

Region of Peel Vision Zero Road Safety Strategic Plan (RSSP)

**2018 CITE Annual Meeting
Edmonton, Canada**

June 2018



- Introduction of the RSSP
- Project Process
 - Vision and Goal
 - Emphasis Areas
 - Awareness Areas
 - Countermeasures
- Key components to a successful RSSP
- Challenges and lessons learned
- Next Steps



Introduction of the RSSP

IMAGINE PEEL

STRATEGIC PLAN
2015–2035

VISION:
Community for life

MISSION:
Working with You
to create a healthy,
safe and connected
community



Living

People's lives are improved in their time of need

In 4 years we will	In 20 years I will have
reduce poverty	affordable housing options
increase stable employment	access to employment opportunities of my choice
increase affordable housing	access to culturally appropriate services
	access to local, nutritious food sources
	a responsibility to contribute to community well-being
	access to services that meet my needs at all stages of life



Thriving

Communities are integrated, safe and complete

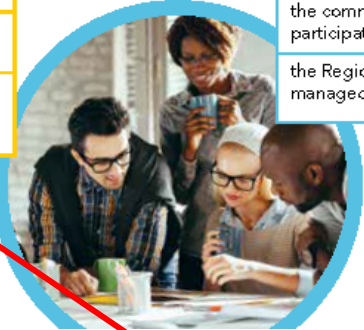
In 4 years we will	In 20 years we live in a
adapt to and mitigate the effects of climate change	community that is environmentally friendly
increase waste diversion	community that promotes mobility, walkability and various modes of transportation
improve goods movement	community that embraces diversity and inclusion
plan and manage growth	community that promotes economic sustainability and future investments in Peel
promote healthy and age-friendly built environments	community where growth is well managed
	community where the built environment promotes healthy living



Leading

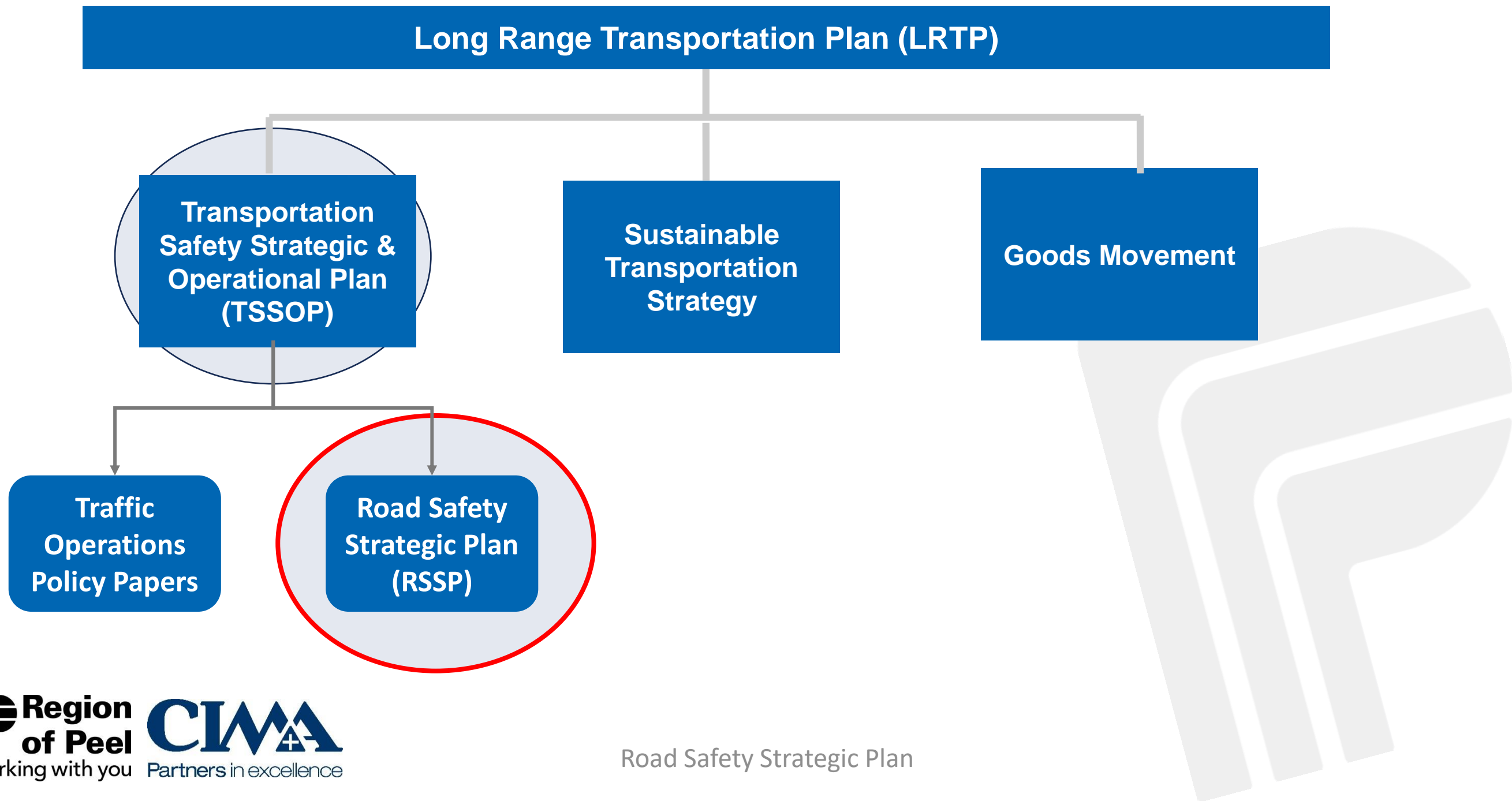
Government is future-oriented and accountable

In 4 years we will	In 20 years I trust that
create a modernized workplace	sustainability and long-term benefits to future generations are considered
attract and retain top talent	the Region of Peel is a model and progressive employer
modernize service delivery	co-ordination and partnerships occur
	a systematic approach to innovation is in place
	the community voice and participation is welcome
	the Region of Peel is a well-managed government



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Introduction of the RSSP

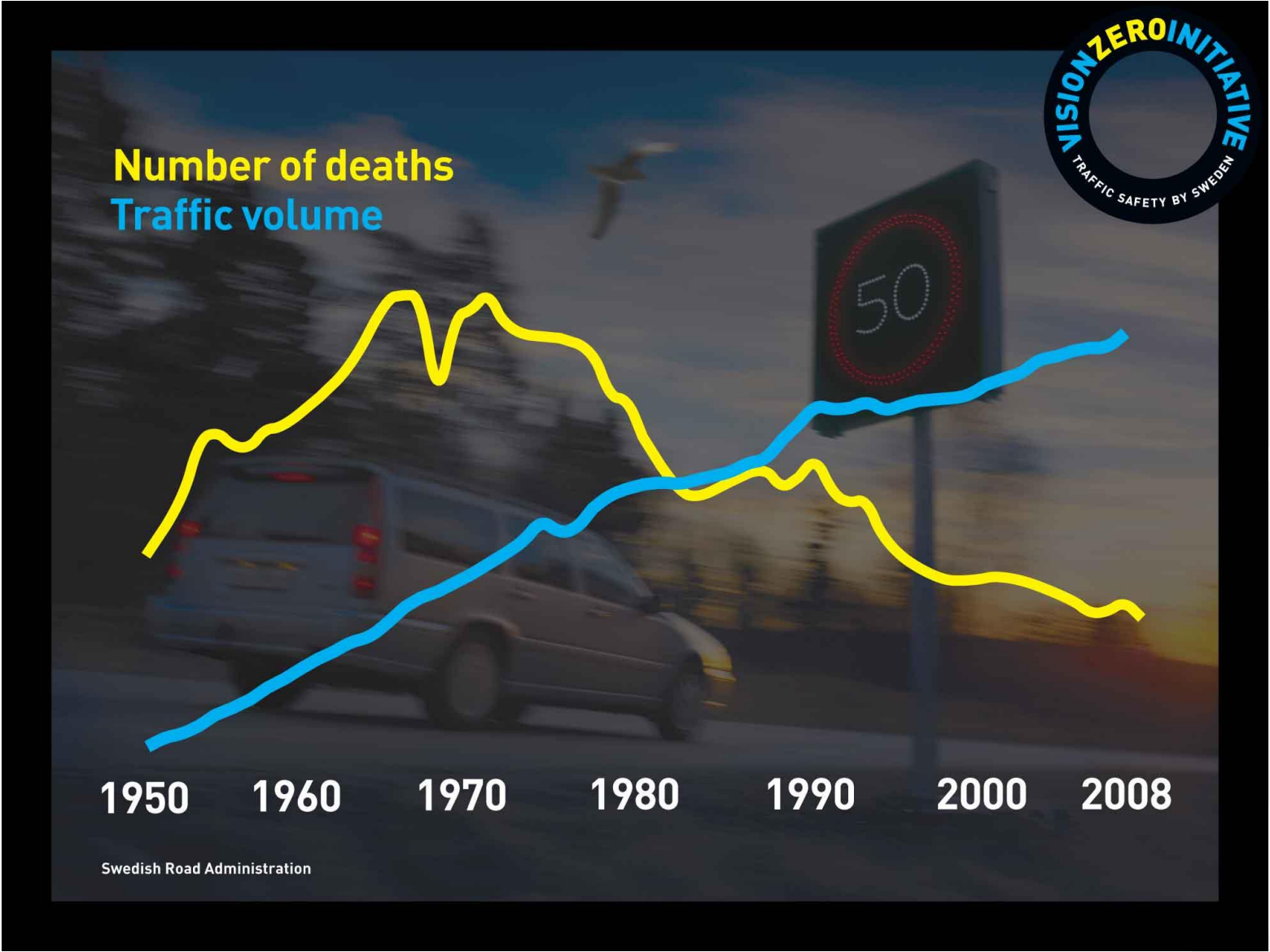


A structured program to improve safety for road users through a data driven effort, incorporating public and stakeholder input, and Regional Council priorities by:

- Identifying and prioritizing emphasis areas,
- Coordinating safety investment,
- Developing an action plan of new or expanded countermeasures, and
- Institutionalizing changes to road safety policy.



Do Road Safety Plans Work?



Coalition Building

- **Road safety is multidisciplinary**
- **A large group of stakeholders contribute to road safety**
- **Stakeholders:**
 - Core group
 - Police, Public Health, Engineering, Municipalities, School Boards
 - Advocates and supporters
 - Pedestrian advocacy groups, cycling groups, MADD, etc.

- **Start the conversation with the core group before initiating the project**
 - Passionate and knowledgeable police and public health are priceless
 - Inclusive engineering department who understands safety is multidisciplinary
- **Important Question: Level of involvement in decision making**

Introduction of the RSSP

Project Stakeholders



Region of Peel



Peel Regional Police



OPP



Town of Caledon



City of Brampton



City of Mississauga



Regional Municipality of York



MTO



Peel Public Health



Mississauga Cycling Advisory Committee



CAA



MADD



Brampton Cycling Advisory Committee



Bike Brampton

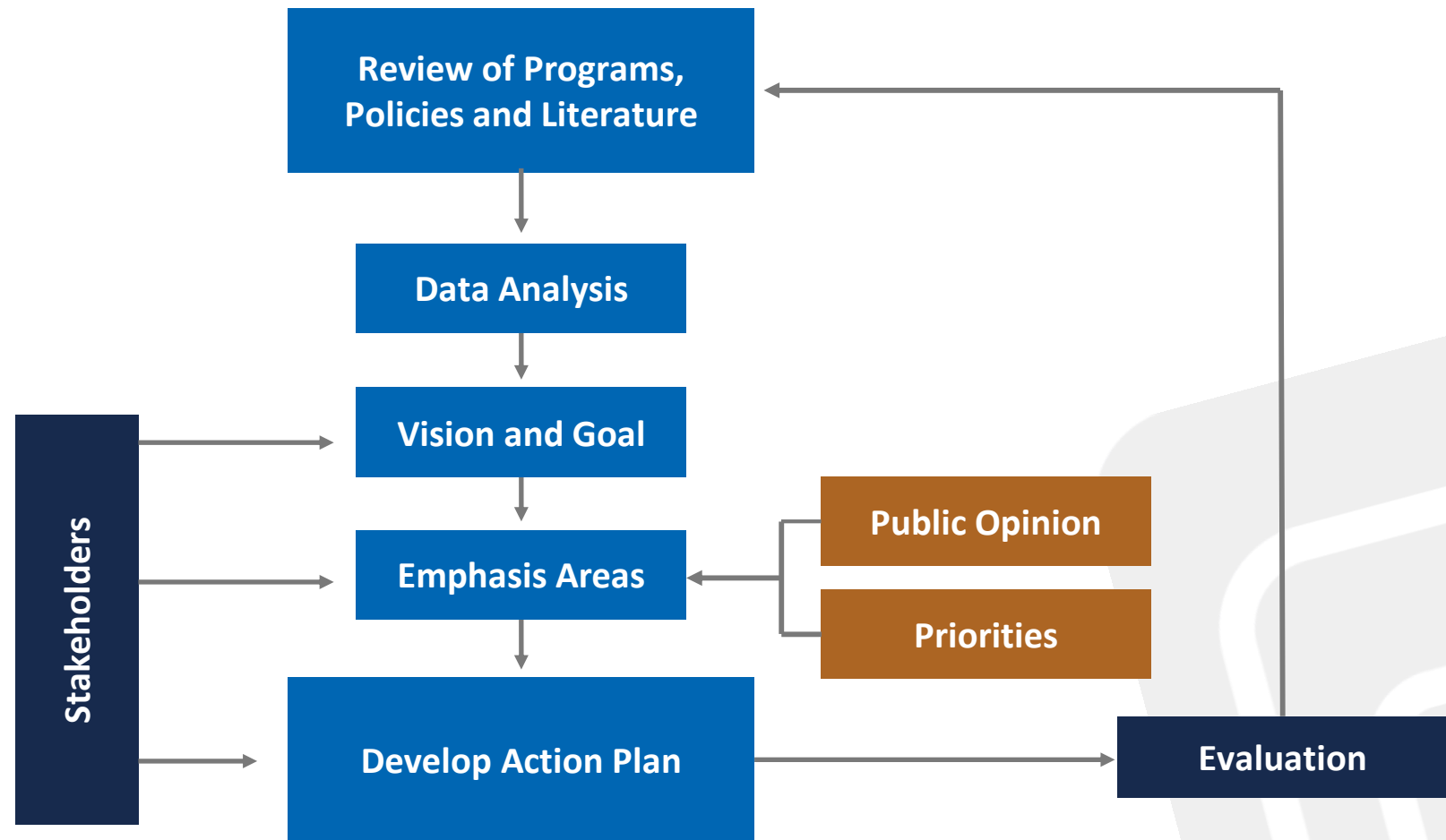


Road Today



MiWay





Why do we need data analysis?



Understand safety issues



Identify emphasis areas



Understand public perception



Vision Zero

- Originated in Sweden in 1997 and passed into law at the federal level

“ No loss of life is acceptable”

- **Long term goal:** No one should be killed or seriously injured as the result of a collision within the transportation system

Vision Zero Framework



Vision Zero



Life and health cannot be exchanged for other societal benefits



Safety is the priority
(prioritized over speed, level of service, etc.)

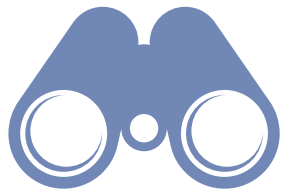


Transportation systems are to be designed forgiving



Traditional Benefit – cost analysis not necessarily applicable
(costs to healthcare and loss of life not usually considered)

Peel Region's Vision and Goal Statements:



VISION: Zero fatal and injury collisions for all road users.



GOAL: 10% reduction in fatal and injury collisions by 2022.

What are Emphasis Areas?

- A type or group of collisions that is a priority safety concern for which resources will be allocated to develop and implement action plans.
- A strategic plan will generally have between 4 to 8 emphasis areas to keep the plan manageable and focused.



Determining Emphasis Areas

Emphasis areas are selected based on the following factors:

A. Collision analysis



B. Public opinion

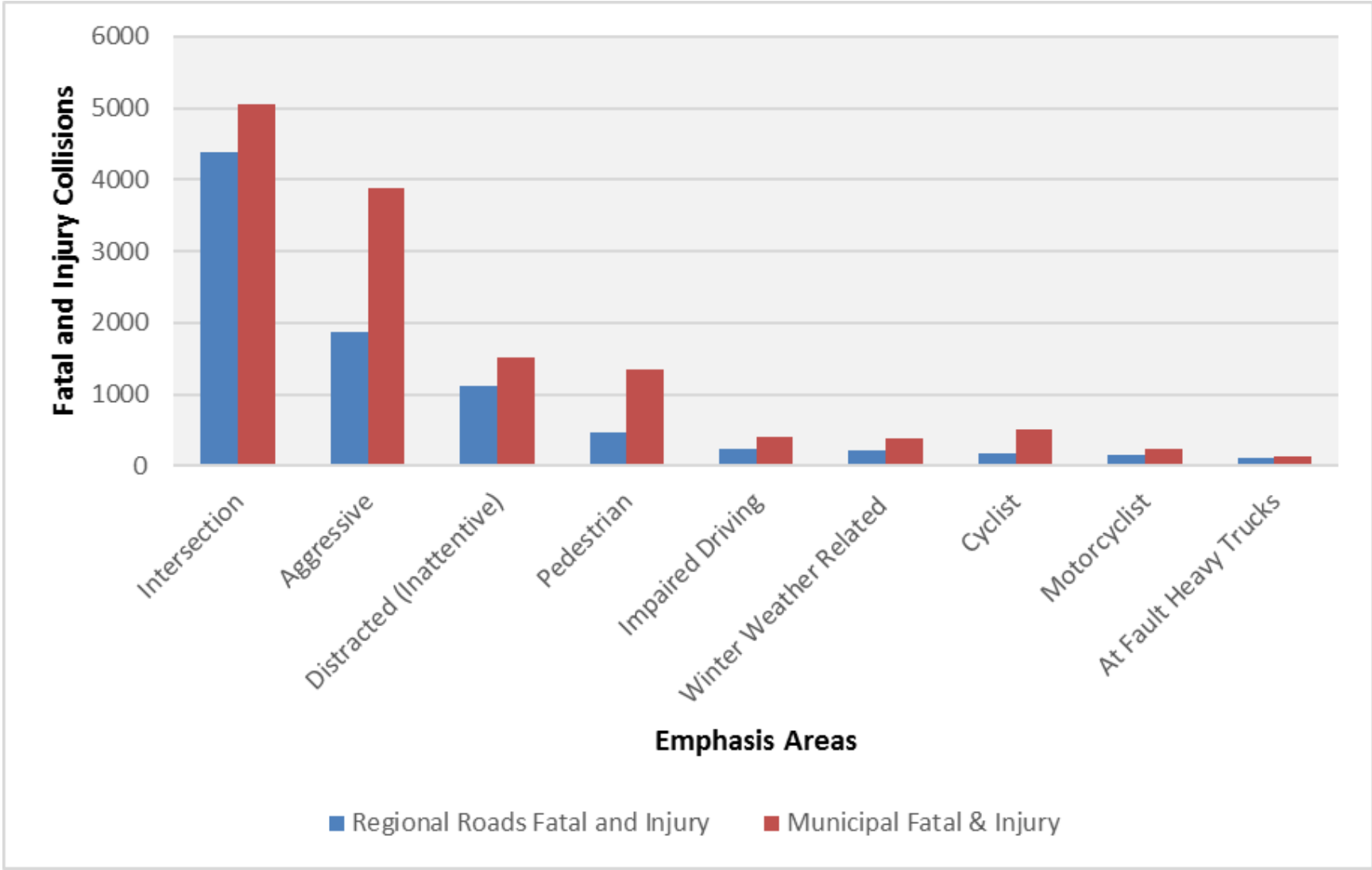


C. Strategic and practical considerations



A) Collision Analysis

Regional and Municipal Fatal and Injury collision Data (2010-2014)



B) Public Opinion Survey

- An extensive public opinion survey was distributed by Peel Region and ResearchNow, a market research company

ResearchNow

- Conducted phone surveys targeting people who live or work in Peel Region
- Controlled the sample size by ensuring responses were proportional to the population of the local municipalities

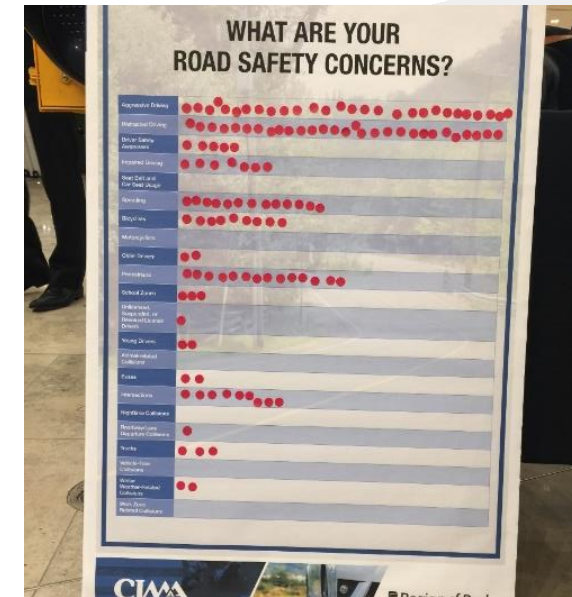
Region of Peel

- Distributed the survey through the following:
 - Posting the survey link to the project website & Region's newsletter (Connect to Peel)
 - Councillor Newsletters
 - Distribution among Regional staff
 - Various community engagements

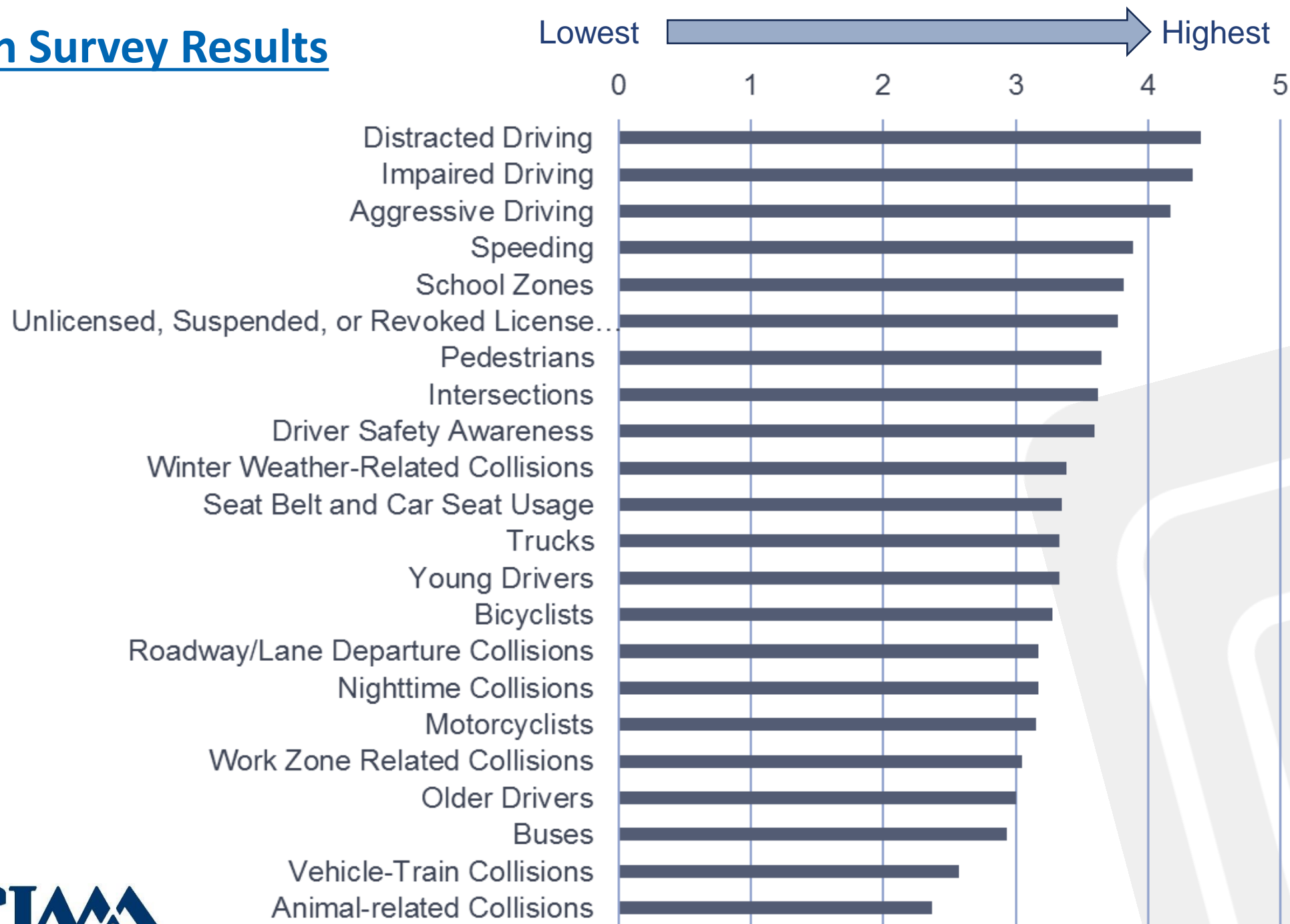


Community Outreach

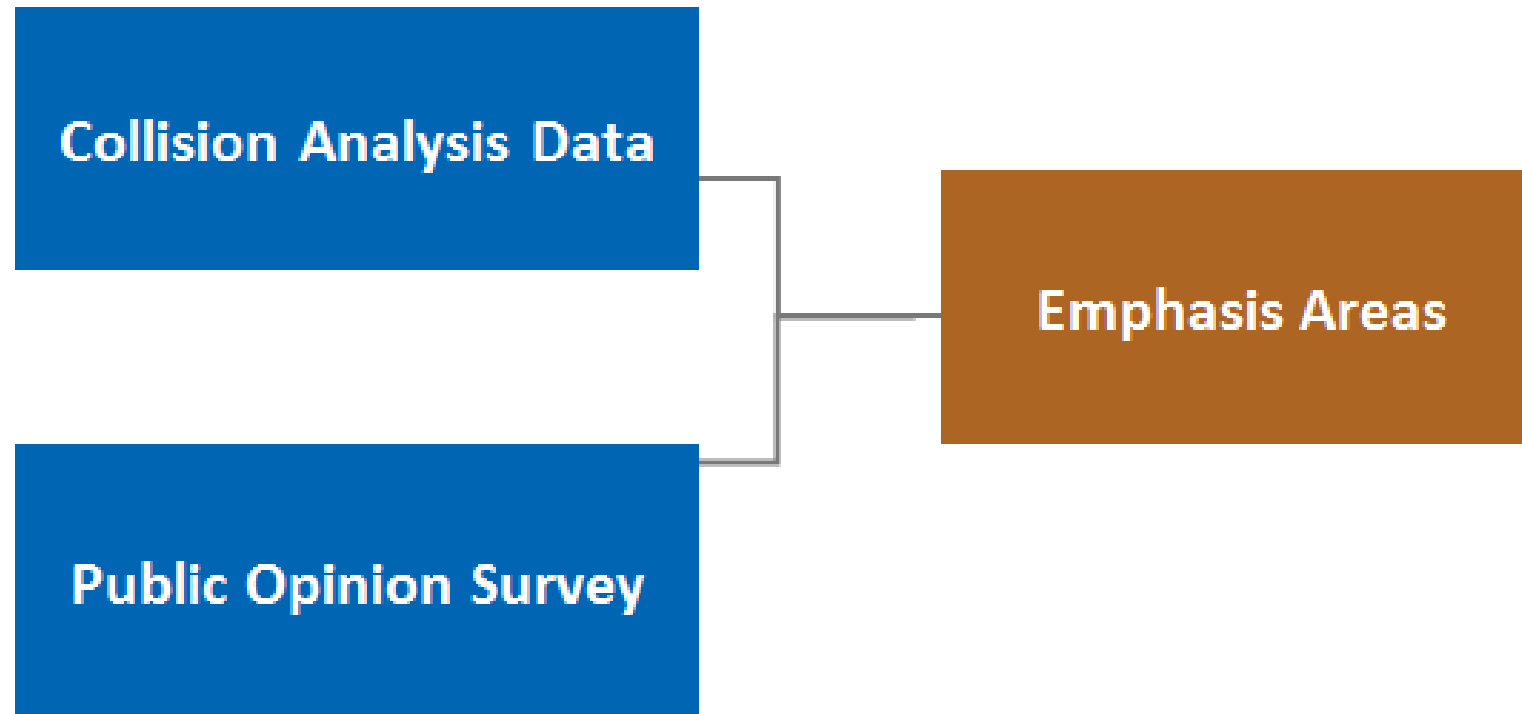
- At community events
- To seek feedback from residents regarding their perception of safety



Public Opinion Survey Results



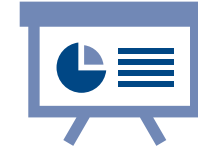
Determining Emphasis Areas





Data Analysis

- Intersections
- Aggressive Driving
- Distracted Driving
- Pedestrians
- Impaired Driving
- Winter Related
- Cyclists
- Motorcycle
- Trucks

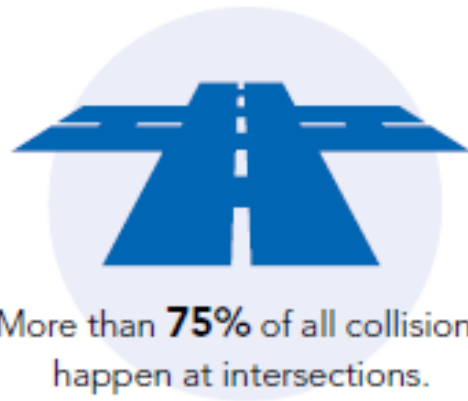


Public Opinion

- Intersections
- Aggressive Driving
- Distracted Driving
- Pedestrians
- Impaired Driving
- School Zones
- Trucks
- Seat Belt Use
- Young Drivers

Selected Emphasis Areas

Intersection Collisions



Aggressive Driving



Distracted Driving



Pedestrian Collisions



Impaired Driving



Cyclist Collisions



- Not specific emphasis areas as determined by the collision data.
- Identified by the public as perceived areas of safety.



Awareness Areas

**Truck Collisions
School Zones**



What is a countermeasure?

- An action taken to reduce the number or severity of motor vehicle collisions.
- Countermeasures are applied to emphasis areas to reduce collisions.
- Ensured countermeasures can contribute to safety improvement of awareness areas.

4 E's of Road Safety



Engineering

Changes to the physical format of the roadway, traffic control, warning devices, pavement markings, or changes to the regulations.



Enforcement

Manned police and automated enforcement of rules of the road intended to gain better compliance.



Education

Change road user behaviors to be more aware of their surroundings and take less risky actions.



Empathy

Trying to put one road user in the position of another, so that they better understand the consequences of their actions.

Countermeasure Development

- Stakeholders brought forward their existing countermeasures from their respective organizations
- Gaps in countermeasures were identified
- Future countermeasures were proposed by the Peel Region Project team



Selection of countermeasures:



- **Agreement and acceptance**



- **Effectiveness**



- **Feasibility**

(easy; requires formal approval of resources; requires external resources; only in conjunction with other programs, etc.)



- **Time-frame**



- **Collaboration**

Overall Strategic Countermeasures



Creation of the Vision Zero Task Force



Vision Zero Traffic Safety Culture



Community Traffic Safety Ambassadors



Review the Process to Integrate Safety

Intersections

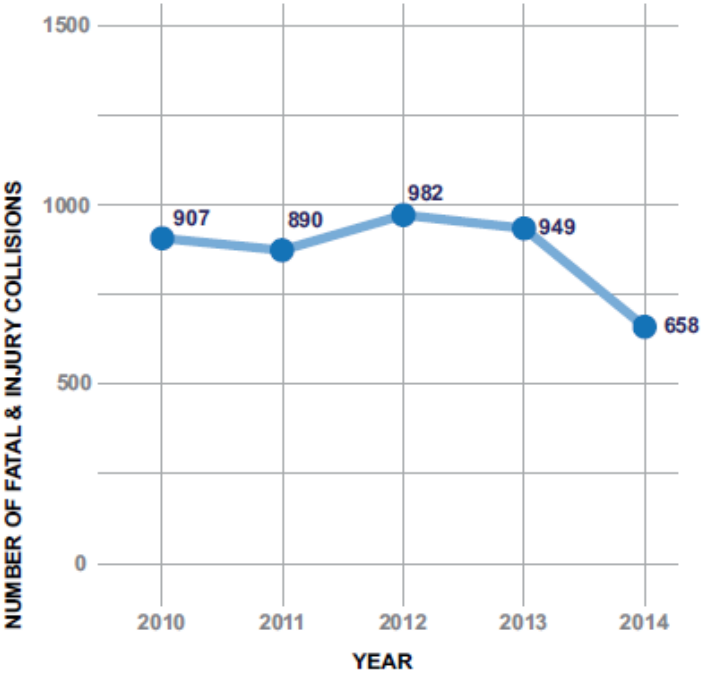
Engineering: Smart channels, roundabout, pavement markings

Enforcement: Red light cameras

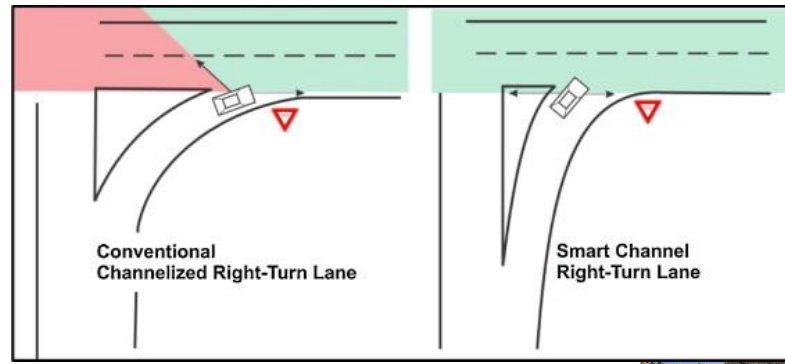
Education/Empathy: Intersection safety campaign, roundabout education



More than **75%** of all collisions happen at intersections.



Intersection Countermeasures



Smart Channels



Smart Channels :

- address geometric concerns (high skew angles),
- lessen property impacts,
- address capacity concerns,
- reduce entry speeds and improve pedestrian safety.



Roundabout:

- decrease speed and serious collisions,
- reduce delays and idling
- lower maintenance costs.

Intersection Countermeasures



Red Light Camera:

- increase intersection safety;
- reduce red light running resulting in angle collisions



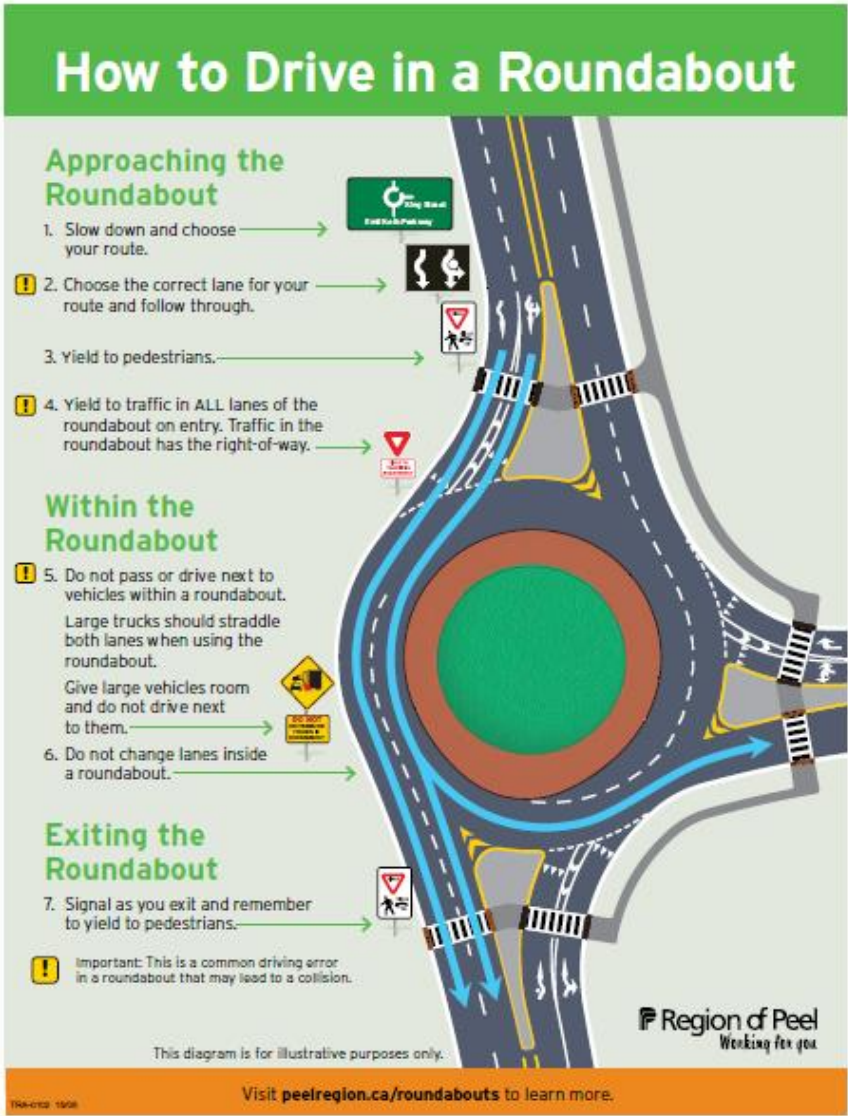
Actuated Advance Warning Beacons:

- deployed at locations with insufficient sight distance
- wirelessly actuated by vehicles waiting on the side street,
- to warn vehicles on the main street to be exercise vigilance as they proceed through the intersection.

Intersection Countermeasures



Positive Guidance Signage



Roundabout Education Brochure

Aggressive Driving

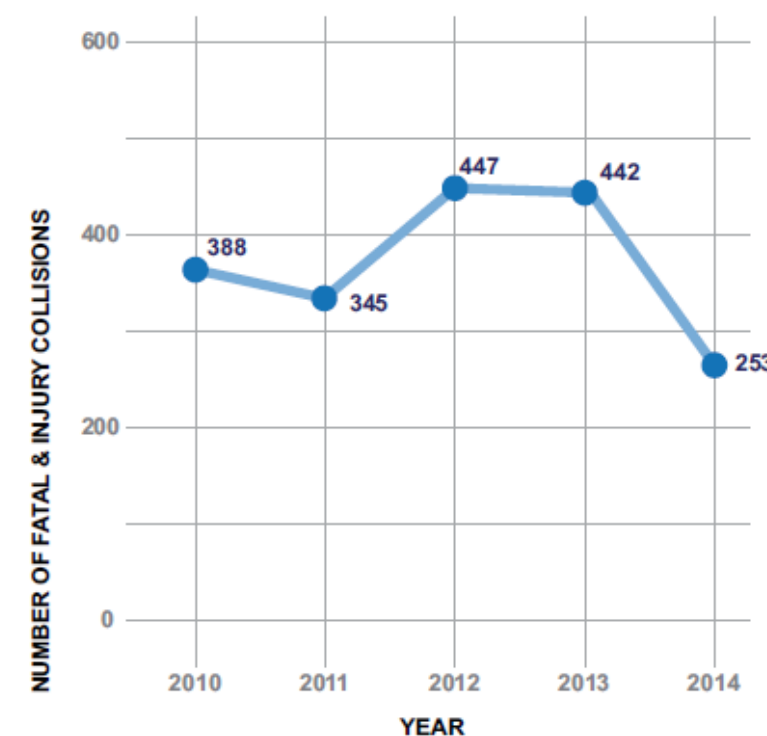
Engineering: Radar signs, traffic calming

Enforcement: ERASE program, Road Watch,
Actuated Speed Enforcement

Education/Empathy: Aggressive driving
awareness campaign



Rear-end collisions are the most common type of collision.



Aggressive Driving Countermeasures



Automated Speed Enforcement:

- Applicable In Community Safety Zones and School Zones
- Combat aggressive driving



Speed Trailer:

- educational and awareness device
- offers versatility with both a radar speed display and variable message board
- shown to slow drivers an average of 10%, usually for several kilometers

Aggressive Driving Countermeasures



Vehicle Actuated Traffic Calming Signs:

- electronic posted speed limit advisory signs
- provide a consistent and clear message of the posted speed limit



Speed Cushions:

- where there has been excessive speeding.
- relatively easy to install and remove
- can be relocated to different locations, if required

Distracted Driving

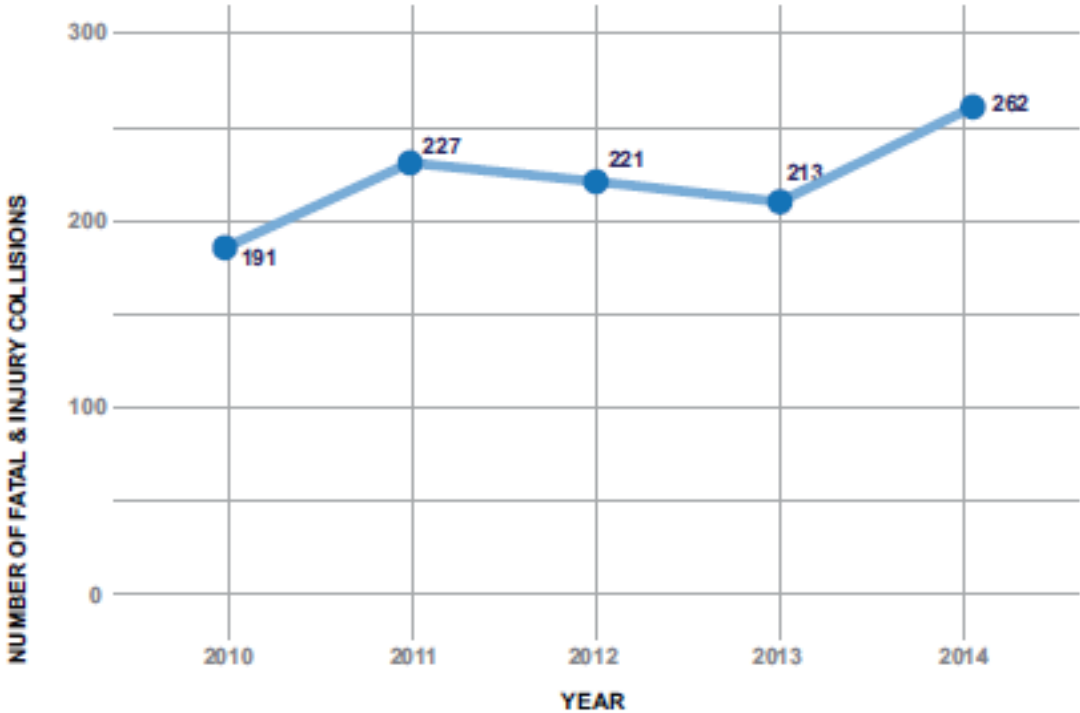
Engineering: Safety edge

Enforcement: Targeted enforcement

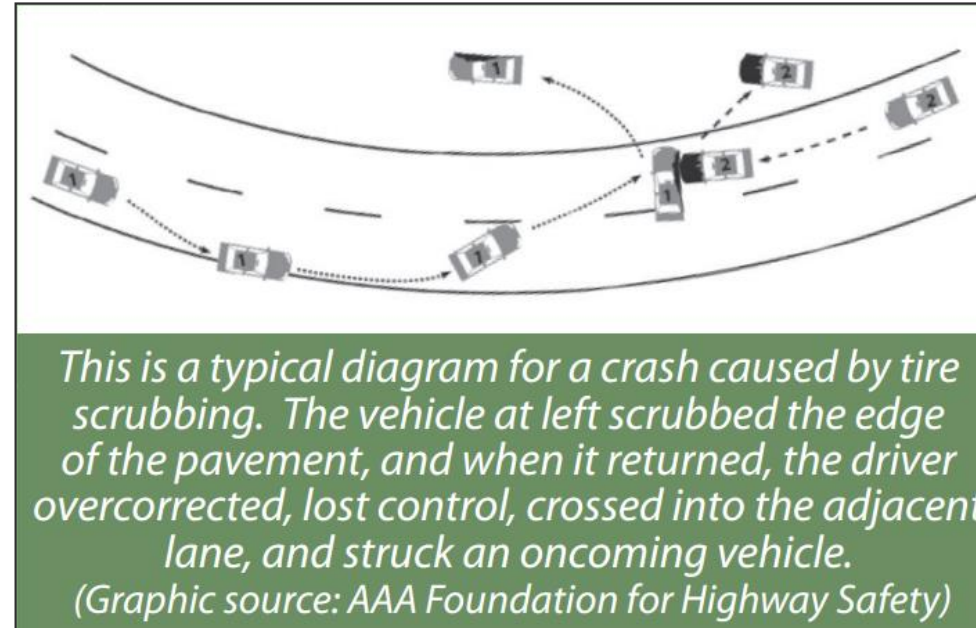
Education/Empathy: Distracted driving campaigns



Fatal/serious injury collisions that were caused by distracted driving has increased by 37% from 2010 to 2014 in Peel Region.



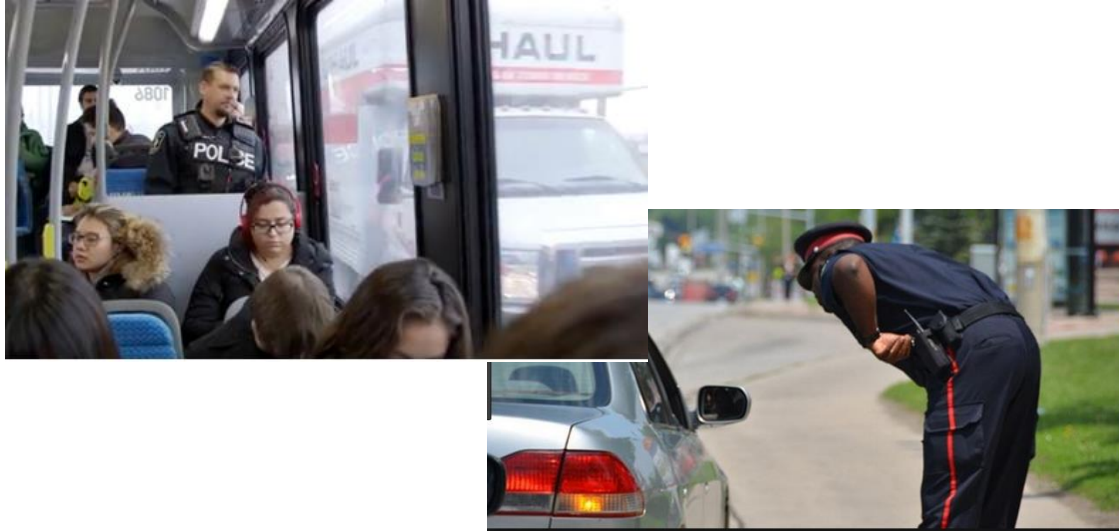
Distracted Driving Countermeasures



Safety Edge:

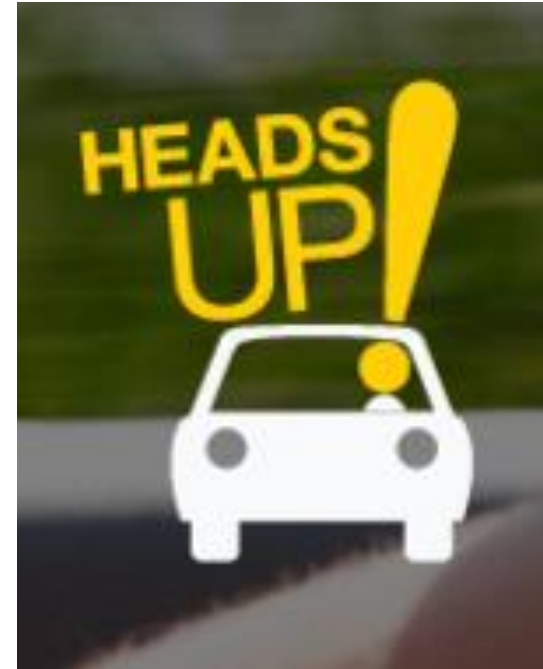
- edge of the paved roadway is finished at a 30° angle
- allow vehicles to safely return to travel lane
- mitigate pavement drop off
- assist in the reduction of “run-off-road” type

Distracted Driving Countermeasures



Distracted Driving Enforcement

- Enforcement blitzes by Ontario Provincial Police and Peel Regional Police
- Targeted cell phone use
- \$490 fines
- 3 demerit points (upon conviction)
- Catching violators using public transit

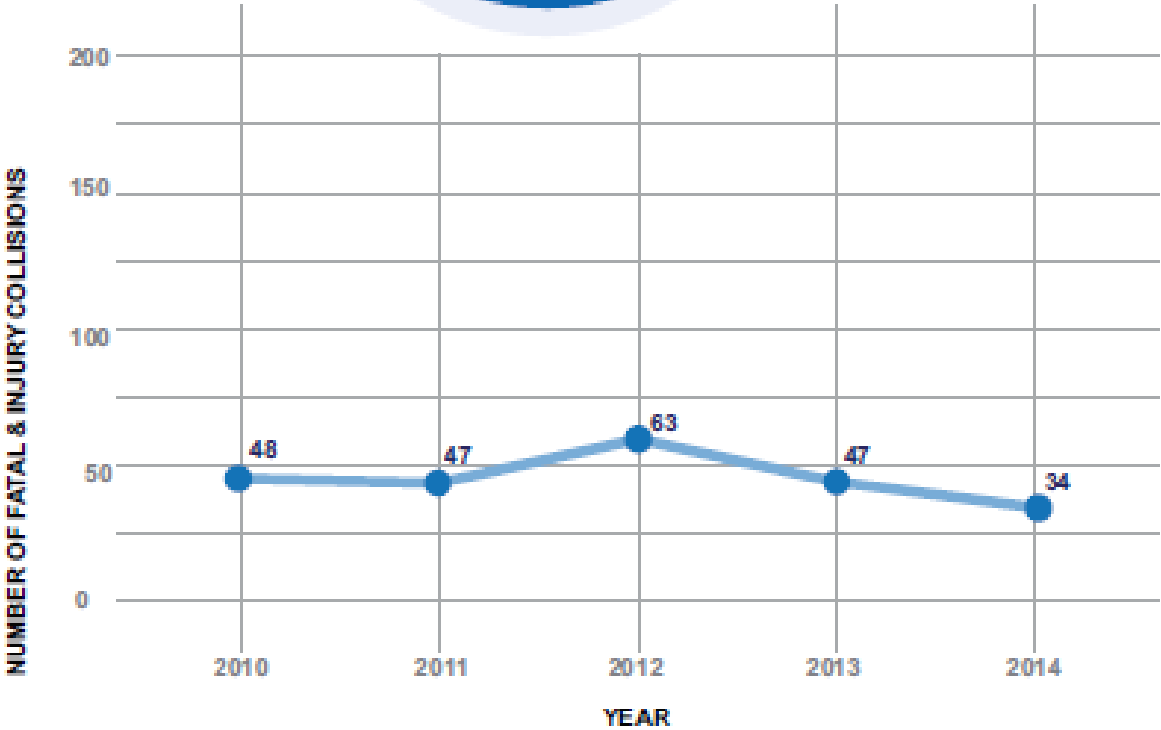


Campaigns to Curb Distracted Driving

Impaired Driving

Enforcement: Targeted enforcement

Education/Empathy: Impaired driving education campaigns



Impaired Driving Countermeasures



R.I.D.E (Reduce Impaired Driving Everywhere)

- Enforcement blitzes by Ontario Provincial Police and Peel Regional Police
- 'zero tolerance' policy regarding impaired driving
- maximize deterrents to impaired drivers
- streamline the procedure in dealing with impaired drivers



Last Drink Program

- reduce impaired driving
- Promoting public safety as a priority over beverage service
- partnerships with law enforcement to reduce impaired driving and hold establishments accountable

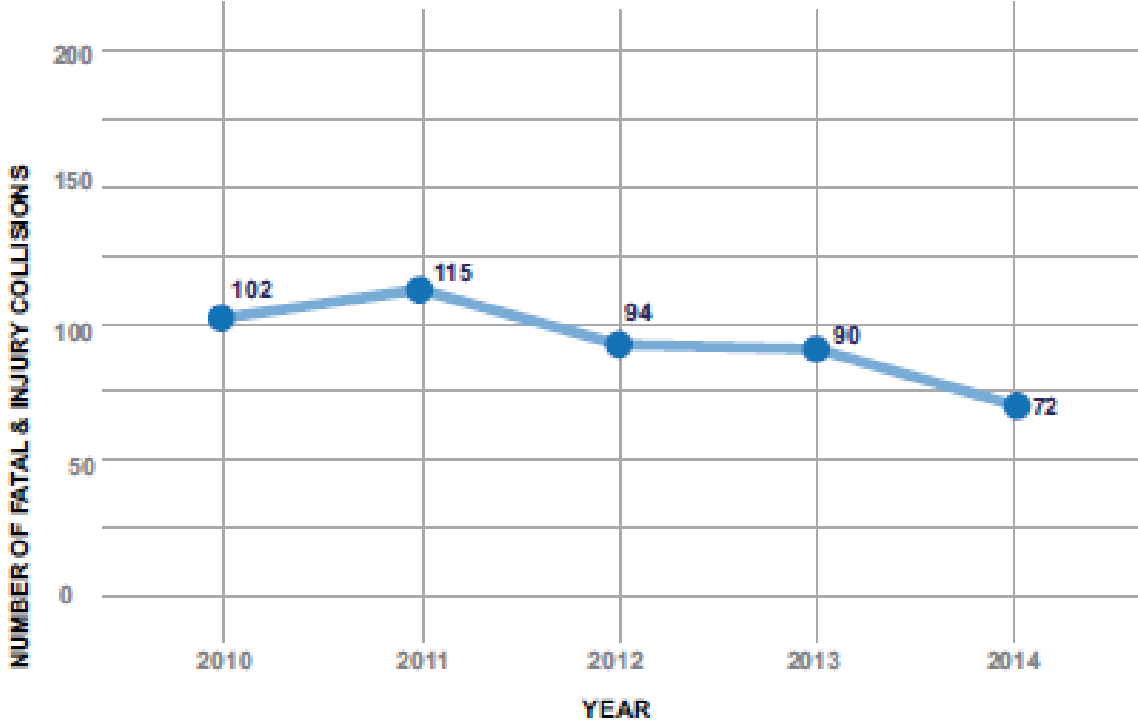
Pedestrians

Engineering: Ladder crosswalks, pedestrian countdown signals, refuge islands

Education/Empathy: School travel planning, pedestrian visibility education



Pedestrians



Pedestrian Countermeasure



Leading Pedestrian Interval

- Increased visibility of crossing pedestrians.
- Reduced conflicts between pedestrians and vehicles.
- Increased likelihood of motorists yielding to pedestrians.
- Enhanced safety for pedestrians who may be slower to start into the intersection.



Pedestrian Education Campaigns

Pedestrian Countermeasure



Pedestrian Crossover Signal

- in the middle of a block
- at intersections without traffic signals
- at right turn lane channels, where pedestrians cross to an island before pushing the pedestrian push button.



Mobile Message Signs

- Safety messages aimed at motorist
- Safety messages aimed at pedestrians



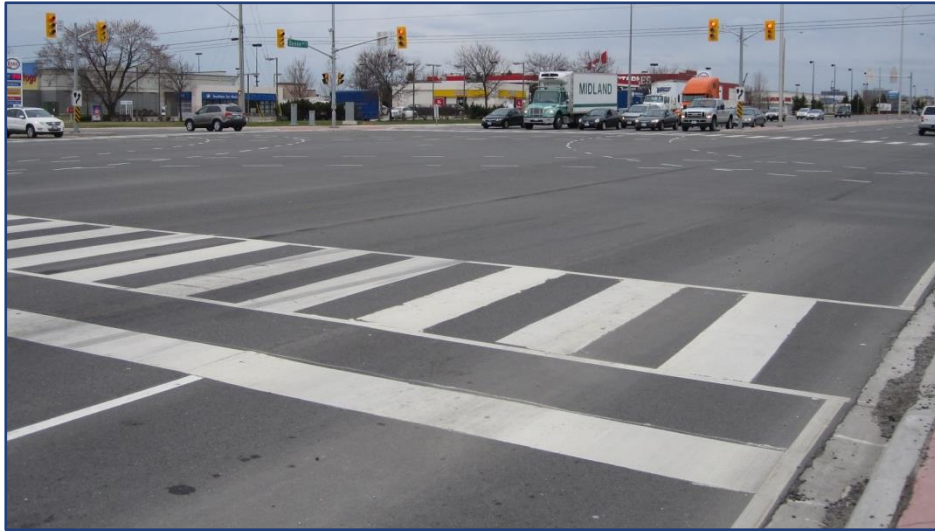
Two Stage Pedestrian Crossing

- Pedestrian crossing divided into two separate phases
- Reduced crossing distance
- Refuge island



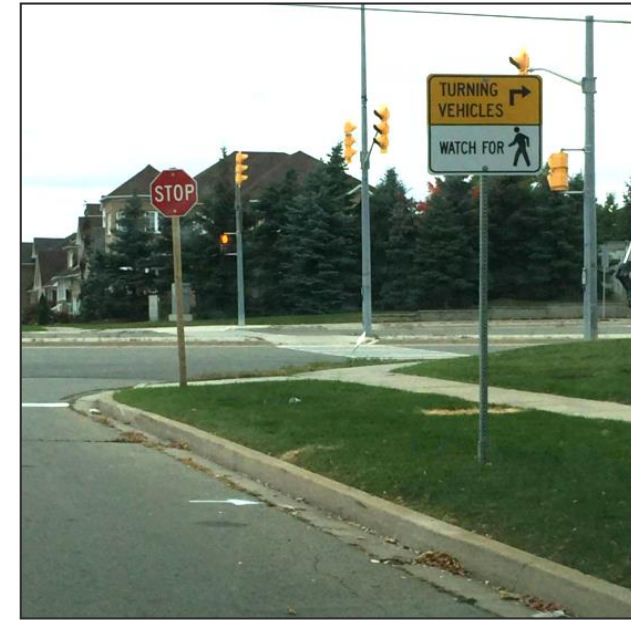
Accessibility for Ontarians with Disability

- Truncated domes
- Curb ramps
- Accessible Pedestrian Signals (APS)



Ladder Crosswalk:

- Increase pedestrian conspicuity
- Improves visibility of the crosswalk
- existing intersection being retrofitted



Enhanced Pedestrian Signage:

- Warning for turning vehicles to watch for pedestrians when turning

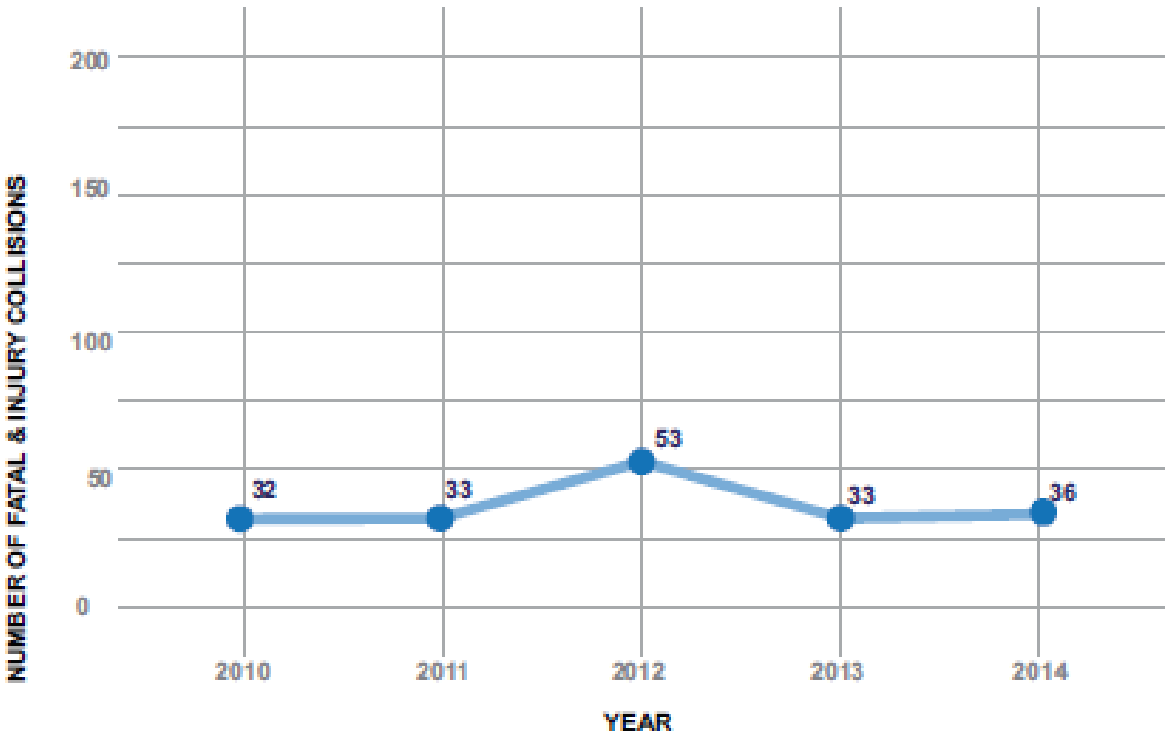
Cyclists

Engineering: Bike lanes, crossrides, bike box

Enforcement: Targeted enforcement

Education/Empathy: Cyclist safety campaign, Share the Road

Cyclist Collisions





Crossride:

- Cyclist can legally cross without dismounting
- Pavement markings and signage alert drivers
- Semi-Actuated Signalized Intersection



Bicycle Signal Detection:

- Video detection aimed at bicyclist approaches and calibrated to detect bicyclists
- Improves efficiency and reduces delay for bicycle travel
- Increases convenience and safety of bicycling
- Discourages red light running by bicyclists

How do we know that a countermeasure is effective?

- Engineering countermeasures (programs) easier
 - CMF Clearinghouse
 - Literature
- Educational programs more difficult to assess
 - Exposure
 - Coordination (provincially and neighbouring jurisdictions)
 - Literature
- Monitoring of results



Key Components for a Successful RSSP

- A safety champion
- Goals and emphasis areas based upon a data driven process
- A culture of partnership and shared responsibility between stakeholders
- Ownership and commitment by all stakeholders in delivering components of the safety plan
- The incorporation of safety assessment into existing plans and programs
- The development of new or reallocated resources to address defined safety needs

Organization of Vision Zero Task Force

- Terms of Reference
- Who is in the group?
- How often do they meet?
- What does the group do?
- What are their responsibilities?



What's next?



Organization of the Vision
Zero Task Force



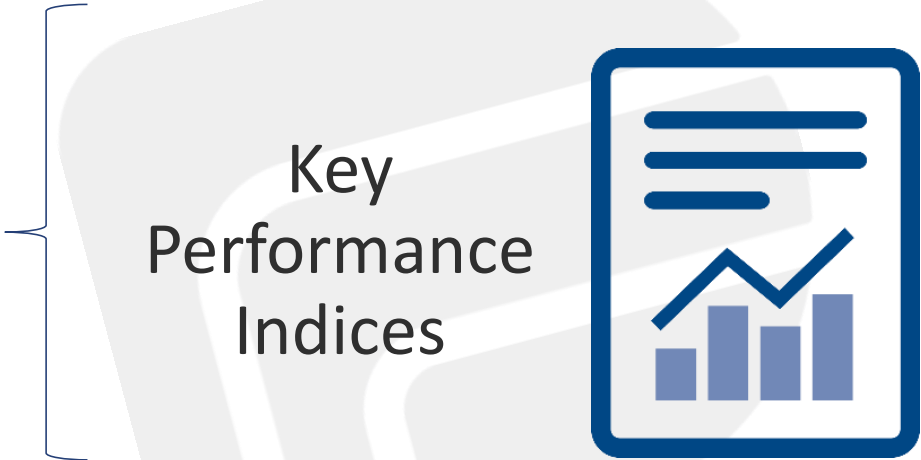
Implementation of
Countermeasures



Evaluation of
Countermeasures



Readjustment



Challenges and Lessons Learned

- **Partner municipalities:** Bringing in all the data for a complete picture
- **Stakeholders:** engaging in key stakeholders early (local municipalities, Peel Regional Police, Ontario Provincial Police, Health)
- **Partnership:** Joint Partnerships with police and health were key to the process

Further Questions?



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