

From Reactive to Proactive: Modernizing our Approach to Traffic Management, Road Safety and Transportation Data

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Special Projects (Traffic)
City of Mississauga



Why?

Changing Practice to Meet Strategic Objectives



Mississauga's Transportation Master Plan

In Mississauga, everyone and everything will have the freedom to move safely, easily, and efficiently to anywhere at any time

 <p>Safety Freedom from Harm</p>	 <p>Inclusion Freedom from Barriers</p>	 <p>Integration Freedom of Choice</p>
 <p>Connectivity Freedom of Access</p>	 <p>Health Freedom to Flourish</p>	 <p>Resilience Freedom to Evolve</p>

91 Actions

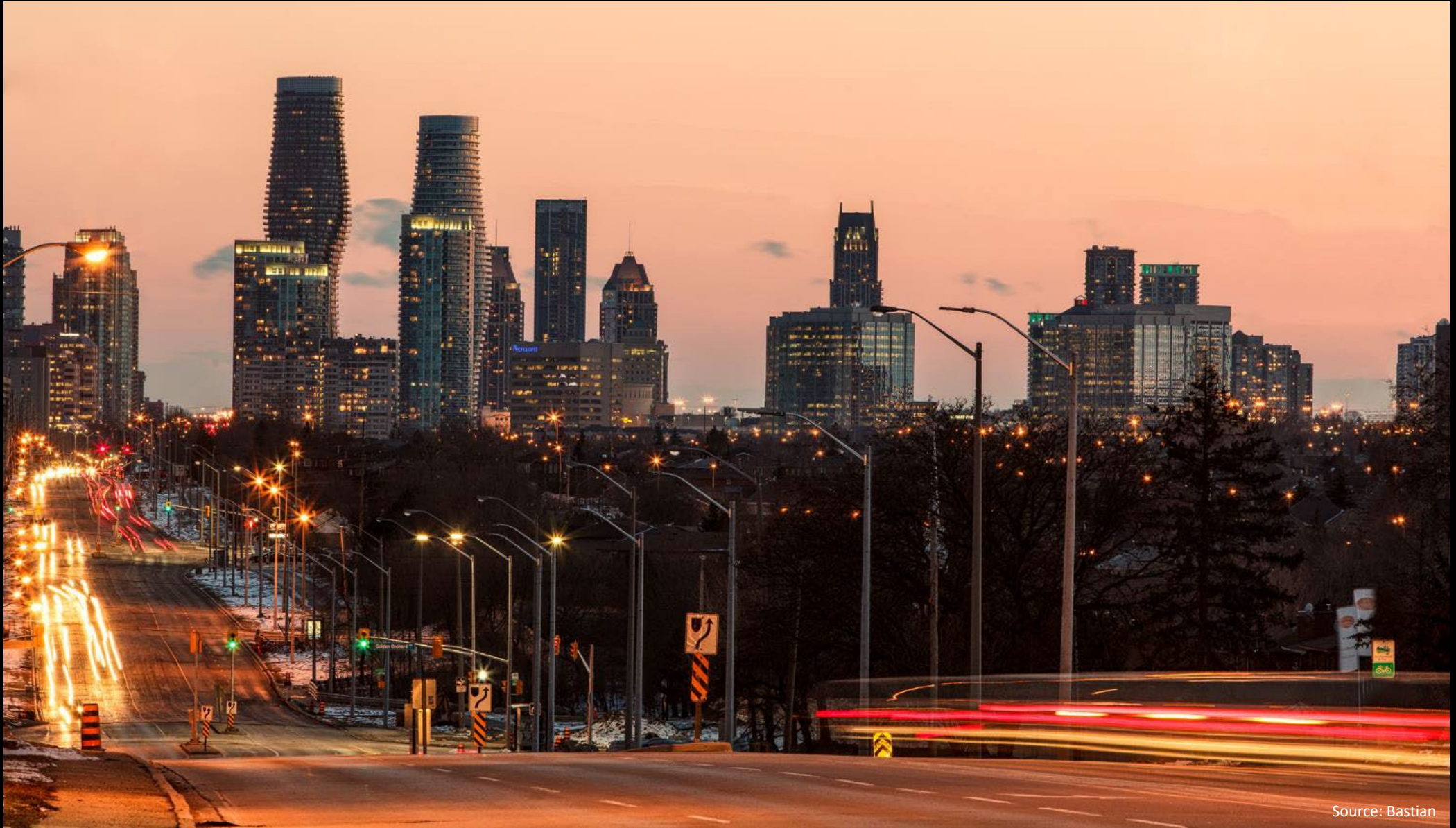
5 Pathways to Implementation

- Policies, guidelines and standards
- Plans and studies
- Programs
- Procedures
- Partnerships

3 Timescales

- Short (1-5 years)
- Medium (6-15 years)
- Long (15+ years)





Source: Bastian



OPEN
Call 905-881-1111

Tire Change

Tomken Road



Tactical Urbanism: Credit Woodlands



Before



After



How?

Understanding Today's Activities to Change Tomorrow



Street Lights

Traffic Signals & Systems

Traffic Operations & Road Safety

Municipal Parking

T&W's Traffic Management and Municipal Parking Division is responsible for operating our City's streets and municipal parking facilities. As we grow and develop, these needs are changing



How do we change today?



Manage our road network for people, not cars:
A traffic management revolution




Make our road network safe for all users
Road safety where it counts



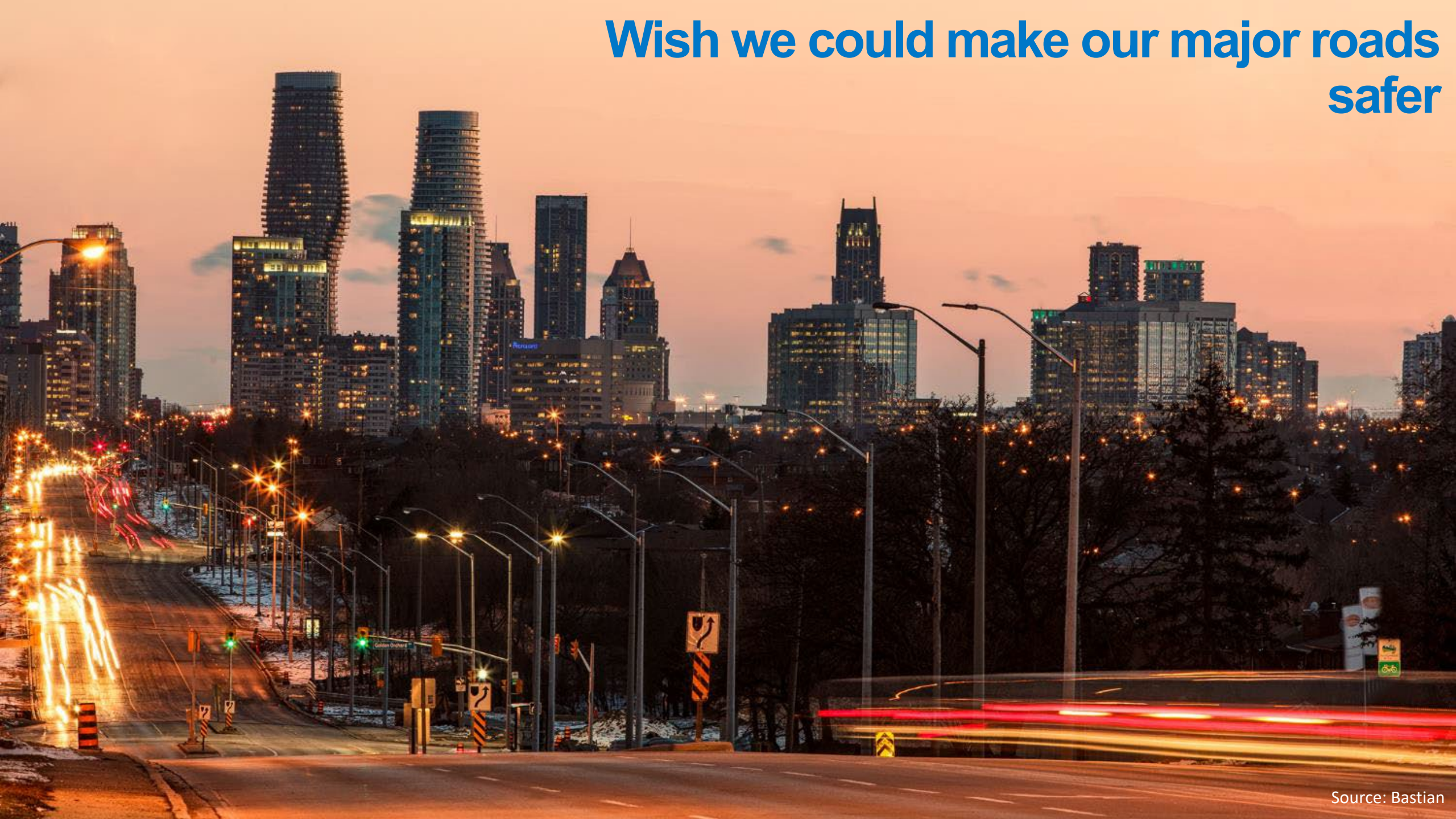
Understand the needs of all road users:
Driving change through data

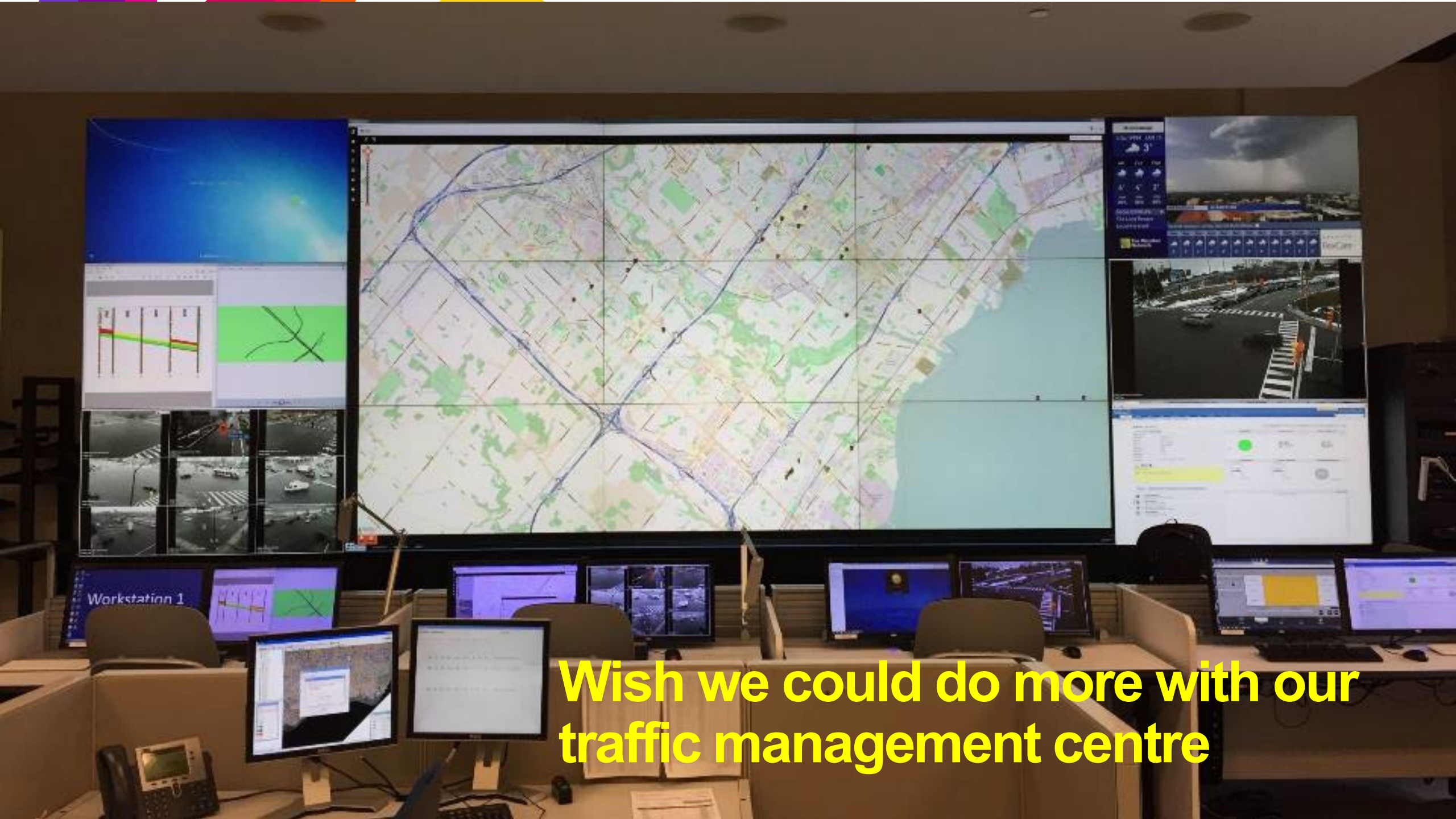


A photograph of a busy intersection with cars and a person holding a traffic counting device. The scene is captured from a low angle on a grassy area. In the foreground, a person's hands are holding a blue and white electronic device labeled 'JAMAR TECHNOLOGIES, INC.' with a small screen and several buttons. The device is positioned to count traffic at the intersection. In the background, a multi-lane road with traffic lights is visible. Several cars, including a dark sedan, a black hatchback, a black pickup truck, and a silver sedan, are driving through the intersection. The surrounding area includes green grass, a brick-paved median, and commercial buildings in the distance under a clear sky.

Wish we could use new sources of data to improve our traffic count program

Wish we could make our major roads safer





Wish we could do more with our traffic management centre

Wish we could more easily share and track collision patterns





Wish we had more people to do this

Follow City PM Process



Project Charter

Purpose

Objectives

Scope

Steering Committees

Working Teams

Risks

Dependencies

Milestones

Stakeholders



Three Strategic Initiatives

Traffic Management Plan



Arterial & Major Collector Road Safety Plan



Transportation Data Plan



What are we doing vs. what we should be doing

- Strategic pressures
- Operational pressures
- Best practice
- Gaps in our service

How do we start doing those things

- Emphasis Areas
- Improvement Tactics
- 5 year roll-out



A Traffic Management Revolution

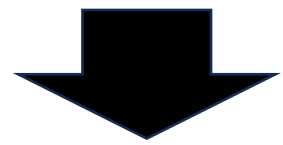


Cycle Length for Ped. LOS D*

105s

Typical Cycle Length in Mississauga

110s-160s



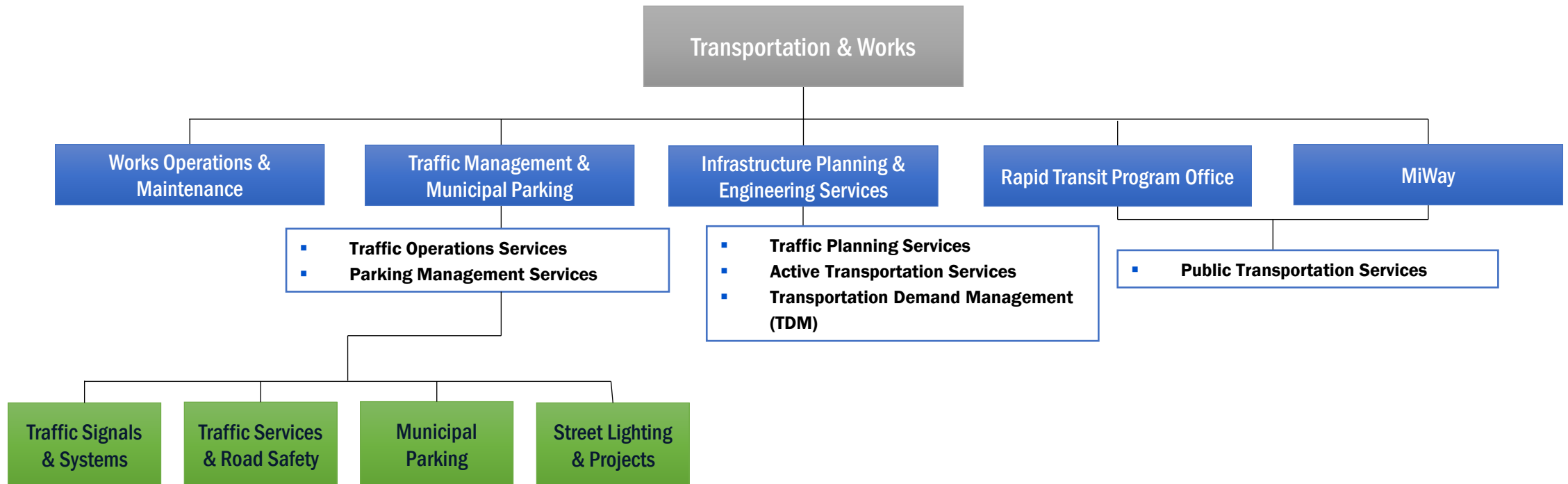
76% of the time, drivers experience free-flow conditions
Most of the time, pedestrians experience inconvenient wait times at intersections

*OTC MMLOS Guidelines



Delivering Traffic Management:

Traffic Management is the process of controlling and regulating the movement of vehicles, pedestrians, cyclists, transit, and other forms of traffic to ensure the safe and efficient operation of transportation infrastructure and systems.



Emphasis Areas



Active
Transportation



Transit Priority



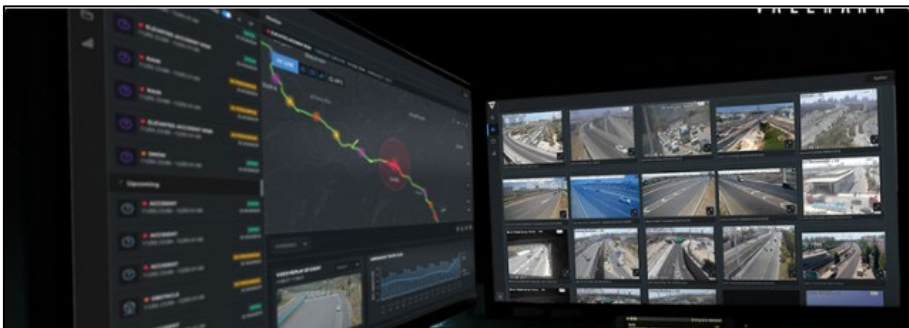
Intersection
Control



Incident Readiness



Manage Work
Zones and Special
Events Proactively



Use our
technology to its
fullest





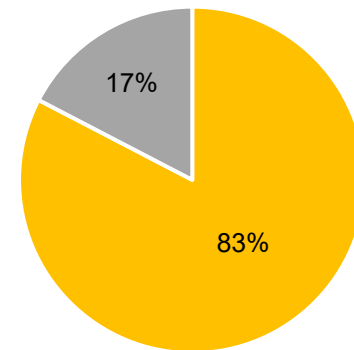
Road safety where it counts

Today: Neighbourhoods



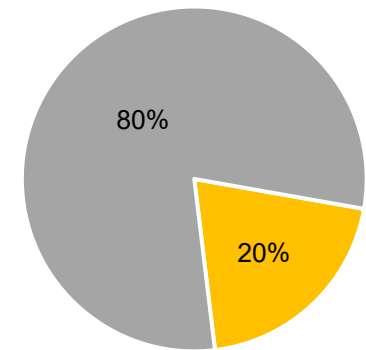
Tomorrow: Higher speed, higher
volume roadways

Where Fatal & Injury Collisions
Occurred on City of Mississauga
Streets, 2015-2019



■ Arterial & Major Collectors
■ Minor Collector & Local

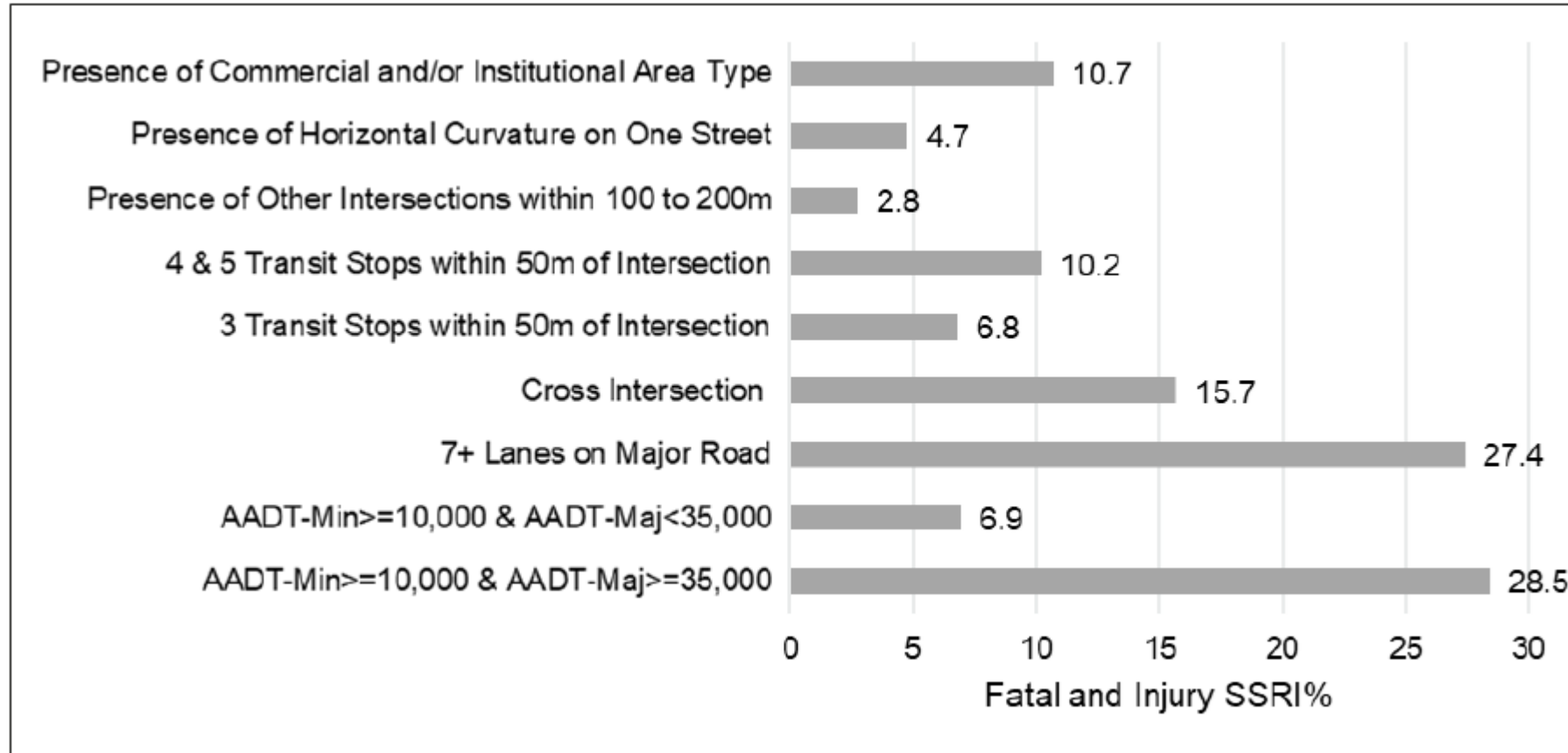
Total length (km) and percentage
of street types, City of
Mississauga streets



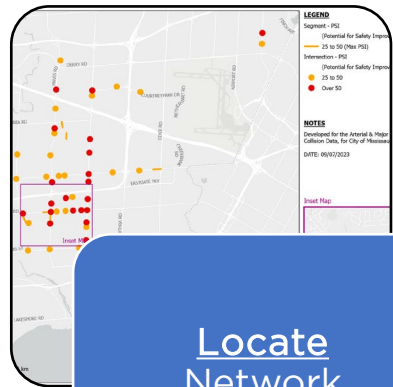
■ Arterial & Major Collectors
■ Minor Collector & Local



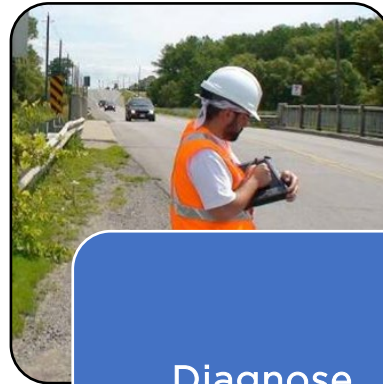
What factors are associated with injuries and fatality collisions?



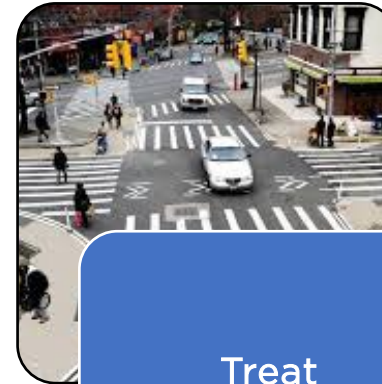
Standing up a data-informed approach:



Locate
Network
Screening &
Systemic Safety
Analysis



Diagnose
In service road
safety reviews



Treat
60+
countermeasures



Evaluate
to assess
countermeasure
effectiveness



Countermeasures

	Engineering	Enforcement	Education /Engagement	Total
Pedestrians	14			14
Cyclists	7			7
Intersections	16	1		17
Speed & Aggressive Driving	8	7	4	19
Distracted Driving	2	1		3
Total	47	9	4	60



E.g.

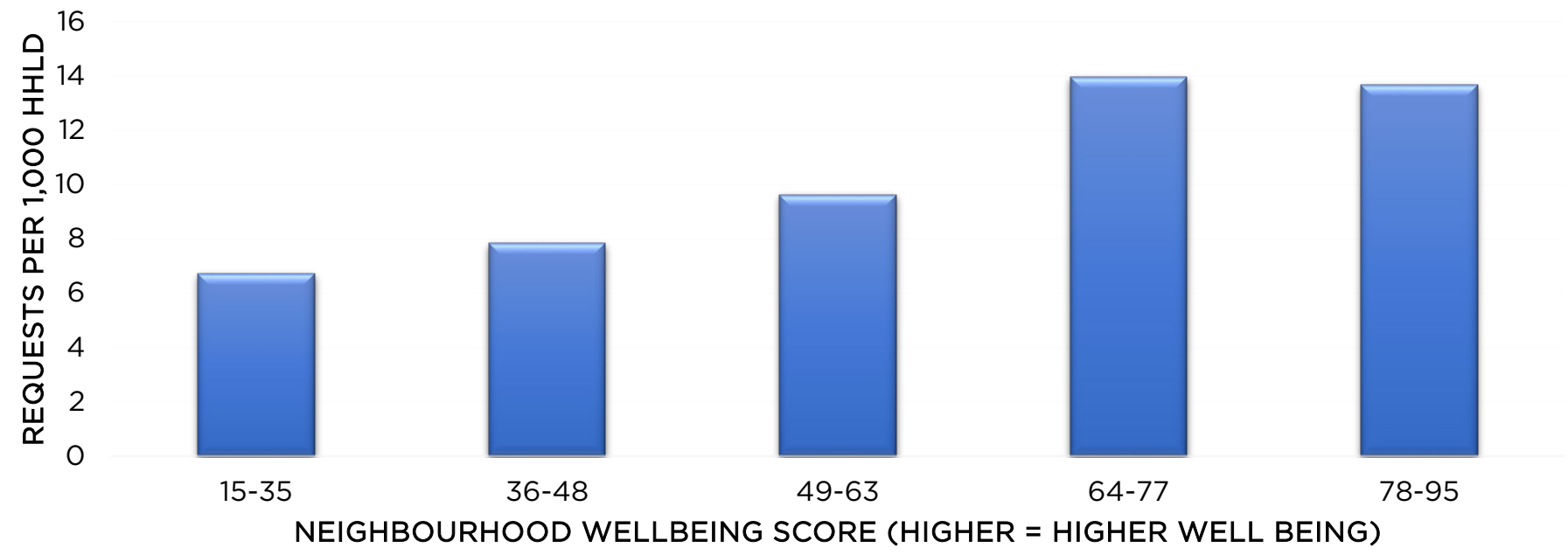
Countermeasure	Emphasis Area	# of Installations by 2028
No Right Turn on Red Restrictions	Collisions involving pedestrians	Top 40 Locations
Left Turn Calming	Intersections	Top 10 Locations
Additional Bicycle Signals	Collisions involving cyclists	Top 46 Locations
Red Light Cameras	Speeding & Aggressive Driving	Top 20 locations
Enhanced Pavement Markings	Distracted Driving	10km of roadway





Driving change through data

T&W 311 Request per 1000 Households



Households in census areas with the highest wellbeing score call or submit 311 requests almost twice as much when compared to areas with the lowest well-being score.



Our Gaps



ACCESS



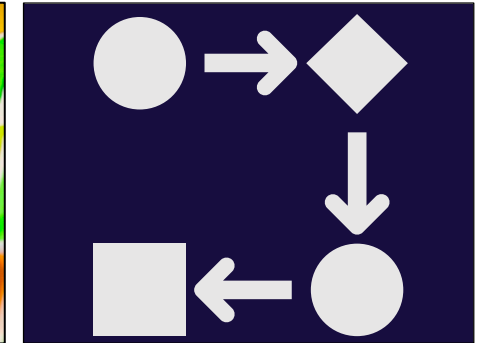
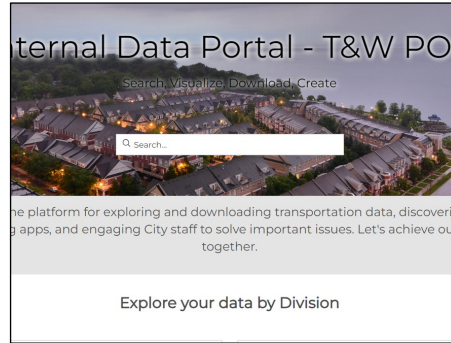
QUALITY



DATA
MANAGEMENT
CAPABILITIES



People First Solutions



Transportation
Data Team

Transportation
Data Portal

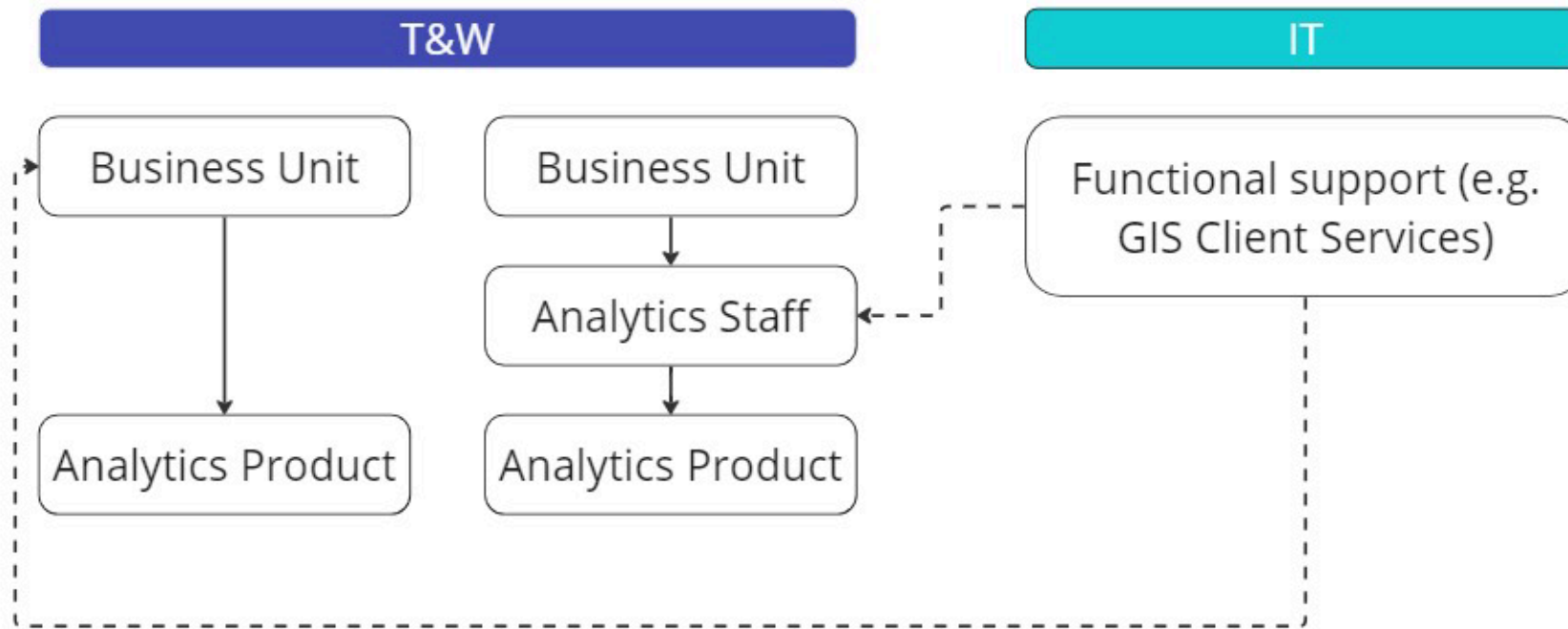
Data Literacy and
Fluency Training

Communications
and Engagement

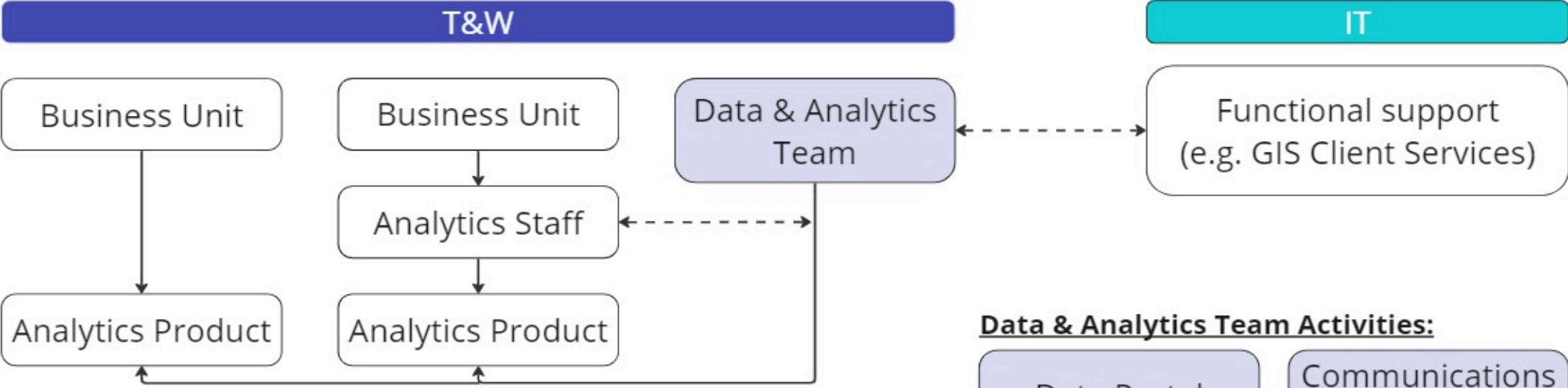
Data Governance



T&W Data & Analytics Today



Recommended T&W Data & Analytics Team



Data & Analytics Team Activities:

- Data Portal
- Communications & Engagement
- Data Literacy Training
- Data Governance



Key Take-Aways

- Infrastructure alone can't create a multi-modal future
- Leadership support is crucial: this is change management
- Doing planning work helps advocate for needs and can expand what staff are comfortable doing
- The hard part is understanding what we're doing today



Questions?

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