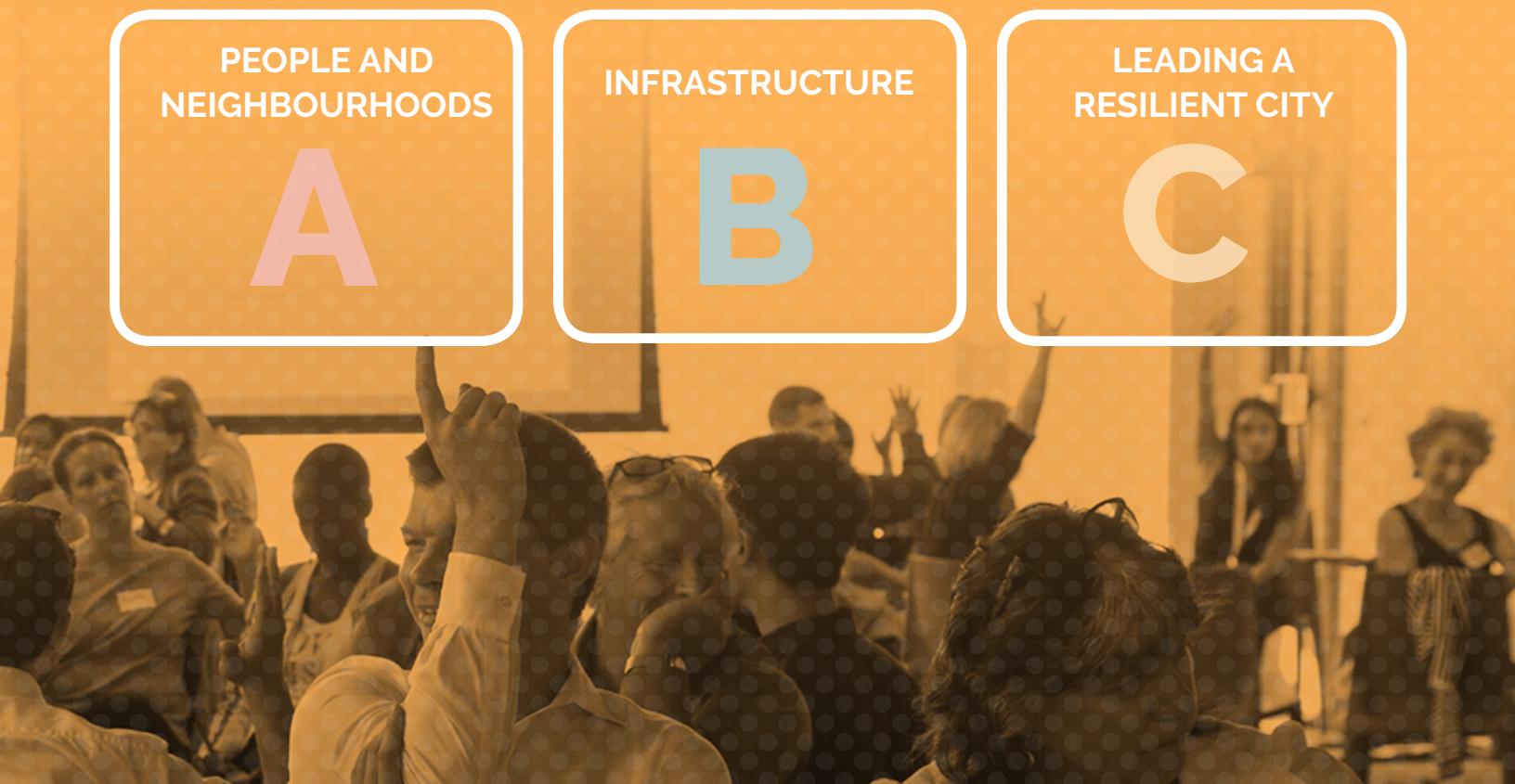
A

INFRASTRUCTURE

B

LEADING A
RESILIENT CITY

C



PEOPLE AND NEIGHBOURHOODS 	<p>1. Toronto has resilient, safe, affordable homes</p> <p>1.1 PRIORITY ACTION: HOME RESILIENCE. Support homeowners and renters to prepare their homes for shocks </p> <p>1.2 PRIORITY ACTION: VERTICAL RESILIENCE. Enable wide-scale change in apartment towers to improve resilience through the improvement or retrofit of apartment towers and units </p> <p>1.3 Apply a resilience lens to the development of the new HousingTO 2020-2030 Action Plan and ensure comprehensive action to address Toronto's affordable housing gaps across the full spectrum of need</p>
	<p>2. Communities take action to improve resilience in their neighbourhoods</p> <p>2.1 PRIORITY ACTION: NEIGHBOURHOOD RESILIENCE. Enhance the capacity of neighbourhoods to prepare for and recover from shocks through grassroots action and network building </p>
	<p>3. Poverty is eliminated and equity is improved</p> <p>3.1 Prioritize the implementation and resourcing of the Council-approved Toronto Poverty Reduction Strategy</p>
INFRASTRUCTURE 	<p>1. Toronto is more resilient to climate change, including the hazards of flooding and heat</p> <p>1.1 Institutionalize an integrated, resilience approach to flooding by adopting the Flood Resilient Toronto Charter</p> <p>1.2 PRIORITY ACTION: FLOOD RESILIENCE: Centralize resources towards a city-wide flood planning and prioritization tool </p> <p>1.3 Review and update existing flood mitigation programs to account for resilience</p> <p>1.4 Take action to mitigate the effects of extreme heat</p> <p>1.5 Communicate, synthesize and scale up ongoing City efforts to advance a system of green and blue infrastructure</p> <p>1.6 Promote a sustainable and resilient food system</p>
	<p>2. Infrastructure and buildings are resilient to a changing climate and reduce greenhouse gas emissions</p> <p>2.1 Develop a Resilience Lens and apply it to City investments, with a focus on infrastructure</p> <p>2.2 Integrate resilience into development and land use planning processes</p> <p>2.3 Incorporate climate resilience into the City's asset management framework and plans</p>

FOCUS AREA

GOAL AND ACTIONS

INFRASTRUCTURE

3. Toronto has multiple reliable, affordable, and safe mobility options that reduce the amount of time it takes to get around
 - 3.1 Create a city-wide mobility action plan through synthesis of ongoing mobility initiatives and priorities, and identification of resilience gaps
 - 3.2 Continue to prioritize service and capital improvements to the TTC that make the system safer, more affordable, more reliable, and less crowded
 - 3.3 Move more people more efficiently within the existing rights of way by expanding demonstration projects

LEADING A RESILIENT CITY

1. Civic engagement and trust in the City improve, and leadership better reflects Toronto's diversity
 - 1.1 Expand corporate civic engagement supports to improve engagement outcomes at the City
 - 1.2 Increase transparency and prioritize communications to improve trust in local government
2. The City prioritizes the most vulnerable people and highest risk in decision-making
 - 2.1 Integrate equity into the City's strategic planning processes
3. Indigenous communities have a leadership role in building resilience
 - 3.1 Build relationships with Indigenous communities in Toronto around resilience
4. Institutionalize resilience into the City's decision-making and take leadership on resilience
 - 4.1 Embed resilience as a practice across the City and partners
 - 4.2 Integrate climate resilience into TransformTO
 - 4.3 Integrate resilience into emergency management
 - 4.4 Improve risk management and communication to residents
 - 4.5 Support local partners in academia, industry, and community to take leadership on resilience
 - 4.6 Position Toronto as a regional, national, and international leader on resilience

FOCUS AREA A: PEOPLE AND NEIGHBOURHOODS

This area focuses on supporting residents, businesses, and communities to make Toronto's neighbourhoods more resilient. It includes a focus on supporting Torontonians at home and in their neighbourhoods.

A photograph showing a group of children in a gymnasium, wearing boxing gloves and red headbands, practicing punches with a female coach. The coach is in the center, demonstrating a punch. Other children are visible in the background.

“For me, it’s just providing a nurturing environment where they can thrive. And I think that’s all the kids in Parkdale need, is a place to thrive.”

KIDS PRACTICING BOXING WITH MIRANDA KAMAL AT MJKO

– MIRANDA KAMAL, MJKO

GOAL A1:

Toronto has resilient, safe, affordable homes

- Torontonians' resilience to shocks is fundamentally tied to the place they call home. This goal supports owners and renters to make changes to their homes that improve resilience. The goal is also about the relationship between resilience and affordability.
-
-
- Toronto is a growing, successful, and prosperous city, and yet over the last decade residents' housing options have become increasingly restricted. This lack of available and affordable housing has a negative effect on both residents and the city's economic vitality. By 2041, the Province anticipates that Toronto will add nearly half a million more residents. That's half a million more people who will need to be housed, which will only add to current affordability challenges if immediate action is not taken. Further, there is increasing demand for shelter space, meaning that the shelter system would be challenged by a sudden increases in users, caused by a cold snap or other similar shock.
-
- Resilient, safe and affordable homes are a key prerequisite for access to employment, shelter during extreme weather, health, and community safety. Considering housing issues through an equity lens, the future resilience rests on the ability to maintain existing and provide new affordable and supportive housing options to everyone, especially seniors, low-income singles and families, persons with disabilities, the homeless, and other groups that will struggle to find and maintain stable, affordable housing.
-
-



ACTIONS



- 1.1** Support homeowners and renters to prepare their homes for shocks
- 1.2** Enable wide-scale change in apartment towers to improve resilience through the improvement or retrofit of apartment towers and units
- 1.3** Apply a resilience lens to the development of the new HousingTO 2020-2030 Action Plan and ensure comprehensive action to address Toronto's affordable housing gaps across the full spectrum of need



ACTION A1.1 PRIORITY ACTION: HOME RESILIENCE

Support homeowners and renters to prepare their homes for shocks

THE CHALLENGE

There are over 400,000 detached, semi-detached and row houses occupied in Toronto. These homes are exposed to climate shocks, including the impacts of extreme cold (i.e. frozen pipes), wind, extreme heat, and flooding. Most of these shocks are also likely to be accompanied by a power failure. Housing quality, and specifically the ability to shelter in place, is a major factor in how residents fare during shocks.

In many cases, the costs associated with recovering from these shocks can be considerable. For example, for basement flooding:

- The average costs of a flooded basement in Canada is \$43,000;
 - Recent evidence shows the mental health costs of flooding can persist for more than three years for a flooded household;
 - In half of the cases studied in Ontario, one member of households affected by a flooded basement took an average of seven days off work as a result;
 - Repeated basement flooding can result in the un-insurability of homes or mortgages, and diminished property values; and
 - Basement residents are more likely to be renters, lower-income, and uninsured, and are therefore the most vulnerable to flooding and likely to suffer the most.
-

THE ACTION

The Resilience Office has already begun to take action to support homeowners and renters to make their homes more resilient. In the summer of 2018, the Office coordinated a partnership between the City of Toronto, the Insurance Bureau of Canada, and the Intact Centre on Climate Change Adaptation at the University of Waterloo to deliver the Home Resilience Pilot. The pilot was delivered at no financial cost to the City and supported 168 homeowners to better understand and protect themselves from flood risk, and to be better

RESILIENCE CHALLENGES



CLIMATE AND ENVIRONMENT



HOUSING



EQUITY

BENEFITS

Toronto's homes, especially those of its most vulnerable residents, are more resilient to flooding, freezing, and other hazards, resulting in fewer costs to Torontonians after a shock

LEAD

- Resilience Office (City of Toronto)

KEY PARTNERS

- Toronto Water (City of Toronto)
- Office of Emergency Management and Toronto Fire Services (City of Toronto)
- Strategic Communications (City of Toronto)
- Municipal Licensing and Standards (City of Toronto)
- Waterloo Intact Centre on Climate Adaptation
- Insurance Bureau of Canada

FUNDING

Seeking partnerships, such as with the insurance sector, to provide financial incentives or subsidies. Aim to leverage policy changes and financial incentives planned by the Province.

prepared for emergencies. Participating residents received emergency preparedness resources and a professional service provider conducted a 50-point visual Home Flood Protection Assessment that identified priority actions to reduce basement flood risk.

A follow up survey showed 90% of participants were 'extremely' or 'very' satisfied with the pilot; over 80% took action to protect their homes from flood risk; and the vast majority of actions taken were simple, low cost, and completed by homeowners themselves or with the help of friends and family.

The pilot built on the success of Toronto's Basement Flooding Protection Program, which offers subsidies and information for homeowners to take actions which reduce their flood risk. It was also informed by the experience of the Home Energy Loan Program, which supports homeowners to pay for the cost of home energy improvements over time.

In order to further support homeowners and renters to take resilience action at home, the City will build on and scale up the success of the Home Resilience Pilot. This will require:

- Expanding the scope of the assessment so that it addresses a more holistic set of risks, including extreme heat, cold/freezing, and power failures;
- Creating a free, online version of the assessment;
- Partnering with the insurance sector and others to provide limited subsidized home assessments to either homes that have been flooded and/or homes with basement tenants;
- Continuing to engage the Province to support implementation of the project, such as through its Made in Ontario Environment Plan. For example, the Province could provide incentives to home owners who complete a home assessment and implement changes in

their homes; and

- Partnering with the insurance sector or other partners to launch a coordinated communications campaign to explain the benefits of home resilience to residents, to improve uptake of both the free online and subsidized home assessments.

After scaling up, the project will be evaluated and re-planned accordingly, with a focus on:

- Improving uptake, data/monitoring, and targeting of the program to vulnerable groups;
- Investigating opportunities for further scaling the assessments to include apartment or condominium assessments;
- Integrating the Home Energy Loan Program, or other City services to provide a one-window approach for homeowners to take climate action; and
- Improving customer service by synthesizing messaging and programs related to home resilience.



EQUITY IMPACT

This action aims to support all homeowners and renters, but with a specific focus on those groups which are most vulnerable to flooding: those who have been flooded in the past, and those who live in basements. Anecdotal evidence suggests that basement dwellers, particularly renters, are more likely to be part of an equity seeking group such as lower-income Torontonians or new Canadians, and that basement renters are less likely to have insurance or access to support in case of a flood. This project will also support the City in better understanding the demographics of climate vulnerability in Toronto's homes, a key input required to support an equity focus in actions such as B1.4, which intends to use social vulnerability data to target other investments.

NEXT STEPS

- Engage industry for technical analysis to expand the scope of the existing assessment process to address a more holistic set of risks.
- Find partner(s) such as the insurance sector, to support subsidized home assessments for the most vulnerable.
- Work with City partners, such as Strategic Communications, to develop the online assessment tool, and to communicate its availability to targeted groups.
- Implement Action A1.1 to help residents understand how to take action to address climate risk at home.



We live in an apartment building in Scarborough. There is no air condition. It is very hot in the summer. We don't like to stay at home. The window can only open a small crack, so the air circulation is not good. It is very hot in our house.



BALDWIN VILLAGE, PHOTO BY ERIC SEHR



ACTION A1.2 PRIORITY ACTION: VERTICAL RESILIENCE

Enable wide-scale change in apartment towers to improve resilience through the improvement or retrofit of apartment towers and units

THE CHALLENGE

The overlap of climate risks and vulnerability in Toronto's aging high-rise rental apartment towers represents the single most pressing, urgent priority for the city's resilience. Over 500,000 Torontonians live in high-rise apartment towers that are more than 35 years old, and there are key resilience risks in these buildings. Many have not updated heating systems and windows since they were built, so they are inefficient and susceptible to failure. Many do not have sufficient back-up power to allow residents to shelter in place, meaning when there is an extended power failure, key systems including heat, water, elevators and lighting, may not work. Almost all do not have central air conditioning (94%), and indoor temperatures often reach unhealthy levels in warm weather.

The residents of Toronto's apartment towers are also more vulnerable to the above risks. Many families, newcomers, and seniors live in these towers; 40% of families living in towers are low income. These communities will likely have more difficulty recovering from extreme weather.

The towers represent 45% of the market rental housing stock in Toronto. The majority of these buildings are privately owned rental apartments (85%). It is essential that these buildings continue to provide quality, affordable housing for generations to come.

International evidence shows that deep retrofits of towers - which go beyond state of good repair to include improving the building envelope to improve insulation, new heating/hot water equipment, better ventilation and cooling, accessibility

RESILIENCE CHALLENGES



CLIMATE AND ENVIRONMENT



HOUSING



EQUITY



COMMUNITY AND NEIGHBOURHOODS

BENEFITS

Safe, livable and affordable housing and a resilient housing stock

LEAD

- Resilience Office (City of Toronto)

KEY PARTNERS

- Social Development Finance Administration (City of Toronto)
- Toronto Building (City of Toronto)
- Energy and Environment Division (City of Toronto)
- Municipal Licensing and Standards (City of Toronto)
- Toronto Public Health (City of Toronto)
- Toronto Fire Services (City of Toronto)
- Toronto Atmospheric Fund
- Tower Renewal Partnership
- Greater Toronto Apartment Association
- Government of Canada
- Province of Ontario

FUNDING

Funding is required to complete technical guidelines. Aiming to leverage federal and provincial funding through new and existing programs such as the National Housing Strategy, Federal climate finance, Province's Carbon Trust, and investment from building owners.

upgrades, fire system upgrades, and emergency backup power - result in:

- Improved resilience to risks such as power failures, heatwaves, and extreme cold;
- Better physical conditions that benefit the physical and mental health of residents;
- Greater building value for the owner and for the tax base; and
- Decreased GHG emissions, by 50% or more.

Many of these buildings are reasonably well-maintained given the constraints under which they operate. However, even well-maintained buildings are at risk from external shocks, such as power failures, which are often related to extreme weather events. Improving resilience in these buildings will ultimately require deep retrofit initiatives that bundle together resilience and efficiency improvements. These actions would effectively extend the life of these buildings ensuring they continue to provide housing for generations to come. There is tremendous opportunity to enhance resilience, reduce carbon emissions, improve health and comfort, create jobs, and preserve critical housing supply through deep retrofit. Deep retrofits fundamentally change the operating standard of buildings and make it possible for these buildings to extend their useful lives.

Further, a sizeable minority of the towers have one or more critical systems (e.g. heating, hot water, electrical, ventilation, elevators, and fire safety systems) which are well past their expected life. Residents of these buildings are at particularly high risk of building systems failing in response to shocks such as flooding or freezing, or simply the passage of time.

However, to date there are few examples of deep retrofits in Toronto. Financial modeling completed by the Resilience Office indicates that "deep" retrofits without a broader business case simply are not economic for private building owners under current conditions.



City programs to improve quality of life in apartment buildings. Over the past ten years, the City has created a number of programs to improve living conditions in Toronto's apartment towers. RentSafeTO is a bylaw enforcement program that ensures that building owners and operators comply with minimum building maintenance standards. Its goal is to ensure that residents of Toronto have a clean, safe and secure place to call home by: strengthening the enforcement of City bylaws; enhancing tenant engagement and access to information; and promoting preventative maintenance in apartment buildings to prevent deterioration of standards

The Tower Renewal Program offers residents and building owners supports to improve the quality of life in towers, including holistic site assessments, and support for tower community initiatives. It also provides access to low-cost financing to make energy efficiency retrofits through the Hi-RIS program. Low-cost financing is also available for community-based organizations and not-for-profits through the Sustainable Energy Plan Financing program.

THE ACTION

The Resilience Office led a cross-divisional and multi-stakeholder process to better understand what policy changes could be made to enable a wider uptake of improvements and deep retrofits of towers while maintaining affordability for residents.

Leveraging data from the City's RentSafeTO program, new research from CMHC including updated costing data for retrofits, participation of tower owners, and development of a new financial model, the Resilience Office produced analysis that supports a new set of actions for the City, the Province, and the Federal government. This research has two key findings:

- The incentives already provided by the City, like through the High-Rise Retrofit Improvement Support Program (Hi-RIS), and other partners are sufficient such that it is economically viable for most tower owners to make initial, smaller and medium-sized retrofits and upgrades that decrease energy use and improve resilience, such as installing more efficient lighting and

- water fixtures.
- To enable deep retrofit of towers, changes to existing policy instruments are required from a combination of the Federal, Provincial, and Municipal governments.

The process also highlighted:

- A lack of clarity on the technical specifics what constitutes a 'deep retrofit' in towers, and how to maximize the value of retrofits for resilience; and
- The continued need for leadership and partnership among a wide range of actors active in the retrofit space to ensure a coordinated, sustained effort to expand retrofit opportunities.

Given those findings, the Resilience Office will continue to advocate for changes that support deep retrofits, with the following priorities:

Develop technical guidelines for deep retrofits.

The City will compile technical guidelines for performance standards of buildings doing deep retrofits, which include costs, savings, and existing incentives. Guidelines are required as a support to policy changes and business owners. There are a number of existing guidelines which can be used as a base, although some are dated and are missing resilience as a focus. In doing this, the City should ensure the actions achieve the most effective suite of updates while also maintaining

affordability, avoiding displacement of tenants, and supporting the economic viability for owners. This will be coordinated with TransformTO's work to develop retrofit technical guidelines for all existing buildings.

Support changes at the Federal or Provincial Level

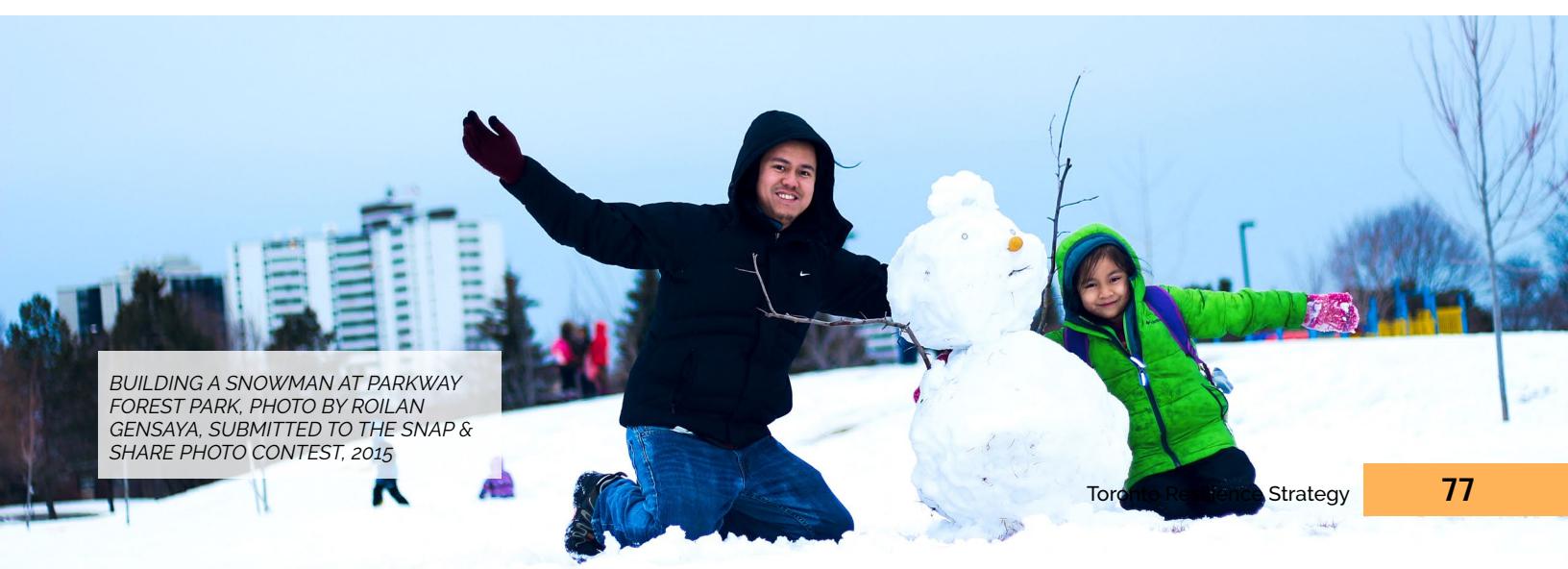
The Federal government has several tools which could improve the enabling environment for deep retrofits, including:

- Changing the Capital Cost Allowance tax classification for deep retrofits to align with other GHG-reducing incentives, like those for electric vehicles. Reclassifying deep retrofits would have a fundamental and systemic change to the business case for retrofits; and
- Providing further support through the National Housing Strategy or other initiatives to reduce the net costs of deep retrofits, either through grants or loans.

The Provincial government could also support deep retrofits, such as through the Made in Ontario Environment plan. Deep retrofits align to Plan's priorities of resilience and supporting business owners to reduce energy costs.

Embed resilience into the City's existing towers leadership

The City's Tower Renewal Program and the Better Buildings Partnership are supporting building



BUILDING A SNOWMAN AT PARKWAY FOREST PARK, PHOTO BY ROILAN GENSYA, SUBMITTED TO THE SNAP & SHARE PHOTO CONTEST, 2015

owners to upgrade their buildings with a number of programs and financial supports. The City should continue support for these programs and ensure programs have the mandate and tools to support a broad suite of resilience retrofits.

While the City is limited in its authority to set standards for construction activity, the City does have the authority to set maintenance standards (under the Building Code Act) and pass regulations related to the "economic, social and environmental well-being of the City, including respecting climate change" (under City of Toronto Act, section 8(2)5.). The City will consider options for improving existing minimum standards to add resilience requirements that have been shown through this work to be economically viable.

The City will also review the information it collects on apartment towers through the RentSafeTO registration process to identify possible opportunities to improve the available resilience data on buildings.

Lead a resilience and deep retrofit collaboration with City and external partners

The City will continue to collaborate with industry and owner representatives; non-governmental organizations, like Tower Renewal Partnership; residents associations; Toronto Atmospheric Fund; utilities; and divisions with a clear mandate to advance vertical resilience. This will be done through existing tables, including the City's interdivisional committee on tower renewal and including external stakeholders when needed. A multi-stakeholder approach works to break down silos and improve coordination.

Investing in resilience will have costs: in the form of grants or delayed or foregone revenues for governments; for tenants in terms of disturbance and in some cases above guideline rent increases; and for building owners in the form of risks associated with all construction projects and

long-term investments. However, not making investments also has costs, though they are difficult to quantify. Moreover, investments will also result in real, tangible benefits, including better living conditions, dramatically reduced energy and water use, reduced greenhouse gas emissions, improved resilience, and continued use of important building assets that are located throughout the city on critical transportation routes.



EQUITY IMPACT

These towers have the highest concentration of resilience risks, such as exposure to heatwaves and power failures, and a high concentration of vulnerability, such as low-income families, seniors living alone, new Canadians, and single-parent households. This action improves housing quality – a major determinant of vulnerability – among equity seeking groups.

Deep retrofit investment in towers also presents a generational opportunity for social, economic, and environmental improvements to tower neighbourhoods. There is a significant opportunity to create local jobs, support innovation, and drive investment in lower-income communities through retrofits.



NEXT STEPS

- Drive deep retrofits through:
 - Developing deep retrofit technical guidelines, building on the significant existing research such as from the Tower Renewal Partnership, and in consultation with owners, residents, academia, and industry;
 - Advocating for changes to the Federal and Provincial governments to improve the enabling environment for deep retrofits; and
 - Integrating resilience into the City's voluntary programs.
- Convene City divisions and external partners to maintain and build momentum for deep retrofits.

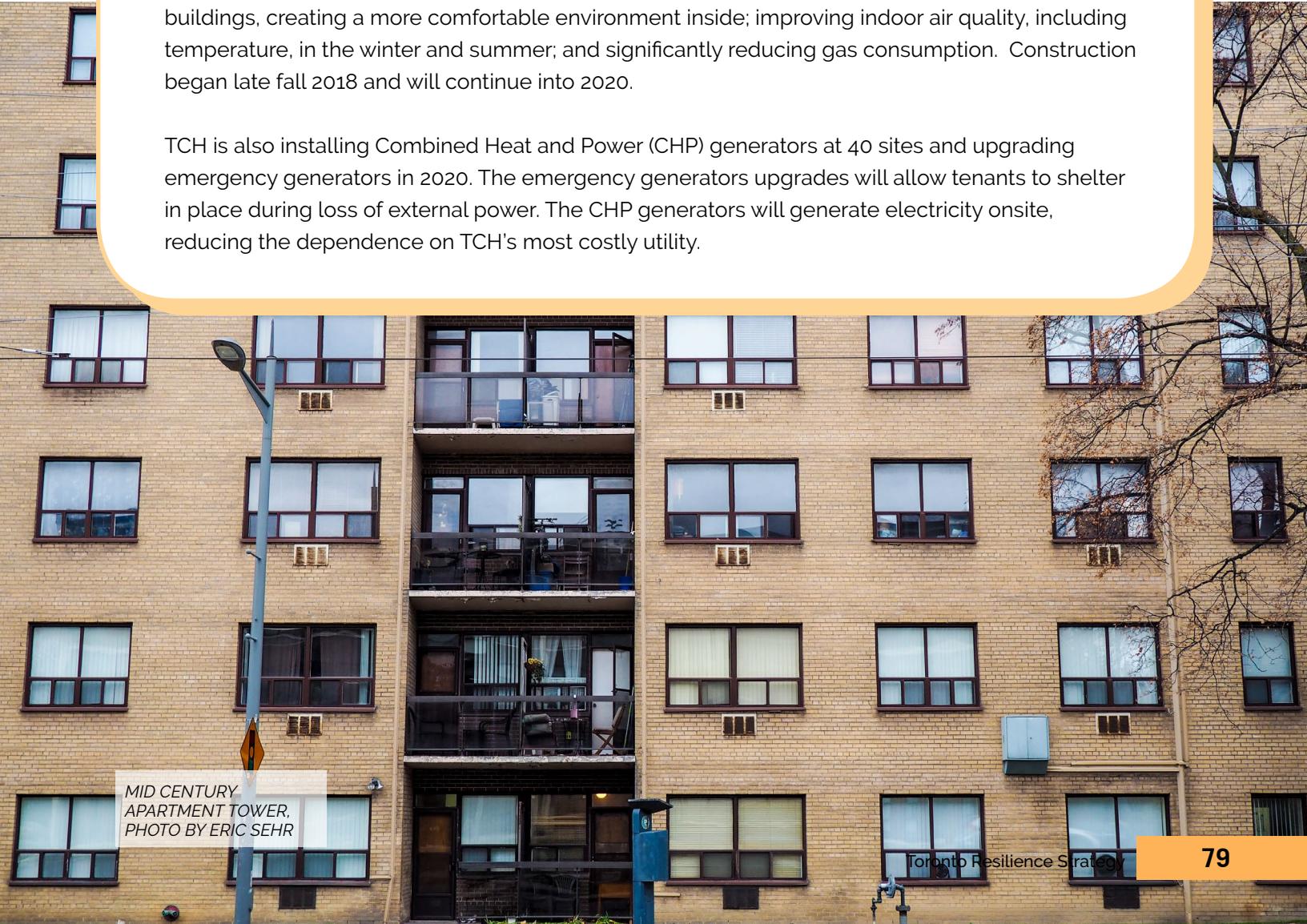
ALIGNED LOCAL ACTION: Resilience retrofits to Toronto Community Housing towers

Toronto Community Housing (TCH), a City-owned corporation, is the largest social housing provider in Canada and the second largest in North America. TCH has 2,100 buildings and 50 million square feet of residential space, which represent a \$9 billion public asset, including 170 towers with 8 or more storeys.

TCH is undertaking deep retrofit at 21 of its apartment towers, funded by the Province of Ontario through the Social Housing Apartment Improvement Program (SHAIP), the Social Housing Apartment Repair Program (SHARP), and by the Energy and Environment Division at the City through a Sustainable Energy Program loan. They are making resilience, energy efficiency and quality of life improvements, including: installing efficient toilets, shower heads and faucets; upgrading heating and ventilation systems; installing efficient lights and adding light sensors in parking garages; replacing single pane windows; installing suite temperature controls; and exchanging window air conditioning units with more efficient in-unit air conditioning.

They are also improving insulation by adding over-cladding to the exterior of 12 of the 21 buildings, creating a more comfortable environment inside; improving indoor air quality, including temperature, in the winter and summer; and significantly reducing gas consumption. Construction began late fall 2018 and will continue into 2020.

TCH is also installing Combined Heat and Power (CHP) generators at 40 sites and upgrading emergency generators in 2020. The emergency generators upgrades will allow tenants to shelter in place during loss of external power. The CHP generators will generate electricity onsite, reducing the dependence on TCH's most costly utility.



ACTION A1.3

Apply a resilience lens to the development of the new HousingTO 2020-2030 Action Plan and ensure comprehensive action to address Toronto's affordable housing gaps across the full spectrum of need

THE CHALLENGE

City of Toronto staff, community partners, and housing experts in Toronto have identified solutions to address the City's affordable housing gaps. However, more work needs to be done to create an enabling environment in which there is sufficient flexibility, momentum, and mechanisms to implement the spectrum of these solutions.

In 2019, the City is developing a new, ten-year housing plan which presents an opportunity to embed the issue of affordable housing within a larger resilience framework supporting vulnerable and low-income Torontonians to truly thrive. The ten-year housing plan will contribute to the development of a more inclusive city in which vulnerable and low-income groups are not just able to bounce back after a shock, but to recover in a way that makes them stronger and even more resilient than they were before the shock (some scholars call this bouncing forward). As urban design scholar Jon Lang advocates, housing environments are connective spaces that can either open up residents to broader opportunities or restrict them.

THE ACTION

To support the development of a more resilient city, the new HousingTO 2020-2030 Action Plan should consider the provision of a range of housing options in the context of a variety of other issues. These issues include:

- Developing complete communities;
- Updating the land use planning framework to allow for the provision of viable housing options and the creation of safe

RESILIENCE CHALLENGES



CLIMATE AND ENVIRONMENT



HOUSING



EQUITY

BENEFITS

Improved housing affordability, and a housing stock that contributes to the City's overall resilience

LEAD

- Affordable Housing Office (City of Toronto)

KEY PARTNERS

- Resilience Office (City of Toronto)
- Shelter, Support and Housing Administration (City of Toronto)

FUNDING

No new funding sources are required to apply a resilience lens to the plan. The implementation of this action requires a commitment to integrate a resilience lens into current and future work, relying on the expertise of staff and partners.

- neighborhoods across large geographies within the city;
- Designing open spaces that provide safe places for people to gather and children to play;
 - Designing mobility systems that provide access to employment, services, and retail;
 - Preparing the existing housing supply for extreme weather, including floods, heat waves and cold snaps;
 - Providing supportive infrastructure and community services, including community centres and libraries;
 - Addressing the wait list and repair backlog for social and supportive housing;
 - Designing systems of engagement that allow people to participate meaningfully in their own governance;
 - Supporting housing organizations to deal with crisis; and

- Ensuring resiliency of the aging stock of rental and social housing, including rental apartment buildings (as described in A1.2).

This will be guided by work to develop a resilient lens for infrastructure projects (Action B2.1).

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NEXT STEPS

- Continue to deliver on the City's Housing Now initiative to construct affordable rental units across Toronto.
- Continue to advance Toronto Community Housing's Tenants First initiative to give residents greater opportunities to have a say in the operation of their buildings.
- Deliver Toronto's next HousingTO Plan by the end of 2019.



SUMMER IN
THORNCWHITE PARK



GOAL A2:

Communities take action to improve resilience in their neighbourhoods

- Communities are the first to experience any shock. This goal is to build more resilient communities in every neighbourhood across Toronto.
- International evidence shows that lower income neighbourhoods tend to do worse in shocks and recover more slowly, and that neighbourhoods with high levels of social capital do better in shocks. Cities around the world - including San Francisco, Melbourne, and Vancouver - are designing and implementing community resilience projects to strengthen their infrastructure and response plans to recover from future shocks. Through these projects, cities also aim to build on the capacity of residents, organizations, and businesses to come together, utilize assets, and adapt to address emerging needs and challenges.



ACTIONS



- 2.1 Enhance the capacity of neighbourhoods to prepare for and recover from shocks through grassroots action and network building



ACTION A2.1

PRIORITY ACTION: NEIGHBOURHOOD RESILIENCE

Enhance the capacity of neighbourhoods to prepare for and recover from shocks through grassroots action and network building

At the heart of a resilient community is a robust set of social networks which help people address the challenges in their day-to-day lives, as well as those that occur in times of extreme stress.

- WELLINGTON (NEW ZEALAND) REGION EMERGENCY MANAGEMENT OFFICE COMMUNITY RESILIENCE STRATEGY

THE CHALLENGE

Toronto's ability to be resilient will rely on strong and prepared neighbourhoods. Connected communities with active local networks of engaged residents, community leaders, community centres, faith-based organizations, libraries, and local not-for-profits and organizations are better prepared to survive, adapt, and thrive in response to a shock.

But not all neighbourhoods fare the same in the face of shock. Communities that experience historic underinvestment, high levels of food insecurity, concentrated poverty, and a lack of social infrastructure are hardest hit by extreme weather and other shocks. After a shock, these communities take longer to recover. Over the last 10 years, income inequality has grown significantly in Toronto, increasing inequities in neighbourhoods with predominantly racialized and newcomer residents (learn more on pages 52-53). There is also significant food insecurity: 1 in 7 households in Toronto are food insecure.

RESILIENCE CHALLENGES



EQUITY



CLIMATE AND ENVIRONMENT



CIVIC ENGAGEMENT



COMMUNITY AND NEIGHBOURHOODS

BENEFITS

Communities are more prepared for shocks and stresses, and are able to recover from them more quickly

LEADS

- Resilience Office (City of Toronto)
- Social Development, Finance and Administration (SDFA, City of Toronto)

KEY PARTNERS

- Parks, Forestry and Recreation (City of Toronto)
- Office of Emergency Management (OEM, City of Toronto)
- Toronto Public Health (TPH, City of Toronto)
- Energy and Environment Division (City of Toronto)
- Toronto Public Library (TPL)

FUNDING

For 2019, funding for this action will come from existing budget envelopes as well as alternate sources. The Resilience Office may request additional funding from Council in 2020.

In response, the City has made key investments to advance equitable economic, social, health, environmental, and engagement outcomes across Toronto neighbourhoods, including through the Toronto Strong Neighbourhoods Strategy 2020.

The City now needs to make critical complementary investments in neighbourhood-based resilience planning that advances more equitable outcomes for residents.

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THE ACTION

Through the Neighbourhood Resilience Initiative, the City will support organizations and grassroots leaders to help neighbourhoods prepare for, respond to, and recover from small to large-scale shocks. Community organizations are at the forefront of neighbourhood resilience and this action seeks to support the efforts, creativity, and expertise of these organizations. The Initiative will be a collaboration between Social Development, Finance and Administration (SDFA), the Office of Emergency Management (OEM), Toronto Public Health (TPH), the Resilience Office and community-based organizations and residents.

It will start with a two-year pilot project beginning in 2020. As part of the pilot, partners will come together to develop and implement an assessment and action planning process in three Neighbourhood Improvement Areas (NIAs). This initiative will bring together the knowledge of what a resilient community looks like from a variety of disciplines and perspectives, and develop a comprehensive process that neighbourhoods can use to build on strengths and address gaps. The pilot will identify opportunities for capacity building, coordination, action and increased local collaboration. It will also explore how City and non-City-owned community assets, like parkland, libraries, community centres, and child centres, can continue to play a role in building resilience.



Community organizations as leaders

Community organizations are at the forefront of resilience action. Toronto's 140+ neighbourhoods are home to many community organizations who serve, represent, celebrate, and foster well-being in different ways. Many of these organizations are guided by residents and community leaders, and have an intimate understanding of needs, ideas, and relationships that are critical to building resilience to acute shocks and long-term stresses. Beyond providing key community services, organizations such as the Jane Finch Community Centre and the East Scarborough Storefront, continue to explore strategies to leverage community benefits from public and private investment. As part of these strategies and thought leadership, both organizations have created space inventories to better understand evolving conditions of access to space, programming, and opportunities for community-led space activation with a variety of partners.



When I heard that a snow storm was coming, I was so worried, because it was my first winter in Canada. But a neighbour in my building helped me store food before the winter.



The launch of the Neighbourhood Resilience Initiative will galvanize internal and external supports and resources for neighbourhood resilience across the city while building on existing efforts. The goal is to develop a replicable practice that can be disseminated and shared with other communities.

The initiative will align with the Toronto Strong Neighbourhoods Strategy 2020 and the Vulnerability Assessment of Toronto's Food System. It will take a food systems approach (learn more on page 107) and integrate the Council-approved community food resilience action plan process. It also connects with the Office of Emergency Management's broader aim to build community-based emergency response and management approaches.

shocks. NIAs generally are home to more residents from equity seeking groups than other Toronto neighbourhoods, including newcomers, racialized people, people with low-incomes and/or who are unemployed or on social assistance, and youth.

NEXT STEPS

- Work with partners to identify the three neighbourhoods that will take part in the pilot project by 2020.
- Develop and implement a robust civic engagement process to work with communities and stakeholders in pilot communities to co-create the neighbourhood resilience assessment and action planning process, and then work with those communities to implement plans.

EQUITY IMPACT

Research suggests that low-income and other equity-seeking groups are at a greater vulnerability to climate shocks than the general population. This action will improve the way residents in NIAs are able to prepare for and recover from climate

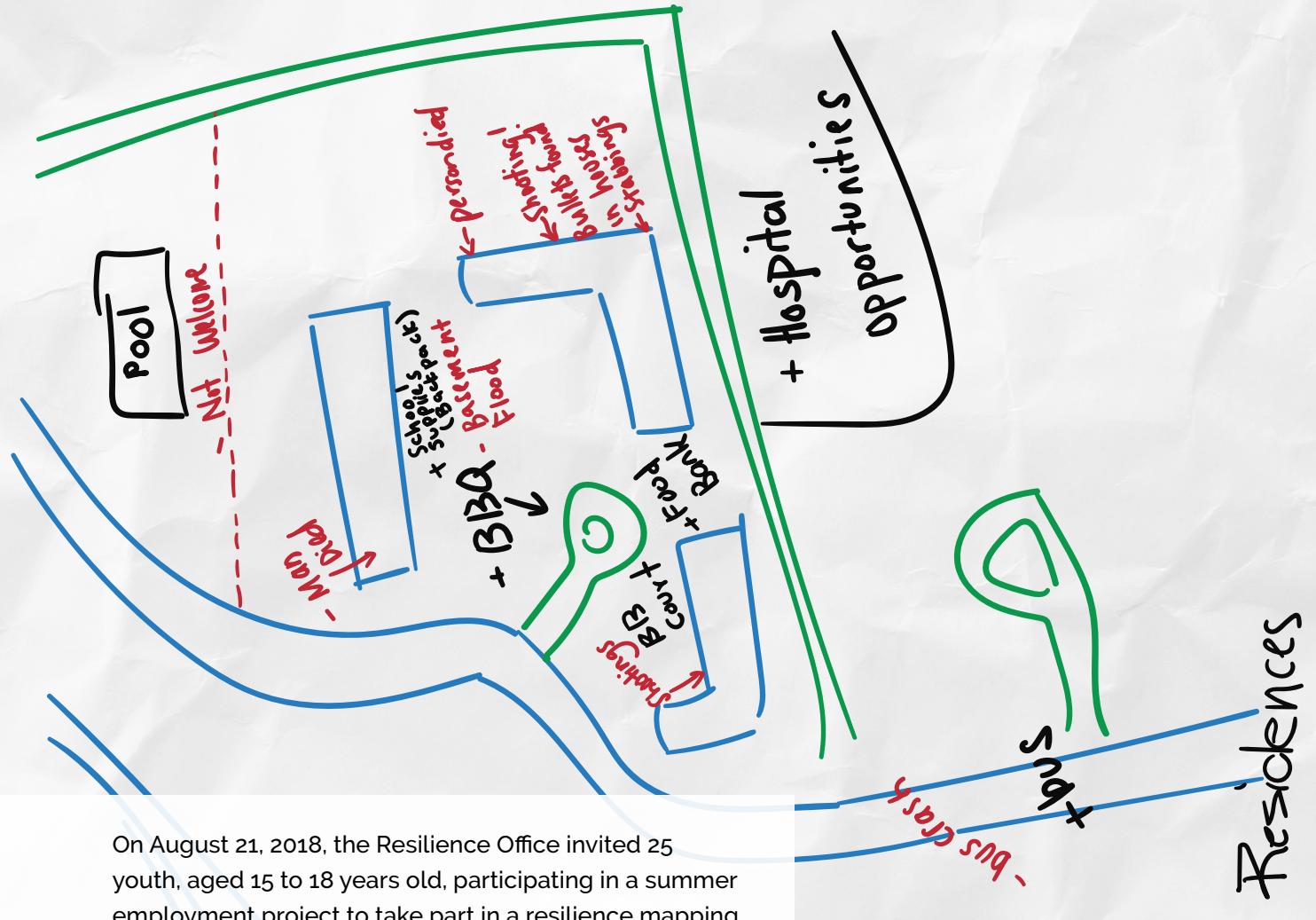
Resilient Conversations

The Resilience Office facilitated a series of conversations with 200 residents in Neighbourhood Improvement Areas in July and August, 2018, led by Local Champions, resident leaders who are part of a program led by Centre for Connected Communities as part of the Toronto Strong Neighbourhood Strategy. To guide these conversations, the Resilience Office worked with the Local Champions to co-create a Resilient Conversations Toolkit (available on the Resilience Office at toronto.ca/resilience).

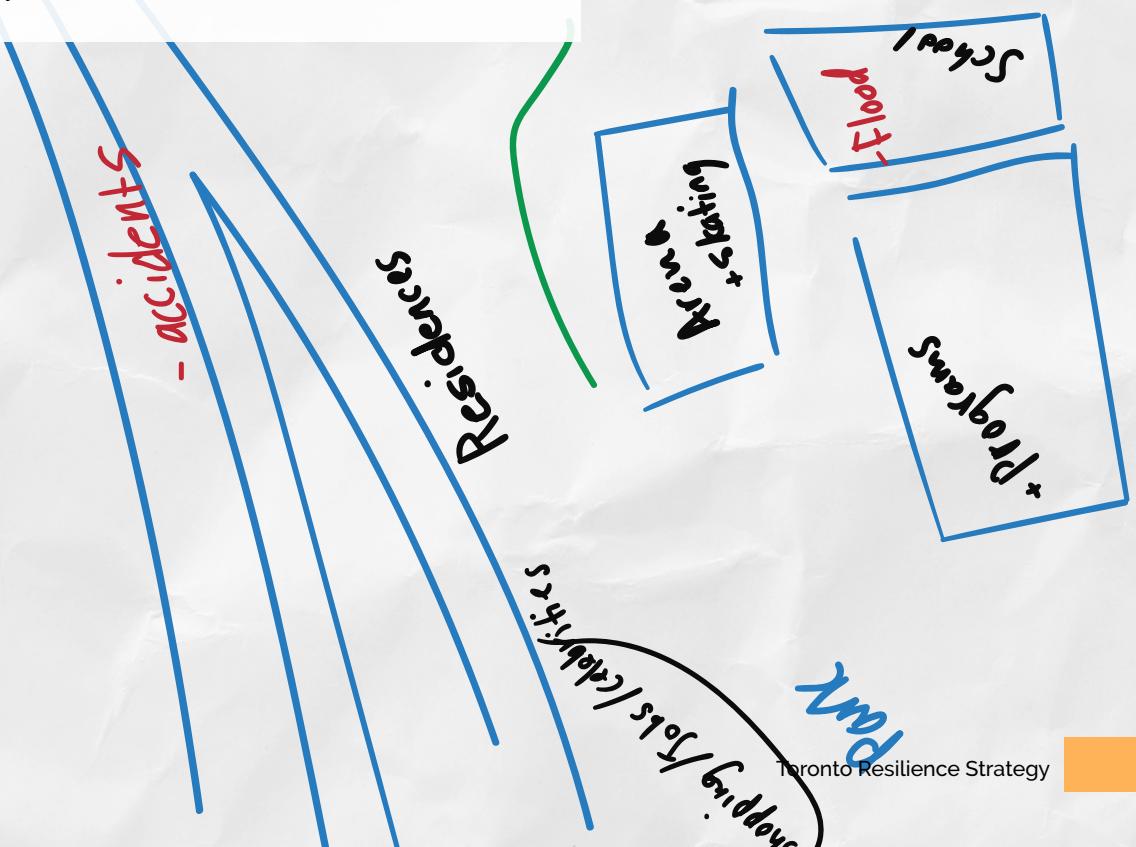
The Toolkit provided the Local Champions and leaders in other organizations with language, means, and opportunity to convene their own Resilient Conversations. The toolkit was made of six exercises that used storytelling, community mapping and historical reflection to drive conversation. The toolkit helped generate a grassroots understanding of how residents living in Neighbourhood Improvement Areas understand resilience.

The Local Champions used the toolkit to guide conversations in neighbourhoods. These conversations yielded specific recommendations on how to improve resilience in each neighbourhood, including on issues related to emergency preparedness. Many of the conversations led to residents recommending that neighbourhood-based emergency preparedness plans be set up for each community based on their respective challenges, assets, and infrastructure.

The Resilient Conversations model offers a starting point for Action A2.1: it successfully engaged residents in neighbourhoods that are at the highest risk and most vulnerability to shocks in conversations about resilience and emergency planning.



On August 21, 2018, the Resilience Office invited 25 youth, aged 15 to 18 years old, participating in a summer employment project to take part in a resilience mapping exercise as a part of the Resilience Strategy engagement process. The exercise invited youth to honestly and openly map things that build and challenge their neighbourhood's resilience. This is one of the many maps created that day.



GOAL A3:

Poverty is eliminated and equity is improved

- This goal supports a response to immediate needs, the creation of pathways to prosperity, and systemic change through which equity is strengthened in day-to-day decision-making.
- Through engagement, residents across Toronto said that their capacity to enable resilience in their communities and families is related to their opportunities and pathways to prosperity. These opportunities and pathways include access to jobs, education, healthcare and other services, and a decent and dignifying income. These issues have life-altering effects and their gravity impacts the well-being of the entire city.
- Although poverty and inequity are the result of complex, interrelated factors, local action and policy has a clear and enabling role. Becoming a city where all people are supported to live in healthy, prosperous, and dignified circumstances is not only a strategic goal, but a matter of fairness and justice in Toronto.

ACTIONS

- 3.1** Prioritize the implementation and resourcing of the Council-approved Toronto Poverty Reduction Strategy

ACTION A3.1

Prioritize the implementation and resourcing of the Council-approved Toronto Poverty Reduction Strategy

THE CHALLENGE

One in four children and one in five adults live in poverty in Toronto. They fear eviction, walk to save a token, are forced to choose the cheapest and least nutritious food, tell government agencies the same information over and over again to access supports, and worry that the opportunities enjoyed by other children will be denied to theirs. That is what life is like for too many residents in Toronto.

Tackling poverty is essential to creating a resilient, stronger Toronto. As long as significant numbers of Torontonians lack access to quality jobs and stable incomes, the city and its residents continue to remain vulnerable to the city's resilience challenges.

THE ACTION

The Toronto Poverty Reduction Strategy is a concrete, 20-year plan that was unanimously approved by City Council in 2015. It contains 17 recommendations linked to a set of actions to be implemented over a four-year period. Annual work plans identify initiatives that advance actions. The Poverty Reduction Strategy focuses on housing stability, services access, transit equity, food access, the quality of jobs and incomes, and systemic change. All of these issues speak to the resilience of households, communities, neighbourhoods, and Toronto as a whole. The forthcoming update to the Poverty Reduction Strategy has the opportunity to address the inequity concerns heard from community members throughout the development of this Resilience Strategy.

NEXT STEPS

- Continue to advance completion of the 2019-2022 Poverty Reduction Action Plan, to be considered by City Council in 2019.
- Advance funding of this Plan as part of future budget processes.

RESILIENCE CHALLENGES



EQUITY



COMMUNITY AND NEIGHBOURHOODS

BENEFITS

Immediate needs of residents are met, new pathways out of poverty are created and are sustained through systemic change

LEAD

- Poverty Reduction Strategy Office (City of Toronto)

KEY PARTNERS

- All City of Toronto Divisions, Agencies, Boards and Commissions
- Residents with lived-experience of poverty
- Community-based agencies and service providers, including the United Way and Toronto Foundation
- Business and Labour leadership
- Province of Ontario
- Government of Canada

FUNDING

In addition to the action plans, annual work plans and progress reports are developed to identify programs, services and initiatives that will be brought forward to City Council as part of the annual budget process. Actions approved in the 2019-2022 Action Plan with financial implications will be submitted to the 2020 City of Toronto budget process.

FOCUS AREA B: INFRASTRUCTURE

This area focuses on making our shared, human-made and natural infrastructure more resilient, and using that infrastructure for a more resilient Toronto.



GOAL B1:

Toronto is more resilient to climate change, including the hazards of flooding and heat

- **Toronto needs to become more resilient to the shocks and stresses of changing climate.**
 - Toronto experiences a wide range of significant climate hazards. Projections indicate that human-caused climate change will result in 'hotter, wetter, wilder' weather in Toronto in the near future. This will come in the form of shocks (storms will be more intense, number of heat waves will increase) and stresses (higher daily summer temperatures, higher daily rain volumes). And yet Toronto will also continue to experience the shocks and stresses associated with severe winter storms and very cold weather.
 - The actions presented here are focused on the two hazards that pose the greatest and fastest growing risk to residents – flooding and extreme heat. The City's own investments and plans must be resilient to climate change while City partners and Toronto's businesses and residents must also be supported to be more resilient. Applying an equity lens, these efforts should focus on the populations who are most vulnerable to each hazard.



ACTIONS

- 1.1** Institutionalize an integrated, resilience approach to flooding by adopting the Flood Resilient Toronto Charter
 - 1.2** Centralize resources towards a city-wide flood planning and prioritization tool
 - 1.3** Review and update existing flood mitigation programs to account for resilience
 - 1.4** Take action to mitigate the effects of extreme heat
 - 1.5** Communicate, synthesize and scale up ongoing City efforts to advance a system of green and blue infrastructure
 - 1.6** Promote a sustainable and resilient food system

ACTION B1.1

Institutionalize an integrated, resilience approach to flooding by adopting the Flood Resilient Toronto Charter

A common vision as well as cross-sector collaboration and continuous improvement can solidify Toronto as a world leader in flood resilience.

THE CHALLENGE

Toronto's risk of heavy flooding from rainfall is evident and growing. Toronto has experienced five severe storms since 2000, causing widespread damage and disruption. The summer of 2017 saw extreme amounts of rain, which led to Lake Ontario reaching record high water levels, flooding the Toronto Islands. Global climate change will result in increased intensity of these storms, increasing the risk of flooding and its impact, while the city's growth has put more people and property at risk. Page 94 describes some of the impacts of flooding in Toronto since 2000.

Over the past two decades Toronto has made extensive investments and efforts to mitigate flood risk, and the collective expertise, capacity and commitment is in place. However, there is room for improvement. Flooding is a risk to all elements of the city – residents, businesses, private and public property, utilities, transportation networks and more – which is why an integrated approach to flooding is needed.

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THE ACTION

The Resilience Office assembled the Flood Resilience Working Group and facilitated a unique, year-long collaboration between 18 people from City divisions, agencies, the private sector; academia, and other orders of government. Supported by international consultation and a workshop by Deltares – a globally leading institute on flood resilience – the Working Group examined challenges and developed solutions to flooding in Toronto.

RESILIENCE CHALLENGES



EQUITY



CLIMATE AND ENVIRONMENT



HOUSING



MOBILITY

BENEFITS

A unified vision to address flooding, improved city-wide resilience to flooding

LEAD

- Resilience Office (City of Toronto)

KEY PARTNERS

- Toronto Water (City of Toronto)
- Flood Resilience Working Group (see page 96 for full list)

FUNDING

No funding required.

The Flood Resilient Toronto Charter was created by the Working Group to set goals for flood resilience and to guide decision-making in the City around a collective vision and set of principles to reduce flooding in Toronto. The Charter's seven actions represent consensus among the Working Group members on best practices to mitigate flood risk. The Charter will be signed by senior leaders of 17 organizations to guide effective decision making that benefits the city as a whole. The Flood Resilience Working Group will be formalized to operationalize the Charter and promote collaboration between stakeholders.

FLOOD RESILIENT TORONTO CHARTER

1. Guide city planning, projects and programs based on greatest risk. Risk, taking vulnerability and impact into account, is to be assessed based on a social cost-benefit analysis considering physical flood hazards, social vulnerabilities and critical infrastructure.
2. Use city-wide modelling to identify probability and impact of flooding, and map critical infrastructure, physical and social vulnerabilities. Produce an intuitive map that can be applied by multiple stakeholders.
3. Use risk mapping and forecasting to guide funding and deployment of operational resources. Operations staff and technology should be assigned geographically and funded based on return on investment versus flood risk and achievable level of service.
4. Plan and fund capital projects based on the outputs of flood risk modelling, aligning investment with a social cost-benefit analysis accounting for return on investment and achievable level of service.
5. Encourage new partnerships and innovative technical approaches; shift thinking towards flood resilience.
6. Collaborate locally, nationally and internationally, and demonstrate leadership in flood resilience.
7. Communicate flood risk to the public and stakeholders, and encourage residents and businesses to take action.

FLOOD RESILIENCE WORKING GROUP

CITY DIVISIONS

- Toronto Water
- Environment and Energy
- City Planning
- Transportation Services
- Engineering and Construction Services
- Toronto Building
- Resilience Office
- Facilities

AGENCIES

- Toronto Transit Commission
- Toronto Hydro

- Metrolinx
- Toronto and Region Conservation Authority

PROVINCIAL MINISTRY/ASSOCIATION

- Ministry of Environment, Conservation and Parks
- Conservation Ontario

PRIVATE SECTOR/ACADEMIA

- Institute for Catastrophic Loss Reduction
- Intact Centre on Climate Adaptation
- University of Toronto

EQUITY IMPACT

The Flood Resilience Charter accounts for social vulnerabilities in assessing flood risk. The desired outcome of this focus is to decrease vulnerability to flooding to equity seeking groups.

NEXT STEPS

- City divisions, agencies and external partners on the Flood Resilience Working Group adopt the Flood charter as Toronto's vision for flood resilience.
- Institutionalize the Flood Resilience Working Group and add partners, such as Parks, Forestry & Recreation (City of Toronto), as required.



A Recent History of Flooding in Toronto

A number of floods have significantly impacted Toronto in the last two decades:

- **On May 12, 2000**, a storm produced over 90mm of rainfall and generated more than 3,000 basement flooding complaints.
- **On August 19, 2005**, a storm lasting three hours produced up to 153mm of rainfall. Over \$620 million of private and public damage occurred. This storm resulted in more than 4,100 basement flooding complaints.
- **On July 8, 2013**, Toronto received more than 100mm of rain within a period of 90 minutes. The storm caused a significant power outage and 300,000 Torontonians lost power for several hours. Flooding heavily disrupted GO Transit and Toronto Transit Commission service, halting operations in multiple locations in the City, necessitated a rescue operation to escort passengers from a train stuck on flooded tracks adjacent to the Don River. The storm resulted in \$1 billion in damages, mostly to private properties - the costliest disaster in Ontario's history, resulting in almost 4,800 basement flooding complaints being reported to the City.
- **In spring 2017**, snow melt and an exceptionally rainy spring contributed to Lake Ontario water levels reaching the highest elevation ever recorded. The Toronto Islands and its 800 residents, businesses and schools were directly impacted, with Toronto Island Park closed for three months.
- **On August 7, 2018** a localized and slow moving storm resulted in more than 100mm of rain falling in two hours in different locations of the city. This event halted the Toronto Transit Commission service on certain lines, severely damaged 9 street cars, and generated more than 700 basement flooding complaints.



DAMAGE FROM AUGUST 19, 2005 STORM (PHOTO FROM JANE-FINCH.COM)

ALIGNED LOCAL ACTION: Port Lands Flood Protection

The Port Lands Flood Protection Project is an unprecedented opportunity to revitalize the Don River and transform Toronto's eastern waterfront and is Toronto's flagship resilience project. Approximately 290 hectares (or 715 acres) of residential and industrial land around the mouth of the Don River will be protected from flooding during the equivalent of a Hurricane Hazel storm. The project will feature a new mixed-use island community, known as Villiers Island, as well as a naturalized mouth of the Don River and with a new natural greenway that will promote wetland diversity and support habitat for fish, birds and wildlife. The new Villiers Island development includes new housing (of which at least 20% will be affordable), new office and retail space, a community centre, and new parkland. The neighbourhood will promote access to nature, active modes of transportation, and will be connected to the downtown core and neighbourhoods to the east via rapid transit. This \$1.25 billion project is funded by the three levels of government and is a cooperative venture with numerous City Divisions, Waterfront Toronto, the Toronto and Region Conservation Authority (TRCA), and other agencies, including CreateTO (Toronto Port Lands Company).



RENDERING OF THE NEW VILLIER'S ISLAND "A PARK FOR PEOPLE"



ACTION B1.2 PRIORITY ACTION: FLOOD RESILIENCE

Centralize resources towards a city-wide flood planning and prioritization tool

THE CHALLENGE

Currently, extensive effort is undertaken to create engineering models of drainage systems, and to map the floodplains of the city's rivers. However, Toronto does not have a city-wide map of urban flooding risk that is accessible to all partners in flood planning and the public. Urban flooding occurs when rainfall overwhelms sewer and drainage capacity, forcing the water to flow overland. This is a key gap identified by the Resilience Strategy development process.



THE ACTION

With support from the Flood Resilience Working Group, the Resilience Office will synthesize existing data sets and establish a high-level city-wide mapping tool to identify and prioritize problematic urban flooding areas. The tool will be used for planning, infrastructure prioritization, utility-based decisions, operations planning and deployment, prioritizing emergency management resources, and communicating with the public to encourage at-risk residents to act.

With the input of the Flood Resilience Working Group, this tool will account for flood risk using topography and sewer capacity and overlay key concerns such as critical infrastructure and vulnerable populations. Many great data sets currently exist within the City and its partners and will be centralized. The Climate Change Risk Assessment Tool and Process, developed by Environment and Energy and Transportation Services, is an example of a successful initiative that identifies, ranks and prioritizes risks for action; however it is missing temporal and geospatial information.

Flood mitigation allows a unique opportunity to work together to develop creative, collaborative solutions – city-wide risk mapping will provide an opportunity for multiple stakeholders to identify

RESILIENCE CHALLENGES



EQUITY



CLIMATE AND ENVIRONMENT



HOUSING



MOBILITY

BENEFITS

Improved coordination and planning related to reducing flood risk

LEAD

- Resilience Office (City of Toronto)

KEY PARTNERS

- Toronto Water (City of Toronto)
- Flood Resilience Working Group
- Geospatial Competency Centre (City of Toronto)

FUNDING

As scope of the tool is finalized, funding will be determined based on investments from stakeholders, available grants, and potential investment from partners such as provincial and federal governments.

needs and work together to develop objective and multi-functional solutions. There may also be opportunities to adapt and apply the tool to other hazards, like extreme heat. The Resilience Office will lead the development of the tool with input from the Flood Resilience Working Group, which will direct the use and update of this tool moving forward. The Resilience Office would collaborate closely with Toronto Water to produce a robust, intuitive tool with a version that is available online to the public. A review of several Canadian cities undertaken by the Working Group shows little to no correlation between house prices and flood mapping risk, and will allow for recognition and action on flood risk.

The tool can be used to support Action A1.1 and A1.2 of the Strategy to help houses (Action A1.1) and tower owners (Action A1.2) take action against flood risk.

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EQUITY IMPACT

The flood mapping tool will include data regarding equity-seeking groups and other vulnerable populations, where possible, so that it can be used in decision making about reducing flood risk. The tool will then enable integrated planning, which will help focus on reducing system impacts of flooding, which disproportionately impact the most vulnerable (i.e. a focus on power or transit outages rather than only on a person's home flooding).

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NEXT STEPS

- Finalize the terms of reference and develop the technical scope for the mapping tool.
- Procure a partner to support development of the tool.



WOODBINE BEACH

ACTION B1.3

Review and update existing flood mitigation programs to account for resilience

THE CHALLENGE

So far, the City has done extensive consultation and work to produce leading-edge wet weather flow management guidance.

In 2003, Toronto released the **Wet Weather Flow Master Plan**, – a long term plan with the goal of reducing and ultimately eliminating the adverse impacts of wet weather flow on Toronto's watersheds. The Plan identifies thirteen objectives including addressing stormwater quality and quantity, improving the City's river and lake quality to allow swimming and healthy aquatic communities, reducing erosion and minimizing threat to property from flooding. The historic and comprehensive Plan made Toronto a leader in wet weather flow management, and aligned wet weather goals with those of the Province and neighbouring municipalities.

The **Basement Flooding Protection Program** is a city-wide program that studies the capacity of the City's existing storm, sanitary and combined sewer drainage systems, recommends and constructs infrastructure improvements, and subsidizes homeowner flood risk reduction efforts. The Program was created after the May 12, 2000, storm, and expanded city-wide in 2006.

Significant progress has been made on these two programs, including City-wide Mandatory Downspout Disconnection, the completion of Basement Flooding Environmental Assessment Studies and construction and upgrade of stormwater management facilities and the advancement of the Don River and Central Waterfront Project to reduce stormwater and combined sewer overflow discharges into the City's watercourses.

RESILIENCE CHALLENGES



EQUITY



CLIMATE AND ENVIRONMENT



HOUSING



MOBILITY

BENEFITS

Improved effectiveness and longevity of ongoing flood mitigation programs

LEADS

- Resilience Office (City of Toronto)
- Toronto Water (City of Toronto)

KEY PARTNERS

- City Planning (City of Toronto)
- Toronto Region Conservation Authority
- Engineering and Construction Services (City of Toronto)
- Environment and Energy Division (City of Toronto)
- Transportation Services (City of Toronto)

FUNDING

Subsequent to the workshop, funding to be determined for review and update of existing programs.

The climate is changing and decision makers need that to take into account future climate risk to ensure proper solutions are proposed, and that these solutions are designed with assets' full lifespans in mind. These flood mitigation programs must be refreshed and updated so that they continue to serve Toronto for generations to come.

Operations play a fundamental role in flood resilience and rely on the collaboration and cooperation of multiple stakeholders. For example, Transportation Services' **Street Sweeping Program** (Clean Roads to Clean Air Program) reduces the amount of road sediment that enters catch basins. This mitigates the impact of extreme rain and flooding by increasing the effectiveness of the drainage system and reduces both stormwater and air pollution by properly disposing of sediment. A review of operations with a collaborative, cross-division dialogue is needed to identify interdependencies, and align operational planning with risk and level of service.

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THE ACTION

The Basement Flooding Protection Program is scheduled to complete the Environmental Assessment studies for all 67 Basement Flooding Study Areas in 2021, after which the older Environmental Assessment studies will need to be revisited and refreshed. The City will develop and refine an updated approach for use in these studies. Aligned with the schedule of the Basement Flooding Protection Program, the Wet Weather Flow Master Plan will be 18 years old in 2021, and can be updated to integrate resilience. An operational framework addressing programs like the Street Sweeping Program for all flooding stakeholders will be developed and reviewed to reflect the Charter and align with updates to the Program and Plan.

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The City will consider the following factors in the review and update of the Wet Weather Flow Master Plan and Basement Flooding Program:

- The principles of the Flood Resilient Toronto Charter (see page 93);
- Substantive urbanization north of Toronto, as well as population growth in Toronto since 2003, and their impacts of river water quality assessments;
- Opportunities to use smart technology and innovate in wet weather flow management;
- Decision making that accounts for risk, critical infrastructure, and a "green, then grey approach" that promotes infrastructure to achieve multiple community benefits;
- Vulnerable populations and the ways they are impacted by flooding, including people living in basement apartments; and
- Climate change adaptation.

More collaboration between stakeholders and leveraging re-development opportunities is needed to create unique multi-functional solutions, similar to projects such as the Port Lands Flood Protection Project (learn more on page 95).

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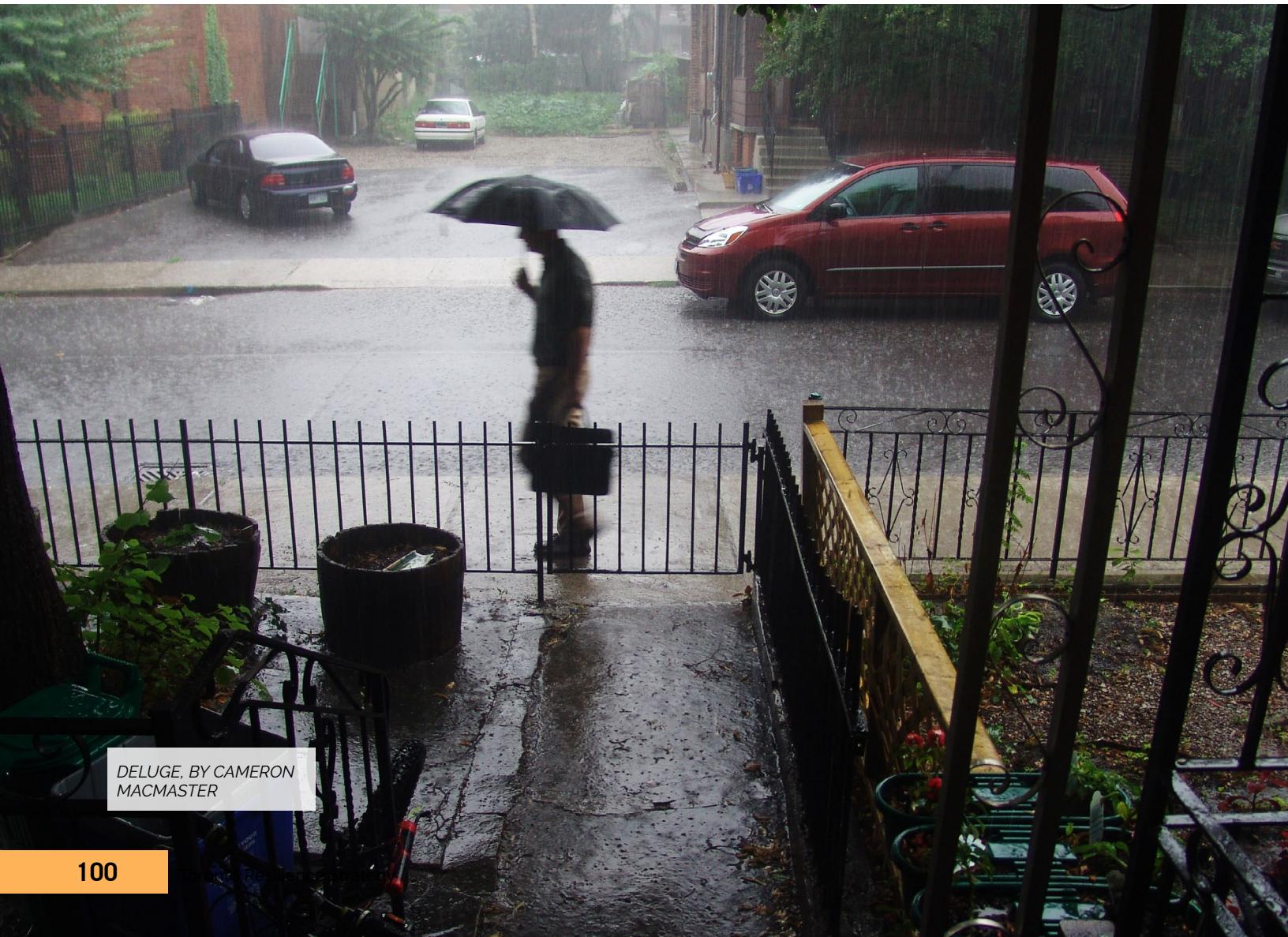
EQUITY IMPACT

An integrated planning approach to flooding, and collaboration between different stakeholders, is more effective at offsetting the cascading effects of flooding caused by interdependencies, such as power outages or transit disruptions. Flooding and its knock-on effects disproportionately impact vulnerable and low-income Torontonians.

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NEXT STEPS

- Hold a workshop with key stakeholders by the end of 2019, led by the Resilience Office, to determine the overall scope and timelines for integrating resilience into flood mitigation strategies.
- Through the Flood Resilient Toronto Working Group, develop an operational framework for completion in 2020 that defines an approach based on cross-divisional understanding, risk and level of service.



*DELUGE, BY CAMERON
MACMASTER*

ACTION B1.4

Take action to mitigate the effects of extreme heat

THE CHALLENGE

A 'hotter, wetter, wilder' Toronto will experience heatwaves more frequently and with more intensity and longer duration. Toronto will go from 12 very hot days per year to 31 by 2050, according to the Climate Atlas of Canada (hot days are days with temperatures above 30°C).

Heat is a major health risk. The health impacts of extreme heat range from heat stress to heat stroke and death. In 2005, Environment Canada, Health Canada and Toronto Public Health estimated that between 1954 and 2000, heat contributed to an average of 120 premature deaths per year in Toronto. Current research suggests that Toronto's annual average heat-related mortality could more than double by the 2050s.

The impacts of heat are disproportionately felt by frail, elderly and isolated people. People experiencing low incomes, including those who are homeless or under-housed, are at higher risk of heat impacts, likely due to poorer quality housing, limited access to air conditioning, and the increased likelihood of pre-existing illness.

Residents living in apartment buildings that do not have air conditioning are also vulnerable to extreme heat. Over 500,000 Torontonians live in older apartment towers with eight or more storeys (as discussed in Action A1.2); the majority of these towers (94%) do not have central air conditioning, and indoor temperatures in buildings such as these are often higher than those outside – sometimes exceeding 30 degrees in summer. People tend to experience heat-related symptoms in temperatures above 26 degrees.

RESILIENCE CHALLENGES



EQUITY



CLIMATE AND ENVIRONMENT

BENEFITS

Improved city-wide resilience to heat, reduced urban heat island effect, and cooling for vulnerable groups

LEAD

- Toronto Public Health (City of Toronto)

KEY PARTNERS

- Heat Relief Network Working Group
- Parks, Forestry and Recreation (City of Toronto)

FUNDING

Funding will be required to develop a long-term heat strategy. A funding request will be made in 2020.

THE ACTION

In March 2018, the Medical Officer of Health was directed to review the Heat Relief Network, which would increase access to cool spaces and to complete the review of the Cooling Centres. As a result, the City created the Heat Relief Working Group, led by the Deputy City Manager Corporate Services in partnership with the Medical Officer of Health.

In 2019, the Working Group will pilot an action plan that includes an expanded heat relief network, education, a neighbour checking program, the addition of shade structures, and review of bylaws with Municipal Licensing and Standards. The Group will also develop long-term strategies to mitigate the impacts of heat, including the urban heat island effect, and will identify funding sources and a lead division to coordinate the implementation of the strategies.

There are a number of related actions in this Strategy to reduce exposure to heat, including

retrofits to apartment buildings (A1.2), reducing the urban heat island through the installation of green infrastructure (B1.2) and improving the preparedness of communities for heatwaves (A2.1).



EQUITY IMPACT

The impacts of extreme heat are disproportionately felt by equity-seeking groups, including people with low incomes, people who are homeless or under-housed, and other vulnerable groups, like seniors, people who are isolated, and people with pre-existing health issues. The action plan and long-term strategies to mitigate the impacts of heat will identify and implement strategies that address the needs of these equity-seeking groups.



NEXT STEPS

- Heat Relief Working Group to develop a heat action plan and long-term strategies to mitigate the impacts of extreme heat.



SUMMER IN
THORNCLIFFE PARK

ACTION B1.5

Communicate, synthesize and scale up ongoing City efforts to advance a system of green and blue infrastructure

THE CHALLENGE

In the past two years alone, Toronto has faced a wide range of climate shocks and stresses, including extreme heat, extreme cold, significant rainfall events, ice storms, wind storms, and the High Lake Effect. Toronto is unique in that it faces a very wide range of climate shocks and stresses. These risks can be mitigated through the development of a network of green and blue infrastructure – sometimes called Natural Infrastructure – that carefully and purposefully integrate natural elements into the built environment in ways that can help protect against flooding, mitigate the heat island effect, and improve air, soil, and water quality. Green and blue infrastructure can include bioswales, urban forestry, wetland habitats, green streets, and more. The impact of this natural infrastructure is significant: the benefits provided by trees in terms of air pollution filtration and energy savings (related to temperature moderation near homes and buildings) have been valued at more than \$28 million a year (Strategic Forest Management Plan, 2012-2022, City of Toronto).

In addition to the tree canopy, Toronto's ravines are one of the best examples globally of how green and blue infrastructure can make cities more resilient. The ravines, covering 17% of the city's land mass, protect the city from flooding, reduce urban heat island effects, and support biodiversity. Toronto's ravines are also an important asset for community development and recreation, and in some cases for mobility. The realization of these quality of life improvements are an important co-benefit that can accompany the development of all green and blue infrastructure projects.

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RESILIENCE CHALLENGES



EQUITY



CLIMATE AND ENVIRONMENT



CIVIC ENGAGEMENT

BENEFITS

Improved resilience to heat and flooding, while building communities and recreation opportunities

LEAD

- Resilience Office (City of Toronto)

KEY PARTNERS

- Green Streets Working Group
- Flooding Working Group
- Ravine Strategy Working Group
- Toronto and Region Conservation Authority
- Sustainable Technology Evaluation Program

FUNDING

All initiatives are currently funded.

THE ACTION

Toronto is already undertaking a number of efforts to protect and improve existing, as well as installing new green and blue infrastructure, including the Green Streets demonstration projects, the Ravine Strategy, and the Tree Canopy Study. The Resilience Strategy aims to support and scale up the number of green/blue projects, which improve the city's resilience to climate shocks.

Most comparator cities have a 'natural infrastructure plan', but given the volume of work already underway, the Resilience Strategy does not recommend developing a new plan or strategy. Rather, in the short term, the City should maintain the current working group structures on each of the associated green and blue infrastructure projects, as these are currently making good progress.

As each of the major initiatives progress, the City will identify opportunities to scale up the network of green and blue infrastructure, including:

- Creating a framework to ensure collaboration and coordination for all city wide blue/green infrastructure with leaders of the existing relevant steering committees. Closer coordination will improve capacity to measure, evaluate and report outcomes overall;
- Finding ways to increase the overall number of projects (e.g. more green streets), identifying opportunities to integrate green and blue infrastructure into larger projects such as redevelopments, and linking green and blue infrastructure projects into 'corridors'.
- Identifying new sources of funding or partnerships to scale up the number and scope of projects, including funding from other orders of government, philanthropic funding, or innovative financing;
- Building on successful multi-stakeholder coordination efforts, such as with the Ravine

Strategy, to catalyze community, business, and resident actions:

- Monitoring, evaluating, and communicating the benefits achieved from green and blue infrastructure in Toronto and internationally, with the aim of prioritizing green and blue infrastructure within decision making and budgets at the City and for its partners; and
 - If required, developing a charter similar to the Flooding Charter (see action B1.4) to ensure coordination across the City and its partners.
-

NEXT STEPS

- Continue to prioritize implementation of Toronto's Tree Planting Strategy, as well as the Strategic Forest Management Plan, the Parkland Strategy, and the Ravine Strategy in order to protect and expand existing natural areas and to establish new ones, and to protect and expand the city's tree canopy.
- Continue to prioritize implementation of green streets throughout the city.
- By 2020, establish a framework for collaboration on blue and green infrastructure to further advance this action.



ESSEX PUBLIC SCHOOL, NATURAL ENVIRONMENT AND COMMUNITY PROGRAMS

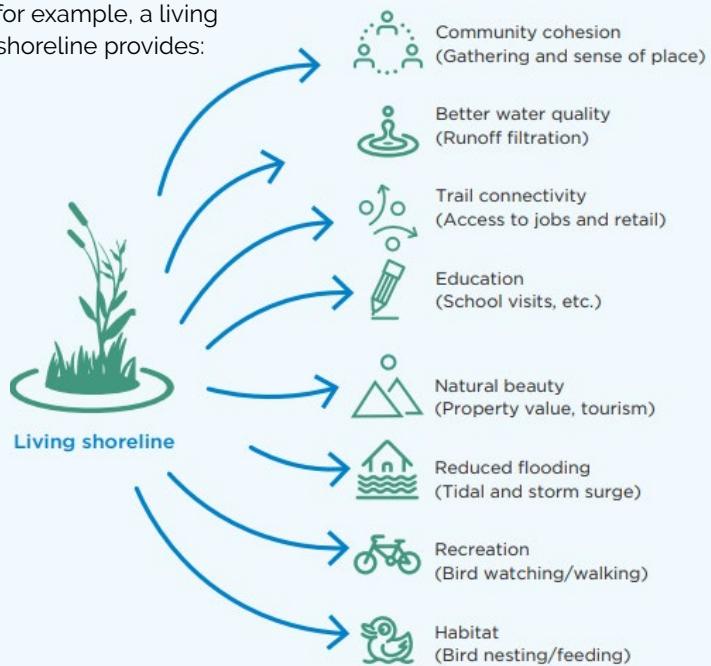


International practice on blue green infrastructure

Green and blue infrastructure – sometimes called natural or resilient infrastructure – refers to the use of nature as infrastructure to meet specific goals and service targets, like gallons of storm water filtered, storm surge reduction, or heat island mitigation. While meeting specific service targets, green and blue infrastructure also provides valuable benefits to the community and economy that the more traditional grey infrastructure projects – like roads, pipes, and sewers – do not. These additional benefits further enhance community resilience and well-being, and increase the return-on investment to the community. More details are in the Building Urban Resilience with Nature report from November 2018 by 100RC, which can be found here: <http://100resilientcities.org/wp-content/uploads/2018/11/100-Resilient-Cities-and-Earth-Economics-Building-Urban-Resilience-with-Nature.pdf>

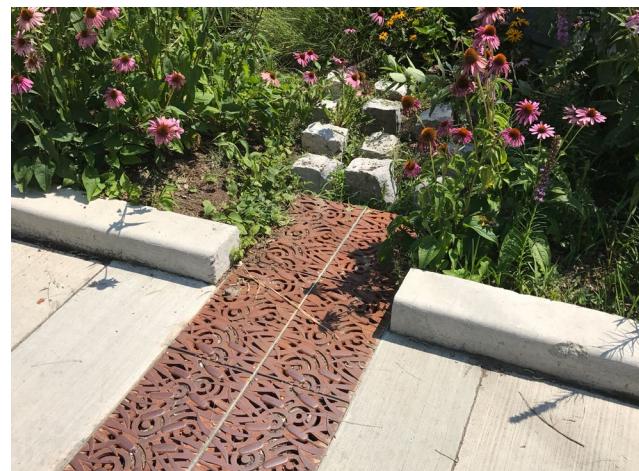


for example, a living shoreline provides:



ALIGNED LOCAL ACTION: Fairford Parkette

This public realm project originated with local community concern and action (with a pilot project to close the turning lane). The City also identified this site as a priority location for improving traffic flow and pedestrian safety. The design became an opportunity to retrofit the site to create a welcoming public parkette that collects and treats stormwater runoff from the adjacent roadway through a trench drain system. The right turn channel and traffic island was removed, and the re-aligned intersection now hosts a diversity of native species pollinator plants, 10 shade trees, seating for 22 people and 8 bicycles spaces.



FAIRFORD PARKETTE, COXWELL AVENUE AND FAIRFORD AVENUE, CONSTRUCTED 2015

ACTION B1.6

Promote a sustainable and resilient food system

THE CHALLENGE

Sustainable and resilient food systems play a powerful role in promoting health, as well as building strong and diverse communities, protecting the environment and strengthening the economy. Food is especially important in any discussions about resilience because it is essential for survival and plays a significant role in community development and social cohesion. Within the context of climate change, food is a primary sector that can both mitigate climate change by reducing greenhouse gas emissions, and help adapt to climate change. This is because about one third of all GHG emissions are created by the food system, as a result of the intensive use of fossil fuels needed to grow food, as well as high levels of food loss and waste. The role of food in climate change is increasingly being recognized by major international bodies such as the EAT-Lancet Commission on Sustainable Diets and the International Panel of Experts on Climate change.



THE ACTION

Building a resilient food system requires addressing both shocks, like extreme weather or other emergencies, and stresses, like lack of access to resources such as food and housing arising from inequity. A food strategy is a vehicle to address both shocks and stresses, while helping the City to realize multiple goals including social inclusion, economic development, newcomer integration, waste reduction, and climate change mitigation by finding ways to reduce GHG emissions throughout the food system.

The City of Toronto has a Food Strategy which works with partners to advance a food systems approach of seeing the food system as a complex web of interactions and networks. City Council recently adopted a high-level vulnerability study of Toronto's food system and tasked Social Development, Finance and Administration, in collaboration with Toronto Public Health and other stakeholders, to work with vulnerable neighbourhoods to develop food resilience strategies. A concerted effort across the food system is

RESILIENCE CHALLENGES



EQUITY



COMMUNITY AND NEIGHBOURHOODS

BENEFITS

A sustainable and resilient food system

LEAD

- Toronto Public Health (City of Toronto)

KEY PARTNERS

- Solid Waste (City of Toronto)
- Economic Development (City of Toronto)
- Office of Emergency Management (City of Toronto)
- Energy and Environment Division (City of Toronto)
- Social Development, Finance and Administration (City of Toronto)
- The Toronto Food Policy Council
- Local food organizations
- Student Nutrition Toronto
- The Greenbelt Foundation
- Farmers Markets
- Experts in urban agriculture and green roofs
- Toronto and Region Conservation Authority (TRCA)

FUNDING

A request for funding will be made in 2020.

needed to address key vulnerabilities that could impact food access, particularly in neighbourhoods that already experience high food insecurity, while also recognizing that food vulnerability is not only income-related. Seniors, people with disabilities and young children, for example, are all at increased risk.

To do this, the City will:

- Better understand the “last mile” of the food distribution system and overall food environment;
 - Incorporate a food lens into emergency planning and climate hazard mapping at the municipal and provincial levels;
 - Build resilience of critical food infrastructure, including the Ontario Food Terminal; and
 - Support vulnerable neighbourhoods in planning for and taking action on food emergencies, as explored further in A2.1.



Food Systems Approach

The City of Toronto, through the Food Strategy led by Toronto Public Health, uses a food systems approach to engage and understand the complexity and interconnectedness of Toronto's urban, regional, and global food system. A food systems approach acknowledges that an urban food system is a complex web of interactions and networks. Food systems link rural and urban communities within a country, across regions and sometimes across continents. This approach is a way of seeing the bigger picture, of developing solutions to food problems by seeing and leveraging their connections to other health, social, economic and environmental connections. A Food Systems approach therefore encourages a more holistic understanding of access, supply, experience, quality, and affordability. Toronto Food Strategy initiatives are influenced by, and have an impact upon, a mix of food system elements including nutrition, disease prevention, food supply chains, healthy food access, social justice, food literacy, environmental protection, climate change mitigation, and economic development. More information on the Toronto Food Strategy, Food Projects, and Toronto Food Policy Council can be found at <https://www.toronto.ca/community-people/health-wellness-care/health-programs-advice/toronto-food-strategy/>



FARMER'S MARKET AT CITY HALL



RAINING LEAVES AT RIVERDALE PARK, PHOTO BY VANESSA WONG,
SUBMITTED TO THE SNAP & SHARE PHOTO CONTEST, 2014

GOAL B2:

Infrastructure and buildings are resilient to a changing climate and reduce greenhouse gas emissions

- This goal aims to ensure that the infrastructure the City owns, maintains, and builds is resilient to a changing climate; and that buildings built in Toronto are resilient. Sound investment decisions that consider the long life spans of infrastructure (up to 100 years in some cases) must be made.
- This goal also seeks to embed a holistic approach to infrastructure and land development in daily planning processes. Input from community when designing and building infrastructure, especially from groups that have historically not been involved in planning processes, improves the quality of assets, ensures they meet the needs of community, and improves community stewardship.
-

ACTIONS

- 2.1** Develop a Resilience Lens and apply it to City investments, with a focus on infrastructure
- 2.2** Integrate resilience into development and land use planning processes
- 2.3** Incorporate climate resilience into the City's asset management framework and plans

We need to think about the future and build it into our day to day actions, into the conduct of every day.”

– VISION AND PRINCIPLES WORKSHOP IN SEPTEMBER 2019

ACTION B2.1

Develop a Resilience Lens and apply it to City investments, with a focus on infrastructure

THE CHALLENGE

Cities can no longer afford to build the same infrastructure that suited the needs of the 20th century. Because public infrastructure – in particular roads, bridges, and subways – is often intended to last for generations, its planning and construction needs to take into account multiple challenges, like a changing climate and access to housing and mobility.

Toronto has a long track record of developing and maintaining resilient infrastructure. One example stakeholders often raised in our engagement process was the Bloor Viaduct (see pages 48-49). More recently, planning for Villiers Island was informed by the Villiers Island Climate Positive Assessment (see page 95), and in 2018, the Energy and Environment Division, Metrolinx, and other partners worked to apply the Federal Climate Lens to SmartTrack station development.

By embedding resilience in the planning and design of projects, the City can realize several benefits. From a simple cost perspective, it can improve value for money by reducing future operating, maintenance, repair, and disruptions costs.

The application of a wider resilience lens can reduce inequities throughout the city by considering the impacts of new infrastructure projects on vulnerable

RESILIENCE CHALLENGES



EQUITY



CLIMATE AND ENVIRONMENT



HOUSING



MOBILITY

BENEFITS

Major infrastructure projects become more resilient to future climate shocks, allowing the City to recover from those shocks much more easily and saving it money in doing so.

LEAD

- Energy and Environment Division (City of Toronto)
- Resilience Office (City of Toronto)

PARTNERS

- City Manager's Office (City of Toronto)
- Major Capital Infrastructure Coordination Office (City of Toronto)
- Financial Planning (City of Toronto)
- Toronto Water (City of Toronto)
- Engineering and Construction Services (City of Toronto)
- City Planning (City of Toronto)
- Transportation Services (City of Toronto)
- Facilities Management (City of Toronto)
- Real Estate Services (City of Toronto)
- Solid Waste Management Services (City of Toronto)
- Parks, Forestry and Recreation (City of Toronto)
- Metrolinx
- Toronto Hydro
- Toronto and Region Conservation Authority
- Toronto Transit Commission

FUNDING

Investment or industry partnership is required to develop the Resilience Lens and to learn from other cities.

groups, including through the provision of local construction jobs, as was done through the Community Benefits Agreement negotiated as part of the construction of the Eglinton Crosstown LRT. The City of Toronto has a 10-year capital plan of over \$40.67 billion, of which almost half (46%) is dedicated to transportation infrastructure.

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THE ACTION

The City should improve the resilience of future infrastructure projects through the development and application of a Resilience Lens to its capital and infrastructure planning. The Lens could be a tool available for use by City staff and partners. The new Lens could be based on the Federal Climate Lens, but could also include the City's existing Equity Lens to ensure that both climate change and equity implications are considered in the planning for all significant infrastructure and capital spending projects.

Since the Federal government's Climate Lens will need to be applied to all federally-funded projects, building staff familiarity with the climate lens tool will bring the added benefit of improving the City's submissions to federal infrastructure funding programs.

Action B2.3 to implement a climate lens in asset management also supports this action.

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NEXT STEPS

- In 2019, undertake consultation at the City and with stakeholders in the private sector in order to apply lessons learned from the use of the Federal Climate Lens and technical industry know-how to the development of the City's new Lens.
- In 2020, develop the City's new Lens and conduct workshops and training events to build the capacity of staff on resilience and how to use the new Lens.

- In 2020, begin piloting the application of the Lens to priority projects, while also evaluating the process of applying the Lens.
- By 2021, work with Financial Planning to develop metrics that can be included in budget submissions and performance evaluation.



The Federal Climate Lens

The Federal Government of Canada has created a Climate Lens tool, which requires proponents of large projects over \$10 million to take resilience and mitigation into account in project plans. A climate lens mandates applicants to federal infrastructure programs take into account both resilience and GHG mitigation in project design and delivery.

The resilience component of the lens also includes a) a risk assessment process that will reduce risk to public infrastructure, and b) the pursuit of multiple benefits, such as synergies with greenhouse gas emissions reduction.



Equity Lens

The City uses an online Equity Lens tool, which guides staff through an equity analysis to support the development of policy and other initiatives. It helps identify and address barriers that may be experienced by equity-seeking communities and Indigenous peoples in accessing City services. The Lens helps staff when planning, developing, and evaluating policies, programs, services or budget proposals. It can provide valuable information at any stage in the process and can be used by individual employees or incorporated into team meetings or brainstorming sessions. The Equity Lens online tool also generates an Equity Impact statement which is required in the budget process.



ALIGNED LOCAL ACTIONS:

Metrolinx Climate Adaptation Strategy

In May 2018, Metrolinx released a Climate Adaptation Strategy, intended to help it run a safe, reliable, and climate resilient transit system. It outlines 39 key actions across six business units involved in operations, asset management, planning, and the design and construction of new capital projects. It is consistent with, and a leading example of, the growing recognition that infrastructure asset owners must adapt to the direct and indirect impacts of climate change, and that by doing so they can play a leading role in helping communities become more resilient in the face of future extreme weather events.

Toronto Island Gibraltar Point Erosion Control Project

The Gibraltar Point Erosion Control project at the Toronto Islands is an example of resilience thinking in infrastructure design. Gibraltar Point, located at the southwesterly tip of the Toronto Islands, has been experiencing erosion since 1879, and in recent years, severe storm events and erosion has led to exposure of and damage to existing infrastructure. The goal of the Gibraltar Point Erosion Control project was to protect Toronto Islands over the long term so that the Islands continue to be used for recreation and animal and fish habitats and critical infrastructure on the Islands are protected (the Island's Water Treatment Plan supplies 20% of Toronto's drinking water). The initial proposal was to create a large costly offshore break wall to control waves. However, it would have appeared above the water level and was not a popular option among Torontonians, as it would have interfered with water activities in the area. In 2016, the TRCA, in collaboration with costal engineers, came up with an alternative, natural infrastructure solution: an innovative nearshore reef, designed to halt shoreline erosion while also providing habitat for fish foraging and spawning. The project plan also includes beach restoration at Gibraltar Point and has gained public support. This natural infrastructure costs nearly half of what the break wall was estimated to cost.

ACTION B2.2

Integrate resilience into development and land use planning processes

THE CHALLENGE

It is critical that municipalities use land use planning to drive action on climate resilience. Land use planning policies, like the Official Plan and Secondary Plans set out the vision and direction for how Toronto should grow. Planning implementation tools like zoning bylaws have a formative impact on development and the delivery of housing, transit, energy, parks, water, and other infrastructure, all of which can build climate resilience.

This is particularly important in the face of significant growth. Toronto has more buildings planned or under construction than almost any other city in North America, and, as noted on page 46 of this document, more than Chicago, Los Angeles, and San Francisco combined.

For Toronto, land use planning has already shaped resilience in the city:

- **Ravines:** The devastating impact of Hurricane Hazel in 1954 led to additional responsibilities given to the Toronto and Region Conservation Authority and a regional approach to flood control and water management in Ontario. The relatively natural character of Toronto's ravines today is due in large part to these protections. Today, the City's ravine system represents 11,000 hectares (public and private land) that is enjoyed and protected through various layers of environmental policy.
- **Green development:** The Toronto Green Standard sets sustainable performance requirements for new private development and the City's agency-, corporation-, and division-owned developments. The City's Green Roof Bylaw was the first in North America to require and govern the construction of green roofs on large new developments.
- **The Region:** In 2006, the Province of Ontario passed legislation that implemented three regional plans that continue to shape the Toronto region. Together, the Greenbelt Plan, the Growth Plan, and the Big Move (transportation plan) guide intensification, inform transit investment at key notes

RESILIENCE CHALLENGES



EQUITY



CLIMATE AND ENVIRONMENT



COMMUNITY AND NEIGHBOURHOODS



MOBILITY

BENEFITS

Future development and land use decisions in the city more fully take into account a changing climate

LEAD

- City Planning (City of Toronto)

KEY PARTNERS

- Resilience Office (City of Toronto)
- Environment and Energy (City of Toronto)
- Parks, Forestry and Recreation (City of Toronto)
- Toronto Water (City of Toronto)
- Toronto and Region Conservation Authority

FUNDING

No funding is currently required.

and corridors, and protect valuable land resources for future generations. The Growth Plan identifies targets for residential and employment densities and 25 Urban Growth Centres for particularly high levels of intensification through land use planning. Five of these Urban Growth Centres are within the City of Toronto.

These examples and others (see the following page for more details on the new TOcore Downtown Plan's approach to resilience) make Toronto a global leader on resilient land use planning. The challenge for Toronto is to continue as a leader. As existing policies are updated and new ones are developed, there is an opportunity to significantly advance resilience in the city through innovative and brave land use planning.

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THE ACTION

This action is about further advancing climate resilience through land use planning tools. City Planning partnered with the Resilience Office to explore the question 'How can we ensure that Toronto's growth is climate resilient?' in a workshop in December 2018. The discussion and outcomes will enrich and inform City Planning's work to identify areas where climate resilience can be further advanced. The next steps are to ensure that a climate resilience lens is taken in planning work and train and engage staff on climate resilience to deepen in-house expertise and capacity to be leaders.

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NEXT STEPS

- Review Toronto's existing land use policies and implementation tools to identify where climate resilience can be further advanced.
- Initiate training for City Planning staff and Committee of Adjustment members on climate resilience, including stormwater management and protection of natural heritage, and implement training on an ongoing basis.



TOcore Downtown Plan: Resilience

Downtown is particularly vulnerable to a changing climate due to its built form and density, age of infrastructure, rapid growth and growing electricity demand in the face of constrained supply. Severe weather events coupled with power outages can impact residents living in tall buildings who rely on electricity for water supply, elevators, security, heating, cooling, and ventilation.

A decade of unprecedented growth in Downtown, along with projections of a near doubling of both residents and workers in the core over the next few decades, prompted the City to update its Official Plan policies. Seizing opportunities that come with growth and intensification to leverage investments in district energy and other low-carbon energy solutions became an important theme of the TOcore planning study.

In July 2018, through Official Plan Amendment (OPA) 406, Council adopted its new 25-year Downtown Plan, pending Ministerial approval. It is a plan that gives serious consideration to climate resilience. A Downtown Energy Strategy accompanies the plan and is designed to encourage investment in the energy infrastructure needed to support a more resilient form of development. The strategy identifies immediate and longer-term actions to improve Downtown's energy performance. It is aligned with TransformTO, the City's climate action plan.

The policies of the Downtown Plan assign clear and strong aspirations to achieve the following planned outcomes:

- Green infrastructure in Downtown will improve air quality, absorb stormwater, minimize the urban heat island, expand biodiversity and improve human health (3.12)

- Downtown will be more resilient to changing weather patterns, with improved back-up power systems in tall residential buildings to mitigate against extreme weather events and area-wide power outages. (3.13)
- Downtown will contribute to the achievement of the City's energy and emissions targets through near-zero emissions development that minimizes electricity demand and, where possible, by connecting development to the deep lake water cooling system and other low-carbon thermal energy networks. (3.14)
- The quality of water along the shoreline will be improved through reductions of direct and indirect wastewater and stormwater discharges to Lake Ontario. (3.15)

Low-Carbon Thermal Energy Networks

Low-carbon thermal energy networks – such as Toronto's deep lake water cooling system – are important in making the city more resilient to climate change and decreasing carbon emissions. A thermal energy network or district energy system distributes energy for heating or cooling to multiple buildings at the block or neighbourhood scale. It consists of a heating and cooling centre and a network of pipes connecting buildings. A low-carbon thermal network can use natural gas efficiently to begin with, but it also provides the platform for integration of large-scale renewable energy sources over time. Examples include solar thermal, sewer heat, biogas, lake water, biomass and ground-source heat. Low-carbon thermal networks connected to energy-efficient buildings are the key ingredients for near-zero emissions development.



DOWNTOWN CORE, PHOTO BY ERIC SEHR

ACTION B2.3

Incorporate climate resilience into the City's asset management framework and plans

THE CHALLENGE

City assets such as roads, bridges, buildings, water, waste management facilities, sanitation, natural assets and fleet are at increasing risk to extreme weather due to climate change. For example, a 'hotter, wetter, wilder' Toronto will experience significantly more rain. This will strain the stormwater management system and put critical infrastructure, like Union Station and power stations, at increased risk.



THE ACTION

The City will improve the value for money of its assets by incorporating climate resilience into asset management. By taking climate change into account, the City can improve planning and avoid additional costs.

In response to City needs and new Provincial legislation, the City of Toronto is creating an asset management policy, framework and management plans for all assets, including water assets, parks, roads, buildings, and green infrastructure. The intent is that the policy and framework will provide a common language and can be used by asset managers to develop management plans. All of these plans will be rolled up into one corporate asset management plan to optimize the value and performance of the City's \$94 billion worth of assets.

The Ontario regulation requires the City consider vulnerabilities caused by climate change; anticipated costs from these vulnerabilities; actions to address vulnerabilities, including related to operations, levels of service and lifecycle management; measures to mitigate climate change; and disaster planning.

Finance and Treasury Services is collaborating with asset managers to comply with the Provincial regulations by

RESILIENCE CHALLENGES



CLIMATE AND ENVIRONMENT

BENEFITS

Increased value for money on capital investments because infrastructure fares better during climate shocks, improved resilience to extreme weather

LEAD

- Finance and Treasury Services (City of Toronto)

KEY PARTNERS

- Resilience Office (City of Toronto)
- City Planning (City of Toronto)
- Energy and Environment Division (City of Toronto)
- Engineering and Construction Services (City of Toronto)
- Toronto and Region Conservation Authority
- Managers of physical infrastructure assets

FUNDING

Financial impact of the asset management policy to be determined through a report to Council in 2019.

developing an asset management policy in 2019. Resilience Office will support the integration of climate resilience into the policy, framework and plans.

In 2020, the Resilience Office will provide support in the integration of climate resilience into the asset management frameworks and plans.

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NEXT STEPS

- Ensure the asset management policy being developed for Council approval in 2019 requires the City to take climate change into account when managing its assets.
- Resilience Office will provide support on incorporating climate resilience into the asset management framework.

New Ontario regulations on asset management

The new Ontario regulation on asset management requires that every municipality have an asset management policy that includes a commitment to consider:

- The actions that may be required to address the vulnerabilities that may be caused by climate change to infrastructure assets, including
 - A. operations, such as increased maintenance schedules,
 - B. levels of service, and
 - C. lifecycle management,
- The anticipated costs that could arise from the vulnerabilities
- Adaptation opportunities that may be undertaken to manage the vulnerabilities
- Mitigation approaches to climate change, such as greenhouse gas emission reduction goals and targets, and
- Disaster planning and contingency funding.

CHERRY BLOSSOMS, BY MATT FORSYTHE



SKATING, PHOTO BY SHAWN
BRADY, SUBMITTED TO
THE SNAP & SHARE PHOTO
CONTEST, 2015

GOAL B3:

Toronto has multiple reliable, affordable, and safe mobility options that reduce the amount of time it takes to get around

- Throughout consultations with stakeholders and the public, the problem of getting around in Toronto was consistently identified as one of the key resilience challenges that people experience in their day-to-day lives. This goal aims to improve access to mobility options and the experience of getting around in Toronto.
- Torontonians now experience the longest commutes in Canada. Many buses and streetcars in the network drive on roads with other vehicles, which affects both reliability and on-time performance.
- For more customers to choose transit, it must be faster, less expensive, and more reliable than driving a car. Yet most major streets in Toronto are designed primarily for moving private vehicles, not for moving people, and are not designed to enable more sustainable and space-efficient trips by transit, walking, or bicycling. There is an economic imperative to addressing this challenge as well, because the costs of congestion to Toronto's economy have been estimated by Metrolinx, the C.D. Howe Institute, and others to be between \$6 and \$11 billion annually, and are anticipated to continue to rise.
- Examining the current state of mobility options in Toronto with an equity lens further underscores concerning trends. A recent study by the University of Toronto introduced the concept of "transport poverty" which occurs when people of low income, poor health, newcomers, or the elderly also lack access to high quality transportation options, impacting their ability to access jobs and essential services. Many of Toronto's most vulnerable communities, which exist at the periphery of the city, far from the core, suffer from transport poverty and many of the negative health and economic outcomes associated with it.

ACTIONS

- 3.1 Create a city-wide mobility action plan through synthesis of ongoing mobility initiatives and priorities, and identification of resilience gaps
- 3.2 Continue to prioritize service and capital improvements to the TTC that make the system safer, more affordable, more reliable, and less crowded
- 3.3 Move more people more efficiently within the existing rights of way by expanding demonstration projects

ACTION B3.1

Create a city-wide mobility action plan through synthesis of ongoing mobility initiatives and priorities, and identification of resilience gaps

THE CHALLENGE

In the context of Toronto today, 48% of the City's census tracts are concentrated in low-income neighbourhoods, where 68% of residents are visible minorities.¹ As shown in pages 52-53 (Equity Resilience Challenge), the main ethno-cultural communities in these low-income neighbourhoods are all overrepresented compared to their share of the city's population. Contributing to the problem of socio-economic segregation is access to mobility, particularly for communities in Toronto's inner suburbs where there are limited modes of transit available. Availability of mobility options and infrastructure across the city has real implications for travel time and experience: Toronto has the highest proportion (16.2%) of people who spend more than 60 minutes travelling to work in the country, with the majority (75.9%) of whom are public transit users.²

The physical fabric of the city as well as the planning and design of civic infrastructure act to proliferate the current systems and structures of inequity, allowing some people to access high-income neighbourhoods, jobs and civic amenities, while keeping others out.³ The City and its partners can continue to focus on removing barriers and adding incentives to equitable mobility options, and improving the planning and design of mobility infrastructure.

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THE ACTION

A city-wide mobility strategy would serve to expand mobility options throughout the city with the aim of improving access

RESILIENCE CHALLENGES



EQUITY



MOBILITY

BENEFITS

Increased capacity for streets and the transit system to move people, more efficient patterns of movement, and increased transit ridership, walking, and cycling

LEADS

- City Planning (City of Toronto)
- Transportation Services (City of Toronto)
- Toronto Transit Commission (TTC)

KEY PARTNERS

- Social Development, Finance and Administration (City of Toronto)
- Toronto Public Health (City of Toronto)
- Environment and Energy Division (City of Toronto)

FUNDING

No funding is currently required.

¹ S. CONTENTA, TORONTO IS SEGREGATED BY RACE AND INCOME AND THE NUMBERS ARE UGLY. (TORONTO: TORONTO STAR, 2018).

² STATISTICS CANADA, 2016 CENSUS. (CANADA, 2017).

³ M. DINCA-PANAITESCU AND A. WALKS, INCOME INEQUALITY, INCOME POLARIZATION, AND POVERTY: HOW ARE THEY DIFFERENT? HOW THEY MEASURED? (TORONTO, 2015)

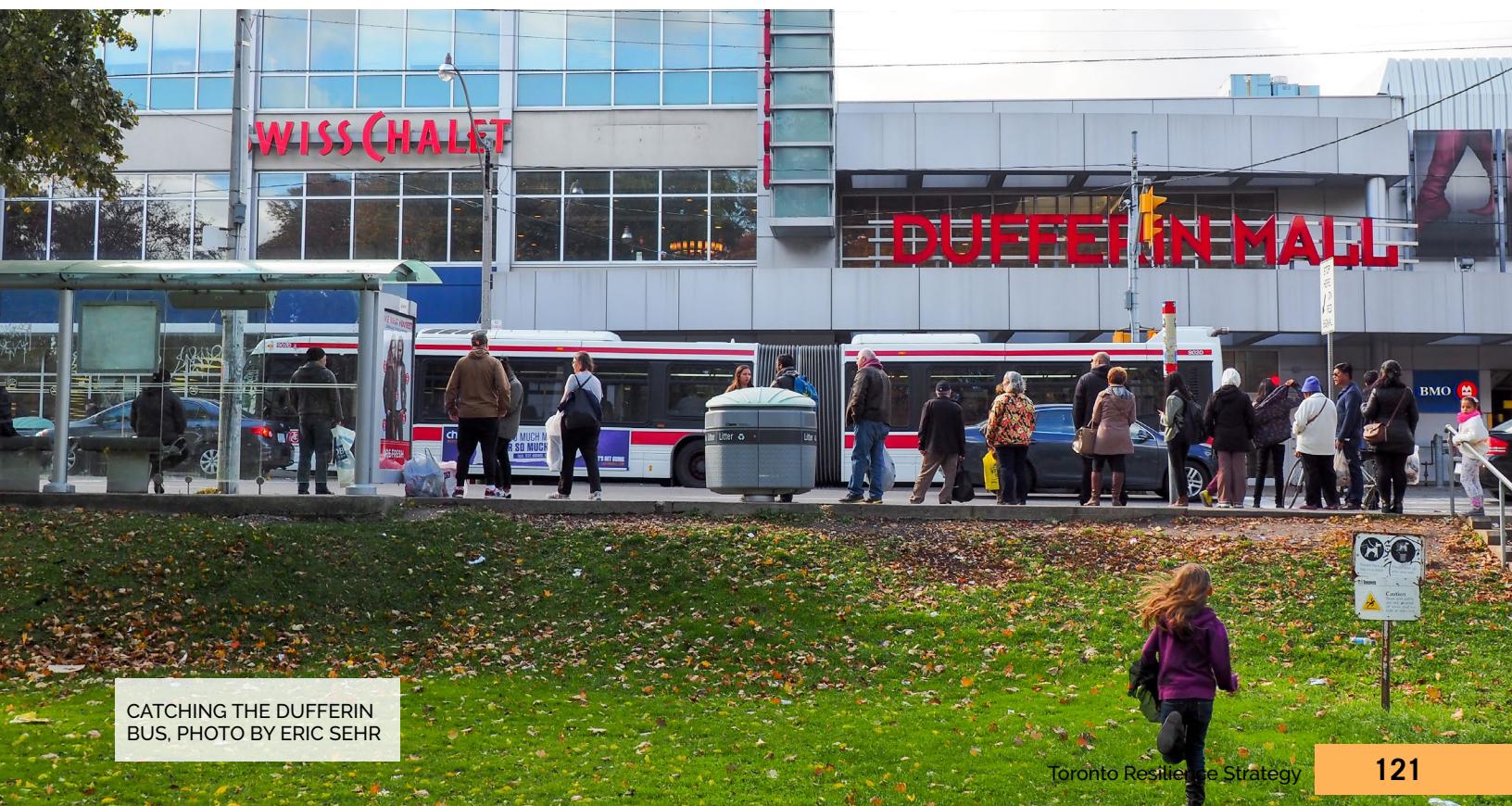
to vital services and jobs for Torontonians and reducing commute times. The development of a city-wide mobility strategy presents the opportunity for key partners to work together to resolve mobility barriers and to support year-round access at the scale of the city, neighbourhood, and station/stop. The approach to mobility equity fundamentally hinges on the planning of transit investments, which aim to improve historical imbalances in mobility between varied communities and focuses infrastructure in areas underserved by higher order transit options. The proposed mobility strategy should align with resilience objectives that prioritize more sustainable and space-efficient travel choices such as walking, cycling, and transit, and should explore innovations, such as smart signal systems. Mobility as a service, improved data collection practices (e.g., use of travel time readers, etc.), and curbside management strategies could work to improve the mobility system's reliability, network coverage, and redundancy. Inclusive design practices, such as offering higher levels of passenger amenity and active-mode connectivity around transit facilities,

will also encourage ridership and open up access. The proposed city-wide mobility strategy should include plans, policies, and lessons from other cities learning from emerging transit technology to prepare for automated vehicles and other technological disruptions that produce challenges and opportunities for resilience.

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NEXT STEPS

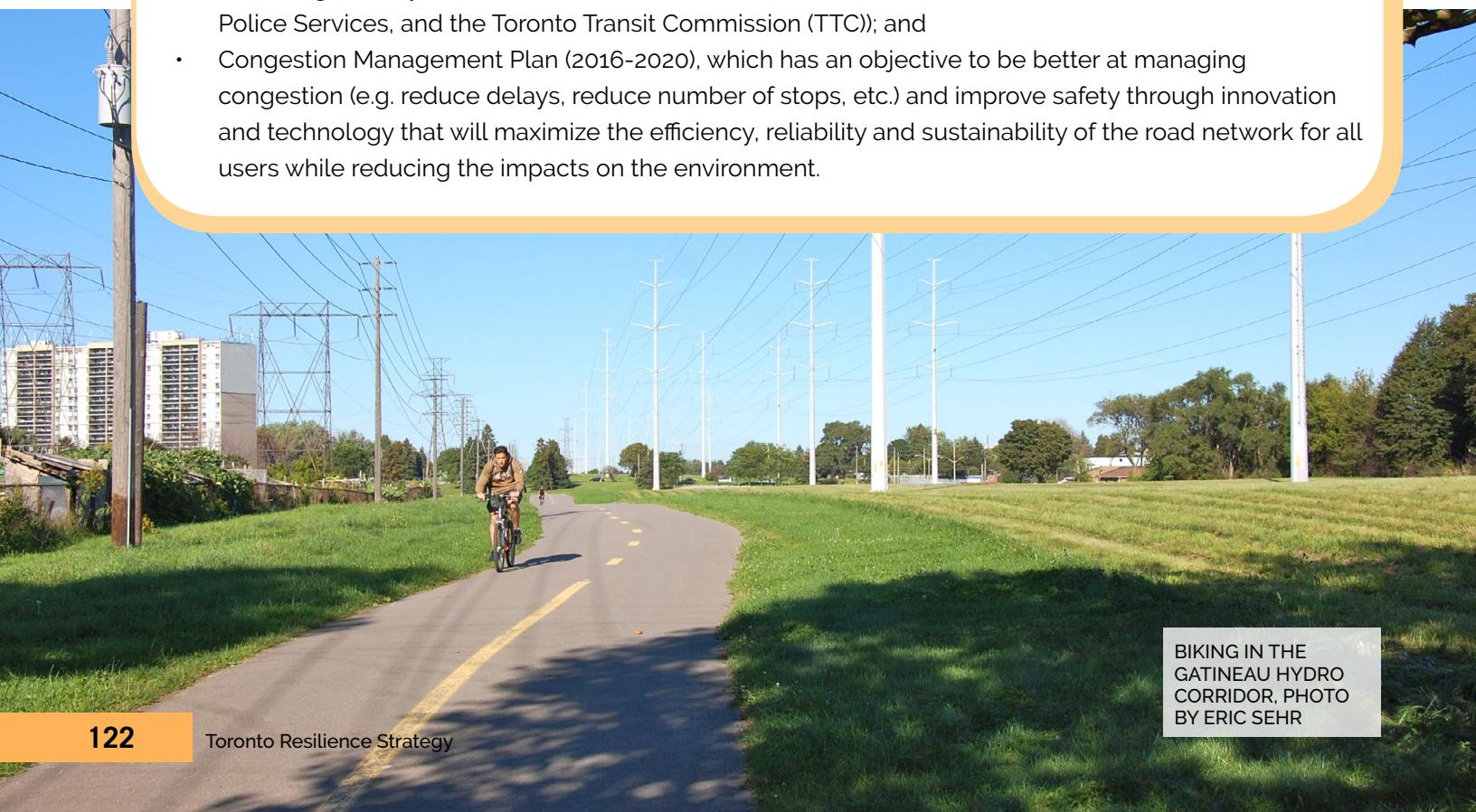
- An inter-divisional working group has been created and initial work on a city-wide mobility strategy has commenced.
- Update the TTC's service standards to include equity considerations.



ALIGNED LOCAL ACTION:

Some of the key City and TTC initiatives that are aligned with the mobility objectives in the Resilience Strategy, and should be considered as part of a new city-wide mobility strategy, include:

- Vision Zero Road Safety Plan (2017-2021) focused on preventing and reducing traffic-related deaths and injuries on Toronto's streets, and addressing the most vulnerable users of the transportation system;
- Rapid Transit network implementation, such as planning for the Relief Line to address capacity and network deficiencies, including the need for greater network redundancy;
- Surface Transit Priority Plan and Network improvements, such as the Express Bus Network and King Street Transit Priority Corridor;
- TTC 5-Year Service Plan and 10-Year Outlook;
- 10-Year Cycling Network Plan and improvements including Bike Share Expansion and other initiatives;
- Toronto Walking Strategy (such as building missing links in the sidewalk network and improving walking connections to transit stops);
- New technologies, Curbside Management Strategy, and facilitating Mobility As A Service (such as the Automated Transit Shuttle pilot project, the draft Transportation Services Automated Vehicle Work Plan, and other initiatives);
- Toronto Complete Streets Guidelines and Green Streets Technical Guidelines (such as area-specific plans taking a Complete Streets approach and conducting demonstration projects for Green Streets);
- TTC service standards updated to include equity considerations;
- City's Consolidated Green Fleet Plan, which articulates a collective vision for the operation of almost 10,000 on-road and off-road vehicles and equipment owned and operated by the City of Toronto (including the City's Fleet Services Division, Toronto Paramedic Services, Toronto Fire Services, Toronto Police Services, and the Toronto Transit Commission (TTC)); and
- Congestion Management Plan (2016-2020), which has an objective to be better at managing congestion (e.g. reduce delays, reduce number of stops, etc.) and improve safety through innovation and technology that will maximize the efficiency, reliability and sustainability of the road network for all users while reducing the impacts on the environment.



BIKING IN THE GATINEAU HYDRO CORRIDOR, PHOTO BY ERIC SEHR

ACTION B3.2

Continue to prioritize service and capital improvements to the TTC that make the system safer, more affordable, more reliable, and less crowded

THE CHALLENGE

Every weekday, about 1.7 million rides are taken on Toronto's public transit system, making it one of the busiest transit systems in North America after New York and Mexico City. However, overall transit ridership has begun to flat line, even as the city's population continues to boom. Despite huge strides by the TTC in reducing subway delays and vehicle short turns, crowding and reliability issues continue to plague the system. If the goal is to get more people out of their cars and onto the transit system, these issues need to be addressed urgently.

THE ACTION

The TTC's new Corporate Plan, 2018-2022, lays out an ambitious agenda for addressing these continued challenges, and aligns well with public feedback received through the development of this Strategy. The advancement of these initiatives is imperative to the resilience of the City's mobility system, and should continue to be prioritized by both the TTC and City Council. Some of the key initiatives from the Corporate Plan that align with the mobility objectives in the Resilience Strategy include:

- A commitment to advocate for a more sustainable funding model around the TTC's operating subsidy with the ultimate goal of exploring fiscal incentives that could make transit more affordable and help drive a better balance between walking, cycling, driving, and public transit;
 - An ambitious plan to significantly grow the transit network with new subway, light rail, and bus rapid transit;
 - A modernization plan that includes new, high-capacity vehicles, and improvements like Automatic Train control, and one-person train operation;
 - A new metric for service planning, called Customer Journey Time, which includes time spent travelling to and waiting for transit, as well as time en route;

RESILIENCE CHALLENGES



EQUITY



MOBILITY

BENEFITS

Safer, more reliable TTC service, leading to sustained ridership growth

LEAD

- Toronto Transit Commission (TTC)

PARTNERS

- City Planning (City of Toronto)
 - Transportation Services (City of Toronto)
 - Province of Ontario
 - Government of Canada

FUNDING

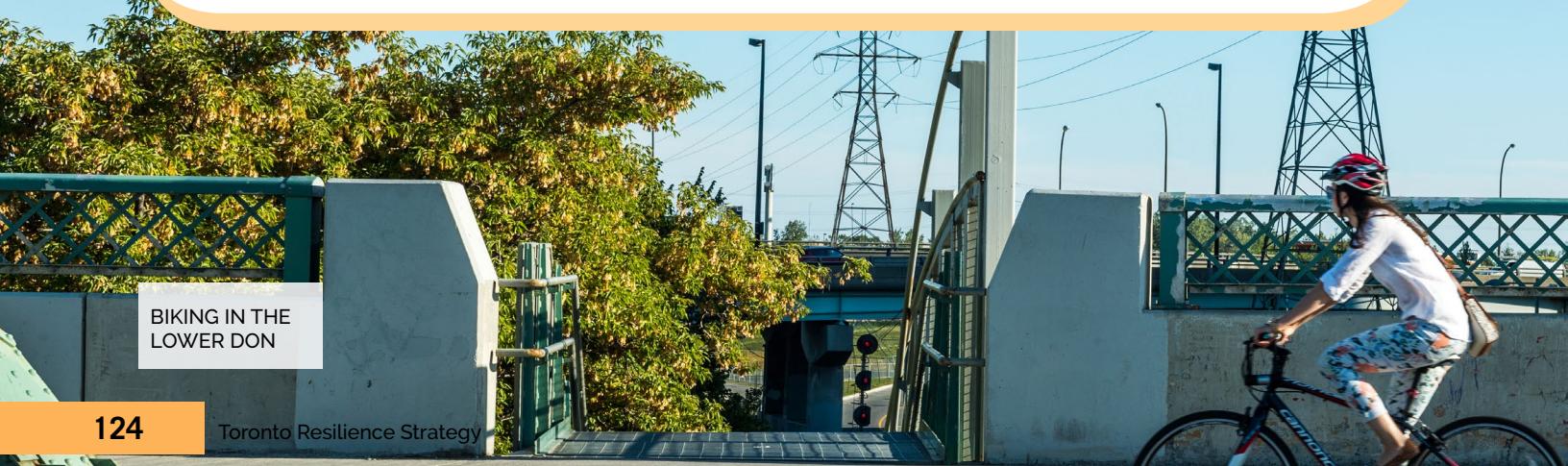
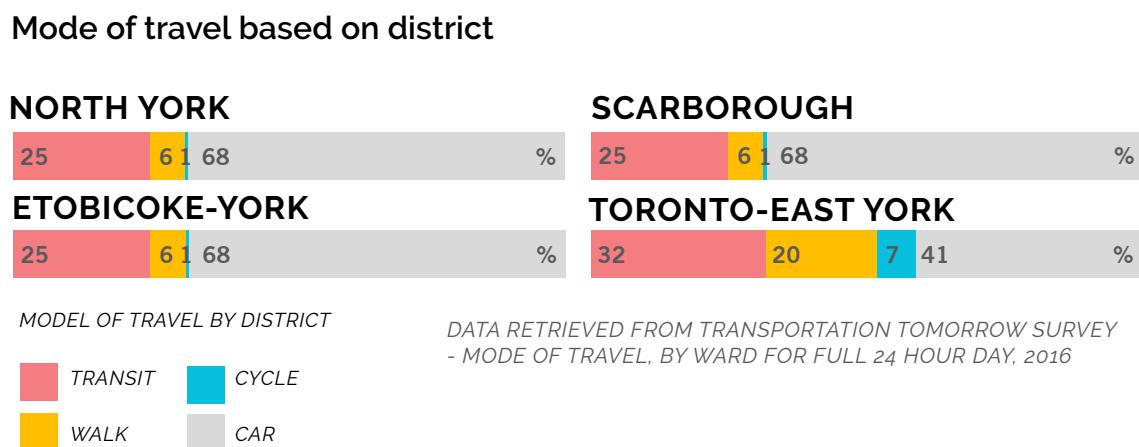
To be determined through the annual capital and operating budgeting process.

- A plan to reallocate buses to reduce crowding on the busiest routes;
 - A commitment to exploring ways to increase the resilience of transit infrastructure to flooding, heat, and other extreme weather events, which will improve the functionality and usefulness of the transit system during a shock; and
 - A commitment to exploring the feasibility of installing platform edge doors to prevent suicides and make riding the subway safer.

Also imperative to the resilience of Toronto's overall mobility system is that the transit system remain in a state of good repair. The recent TTC Capital Plan identifies \$23.7 billion in unfunded capital investments required between now and 2033 to maintain the existing system and drive additional ridership growth. This is in addition to the operating costs required to run the system and the significant capital investments required for system expansion. It is of critical importance that permanent funding for public transit be prioritized by all orders of government.

NEXT STEPS

- Building on the success of the 5-Year Corporate Plan, the TTC will develop a complementary and overarching 5-Year Service Plan and 10-Year Transit Outlook. The purpose of the Plan is to set a vision and identify actionable and meaningful transit improvements that will significantly enhance mobility and advance the economic, social, and environmental vitality of Toronto.



ACTION B3.3

Move more people more efficiently
within the existing rights of way by
expanding demonstration projects

THE CHALLENGE

The need to move more people more efficiently within existing rights-of-way is imperative to the long-term resilience of the city's overall mobility system. This is true from a practical perspective, but also from a financial perspective, since the cost of improving service on existing surface transit routes is far less than the cost of building new transit infrastructure. In the long-term, both types of investment are needed, but in the short-term, the improvement of surface routes will create much more value for money.

Two recent examples of effective surface route improvements are the Richmond-Adelaide Street cycle tracks and the King Street Transit Priority Corridor. Both projects have significantly transformed mobility patterns along their respective corridors at a tiny fraction of the cost of new infrastructure. The installation of separated cycle tracks on Richmond and Adelaide alone increased the number of cyclists on those routes by up to a factor of 10, of which 94% are estimated to be new cyclists. These cycle tracks now account for one third of the traffic on Richmond and Adelaide during the peak periods in the peak direction, and they carry a higher volume of vehicles than one of the regular traffic lanes in the peak period, peak direction. The cycle tracks have successfully increased the capacity of the roads, while also dramatically reducing collision rates, and with minimal impact on vehicle travel times. Together with the increased transit ridership that has occurred on King Street as a result of the implementation of the King Street Transit Priority Corridor, 12,000 additional commuters are now being served by the 504 King route every day. This was achieved by a combined cost of less than \$3 million, while also making the affected routes safer and maintaining or reducing overall travel time for all users.

THE ACTION

In partnership with the TTC, the City should build on the success of these initiatives by identifying additional routes where similar pilot projects can be tested. These new initiatives should be focused on

RESILIENCE CHALLENGES



EQUITY



MOBILITY

BENEFITS

Increased efficiency of existing surface transit routes, increased transit ridership, increased walking and cycling use, and better transit access for low-income communities on the periphery of the city

LEADS

- Toronto Transit Commission (TTC)
 - Transportation Services (City of Toronto)

KEY PARTNER

- City Planning (City of Toronto)

FUNDING

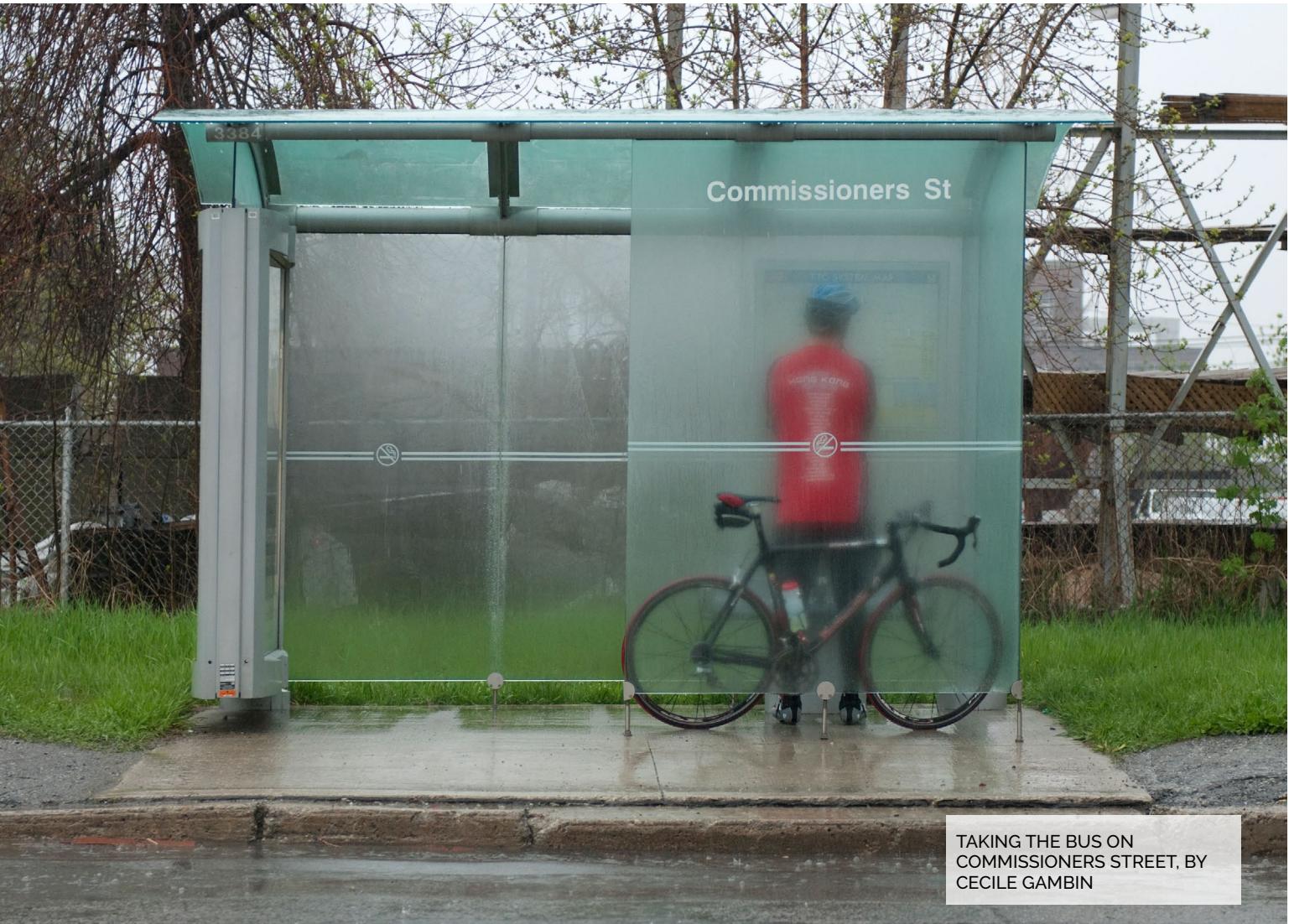
Funding to be determined and allocated on a route-by-route basis based on staff recommendations and after a full study has been undertaken.

suburban arterials where transport poverty and inequity in transit investment is experienced, and where the impact will therefore be greatest, both from a mobility and an equity perspective.

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NEXT STEPS

- The City and TTC to consider this action within the planned Surface Transit Network Implementation Study.



"We must act and not just plan."

– PARTICIPANT IN THE VISION AND PRINCIPLES
WORKSHOP IN SEPTEMBER 2018

FOCUS AREA C: **LEADING A RESILIENT CITY**

This area focuses on the City of Toronto's role as the leader on resilience for residents, businesses, and partners. It includes changing how the City does business to lead a more resilient city.



SNACKING AT A CHILD CARE CENTRE
NEAR DOWNSVIEW-RODING

GOAL C1:

Civic engagement and trust in the City improve, and leadership better reflects Toronto's diversity

- This goal aims to ensure a culture change towards effective civic engagement that builds trust, and ensures policy making reflects the reality of life 'on the ground' for residents and businesses.
- International evidence indicates that civic engagement is a determining factor in how people fare in shocks, including whether a household trusts authorities enough to believe information about a serious risk, like an extreme weather warning. It is also simply common sense: policies and plans cannot break down barriers or promote inclusive growth if the policy processes themselves do not properly engage the people and communities facing barriers in the first place. By working to reduce the barriers that keep youth, newcomers, and low-income residents from participating in decision-making processes, more spaces can be created to support diversity and better decision-making.
- The Resilience Office was mandated to 'pilot new methods to more effectively engage communities... aligned with strengthening the City's overall civic engagement.' Through that process, residents shared how detached they feel from the decision-making process at the City. This came especially from the most vulnerable groups who face significant barriers to meaningful civic engagement. This leads to cynicism about the positive role of government, and decreases their confidence that the right decisions are being made that will ultimately improve their lives.



ACTIONS

- 1.1 Expand corporate civic engagement supports to improve engagement outcomes at the City
- 1.2 Increase transparency and prioritize communications to improve trust in local government

“We participate in consultations. We share our thoughts and nothing happens. Nothing changes.”

– TORONTO RESIDENT

ACTION C1.1

Expand corporate civic engagement supports to improve engagement outcomes at the City

THE CHALLENGE

Many Torontonians face regular barriers to participation in their neighbourhood and City decision-making processes, including language, resources, child care, time, and accessibility, which can leave them feeling excluded and distrustful of their local government as a consequence. Communities cannot truly thrive if they feel chronically excluded in this way.

Many Divisions at the City are at the forefront of civic engagement, both nationally and internationally, but this level of excellence is not consistent, and there is a need for greater coordination across neighbourhoods, communities, and City Divisions. Cities across Canada, including Vancouver, Calgary, Edmonton, and Montreal all have centralized civic engagement functions that support city-wide civic engagement efforts. In Toronto, this function is largely decentralized, with some coordination coming from the City Manager's Office, and additional support for Infrastructure and Development Services coming from the Public Consultation Unit on a cost-recovery basis.

THE ACTION

Divisions should be supported to expand their current civic engagement capacity and activities through an expansion of the current function within the City Manager's Office as a larger centre of excellence that promotes best practices and supports excellence in civic engagement across the organization. This would ensure Toronto keeps pace with other Canadian cities that are establishing central civic engagement functions and investing in tools for public engagement. A strategic approach would increase opportunities for Divisions, communities, and neighbourhoods to learn from one another, share data, leverage coordinated resources, foster better relationships with residents, increase value for money, and improve customer service outcomes.

RESILIENCE CHALLENGES



EQUITY



COMMUNITY AND NEIGHBOURHOODS



CIVIC ENGAGEMENT

BENEFITS

A strong relationship between Torontonians and their government, and policies that are more reflective of the city's diversity

LEAD

- City Manager's Office (City of Toronto)

KEY PARTNERS

- All of City of Toronto Divisions
- Resilience Office (City of Toronto)

FUNDING

No funding is currently required.

This expanded function within the CMO should support Divisions by:

- Providing advice and training on how to carry out exceptional public engagement;
 - Establishing standards, policies, frameworks, and tools for public engagement that can help to ensure greater consistency in Divisional engagement initiatives;
 - Supporting strategies to improve the engagement of hard-to-reach and equity-seeking groups, including low-income, racialized, and Indigenous residents, newcomers, and youth;
 - Establishing standards for collecting demographic data as part of public engagement initiatives to make it easier to track who is being engaged;
 - Leading public engagement efforts on large projects of city-wide importance;
 - Facilitating information and data-sharing between Divisions on engagement and the feedback received to improve customer service and make engaging with Torontonians easier and more seamless;
 - Improving communication between the public and Divisions to build trust and show how perspectives and input are contributing to decision-making;
 - Facilitating a community of practice of City public engagement practitioners to share best practices;
 - Exploring ways to support engagement at the neighbourhood level, with the objective of facilitating ongoing and constructive dialogue between the City and residents; and
 - Continuing to provide supports to residents who want to learn more about how their City works.

NEXT STEPS

- The City Manager's Office will review the City's civic engagement practices, in consultation with Divisions and the public, to consider resources and frameworks that would enhance engagement, reflect the unique needs of equity-seeking and other hard-to-reach groups and best practices from other municipalities, and include methods for evaluating engagement.

ALIGNED CITY ACTION: Toronto Planning Review Panel

In 2015, Toronto's City Planning Division created the Toronto Planning Review Panel, a representative advisory body of Torontonians convened to provide resident input into strategic projects and policies. To ensure that members of the Panel are as representative of Toronto's population as possible, invitations to participate were sent out randomly to thousands of households across the city in what's known as a civic lottery. Volunteers were asked to self-disclose around a series of diversity questions, including age, gender, status as either racialized, non-racialized, or Indigenous, and housing tenure. The final panelists were then selected randomly from the group of volunteers, controlling for each demographic quality, according to its prevalence in the city's overall population. Panelists receive intensive training on how the City works and the planning process, and then provide input over a two-year period into a series of planning projects and policy-development initiatives of strategic importance to the Planning Division or other City Divisions doing planning-related work. The Panel represents an innovative use of the civic lottery process that is now seen as an international best practice. Its benefits extend beyond the high-quality feedback that planners get out of it. Panelists also gain extensive educations about how the City works, and reported higher levels of interest in City issues, higher degrees of empathy for their neighbours, and greater confidence in planning processes as a result of their participation.

ALIGNED CITY ACTION: Lived Experience Advisory Group (LEAG)

Since February 2017, 17 Torontonians have been using their personal lived experience with the realities, conditions, and impacts of living with poverty to inform the effective development, implementation, and monitoring of the City's Poverty Reduction Strategy.

Hundreds of Toronto residents provided input on how the Lived Experience Advisory Group (the LEAG) should work, including composition and terms of membership, frequency and location of meetings, communications, audience and tactics, and supports required. More than 350 residents applied to be part of the first LEAG. The selected members come from communities across the city and have diverse experiences with poverty and intricate knowledge to share. Over the course of a four-year term (2017-2020), LEAG members will work together with City Divisions and community partners to address the actions outlined in the Poverty Reduction Strategy. The mandate of the LEAG focuses on advocacy, education and awareness, and monitoring and evaluation. It is an example of how engagement can be tailored towards hard-to-reach and vulnerable populations to achieve better policy and implementation outcomes at the City.



PRIDE PARADE 2009, BY NEAL JENNINGS

ACTION C1.2

Increase transparency and prioritize communications to improve trust in local government

THE CHALLENGE

City Manager Chris Murray has noted that the main currency of government – what it is attempting to earn through the services it provides to residents – is trust and confidence. In Toronto, research suggests that while local government still enjoys higher levels of confidence than other levels of government, it enjoys lower levels of confidence than other local institutions (learn more on page 57). This was a sentiment that the Resilience Office also heard in the context of its consultations for the development of this Strategy.

A well-informed public increases trust and confidence in civic government. The Edelman Trust Barometer, which has been measuring trust in 28 countries for 18 years, found that the trust index for informed Canadians was 18 points higher than for the general population of Canada in 2019.

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THE ACTION

Open and transparent communications is foundational to positive public engagement with government. That starts with communications leadership. When trust and confidence in government decision-making is high, the public are more likely to continue to engage with it. Continuously improving communications, therefore, is vital to the success and prosperity of a city and its residents.

Government must be accessible, not just physically, but in all ways. Toronto is a diverse city; people with disabilities, low income residents, and those living in isolation, for example, need options and tools to provide input and receive information from their government. This could include options that are in the language of their choice, that use different technologies, or any other interventions that are meaningful to them.

To achieve this Action, communications resources must be built into project budgets with processes established to inform the

RESILIENCE CHALLENGES



EQUITY



COMMUNITY AND NEIGHBOURHOODS

BENEFITS

A more informed public and increased levels of trust in local government

LEAD

- Strategic Communications (City of Toronto)

PARTNERS

- All City of Toronto Divisions
- Resilience Office (City of Toronto)

FUNDING

No funding request at this time.

public, engage on issues, and, critically, provide meaningful feedback on how their engagement was woven into decision-making. When people are well-informed and kept apprised of issues, and shown by the government that they've been listened to, residents are more likely to trust that the decisions made by government were thoughtful and well-considered, even when they don't necessarily agree with them.

- Establish a standard for communicating back to the public what was heard through civic engagement initiatives in a timely way.

NEXT STEPS

- Embed fully-funded communications strategies that use innovative communications to foster civic engagement and public feedback, into all City projects.



GOAL C2:

The City prioritizes the most vulnerable people and highest risk in decision-making

- This goal is about ensuring that the City's programs and processes include vulnerable groups in decision-making, prioritize programs and projects that support equity-seeking groups, and measure progress in achieving the vision.
- Companies, organizations, and governments are expected to not only be more representative, but also more inclusive of people from traditionally marginalized and racialized groups. Improving resilience in Toronto requires strengthening the decision-making processes and systems in place, and addressing how the voices and experiences of vulnerable and high risk groups matter at a strategic level in the City. The relationship between equity and resilience is discussed further on page 22.

ACTIONS

- 2.1 Integrate equity into the City's strategic planning processes

ACTION C2.1

Integrate equity into the City's strategic planning processes

THE CHALLENGE

As highlighted on page 35, Toronto is embarking on a number of new central strategic planning activities and updating major strategic initiatives, including:

- A Governance Review, to examine the governing structure of City Council;
- An update to the HousingTO Action Plan; and
- A report on transit expansion priorities for the next decade.

These central planning initiatives will have an impact on City operations. They are expected to address top priority, cross-cutting issues such as housing, transit, government modernization, and the City's approach to engaging the public. As such there is significant potential for strategic initiatives to address equity and inclusion. Failure to purposefully and meaningfully address equity could result in outcomes that deepen the divides in Toronto.

THE ACTION

The City's strategies will embed equity and inclusion as a priority. In addition, the City's Equity Lens tool should be applied to each of the areas of action or recommendations in the strategies (learn more about the Equity Lens tool on page 14).

City's strategies are also a rare opportunity for Toronto to share who it is as a city to partners in the region and cities around the world. Including equity in strategies sends an important message about prioritizing the needs of the most marginalized. It shows that the City is alert to the growing inequities and is dedicated to addressing them.

NEXT STEPS

- Increase adoption of the Equity Lens tool in City action planning and program development processes.
- Leverage equity data to foster dialogue among stakeholders and inform decision-making.
- Integrate an equity responsive budgeting framework during planning cycles.

RESILIENCE CHALLENGES



EQUITY

BENEFITS

Improved, equitable outcomes for all Torontonians in the areas prioritized in the strategies

LEAD

- All City Divisions

KEY PARTNERS

- People, Equity and Human Rights (City of Toronto)
- Social Development, Finance and Administration (SDFA, City of Toronto)

FUNDING

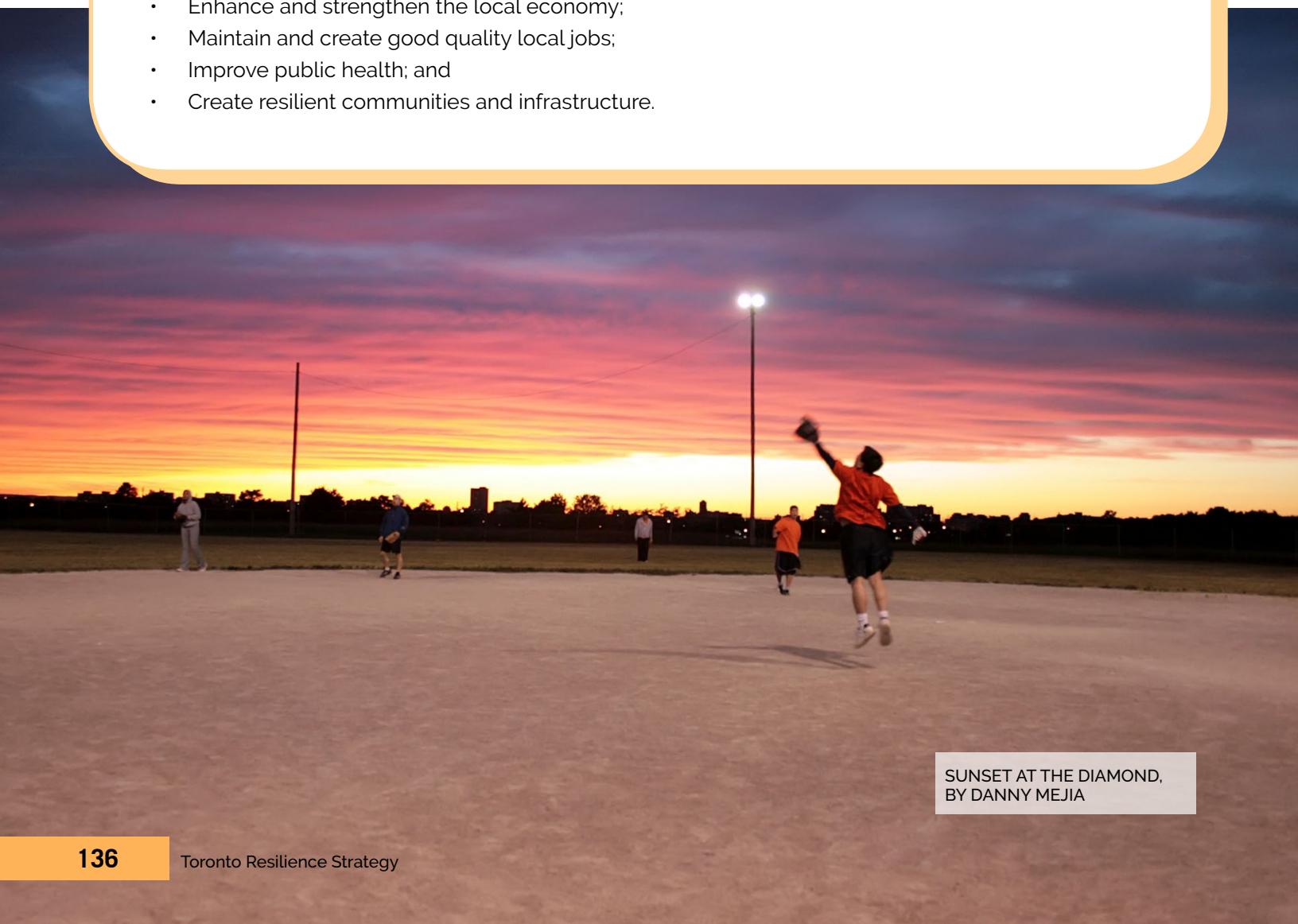
No new funding sources are required. The implementation of this action requires a commitment to integrate equity using existing resources.

ALIGNED CITY ACTION: Integrating Equity in Energy and Environment Division

The Energy and Environment Division (EED) was recognized in 2018 as leaders in integrating equity into their work. EED established an Equity Action Team and worked to ensure an equity lens is applied to programs and policy development. EED embedded equity principles into TransformTO, the City's climate mitigation plan. They also provided all staff with multiple training sessions on equity, including on the City's Equity Lens, and the KAIROS blanket exercise on the nation-to-nation relationship between Indigenous and non-Indigenous peoples in Canada.

TransformTO's guiding principles for designing climate action are:

- Advance social equity;
- Improve affordability particularly for vulnerable populations;
- Protect low-income residents;
- Contribute to poverty reduction;
- Enhance and strengthen the local economy;
- Maintain and create good quality local jobs;
- Improve public health; and
- Create resilient communities and infrastructure.



SUNSET AT THE DIAMOND,
BY DANNY MEJIA

GOAL C3:

Indigenous communities have a leadership role in building resilience

- This goal aims to support Indigenous communities who are taking a leadership role in this work
- to further build the resilience of Indigenous communities in and around Toronto. Broad and deep co-development that brings together diverse perspectives and worldviews is required to develop novel approaches and diverse ways of thinking to address the urgency and complexity of the challenges facing Toronto.
- Indigenous communities have essential, far-reaching knowledge and practices relevant to building a Toronto in which every resident can thrive. Indigenous communities faced the major shock of colonization, including the Residential School system, which has created ongoing stresses around language and culture loss, child removal, racism, poverty, inequity and displacement. Indigenous communities are experts in long-term resilience.
- Key aspects of Indigenous knowledge that provide an essential framework for resilience actions include: importance of interconnectedness, thinking about "all my relations", including humans, all other species, and the earth when making decisions; importance of thinking on a long time horizon; and the importance of being dynamic, adapting to new technologies and realities quickly. As one participant in the Indigenous Knowledge and Climate Action workshop shared, "Anishinaabe law and political systems are for the present and future".

ACTIONS

- 3.1** Build relationships with Indigenous communities in Toronto around resilience

“We need to ask...how the usual ways of framing change needs to better reflect how we live together as Indigenous and non-Indigenous peoples”

– FROM REPORT ON INDIGENOUS KNOWLEDGE AND CLIMATE ACTION BY THE
INDIGENOUS CLIMATE ACTION

ACTION C3.1

Build relationships with Indigenous communities in Toronto around resilience

THE CHALLENGE

To begin to support Indigenous leadership on resilience, the City must build meaningful relationships with Indigenous leaders, Elders and Knowledge Keepers, and community members based on mutual respect and trust. Strong relationships are the foundation upon which the City and Indigenous communities could co-create a set of actions to further support the goal.

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THE ACTION

The Resilience Office partnered with the Energy and Environment Division in 2018 to explore the relationship between Indigenous knowledge and climate action through a workshop with Indigenous Elders and Knowledge Keepers, and other Indigenous peoples working on climate and environmental issues. The workshop was led by Indigenous Climate Action, an organization guided by Indigenous peoples from communities and regions across Canada with the goal to uplift Indigenous worldviews and experiences within climate discussions.

Some of the key responses from participants were that:

- The City should do more meaningful Indigenous engagement on these questions;
- Indigenous views of the world do not have a separate category for the environment or the climate;
- “Full Cost Accounting” is needed; cities can avoid facing their real contribution to overall emissions by not calculating what residents consume and how it is produced and imported;
- The City should respect and engage meaningfully with Indigenous knowledge and practices; not merely as vulnerable people, but people with knowledge who have ways to solve their own problems and contribute to broader strategies that address what is coming;

RESILIENCE CHALLENGES



COMMUNITY AND NEIGHBOURHOODS

BENEFITS

Better, more innovative, and holistic solutions to resilience challenges, stronger and healthier relationships with local First Nations and urban Indigenous communities, and more knowledgeable City staff

LEAD

- Resilience Office (City of Toronto)
- Energy and Environment Division (City of Toronto)

KEY PARTNERS

- Indigenous Affairs Office (City of Toronto)
- Indigenous Climate Action
- Native Child and Family Services of Toronto (agency of the City of Toronto)

FUNDING

To be determined through the annual capital and operating budgeting process.

- The City should find ways to accommodate urban Indigenous cultural resurgence, in part, because it supports the meaningful revitalization of Indigenous peoples' essential contributions on how to mitigate and respond to climate change;
- Engagement with Indigenous communities must be inclusive, especially of people surviving on low income and living with diverse critical symptoms of deep trauma; and
- Indigenous people need more urban space, specifically, much more access to land and water, as a vital way to demonstrate real strategies for climate change, which is linked to food sovereignty.

 The full summary of the responses is included on the Resilience Office website at: toronto.ca/resilience.

The next step in this action is to continue to build relationships with Indigenous communities in Toronto around resilience and work towards co-developing a plan to achieve Goal A3, guided by the responses described above.

To build these relationships, the City must commit to reconciliation and acknowledge and foster learning about the history of residential schools and the harmful impacts caused by the loss of land and culture. This includes providing training for City staff on Indigenous cultural competency, as directed by the Truth and Reconciliation Call to Action (#57), and implementing the other seven calls to action that City Council identified as a priority in 2015. A number of City Divisions are already working to respond to these Calls to Action, with the Indigenous Affairs Office supporting this work across the City.

In addition to this action, all actions in the Resilience Strategy may affect Indigenous communities in both predicted and unexpected ways. The City will work with Indigenous partners



*We need to ask... how
the usual ways of
framing change needs
to better reflect how
we live together as
Indigenous and non-
Indigenous peoples"*

*FROM INDIGENOUS CLIMATE
ACTION REPORT ON INDIGENOUS
KNOWLEDGE AND CLIMATE ACTION*



(including Indigenous nations, communities and organizations) to identify the impacts on Indigenous peoples and work with Indigenous communities to ensure they benefit from the Strategy and ensure there are opportunities to lead the implementation of the Strategy.



NEXT STEPS

- Have all Resilience Office staff and resilient leads across the City complete Indigenous Cultural Competency Training in 2019.
- Continue to build relationships with Indigenous communities in Toronto around resilience and work towards co-developing a plan to achieve Goal A3, guided by the responses described above.

ALIGNED LOCAL ACTION: Nikibii Dawadinna Giigwag

Nikibii Dawadinna Giigwag (Anishinaabemowin for Flooded Valley Healing) is a participatory employment training program that includes the voices of Indigenous youth and Elders/Knowledge Keepers in the planning and designing of green infrastructure.

The inaugural program provided four Toronto high school youth and two University of Toronto graduate students with summer employment and an opportunity to contribute to the revitalization of Bolton Camp, a 254-acre site 40 kilometres north of the city. More than 30 experts mentored the students through lectures, workshops, design reviews, guided site visits, and training in the field. The program challenged the youth to brainstorm design concepts to transform an existing cabin structure at Bolton Camp into a sustainable cabin that will provide Indigenous youth, Elders, and others with access to future programming and ceremonial space.

Phase II of the program will begin in spring 2019 and continue to offer participants the opportunity both to explore traditional teachings of the Land, and to learn about potential career paths in fields such as architecture and environmental conservation. Indigenous youth will work alongside architects, engineers, and Elders/Knowledge Keepers to finalize the detail design of the sustainable cabin space at Bolton Camp. Youth will also participate in a variety of environmental training and workshop opportunities in the field such as tree identification, invasive species removal, and rain water garden design. Such activities will encourage creative problem-solving skills, build environmental literacy, foster resident engagement, and contribute to building sustainable landscapes.

The pilot program was supported with seed funding from the Landscape Architecture Canada Foundation and developed collaboratively by Elder Whabagoon; Toronto and Region Conservation Authority; the John H. Daniels Faculty of Architecture, Landscape and Design at University of Toronto; the Native Canadian Centre of Toronto; and Great Lakes Waterworks Water Allies. Learn more at <https://trca.ca/learning/bolton-camp-project/nikibii-dawadinna-giigwag/>



PARTICIPANTS IN THE NIKIBII DAWADINNA GIIGWAG PROGRAM



INDIAN RESIDENTIAL
SCHOOL SURVIVORS LEGACY
CELEBRATION AT NATHAN
PHILLIPS SQUARE, OCTOBER 2018

GOAL C4:

Institutionalize resilience into the City's decision-making and take leadership on resilience

- The Strategy was developed over the past two years through partnerships with organizations and leaders across sectors with the support of a small team in a temporary Resilience Office. To achieve the vision of the Resilience Strategy, City Divisions and organizations across the city must ensure that their policies and practices actively increase collective resilience. City Divisions and agencies need to embed resilience into their everyday work and enhance current resilience-building programs. While resilience-thinking exists informally and varies across City Division or organization, the goal is to show leadership on resilience by aligning all City programs towards a coordinated approach to planning and investing in the future.
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ACTIONS

- 4.1** Embed resilience as a practice across the City and partners
- 4.2** Integrate climate resilience into TransformTO
- 4.3** Integrate resilience into emergency management
- 4.4** Improve risk management and communication to residents
- 4.5** Support local partners in academia, industry, and community to take leadership on resilience
- 4.6** Position Toronto as a regional, national, and international leader on resilience

ACTION C4.1

Embed resilience as a practice across the City and partners

THE CHALLENGE

Resilience as a concept can be valuably applied to nearly all of the City's Divisions, agencies, boards and corporations. Embedding resilience can improve value for money of City services and lead to more equitable outcomes.

There are challenges in embedding resilience as a practical concept; primarily, resilience thinking is long term and strategic, and often competes for resources with immediate needs.

Embedding resilience now saves costs later, such as through avoided maintenance or with new financing. However, allocating resources to resilience requires prioritization over other priorities in the short term. A challenge therefore is to support Divisions to first identify and capture opportunities to embed resilience within existing budgets and planned projects.

The Fairford Parkette green streets project (on page 105) is a good example of this approach. The project takes advantage of planned street works to embed green and blue infrastructure.

Already, resilience is being integrated across the organization, some of which is called 'resilience' and some of which has not been identified as such. The City is home to some of the most exciting resilience projects in the world, with infrastructure projects like the Don River Naturalization or policy projects such as the Toronto Public Health's Food Resilience Strategy. The challenge is to leverage the good resilience practice and scale it up.

THE ACTION

The focus for embedding resilience will be to support divisions, agencies, boards and corporations to embed resilience in their ongoing work. This can be achieved by:

- Supporting staff and building capacity in the Toronto Public Service through workshops and training. The Resilience Office and City Planning partnered to pilot this approach (see Action B2.2) through the development of a resilience workshop. The

RESILIENCE CHALLENGES



EQUITY



CLIMATE AND ENVIRONMENT



CIVIC ENGAGEMENT



COMMUNITY AND NEIGHBOURHOODS



HOUSING



MOBILITY

BENEFITS

Efficient and agile delivery framework which breaks down silos and scales up resilience

LEAD

- Resilience Office (City of Toronto)

PARTNERS

- All Divisions as well as select Agencies, Boards, and Commissions

FUNDING

Funded through the Resilience Strategy. The Resilience Office will pursue grants, scholarships and innovative financing to embed and scale up resilience practice in the City.

workshop can be delivered across the City in partnership with the Resilience Office.

- Creating a network of resilience champions who are already working on resilience. The Resilience Office will support a 'community of practice' which can share ideas, lessons, and opportunities on resilience. A request will be made to Divisions to nominate a resilience champion to participate. Requests will be made to partners such as the Resilience Steering Committee to leverage their resilience expertise through events, partnerships, or networks. Finally, a request will be made to Montreal, Calgary, and Vancouver's resilience offices to connect the champions with their counterparts, to build on the national community of practice (see page 155). The network will support breaking down silos across the City.

The four priority actions in this Strategy will be delivered through multi-stakeholder working groups, which include both Divisions, agencies, boards and corporations, and external practice. The Resilience Office will act as the backbone to these working groups to ensure that activities are sustained and integrated into existing work. This will support embedding resilience by continuing to breakdown silos on these four priorities.

To deliver this action – as well as other actions as demonstrated in the work plan on pages 156-157 - the Resilience Office will be maintained beyond the end of the 100RC grant. To start, the Resilience Office will be extended to the end of 2019. The continuation of the Resilience Office after 2019 will be considered through the City's budget process in 2020 and beyond. For 2020, consideration will be given to reorganizing the Resilience Office to be a part of the team delivering TransformTO, as discussed in Action C4.2. The Resilience Office will report on progress in one year, focusing on outcomes that:

- Improve the quality and scale of resilience practice in the City;
 - Improve value for money by embedding resilience;
 - Build capacity in the Toronto Public Service and break down silos;
 - Deliver results on the four priority actions and advance the supporting actions;
 - Access funding for City initiatives through methods such as grants, partnerships, and innovative financing;
 - Promote Toronto as a resilient city locally, nationally, and internationally; and
 - Foster partnerships at the City and with academia, industry and communities in the emerging field of city resilience - both to implement the Strategy and to position Toronto as a national and international leader in urban resilience.
-

NEXT STEPS

- Identify and partner with Divisions to deliver resilience capacity-building workshops.
- Develop business cases for 2020 budget process required to implement the Resilience Strategy.



WALKING IN DUFFERIN GROVE
PARK, PHOTO BY TOBY PROCTOR,
SUBMITTED TO THE SNAP & SHARE
PHOTO CONTEST, 2014

ACTION C4.2

Integrate climate resilience into TransformTO

THE CHALLENGE

TransformTO, Toronto's climate action plan, is an ambitious strategy to achieve an 80% reduction in Toronto's GHG emissions from 1990-levels by the year 2050. It contains an important set of actions that will go a long way towards ensuring Toronto plays its part in helping Canada meet its obligations under the Paris Climate Agreement, which aims to ensure that global temperature increases do not exceed 2 degrees Celsius. But even if that objective is achieved, the climate change impacts will still be considerable, and Toronto's climate will nonetheless transform in all of the ways that this Strategy has already described. That is why cities and other levels of government around the world are working to combat climate change with a two-pronged approach that incorporates efforts both to mitigate climate change (primarily through reductions in GHG emissions, as TransformTO aims to achieve), as well as efforts to adapt to the effects of climate change, so as to protect people and infrastructure from the worst of impacts. Currently, Toronto lacks the kind of robust climate adaptation plan that many cities around the world are already implementing. This increases the vulnerability of all Torontonians to impacts of climate change, puts public investments at risk, and will require considerable future government expenditure to recover from future shocks.

THE ACTION

International best practice for municipalities shows that responding to climate change requires coordinated action on both climate mitigation and adaptation. As detailed in the Climate Resilience Framework report (see Resilience Office website at toronto.ca/resilience for details), it is fundamental to consider mitigation and adaptation to identify interdependencies that maximize efficiencies and cost-effectiveness, and minimize risk. Merging climate adaptation and mitigation together in one climate plan has several benefits:

- Customer Service: It is easier for residents, businesses, and other partners to understand the City's climate action through one plan which covers both mitigation and adaptation.
- Alignment: Pairing adaptation with mitigation aligns the City

RESILIENCE CHALLENGES



CLIMATE AND ENVIRONMENT



CIVIC ENGAGEMENT

BENEFITS

Improved access to funding, policy alignment, customer service, and climate leadership

LEADS

- Resilience Office (City of Toronto)
- Energy and Environment Division (City of Toronto)

PARTNERS

- Relevant TransformTO Divisions
- Community partners such as the Atmospheric Fund, Toronto Environment Alliance, and CREW

FUNDING

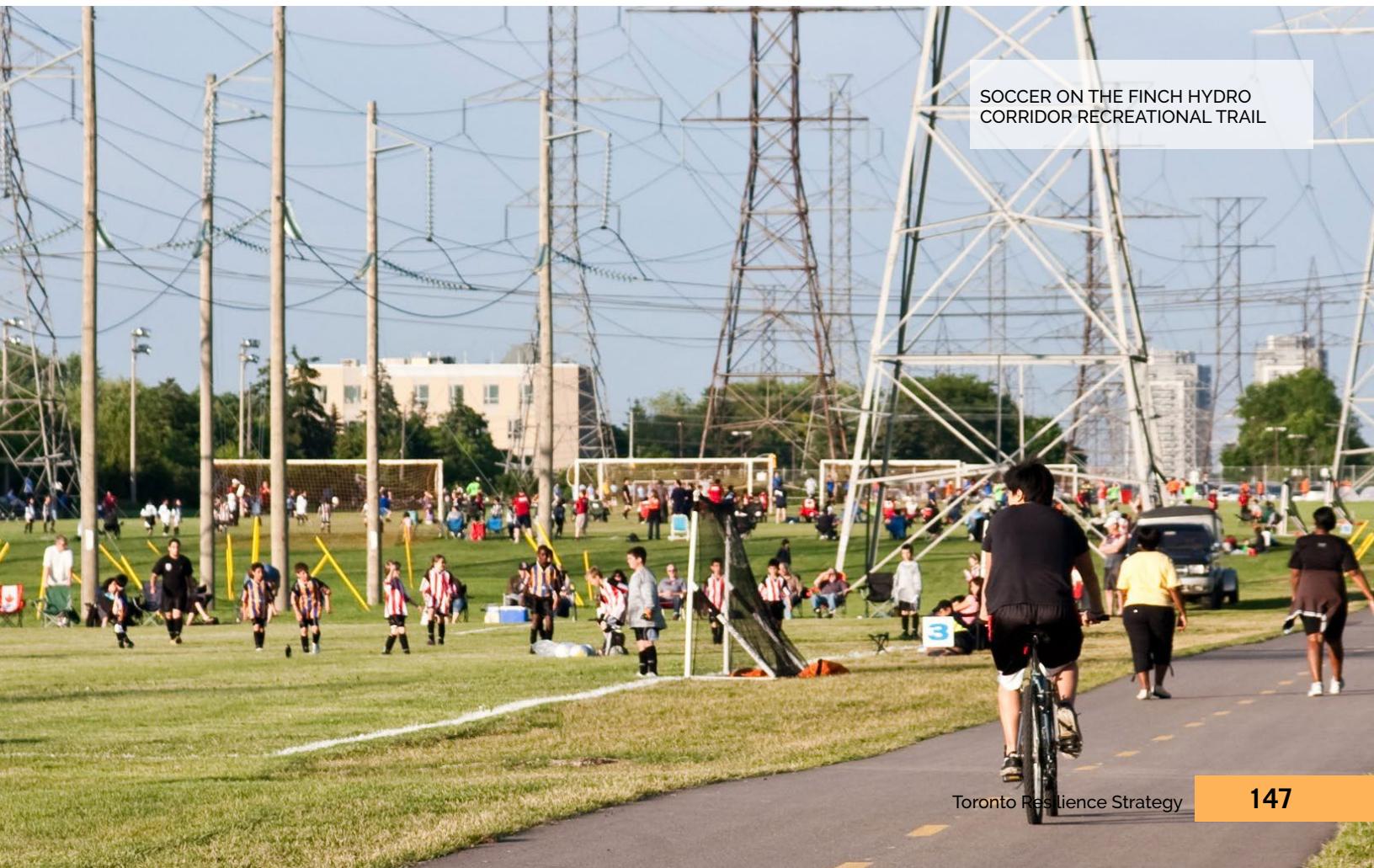
Analysis already funded within TransformTO and the Resilience Strategy.

- with the Federal Pan Canadian Framework on Climate Change, the Provincial Made in Ontario Environment Plan, neighbouring municipalities, and agencies such as Waterfront Toronto.
- Funding: Considering adaptation and mitigation together supports better business cases and access to funding opportunities. For example, all federally-funded infrastructure projects are required to consider both adaptation and mitigation (see context on Federal Climate Lens on page 111). This is particularly relevant given the Province's decision to cancel the Cap and Trade program.
 - Cost-Benefit Analysis: International best practice for cities is to identify, understand, and make informed cost-benefit decisions about synergies, trade-offs, mal-investment, and piggybacking opportunities between mitigation and adaptation action.

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NEXT STEPS

- Support the planned TransformTO Implementation Plan for 2023 to align with the Resilience Strategy.
- Work with TransformTO to ensure that relevant actions, such work on existing building retrofits, community engagement, and capacity building/training are focused on both mitigation and adaptation.



ACTION C4.3

Integrate resilience into emergency management

THE CHALLENGE

There is an inherent link between resilience and emergency management, which both share a focus on the impacts of major shocks like storms, floods, and power outages. In Toronto, throughout the Strategy development process, the Office of Emergency Management (OEM) and the Resilience Office worked as partners to deliver projects and policy research.

THE ACTION

Improving Toronto's capacity for preparation, response, and recovery will be achieved through greater integration of resilience and emergency management, as the Resilience Office supports OEM in the enhancement and expansion of the existing corporate business continuity program and planning process across divisions, agencies, boards, and corporations. For example, in 2019 OEM will launch the Corporate Business Continuity and Resilience Task Force.

OEM will also play an important role in supporting the development and implementation of a Community Resilience Framework, Assessment Tool and action planning process (Action A2.1) and in enhancing the Hazard Identification and Risk Assessment process (Action C4.4).

NEXT STEPS

- Establish a terms of reference, mandate, and action plan for the Corporate Business Continuity and Resilience Task Force.
- Report to the Toronto Emergency Management Program Committee on progress against the action plan on a quarterly basis.

RESILIENCE CHALLENGES



EQUITY



CLIMATE AND ENVIRONMENT

BENEFITS

Improved preparedness and recovery

LEAD

- Office of Emergency Management (City of Toronto)

PARTNERS

- City's Divisions, Agencies, and Boards and Commissions
- Toronto Emergency Management Program Committee members
- Emergency Management Working Group members
- Business Continuity Working Group members

FUNDING

Funded within 2019 Office of Emergency Management budget.

ACTION C4.4

Improve risk management and communication to residents

THE CHALLENGE

A foundation of resilience and emergency management is understanding, managing, and reducing risk. The primary challenge is understanding the possible impact of a stress or shock on vulnerable populations as well as taking into account the complex interactions of infrastructure and social support systems impacted by stresses and shocks such as extreme weather, power outages, and other infrastructure failures.

The City's existing Hazard Identification and Risk Assessment (HIRA) meets Provincial requirements and serves as a useful input to planning and policy (including the development of this Strategy).

The City has also been actively researching the relationships between climate risk and infrastructure systems. In collaboration with the University of Toronto, the Environment and Energy Division conducted pioneering work on this topic in 2012 that was featured in a C40 Cities report, "Infrastructure Interdependencies + Climate Risk" (2017), found at https://unfccc.int/sites/default/files/report_c40_interdependencies.pdf. The report establishes the need for cities to engage with sectors they do not control but depend upon – and which could be at risk due to extreme weather. More work is required in this area to better understand interdependencies and the risks of cascade failure of infrastructure systems under the triple threat of more frequent extreme weather, aging infrastructure systems and a growing population.

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THE ACTION

The City can improve how it manages and mitigates risks to shocks and stresses, and how it communicates those risks with and to its residents and partners. This action is linked to the priority on understanding flood risk (Action B1.4), and will be a critical input for infrastructure planning (Action B2.1), land use planning (Action B2.2), and asset management (Action B2.3).

The HIRA process will be updated to include climate risk, social vulnerability, and critical infrastructure analysis. To be effective, this

RESILIENCE CHALLENGES



EQUITY

BENEFITS

Improved undertaking of risk and decision making to invest in resilience

LEAD

- Office of Emergency Management (City of Toronto)
- Energy and Environment Division (City of Toronto)

PARTNERS

- Toronto Emergency Management Program Committee members
- Emergency Management Working Group members
- Energy and Environment Division (City of Toronto)
- The Province of Ontario

FUNDING

Investment or industry partnership required to conduct critical infrastructure analysis. Funding sources may include the Province of Ontario or the Government of Canada (including Public Safety Canada).

process needs to draw on the expertise of the entire City and its partners. It must also involve external and community partners, to ensure the analysis is not 'top down'. Based on lessons from other jurisdictions, the work should be phased, with the first phase of this work completed in time for an update to the HIRA in 2020. Within five years, the HIRA should be a live and complete tool, in use by all divisions and partners. Recognizing the complexity of this assessment, the update may be phased, and planning should begin in 2019. The City will also engage the Province with the aim of leveraging new data from the planned provincial-level climate change impact assessment.

NEXT STEPS

- In 2019, EED will report on its Task Force on Climate Related Financial Disclosure (TFCD), which could include recommendations around the use of HIRA.
- In 2019, EED will conduct a series of senior-level multi-stakeholder "Interdependencies Workshops" for internal and external critical infrastructure sectors.
- In 2019, OEM and the Resilience Office will pilot community-level risk assessments in Neighbourhood Improvement Areas, as per Action A2.1.

ACTION C4.5

Support local partners in academia, industry, and community to take leadership on resilience

THE CHALLENGE

Building resilience requires galvanizing the ideas, resources, and energy of many.

Cities and partners across southern Ontario have started taking resilience action. For example, in southern Ontario alone: in 2017, London hosted the 'Resilient Cities Conference' to explore how their city can be made more resilient; Bancroft, Peel, and Carlton all launched resilience processes focused on water; and in 2018, Oakville launched a neighbourhood extreme weather resilience hub.

Outside government, Toronto Area Interfaith Council, with partners such as Faith in the Common Good, have provided both leadership and on the ground support to prepare for,

respond to, and recover from shocks. The YMCA is working to ensure their existing and new Centres of Community (health and fitness centres) are resilient safe havens for the public in the event of extended power outages or other emergencies (more on page 152). Toronto Foundation is supporting resilience action through its Resilience Building Grantees program (more on the work of the Toronto Foundation on page 36).

International evidence on collective impact suggests that when addressing complex issues, like the resilience challenges identified in this report, organizations across sectors must develop a common agenda, agree on shared measurements, work on mutually reinforcing activities, and continuously communicate with each other.



*There are people out there
that have solutions we need.
Nurture them. Leverage them.*

-FROM PARTICIPANTS AT THE VISION AND PRINCIPLES WORKSHOP IN SEPTEMBER 2018"



THE ACTION

The Resilience Strategy sets a common agenda for resilience in Toronto and provides an opportunity to partners to support resilience in the city. The Resilience Office will act as the support and enabler of collective action in the region. As the next step in delivering this action, the Resilience Office will host a Resilience Strategy launch event with the University of Toronto's School of Cities in May 2019. This event will invite partners from across Toronto and region to share how they will drive the implementation of the Strategy and collaborate to drive wide scale change.

NEXT STEPS

- Launch the Council-approved Resilience Strategy, led by the Resilience Office in partnership with the University of Toronto School of Cities and 100RC, with the aim of mobilizing support from the academia, industry, and community for resilience.



Resilience Steering Committee

The Resilience Strategy development has been supported by a Resilience Steering Committee of community, industry, and academic partners, chaired by the Toronto Foundation. The Committee has supported the Strategy development with in-kind resources, the delivery of resilience projects, and through advice and leadership. For example, after the Yonge Street van attack in April 2018, the Committee convened to support the creation of the TorontoStrong Fund.

*We could do more if
we planned together!*

-FROM PARTICIPANTS AT
THE VISION AND PRINCIPLES
WORKSHOP IN SEPTEMBER 2018

RESILIENCE CHALLENGES



EQUITY



CLIMATE AND
ENVIRONMENT



CIVIC
ENGAGEMENT



COMMUNITY AND
NEIGHBOURHOODS



HOUSING



MOBILITY

BENEFITS

Increase resilience outcomes through driving collective action

LEAD

- Resilience Office (City of Toronto)

PARTNERS

- Communities, industry, academia, residents, and businesses

FUNDING

No funding required. The City aims to connect external partners working on resilience to funding opportunities.

ALIGNED LOCAL ACTION: YMCA Resilience Action

The YMCA of Greater Toronto is working to increase community resiliency and protect vulnerable populations. The YMCA recognizes its important role in supporting and enhancing community resilience and has developed its own Resiliency Strategy to guide this effort. The YMCA's Strategy helps apply a climate resilience lens to strategic actions and priorities.

As part of this Strategy, the YMCA plans to turn existing and new Centres of Community (health and fitness centres) into Community Resiliency Centres. This would allow the YMCA Centres to generate their own electricity on-site and continue to support the community even if the electricity grid is compromised in an emergency. This will be accomplished by installing high-efficiency combined heat and power energy systems. The YMCA will also integrate other resilience-building and low-carbon microgrid measures including solar panels, battery energy storage systems, electric vehicles chargers, advanced controls, and backup generators where combined heat and power energy system are not possible.

These investments will increase the resilience of communities throughout the region by providing the public with safe havens in the event of power outages and other emergencies while providing safe and reliable command centers for first responders.



SKATING AT NATHAN PHILLIPS SQUARE, PHOTO BY RICHARD K LAKE,
SUBMITTED TO THE SNAP & SHARE PHOTO CONTEST, 2015

ACTION C4.6

Position Toronto as a regional, national, and international leader on resilience

THE CHALLENGE

The action Toronto has taken and will take through implementing this Strategy will improve the City's attractiveness to international investment. There are also economic development opportunities within the practice of resilience: Rotterdam's 'waterpark' project welcomes over 80 foreign delegations each year. Toronto has an opportunity to build on strong areas of innovation and to communicate success stories. For instance, Toronto had the most square footage of green roofs installed out of all North American cities in 2016 – a successful track record due in large part to the Green Roof Bylaw (2010). With investors and cities around the world embracing resilience, Toronto has an opportunity to position ourselves as a global leader.

THE ACTION

A work plan will be created to identify, on an ongoing basis, the following:

- How to best position Toronto's resilience in terms of investment attractiveness;
- Gaps in the city's resilience capacity or the perception of Toronto and how to address them;
- A shortlist of international or national events or conferences Toronto may host to position Toronto as a global leader; and
- How to best engage with other Ontario and Canadian municipalities to support a wider uptake of resilience in Canada.

NEXT STEPS

- Identify opportunities to continue or scale up cooperation between Canadian cities on resilience.
- Participate in the 2019 Global Resilience Summit, hosted by 100RC.

RESILIENCE CHALLENGES



EQUITY



CLIMATE AND ENVIRONMENT



CIVIC ENGAGEMENT



COMMUNITY AND NEIGHBOURHOODS



HOUSING



MOBILITY

BENEFITS

Economic development opportunities from being a global resilience leader

LEAD

- Resilience Office (City of Toronto)

PARTNERS

- Economic Development and Culture (City of Toronto)
- Strategic Communications (City of Toronto)

FUNDING

None currently required.

ALIGNED LOCAL ACTION: Circular Economy

One of the ways Toronto is already taking a leadership role on resilience is through the City's commitment to work towards an aspirational goal of zero waste and a Circular Economy. A Circular Economy aims to reduce waste and maximize resources by moving away from the linear take-make-and-dispose approach to an innovative system that focuses on product longevity, renewability, and reuse and repair.

The City has created a team to support this commitment and one of the first steps has been looking at how the City can use its purchasing power to develop Toronto's circular economy.

A city with a circular economy is a resilient city; the sustainable use of resources at their fullest value can drive the local economy, increase social prosperity and have better environmental outcomes. With a stronger focus on product longevity, renewability, reuse, and repair, a circular economy can decrease risk associated with reliance on primary raw material extraction costs and impacts to the environment.

Circular Economy principles can also be integrated into many of the Resilience Strategy actions, including the promotion of sustainable and resilient food systems (Action B1.6) and integration of climate resilience into the City's asset management framework and plans (Action B2.3). Learn more at <https://www.toronto.ca/services-payments/recycling-organics-garbage/long-term-waste-strategy/working-toward-a-circular-economy/>





Resilient Cities Across Canada

Toronto is one of four Canadian cities participating in the 100RC network, with Montreal, Calgary, and Vancouver. Starting in 2016, the four member cities began developing resilience strategies. The purpose of convening is to bring together resilience practitioners to:

a) Advance and illuminate the state of urban resilience in Canada.

The four Canadian member cities of the 100RC network each have unique challenges and opportunities – the diversity of urban centers and metropolitan areas is vast in Canada. Each of the Chief Resilience Officers are leading their cities through a transformational process to institutionalize resilience in operations and partnerships.

b) Share emerging learnings, best practices, and innovations.

The network has also been beneficial for sharing learnings and best practices leading to the development of a resilience strategy.

c) Connect with national and international practitioners and thinkers to advance urban resilience in Canada.

Municipal governments alone cannot build resilience in communities – it takes great partnerships, new technologies, resources, and leadership. Leading experts have insights on a wide range of topics including urban modelling, strategic foresight, risk profiling tools, future of work in Canada, Truth and Reconciliation, and more.

d) Begin conception of a national Urban Resilience Agenda for Canada.

A national urban resilience agenda would benefit the many Canadians living in cities. Opportunities are being explored for national engagement and national impact, cross-city solutions, and new philanthropic investment in a pan-Canada initiative.



Action Plan

An action plan to address immediate priorities and to embed resilience.

FOCUS AREA

ACTION



	1.1	Support homeowners and renters to prepare their homes for shocks
	1.2	Enable wide-scale change in apartment towers to improve resilience through the improvement or retrofit of apartment towers and units
	1.3	Apply a resilience lens to the development of the new HousingTO 2020-2030 Action Plan & ensure comprehensive action to address Toronto's affordable housing gaps across the full spectrum of need
	2.1	Enhance the capacity of neighbourhoods to prepare for and recover from shocks through grassroots action and network building
	3.1	Prioritize the implementation and resourcing of the Council-approved Toronto Poverty Reduction Strategy



	1.1	Institutionalize an integrated, resilience approach to flooding by adopting the Flood Resilient Toronto Charter
	1.2	Centralize resources towards a city-wide flood planning and prioritization tool
	1.3	Review and update existing flood mitigation programs to account for resilience
	1.4	Take action to mitigate the effects of extreme heat
	1.5	Communicate, synthesize and scale up ongoing City efforts to advance a system of green and blue infrastructure
	1.6	Promote a sustainable and resilient food system
	2.1	Develop a Resilience Lens and apply it to City investments, with a focus on infrastructure
	2.2	Integrate resilience into development and land use planning processes
	2.3	Incorporate climate resilience into the City's asset management framework and plans
	3.1	Create a city-wide mobility action plan through synthesis of ongoing mobility initiatives and priorities, and identification of resilience gaps
	3.2	Continue to prioritize service and capital improvements to the TTC that make the system safer, more affordable, more reliable, and less crowded
	3.3	Move more people more efficiently within the existing rights of way by expanding demonstration projects



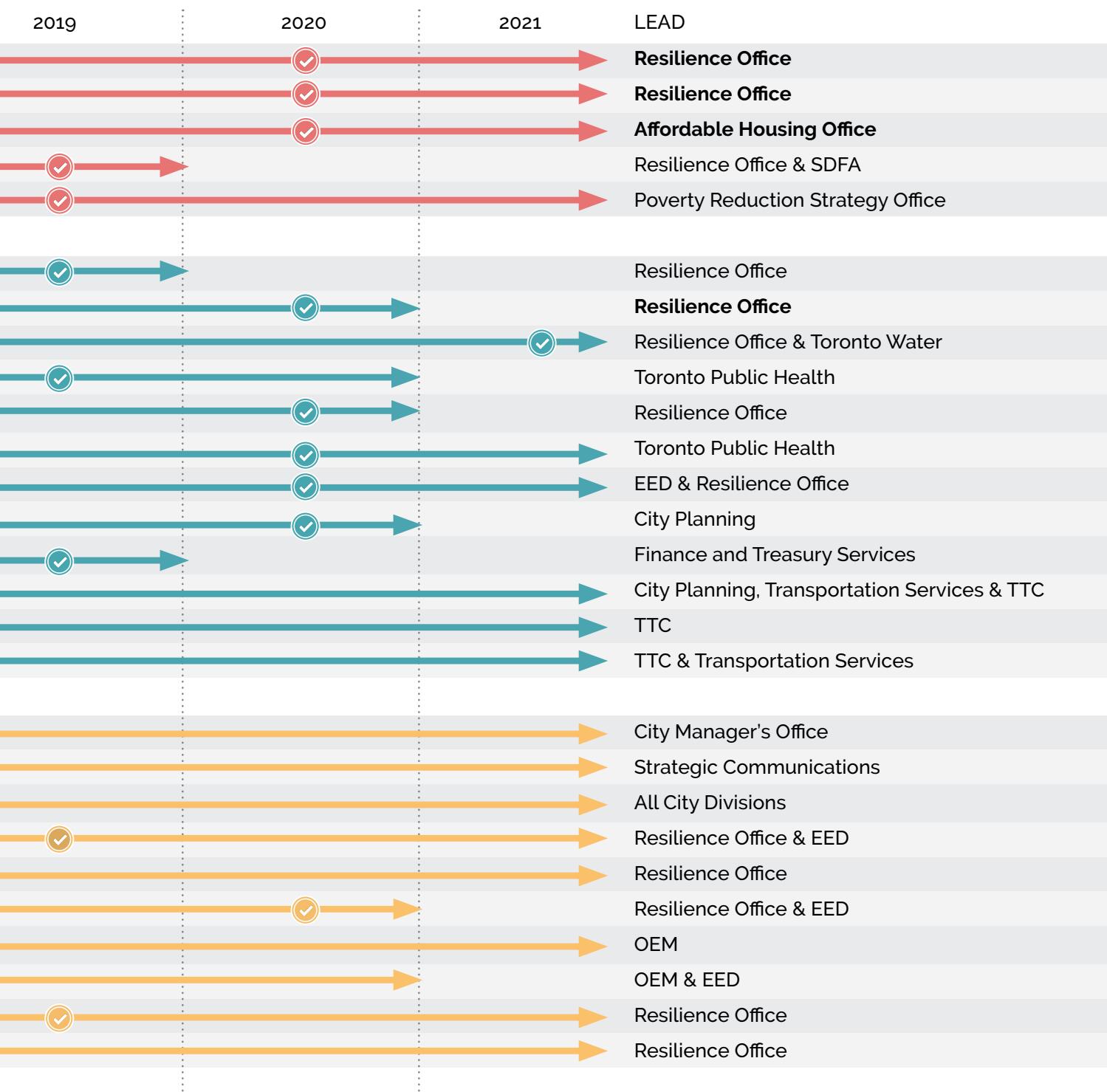
	1.1	Expand corporate civic engagement supports to improve engagement outcomes at the City
	1.2	Increase transparency and prioritize communications to improve trust in local government
	2.1	Integrate equity into the City's strategic planning processes
	3.1	Build relationships with Indigenous communities in Toronto around resilience
	4.1	Embed resilience as a practice across the City and partners
	4.2	Integrate climate resilience into TransformTO
	4.3	Integrate resilience into emergency management
	4.4	Improve risk management and communication to residents
	4.5	Support local partners in academia, industry, and community to take leadership on resilience
	4.6	Position Toronto as a regional, national, and international leader on resilience



The Strategy includes four priority actions which each address immediate needs and build on existing investments by the City and partners.



Implementation Milestones





The quotes throughout this document were provided by residents and used with their permission. Some have been edited for brevity and clarity while preserving the meaning.

All photos without attribution are copyright City of Toronto.

CAMPFIRE ON TORONTO ISLAND, PHOTO BY ERIC SEHR

ACKNOWLEDGMENTS

ACORN Canada
AET Group: Environmental Consulting
Affordable Housing Office
Agincourt Community Services Association
Arcadis
Bang The Table
Black Creek Community Health Centre
Boys and Girls Club of East Scarborough
BOMA Toronto
C40
Canadian Urban Institute
Centre for Connected Communities
Chief Transformation Officer
City Planning
Civic Innovation Office
Clean Air Partnership
Community Action Planning Group
Community Resilience to Extreme Weather
Conservation Ontario
Converso
Deltares
Deputy City Manager - Internal Corporate Services
East Scarborough Storefront
Economic Development and Culture
Employment and Social Services
Engineering and Construction Services
Environment and Energy Division
ERA Architects
Centre for Urban Growth + Renewal
Evergreen
EY
Facilities Management
Financial Planning
Fleet Services
Indigenous Climate Action
Institute for Catastrophic Loss Reduction
Institute of Municipal Finance and Governance
Insurance Bureau of Canada
Leah Birnbaum Consulting
Lossless Creative
Metrolinx
Ministry of Environment and Climate Change (MOECC)
MJKO
Morrison Park Advisors
Municipal Licensing and Standards
Native Family and Child Services
North York Community House
OCAD University
Office of Emergency Management
Parkdale Activity Recreation Centre
Parks, Forestry and Recreation
Perkins + Will
Progress
Rexdale Community Health Centre
Ryerson University
Scadding Court Community Centre
Social Development Finance and Administration
Social Planning Toronto
Solid Waste Management Services
Strategic and Corporate Policy
Strategic Communications
Sustainability Solutions Group
TAS Designs
The Neighbourhood Organization
Thorncliffe Neighbourhood Office
Thorncliffe Park Women's Committee
Toronto Aboriginal Support Services Council
Toronto Building
Toronto Community Housing Corporation
Toronto Environmental Alliance
Toronto Financial District Business Improvement Area
Toronto Foundation
Toronto Hydro
Toronto Public Health
Toronto Public Library
Toronto Region Board of Trade
Toronto Region Conservation Authority
Toronto Transit Commission
Toronto Water
Toronto Youth Cabinet
Transportation Services
United Way
University of Toronto
Urban Land Institute
Waterloo Intact Centre on Climate Adaptation
Watervision
Wellesley Institute
YMCA of Greater Toronto
York University
Zahra Ibrahim

For updates, check out toronto.ca/resilience.

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I am...
 Under 18 18-30 31-40
 41-50 51-60 Over 60

The gender I identify with is... Female

The ethnicity I identify as is: Pakistani

The Toronto neighbourhood I live in is... Don Mills Rd / North York

ResilientTO:
Toronto's Resilience Strategy

My #ResilientStory

Understanding how Torontonians experience resilience is an important step towards creating a Resilience Strategy that improves everyone's quality of life. What kinds of shocks and stresses do you experience, or have experienced in your everyday life? What about your community? What resources, assets, or networks do you have or to help you cope with these challenges? What can the City do to better support you?

I used to be fat. And there an old man said me not to pass my region because I was walking at night. He didn't even know who I was called and told me to get off my head. I hadn't spoken to him. I didn't know him. He only said that because I was muslim.

- My story should be more stronger -



About me

I understand the meaning of "Resilient" new
I am... Nigah-

Under 18 18-30 31-40
 41-50 51-60 Over 60

The gender I identify with is... Female

The ethnicity I identify as is: South Asian (Pakistani)

The Toronto neighbourhood I live in is... Don Mills Rd / North York

ResilientTO:
Toronto's Resilience Strategy

My #ResilientStory

Understanding how Torontonians experience resilience is an important step towards creating a Resilience Strategy that improves everyone's quality of life. What kinds of shocks and stresses do you experience, or have experienced in your everyday life? What about your community? What resources, assets, or networks do you have or to help you cope with these challenges? What can the City do to better support you?

When we came to Canada we got a very bitter experience of bed bugs; me and my family was very tired after a long journey of plane. When we slept at night bugs



About me

My #ResilientStory

Understanding how Torontonians experience resilience is an important step towards creating a Resilience Strategy that improves everyone's quality of life. What kinds of shocks and stresses do you experience, or have experienced in your everyday life? What about your community? What resources, assets, or networks do you have or to help you cope with these challenges? What can the City do to better support you?

NIGAH'S RESILIENCE

About one year ago, there was a shooting in our neighbourhood. Some one at was shot inside of my FAVOURITE PIZZA store. The community came together and looked out for everyone and kept them updated. The community came together and donated money to the pizza store and

I am...
 Under 18 18-30 31-40
 41-50 51-60 Over 60

The gender I identify with is... Female

The ethnicity I identify as is: Pakistani

The Toronto neighbourhood I live in is... K.G.O.

ResilientTO:
Toronto's Resilience Strategy

About me

My #ResilientStory

Understanding how Torontonians experience resilience is an important step towards creating a Resilience Strategy that improves everyone's quality of life. What kinds of shocks and stresses do you experience, or have experienced in your everyday life? What about your community? What resources, assets, or networks do you have or to help you cope with these challenges? What can the City do to better support you?

My resilient story is peer pressure. Growing up, I was forced to do things I didn't want to do. This is uncomfortable to do. This used to stress me that I would be abandoned. something that taking it out me cope is taking it out about how I feel. I feel the city really rare no anything about it but we should listen to our own support our own

ResilientTO:
Toronto's Resilience Strategy

About me

My #ResilientStory

Understanding how Torontonians experience resilience is an important step towards creating a Resilience Strategy that improves everyone's quality of life. What kinds of shocks and stresses do you experience, or have experienced in your everyday life? What about your community? What resources, assets, or networks do you have or to help you cope with these challenges? What can the City do to better support you?

Request to Dow rents.

I am...
 Under 18 18-30 31-40
 41-50 51-60 Over 60

The gender I identify with is... Female

The ethnicity I identify as is: South Asian

The Toronto neighbourhood I live in is... Don Mills Rd / North York

ResilientTO:
Toronto's Resilience Strategy

About me

My #ResilientStory

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We family of four live in one bed room apartment. My daughter will go to University. She cries for her own room to study. If I move from one to two bed room I have to pay hydro + parking + locker. I can't afford to send two bed room. we sleep in the living room. No life in Canada because of high rent.

About me

My #ResilientStory

Understanding how Torontonians experience resilience is an important step towards creating a Resilience Strategy that improves everyone's quality of life. What kinds of shocks and stresses do you experience, or have experienced in your everyday life? What about your community? What resources, assets, or networks do you have or to help you cope with these challenges? What can the City do to better support you?

I survived being evicted from my home 25 years later with stepmom & family, friends & other members

I am...
 Under 18 18-30 31-40
 41-50 51-60 Over 60

The gender I identify with is... Female

The ethnicity I identify as is: White - European

The Toronto neighbourhood I live in is... Finch Don Mills Rd / North York

ResilientTO:
Toronto's Resilience Strategy

About me

My #ResilientStory

Understanding how Torontonians experience resilience is an important step towards creating a Resilience Strategy that improves everyone's quality of life. What kinds of shocks and stresses do you experience, or have experienced in your everyday life? What about your community? What resources, assets, or networks do you have or to help you cope with these challenges? What can the City do to better support you?

A few weeks ago there was one of the worst heat waves the city experienced. Many people did not have access to water, so the government let the people into the malls after hours to get away from the heat and also provided free water/water stations to anyone who needed it.

ResilientTO:
Toronto's Resilience Strategy

About me

My #ResilientStory

Understanding how Torontonians experience resilience is an important step towards creating a Resilience Strategy that improves everyone's quality of life. What kinds of shocks and stresses do you experience, or have experienced in your everyday life? What about your community? What resources, assets, or networks do you have or to help you cope with these challenges? What can the City do to better support you?

My story is I live alone. Both my kids live 5,000 miles away. So it is important for me to stay healthy and connect with people in my neighbourhood.

I am...
 Under 18 18-30 31-40
 41-50 51-60 Over 60

The gender I identify with is... Female

The ethnicity I identify as is: Black African

The Toronto neighbourhood I live in is... Don Mills Rd / North York

ResilientTO:
Toronto's Resilience Strategy

result I have met and made connection with a group of people who support and empower me. I am always busy with community events and have no time to worry about loneliness and depression.

PIONEERED BY THE ROCKEFELLER FOUNDATION

100 RESILIENT CITIES

awoke up and started bite my kids because red because of rash started because of bugs bite.

My husband was worry to see the children condition after this. But now this later condition changed the apartment. Now condition is good apartment is clean. we threw all the stuff like pillows, mattress etc at and bought all new things it was a lot of loss in a new country. Now we are comfortable in our building

About me



My #ResilientStory

Understanding how Torontonians experience resilience is an important step towards creating a Resilience Strategy that improves everyone's quality of life. What kinds of shocks and stresses do you experience, or have experienced in your everyday life? What about your community? What resources, assets, or networks do you have or to help you cope with these challenges? What can the City do to better support you?

Safety

Robbery

- Drug dealing
- Gang fighting
- Poverty House rent & utility high

I am...
 Under 18 18-30 31-40
 41-50 51-60 Over 60

The gender I identify with is... South Asian Female

The ethnicity I identify as is:

The Toronto neighbourhood I live in is... Don Mills Rd / North York

ResilientTO:
Toronto's Resilience Strategy

About me



My #ResilientStory

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RACIAL DISCRIMINATION
Rampant when I came to Canada. Relied on co-workers who were friendly to help me to understand Canadian workplace culture

I am...
 Under 18 18-30 31-40
 41-50 51-60 Over 60

The gender I identify with is... Female

The ethnicity I identify as is: Guyanese

The Toronto neighbourhood I live in is... North York

ResilientTO:
Toronto's Resilience Strategy

About me



My #ResilientStory

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IN DECEMBER OF 2013, WE HAD A MAJOR ICESTORM SHUTTING DOWN POWER TO OUR PROVINCE AND CITY FOR 10 DAYS. I PERSISTED THROUGH THE HARD TIMES BY HELPING THE PEOPLE IN NEED, EVERYONE NEEDED HELP WITH MY STRONG COMMITMENT AND RESILIENCE, I AM MUCH STRONGER TODAY. I BOUNCHED BACK AND I

I am...
 Under 18 18-30 31-40
 41-50 51-60 Over 60

The gender I identify with is... Male

The ethnicity I identify as is: Canadian

The Toronto neighbourhood I live in is... K.G.O.

ResilientTO:
Toronto's Resilience Strategy

About me



My #ResilientStory

Understanding how Torontonians experience resilience is an important step towards creating a Resilience Strategy that improves everyone's quality of life. What kinds of shocks and stresses do you experience, or have experienced in your everyday life? What about your community? What resources, assets, or networks do you have or to help you cope with these challenges? What can the City do to better support you?

MY COMMUNITY IS VERY HELPFUL BUT OF POVERTY PROBLEM. SENIORS ARE ALONE NO FOOD WITH THEM. NO P.M.T. NO P.M.T.

I am...
 Under 18 18-30 31-40
 41-50 51-60 Over 60

The gender I identify with is... Female

The ethnicity I identify as is: Home maker

ResilientTO:
Toronto's Resilience Strategy