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# Toronto's Resilience Strategy

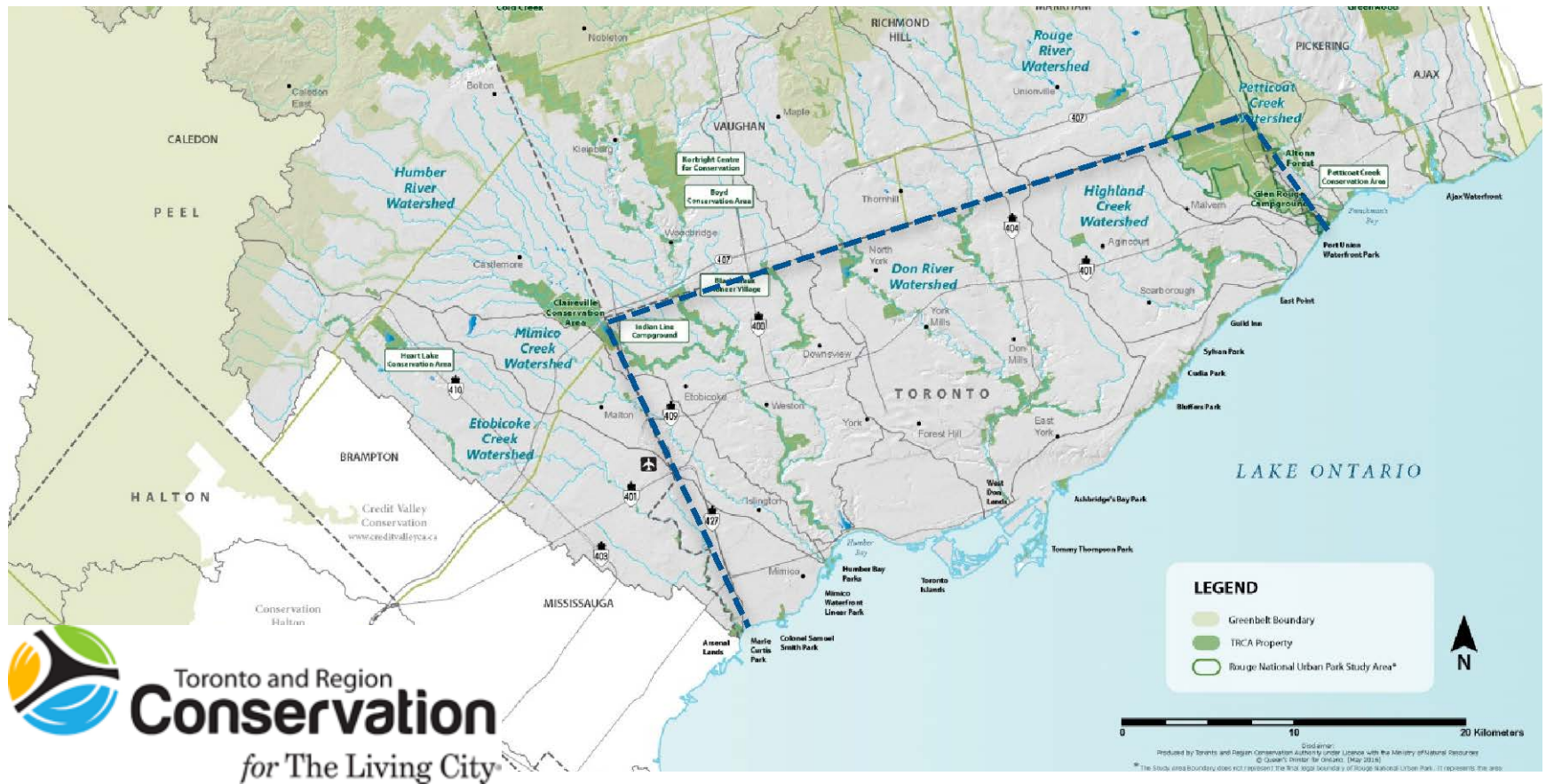
Preliminary Resilience Assessment

September 2017

# Introduction



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“It’s something we know inherently, something we never question. Nature and people are interconnected – the health of one directly impacting the health of the other”

# Introduction



1946

Conservation  
Authorities created by  
Ontario

1951

CA's propose a flood  
protection measures  
(which are rejected)

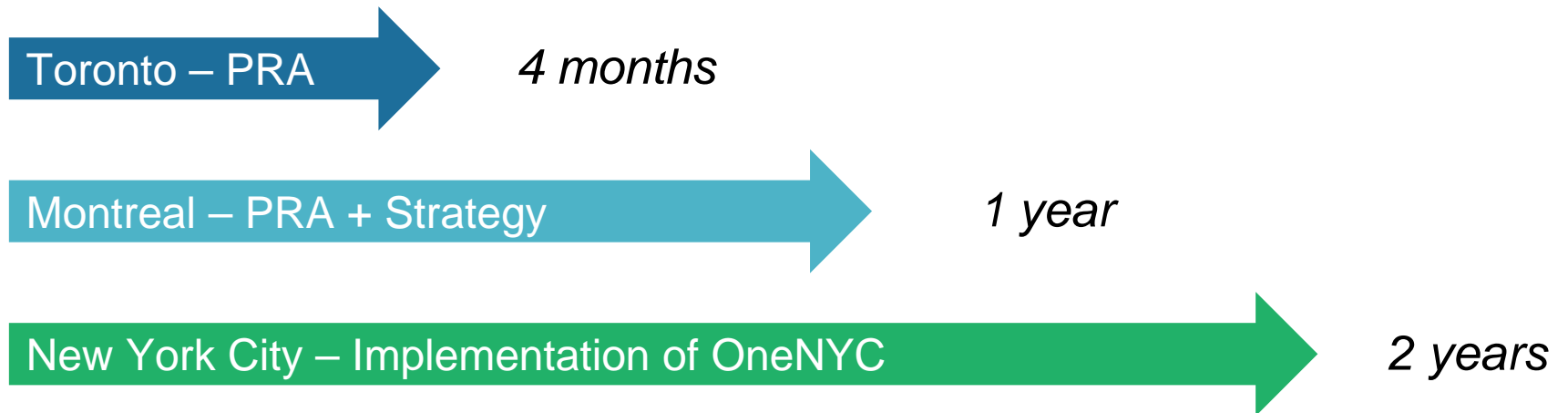
1954

Hurricane Hazel

1957

CA's amalgamated to  
a regional body  
(TRCA) with new  
powers

# Context



# Consultation to date

PRA work to date includes consultation with:

- **300+** individuals
- **100+** one to one interviews in Toronto
- All 3 clusters of City of Toronto, and 30+ City divisions additionally
- Focus groups including with businesses, industry associations, philanthropic sector
- Ontario municipalities, Province of Ontario, and federal counterparts
- Monthly+ meetings with Canadian 100RC cities – Calgary, Montreal, Vancouver
- 50+ cities, associates, and partners in the 100RC network

# Jurisdictional Scan

Top Table

Top Contenders

Other World  
Cities

London  
New York City  
Paris  
Singapore  
Tokyo  
Hong Kong  
Seoul

**Los Angeles**  
**Shanghai**  
**Beijing**  
**Amsterdam**  
**Chicago**  
**San Francisco**  
**Toronto**  
**Madrid**  
**Sydney**  
**Washington DC**

Montreal  
Vancouver  
Tel Aviv  
Buenos Aires  
Melbourne  
Berlin  
Stockholm  
Boston  
Milan  
Others...

# Jurisdictional Scan

	<b>Toronto's Rank</b> (among the contenders)	Source
Economy and Labour Attractiveness	<b>1</b>	2015 Scorecard
Cost of Living Adjustment	<b>1</b>	2015 Mercer
Health Index	<b>2</b>	2017 Numbeo
Macro-Political Stability	<b>1</b>	2016 World Bank
City Risk Index	<b>1</b>	2017 Lloyd's
<b>Quality of Life</b>	<b>1</b>	2017 Economist EIU

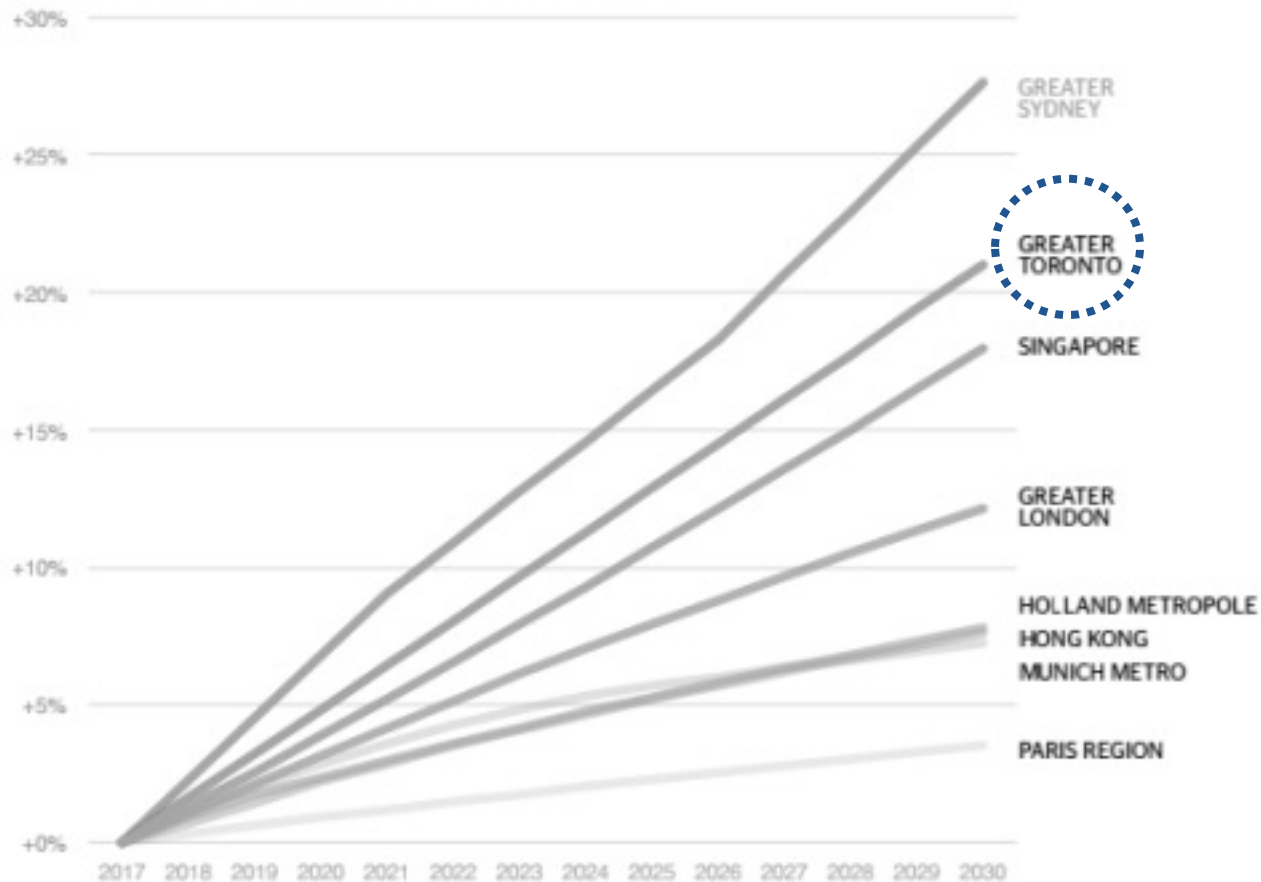


But...

...Toronto is changing

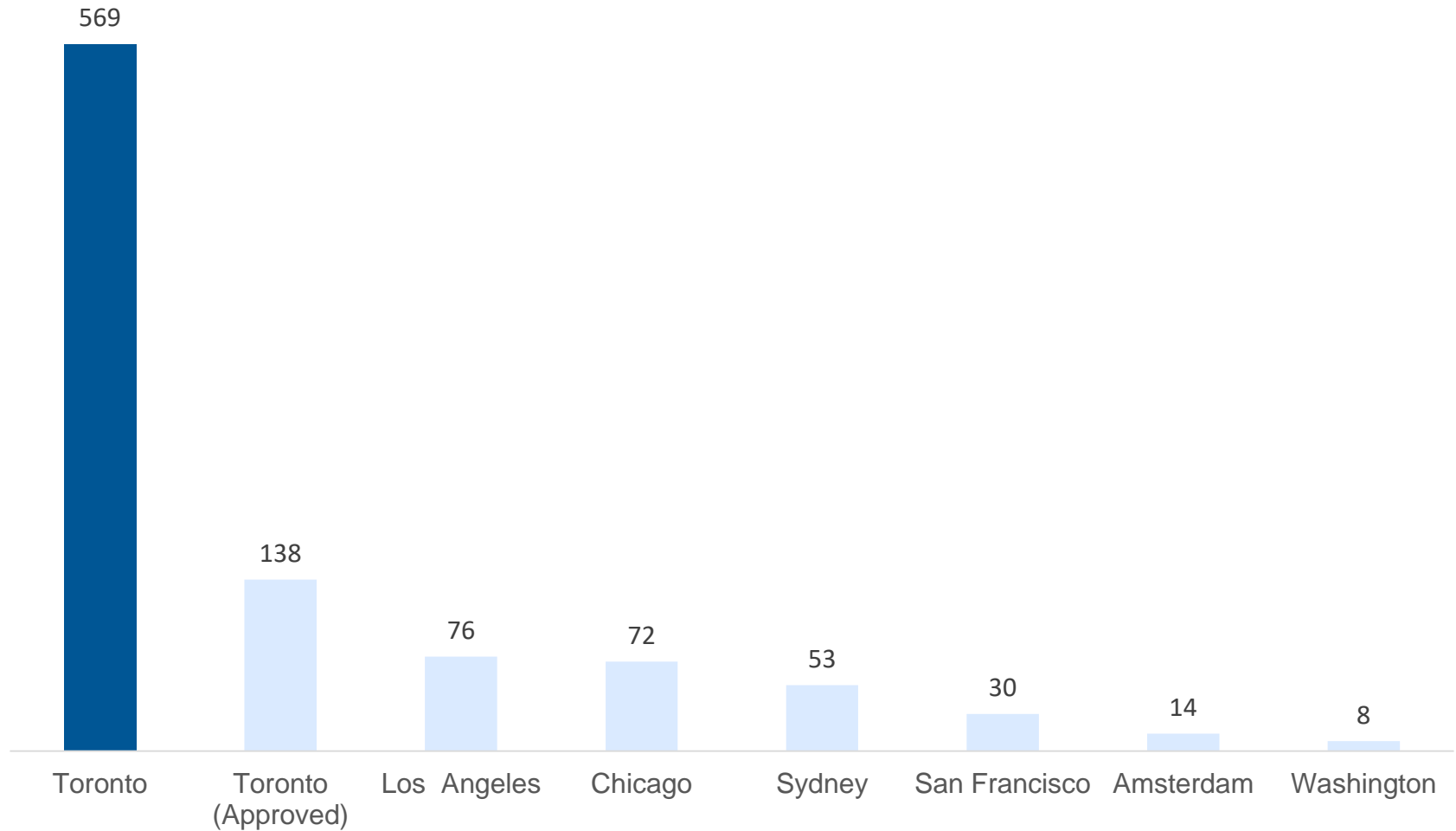
# Population Growth

Forecast Population Growth (%) 2017-2030  
(Top Table and Contenders)



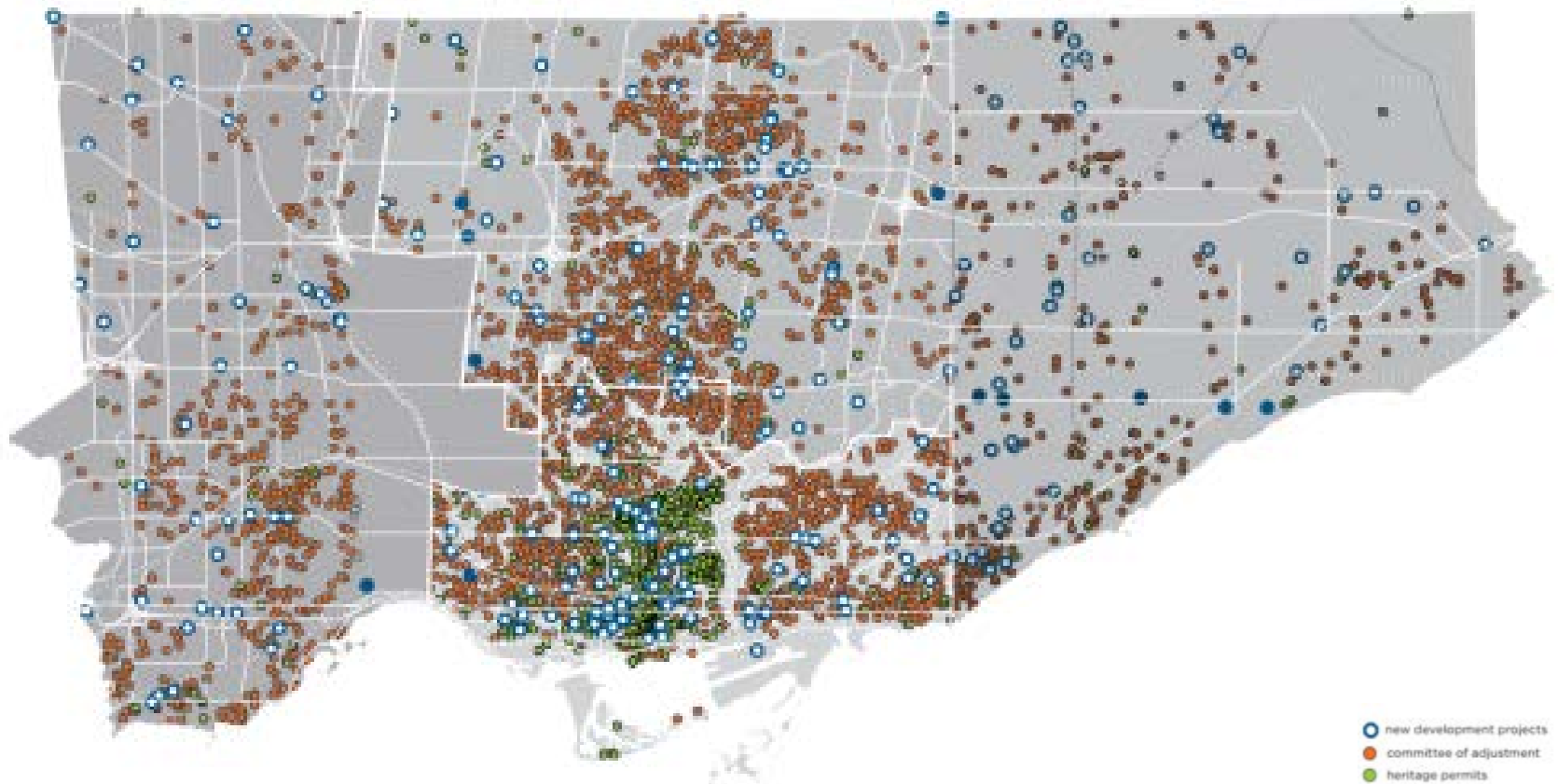
# Built Environment

## Highrise Buildings Proposed or Under Construction\*



# Densification

New Projects, Committee of Adjustment, Heritage Permits  
in Toronto, 2016



# Climate is Changing



**DAILY  
TEMPERATURE  
MAXIMUM**

44°  
celsius

2040-50

37°

2000-09



**HOT DAYS**

66  
above 30°

2040-50

20

2000-09



**EXTENDED  
HEAT WAVES**

2.5  
per year

2040-50

0.6

2000-09



**DAILY  
RAINFALL  
MAXIMUM**

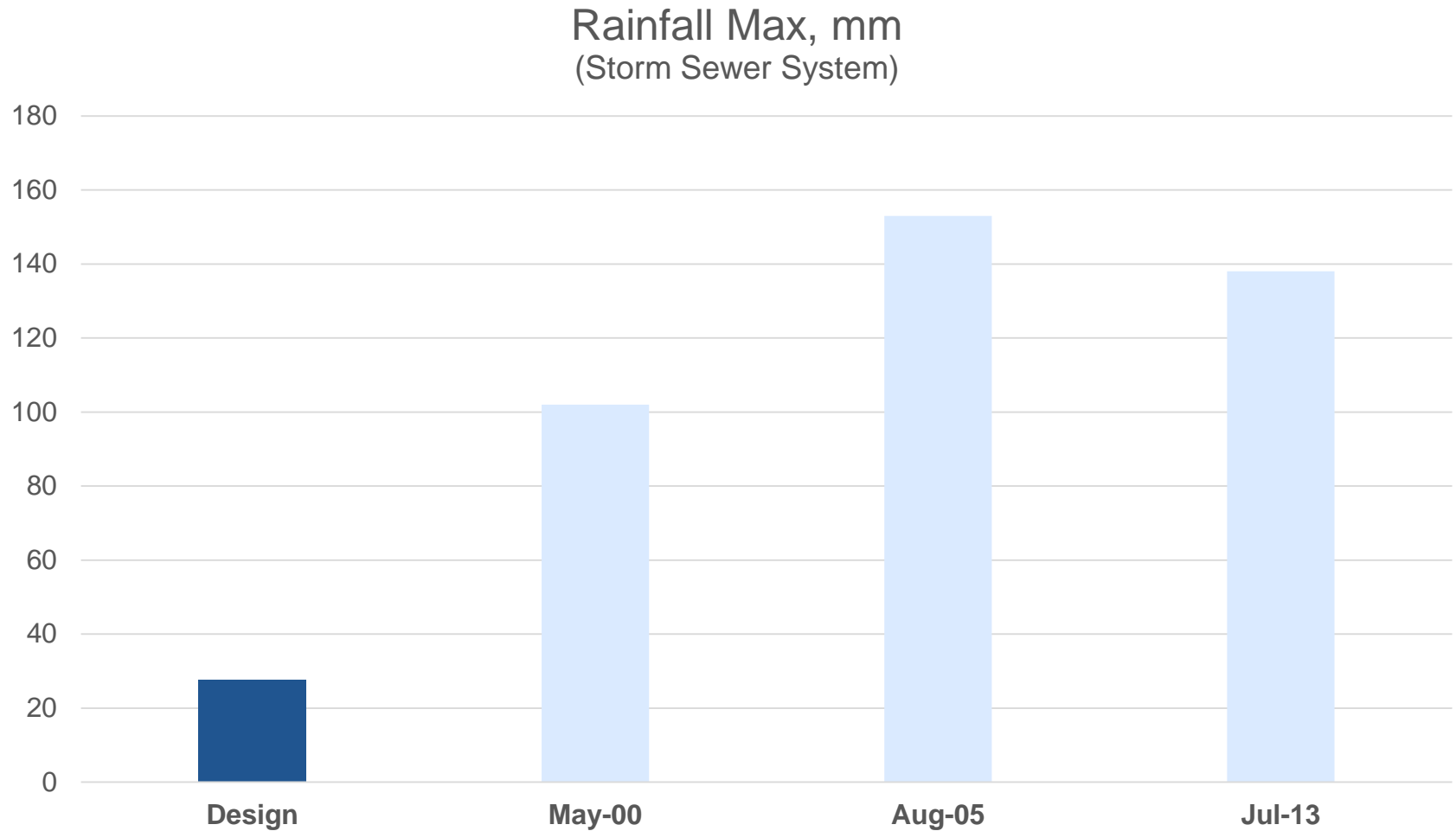
166  
millimetres

2040-50

66

2000-09

# Climate Change and Urbanisation



# Urbanisation and Hurricane Harvey

- Harvey was the **third 1/500 year** storm in 30 years.
- Houston's engineered flood defenses are meant to protect for a 100-year flood.
- Flood maps are not kept up to date.
- Sampling of building/zoning permits found more than half were not in compliance.
- County lost 30% of its freshwater wetlands in the past 20 years.



# Harvey's Impact on Vulnerable Groups



- Poorer or disabled residents may not have had the resources or the capability to follow evacuation advice.
- Many undocumented immigrants stayed behind because Border Patrol refused to suspend its checkpoints during the storm.

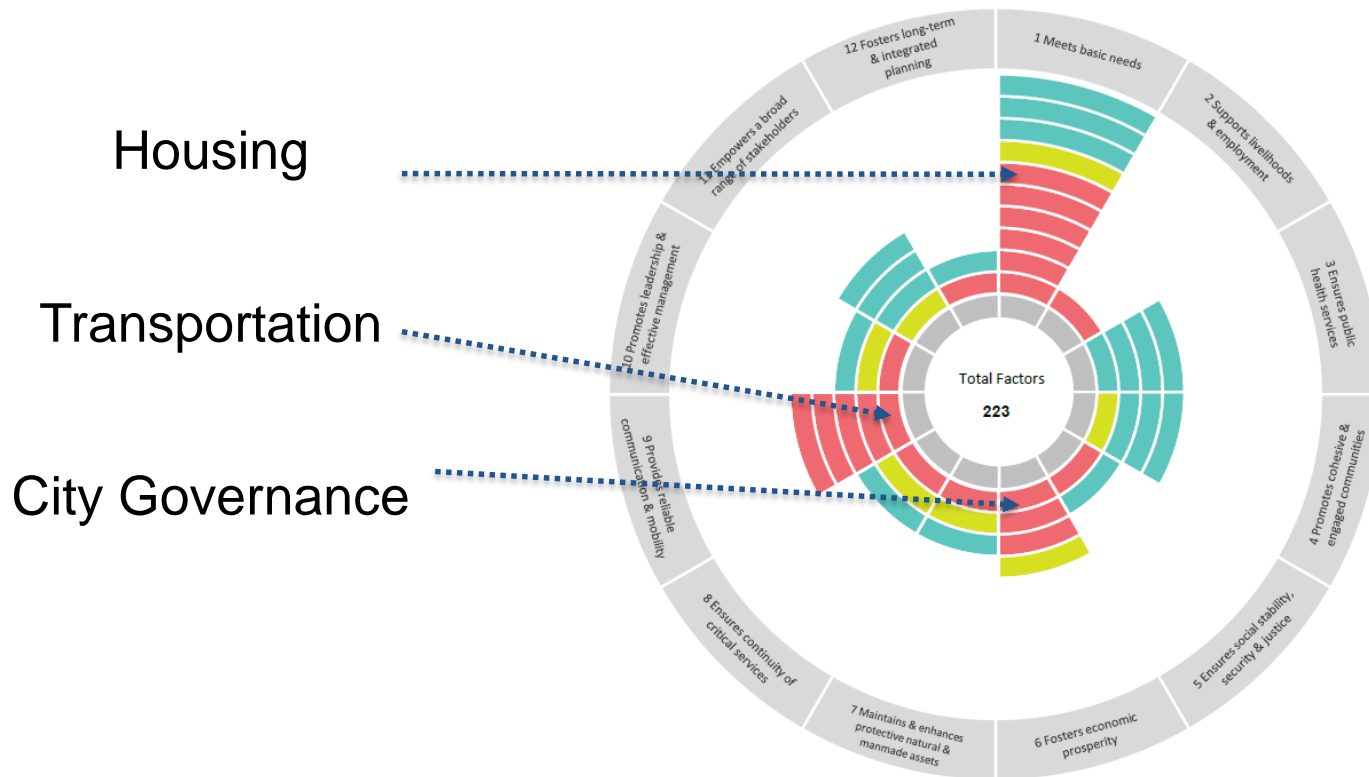


# Risk Assessment

- Through Provincially mandated risk assessment process, the City has identified major threats – which include:
  - **Cyber** Failure or Attack
  - **CBRNE** Failure or Attack
- Risks associated with **energy supply** ranked highest; compounded by fuel switching and climate change mitigation.
- Other possible risks identified through this process include:
  - Our globalised **food** system
  - Potential for increase in **migration**

# Torontonian's Perceived Stresses

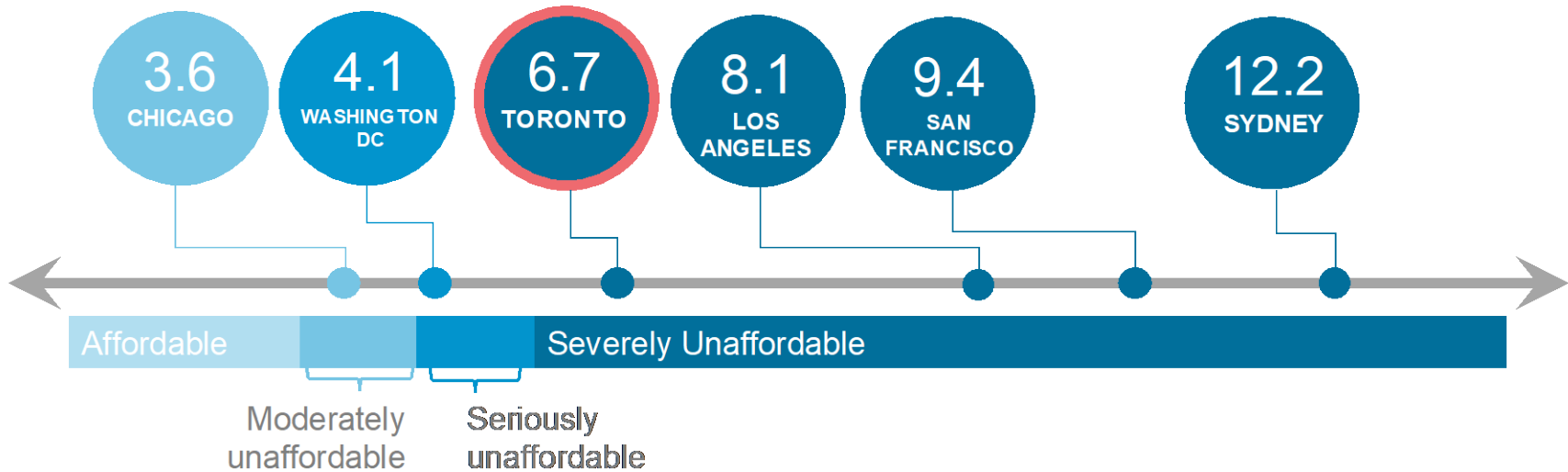
## Perceptions Assessment



### LEGEND

- Need to do better
- Doing well, but can improve
- Area of strength

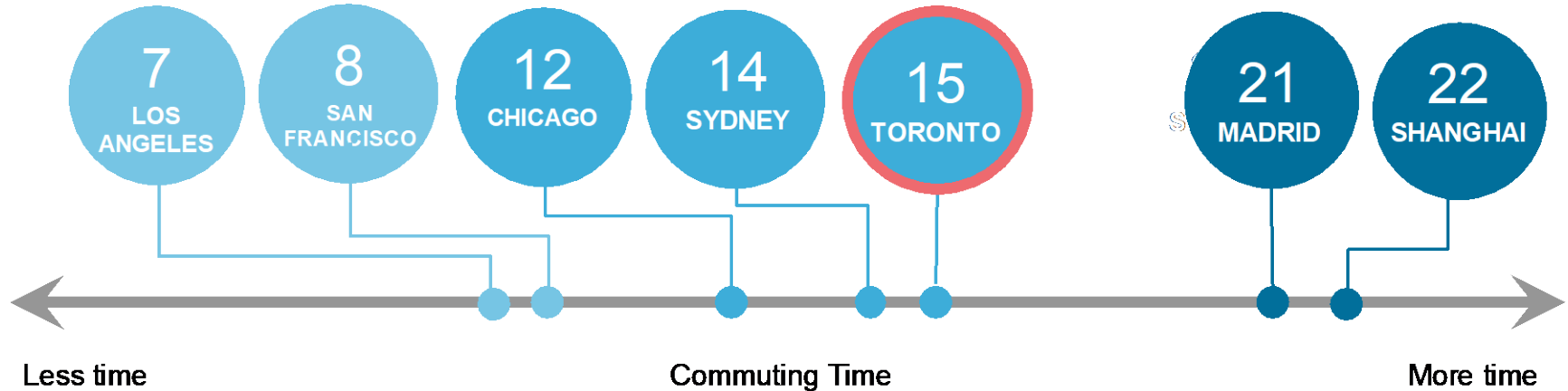
# Housing Affordability



Most of our peer cities are experiencing a similar decline in housing affordability.

Stakeholders rated housing affordability as a top stress; but most of that data was collected before August.

# Congestion



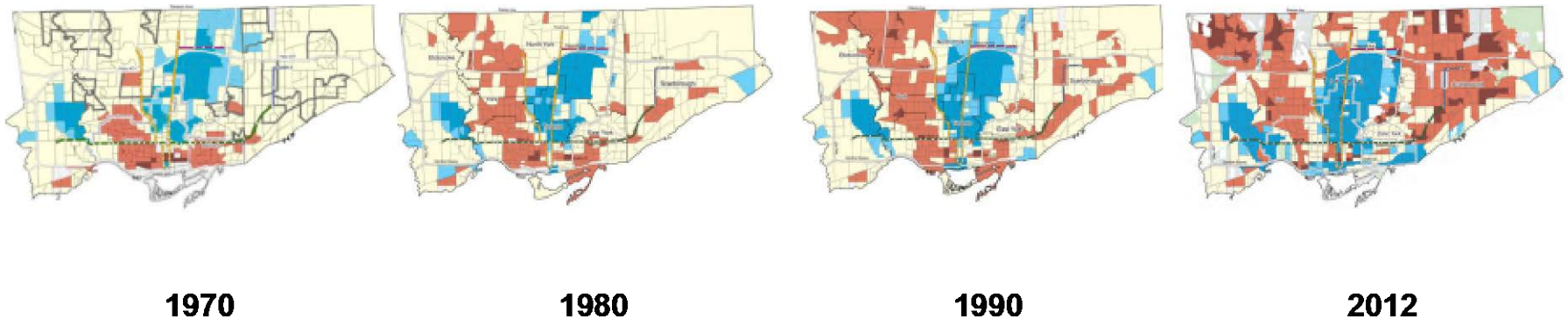
Stakeholders consistently ranked transportation and congestion as one of the top stresses in Toronto.

Congestion has become a fact of life in Toronto, and it is threatening our prosperity and our quality of life.

# Equity

## Income by Census Tract in Toronto

(low, middle, high)



Congestion and housing affordability are together fueling a long term trend in inequality in Toronto:

*“[Equity] trends could be slowed or reversed by public policies that ... expand access to services in neighbourhoods where the need is greatest, and by **renewing the aging high-rise neighbourhoods.**”*

# Selected Stakeholder Perceptions

“Toronto is a *Strategy Production Factory*”

“We have lots of strategies... but how many are funded? 10%?”

“It will take a near miss – or a disaster – for us to fund something proactive”

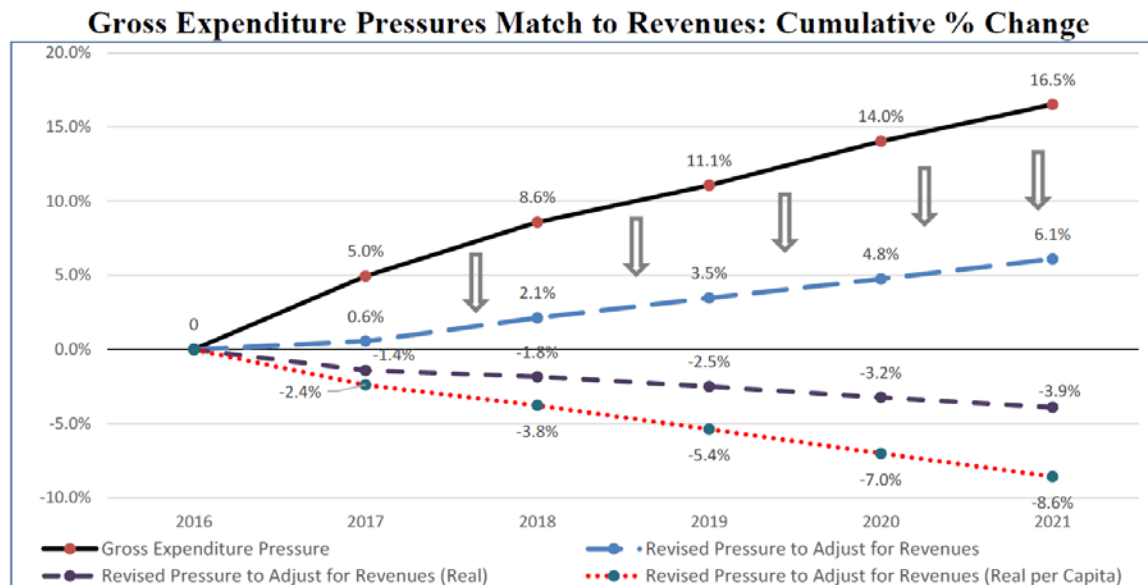
“We would like to innovate and to try new things, but that requires taking resources off of the front lines”

“It is imperative you *actually do* something”

# City Budget

“Given the limited funding for City services, there is no additional financial capacity to fund any new capital works in 2017...

...While the City has faced budget challenges in the past, mitigating measures which helped balance the budget previously are either not expected to reoccur [or] are longer feasible”



*Mention October 26<sup>th</sup> annual Municipal Finance Event at IMFG with City Manager*

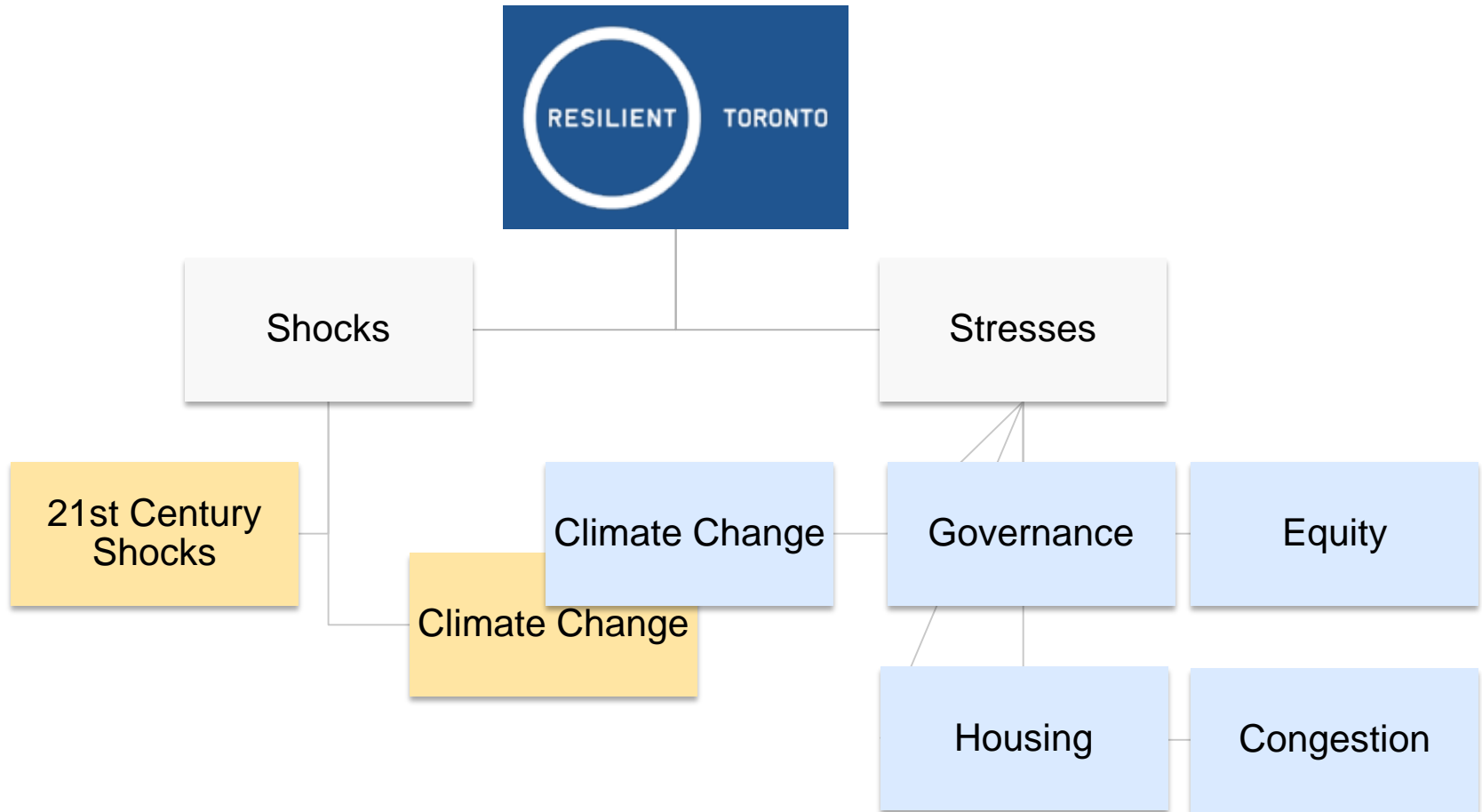
# Toronto's MFG

- Corporation was created in 1998 as an amalgamation of six municipalities
- **“Too big, yet still too small?”**
- “[Toronto] has fewer tax options than the other cities”
- “Regional issues need regional solutions that go beyond Toronto’s boundaries”
- “It is clear from this analysis that much more can be done to reduce [Toronto’s] exposure to flood risk ”





# Toronto's Resilience Challenge



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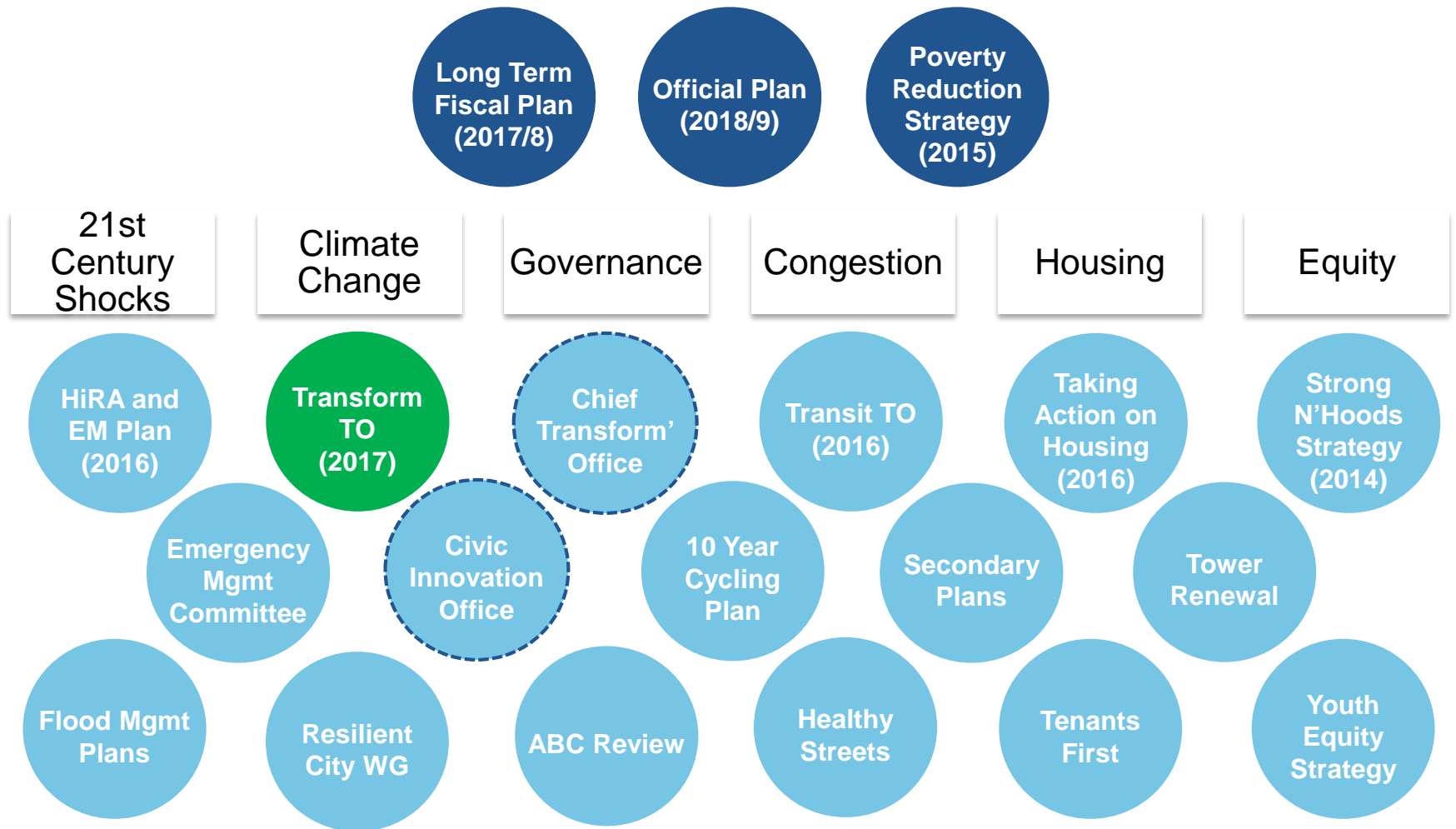
In the context of a rapidly urbanising city, a changing climate, and a connected global economy, how do we enable **inclusive, climate resilient growth**

# The Art of the Possible

Narrowing down is an act of balancing aspiration with:

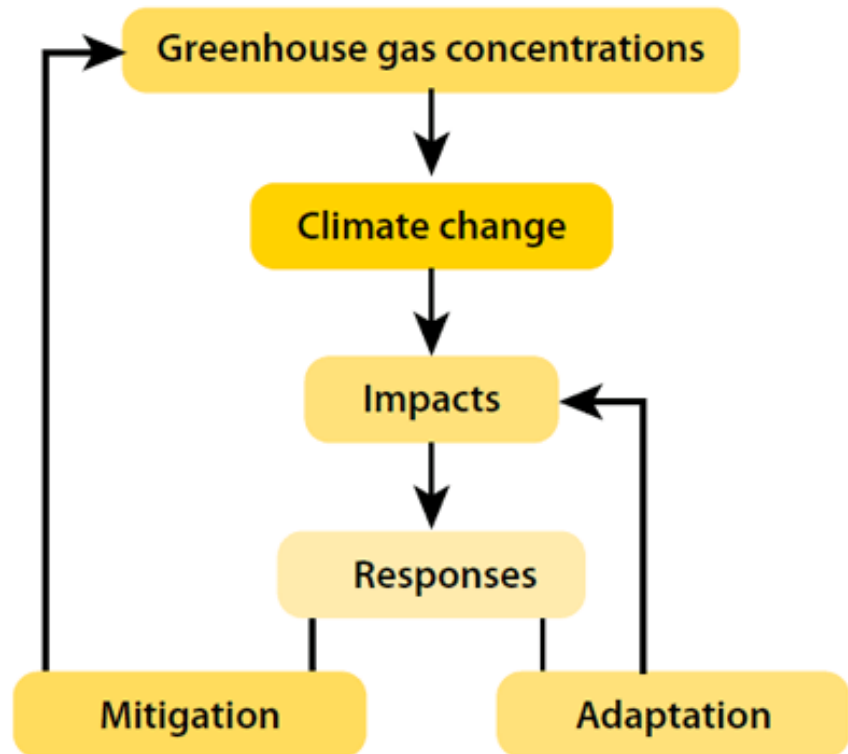
- Timelines
- Resources
- Governance
- Gaps

# Actions Inventory



# Transform TO

- Transform TO is Toronto's climate change mitigation plan
- There are several co-benefits for adaptation, such as:
  - Active transportation
  - Climate finance
  - Neighbourhoods work
- Any resilience work needs to draw from and mesh with TransformTO
- As compared to our peers, Toronto does not have an up to date adaptation plan



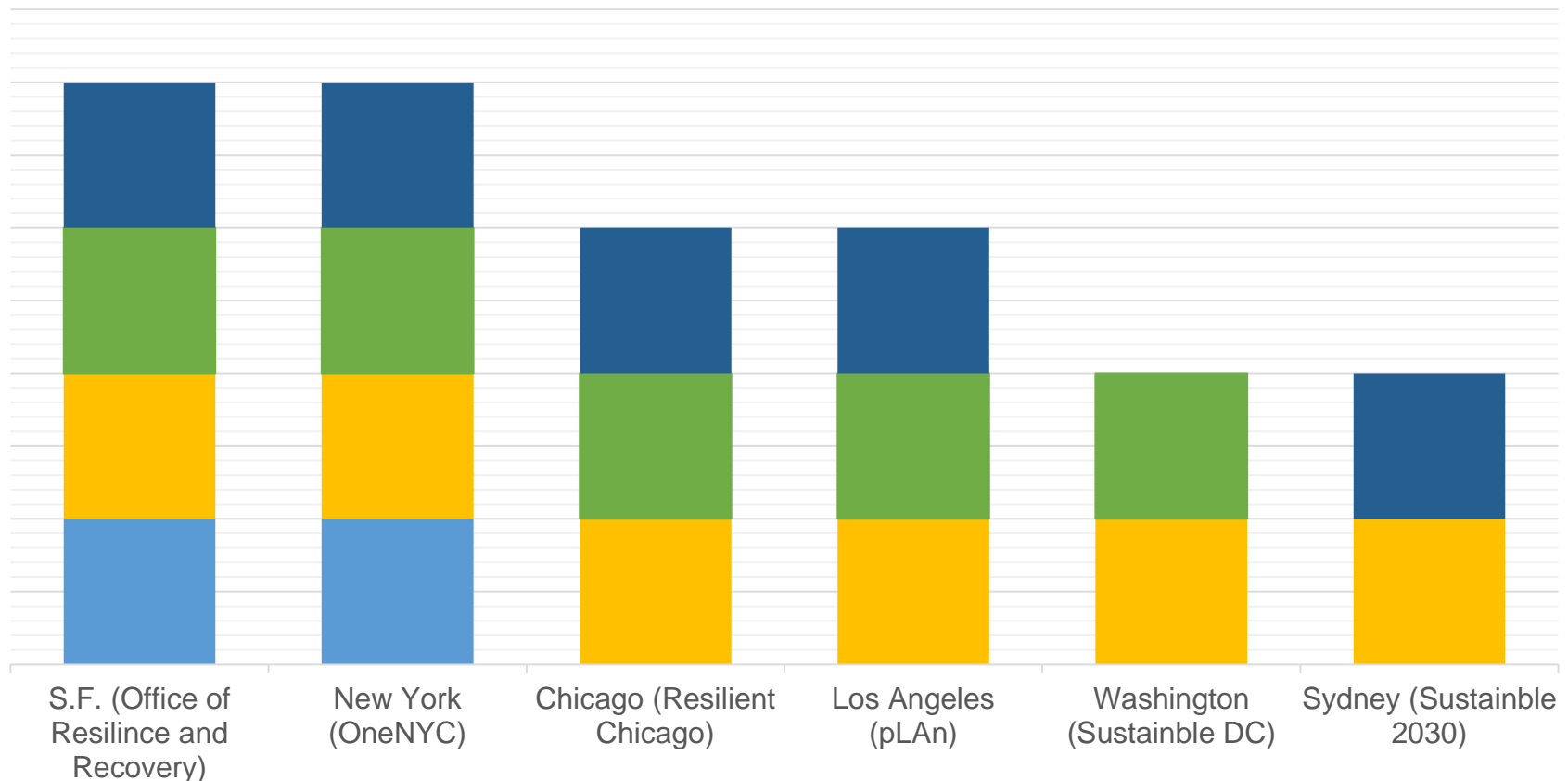
# Adaptation Building Blocks

■ Neighbourhood Level Adaptation Planning

■ Mainstreaming Adaptation through City Government

■ City Adaptation Plan

■ Recovery Planning



# Mainstreaming Adaptation

## Planning

Structuring our **land use plans** to proactively reduce climate vulnerability; ensuring **redundancy** in transportation systems

## Design

Taking climate projections into account in our capital projects **environmental assessments**

## Financial Closure

Leveraging **adaptation finance** such as from other orders of government

## Procurement

Taking climate adaptation into account for **materials** and **construction**

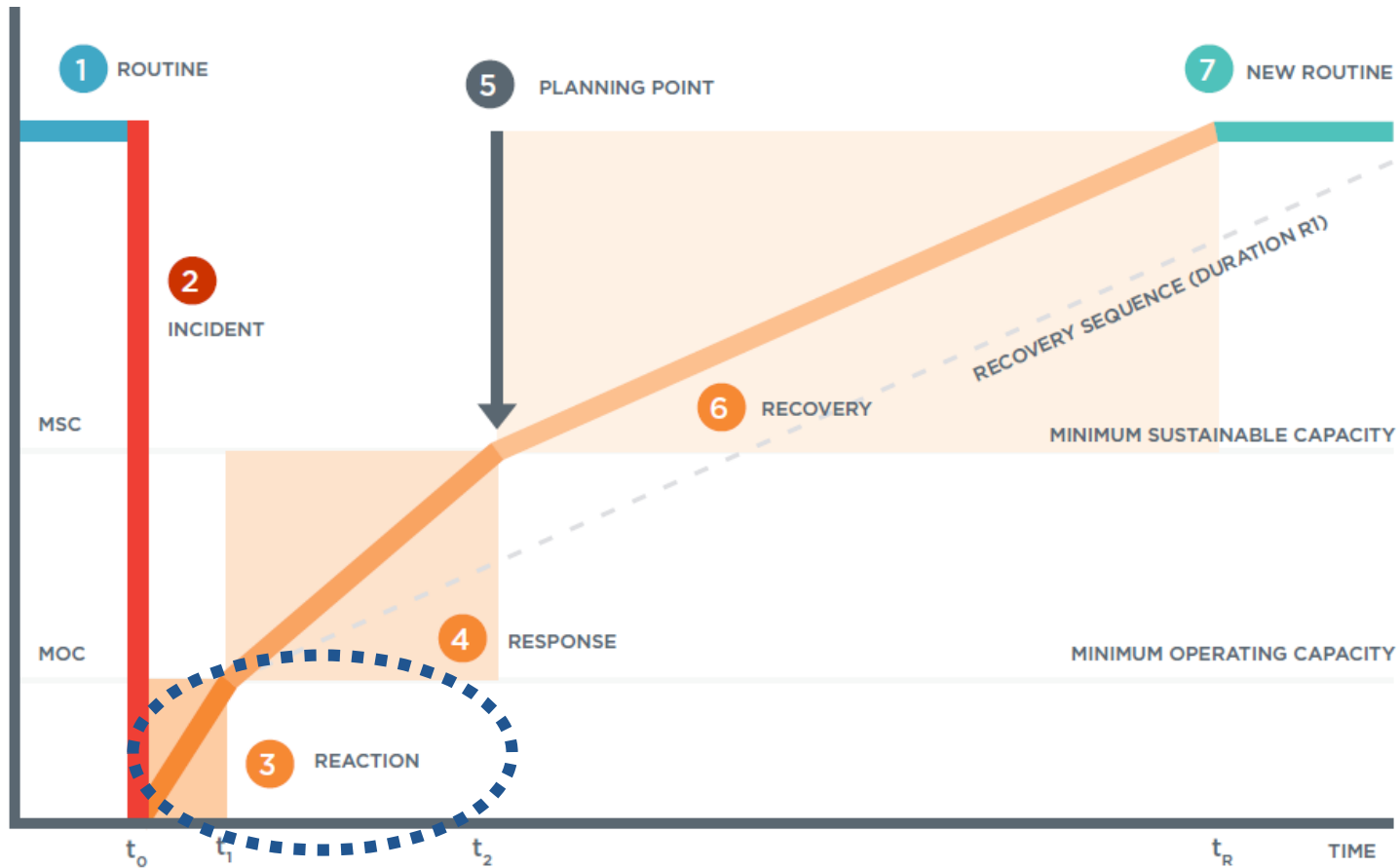
## Delivery

Planning for **extreme climate events** such as floods or heatwaves

## Evaluation

Integrating new **technology** and **lessons** on climate adaptation

# Neighbourhood Resilience



Neighbourhoods and business are our first line of defense

Vulnerable neighbourhoods do worse after shocks, recover more slowly

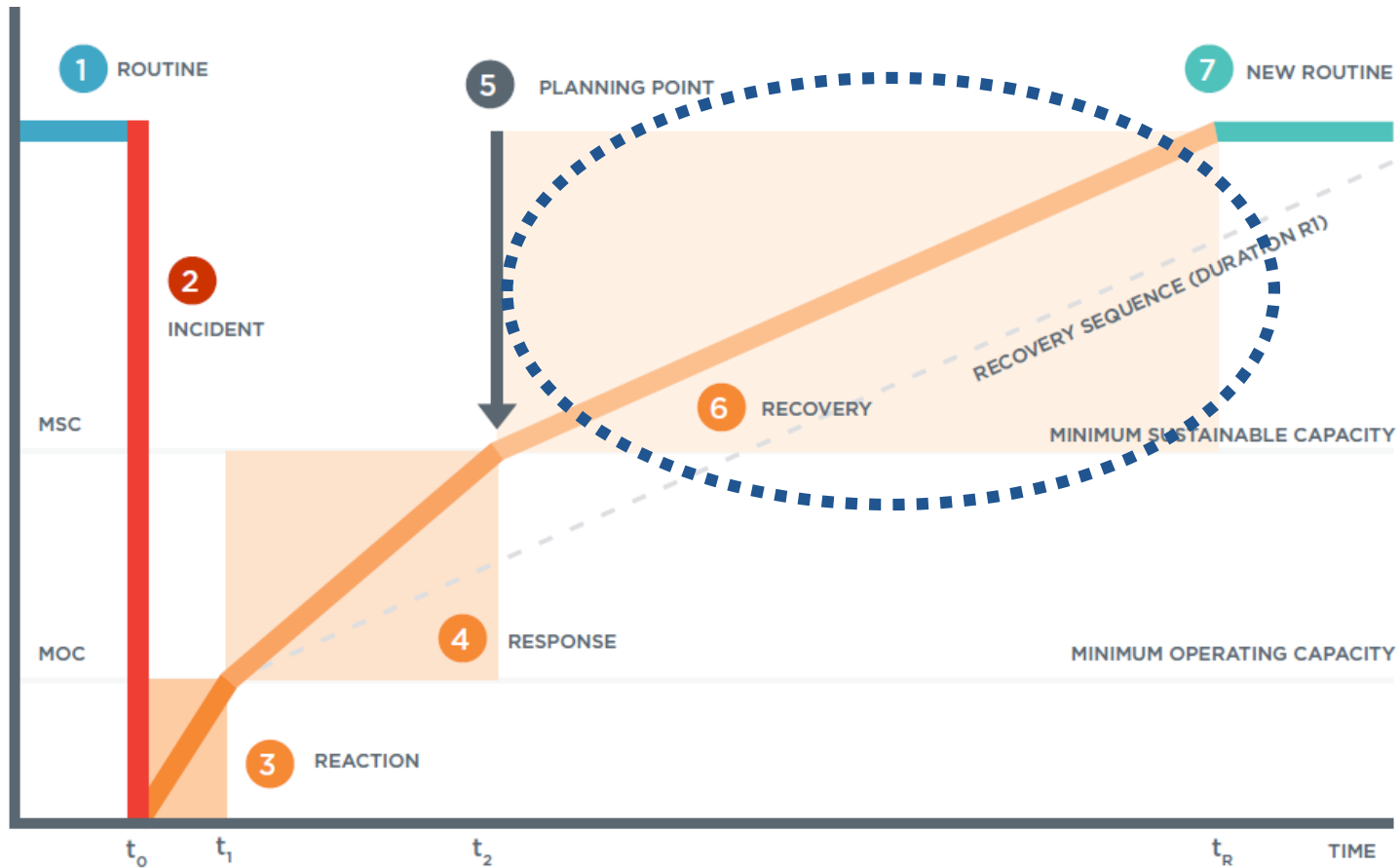


# Tower Renewal & RAC Zoning

- Tower Renewal focuses on environmental, economic, social change for the 1200 towers built before 1985.
- Prior to July 2017, those towers were zoned as residential only.
- The new **Residential Apartment Commercial (RAC) Zone** allows for a number of small-scale nonresidential uses, such as retail stores, services and community facilities either outdoors or on the ground floor of certain sites.



# Recovery



Toronto Islands and Waterfront Parks provide us with a test bed to apply resilience thinking in the context of recovery

# City Level Resilience Plan

- Resilience requires a whole of government working across the City
- And a whole of governments approach, with our ABCs, neighbours and the Province
- Enables us to apply a 'resilience' lens across the City



# Toronto's Resilience Challenge

In the context of a rapidly urbanising city, a changing climate, and a connected global economy, how do we enable **inclusive, climate resilient growth**

**We want to hear from you!**

**Participate** in the **#ResilientTO** Survey:

<http://cityoftoronto.fluidsurveys.com/s/resilientTO/>

**Connect** with #ResilientTO:

@elcappell and @resilientto

resilientto@toronto.ca

**Upcoming Events:**

Resilient Toronto Series in partnership with the

Canadian Urban Institute

September 26th @InnisHall

**Resilient Toronto Series with the Toronto's Chief Resilience Officer, Elliott Cappell in partnership with the Canadian Urban Institute.**



Part 1 of the series will be held on September 26th (8-10 am)  
at Innis Town Hall. Tickets available at [www.canurb.org](http://www.canurb.org)  
[@resilientto](https://twitter.com/resilientto) [@canurb](https://twitter.com/canurb)



TORONTO

