



Case Study Series

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Vision Zero: The Canadian Landscape

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Vision Zero: The Canadian Landscape

This Case Study is part of a series that features a variety of issues and examples of Vision Zero from across Canada and around the world. We hope that these practical, evidence-based case studies will help educate, inform and inspire those who are interested in getting to zero.

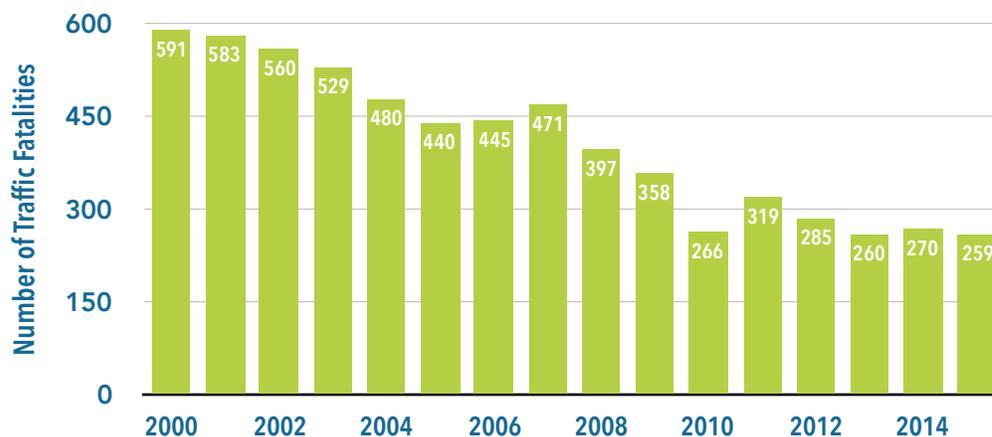
What's in this issue?

This Case Study provides an introduction to Vision Zero in Canada with a 'snapshot' of different cities currently implementing or considering a Vision Zero road safety approach.

Vision Zero, where no loss of life is acceptable

Vision Zero is an approach to road safety that aims to reduce the number of traffic fatalities and serious injuries to zero. It started in [Sweden](#) in 1997 and was developed out of a moral argument that any number of deaths was too high a price to pay for mobility. Vision Zero shares common principles with other well-known national strategies (e.g., [Australia's Safe System approach](#)) and challenges conventional thinking when it comes to road safety. Since Adopting Vision Zero, Sweden has made

Traffic Fatalities in Sweden, 2000 - 2015



Source: [Sweden Road Traffic Injuries Report, 2015, Table 6.6](#)

tremendous progress in road safety. For example, between 2000-2014 the number of traffic fatalities in Sweden has decreased by 54.3 %¹

Vision Zero comes to Canada

In 2015, city council approved [Edmonton's Road Safety Strategy 2016-2020](#), making it the first major Canadian City to officially adopt Vision Zero. The city of Toronto soon followed when city council approved a five-year Vision Zero road safety plan in the summer of 2017. Around the same time, British Columbia became the first province to openly support Vision Zero in their [provincial road safety strategy](#).

At the national level the Canadian Council of Motor Transportation Administrators' (CCMTA) also embraced Vision Zero when they launched [Road Safety Strategy 2025](#) (RSS 2025), CCMTA's fourth road safety strategy. *Towards Zero: The Safest Roads in the World*, is modeled after the Safe System Approach and was developed with the intention of helping jurisdictions implement road safety programs that meet their own needs.

Since this time, other cities across Canada have taken an interest in Vision Zero. In 2016 the mayors of Vancouver and Montreal both supported Vision Zero by calling for zero traffic fatalities in their cities. Meanwhile, Ottawa and Hamilton are also considering the potential for implementing Vision Zero in Ontario.

Cities implementing Vision Zero

Edmonton

What have they done?

In 2006 Edmonton created the first municipal Office of Traffic Safety in North America (since renamed to Traffic Safety). Through a combination of initiatives focusing on five E's of traffic safety (Engineering, Enforcement, Evaluation, Education and Engagement), they have made tremendous gains.

Key indicators of their success include:

- ◆ [55% reduction in collision injuries since 2006, worth an estimated at \\$1.1 Billion in societal savings](#)
- ◆ [75% reduction in right-turn collisions at 18 intersections between 2009-2014](#)
- ◆ [99% reduction in left-turn collisions in 52 locations between 2009-2014](#)

Edmonton's Road Safety Strategy 2016-2020 calls for even further reductions in collisions, using progressive targets, with a focus on intersections and school zones.

Rolling out Vision Zero Edmonton

In 2016 Edmonton became the first Canadian city to roll out a [Vision Zero campaign](#). This required re-organizing the website to be more "Vision Zero" focused and a slow dissemination of basic safety messaging with a Vision Zero tagline as most people were unfamiliar with the concept. A sizeable pocket of funding allowed them to develop expensive ad campaigns throughout the year, including close to \$1 million on bus ads.



However, as people became more familiar with Vision Zero, complaints to the city actually increased and people posted photographs of unsafe traffic conditions to social media or called the city's 311 line. This delighted Gary Dyck, the Communications Advisor for Traffic Safety, who regarded it as a public demand for safer roads:

...we started to get lots of complaints: "this is intersection isn't vision zero, this school zone isn't vision zero." You might hear the complaints and say, "wow this is awful," but we (in Traffic Safety) we're saying: "no, this is really exciting because the public are recognizing that we can do better."

Community survey

In 2016, the City of Edmonton, Traffic Safety, and the University of Alberta teamed up [to survey](#) 3,600 drivers, pedestrians, cyclists and motorcyclists to gather insight on road user attitudes, perceptions and behaviours.

These results were used to inform future education and engineering strategies. For example, many participants admitted to doing risky behaviour they deemed unsafe, while many supported automated enforcement to prevent running red lights.

Looking ahead

Traffic Safety is now in year two of their strategy and will submit a report of year one activities to council committee for review in late April. In the meantime, they are busy with various initiatives, including the strategic deployment of driver feedback signs, pedestrian safety and protection measures, school zone safety and the use of data analytics to distinguish car conflicts (i.e., near misses) from crashes.

On August 8th to 10th they will host the annual International Urban Traffic Safety Conference in Banff, a key educational venue for sharing leading and best practice in global urban traffic safety.

"When management says everyone here at this table, we're all going to work on Vision Zero so whether you're sanding the street, designing street lights or painting the lines - the goal is zero. Then you start to see everyone working together."

Gary Dyck

Communications Advisor for Traffic Safety
City of Edmonton

Toronto

What have they done?

In 2016 the city of Toronto released a [five year \\$80M plan](#) to eliminate traffic-related deaths and serious injuries on Toronto's roads. The plan focuses on six emphasis areas (pedestrians, school children, older adults, cyclists, motorcyclists, and aggressive driving and distraction) and lists over 50 countermeasures to be



implemented. The plan was developed over a period of two years in collaboration with 12 agencies and was unanimously approved by Toronto City Council and Mayor John Tory.

A data driven approach

Toronto's road safety plan focuses on reducing collisions that result in death and serious injuries (injuries where a person is admitted to a hospital), called "killed and seriously injured" or KSI collisions. It places a greater emphasis on vulnerable road users (i.e., pedestrians, cyclists and motorcyclists) and recognizes that the factors and circumstances that differentiate a fatal collision from a serious injury are often marginal.

Vulnerable Road Users

Pedestrians, cyclists and motorcyclists accounted for 74% of all KSI collisions in Toronto over the last five years.

Through a combination of KSI collision trend and geospatial analysis, the Traffic Safety unit was able to identify several KSI collision patterns, including the type of road user's most vulnerable and the circumstances through which KSI collisions occur. This data helped to establish emphasis/priority areas and relevant countermeasures for each. A detailed list of each safety measure mapped out by location is available on their [website](#).

According to Roger Browne, Manager for the Traffic Safety Unit at the City of Toronto, this was a sensible approach for a city as large as Toronto. *"The traditional Vision Zero approach is to systematically apply evidence-based interventions across the city however, with a city as large as Toronto, we really needed to adopt a data-driven approach at prioritizing the safety improvements in terms of locations and specific needs."*

Looking ahead

Toronto is committed to continuing its data driven approach in addressing vulnerable populations and implementing strategic interventions based off known issues. Toronto has reconvened their Vision Zero Road Safety Committee to work on the implementation of Vision Zero. The committee includes researchers, road safety experts, members of the community, police, advocacy groups and government officials. Toronto has also committed to have an annual Vision Zero summit.

British Columbia

What have they done?

In January of 2016, RoadSafetyBC², in collaboration with 40 road safety stakeholder groups, updated B.C.'s Road Safety Strategy with the release of [*Moving to Vision Zero: Road Safety Strategy Update and Showcase of Innovation in British Columbia*](#).

The strategy highlights the application of the Safe Systems Approach and provides a framework for how road safety partners can work together to ensure British Columbia has the safest roads in North America by 2020.

B.C. Community Road Safety Survey and Toolkit

In 2015, the Safe Roads and Communities Working Committee of the B.C. Road Safety Strategy [surveyed 81 municipalities](#) to gather information about road safety from British Columbia's communities.

It found that many municipalities wanted more knowledge on road safety planning, safety designs, and strategies. In response, they developed [the B.C. Community Road Safety Toolkit](#). The first of three modules has been released and it features road safety designs and strategies that local governments can implement to improve road safety outcomes.

B.C. Vision Zero logo

Through RoadSafetyBC, the Education and Awareness Working Committee also worked to promote the vision zero approach with the development of a B.C.-specific [Vision Zero logo](#). This logo can be used by any road safety partner for promotional materials, as an email signature or in advertising, where the content aligns with the goals and objectives of reducing fatalities for road users.



Looking ahead

RoadSafetyBC continues to lead policy development and operational program delivery to help ensure the safety of road users in B.C.. This includes chairing the B.C. Road Safety Strategy Steering Committee and its five working committees.

The major focus of RoadSafetyBC's current work is on developing mitigation measures and strategies to tackle those areas where B.C.'s latest [motor vehicle fatality report](#) shows increasing numbers of road users being killed; specifically, reducing fatalities that occur at intersections, those that involve vulnerable road users and those that involve drug impairment.

Cities considering Vision Zero

Montreal

Why Vision Zero?

Although overall traffic fatalities are trending down in Montreal³ there are concerns that the city needs to do more to protect vulnerable road users. Montreal has the highest cycling crash rate among Canada's largest cities, with seven crashes for every 100,000 cycling trips.⁴

What have they done so far?

In 2008 the City of Montreal released their [Transportation Plan](#), with a goal of reducing the number of traffic fatalities by 40% over a 10-year period. The plan included several initiatives focusing on vulnerable road users, including an intersection improvement program to enhance pedestrian safety.

Two years later SPVM (Montreal Police) spearheaded the ['Zero Accident' campaign](#) with the objective of bringing together key stakeholders to improve pedestrian safety through prevention and awareness and by 2010; the number of pedestrian fatalities had decreased 10% from the previous year.⁵

In September of 2016 Montreal Mayor Denis Coderre went a step further by calling “one death too many” as members of his administration and the executive committee for transportation, formally introduced [Montreal’s Vision Zero Road Safety Strategy](#).

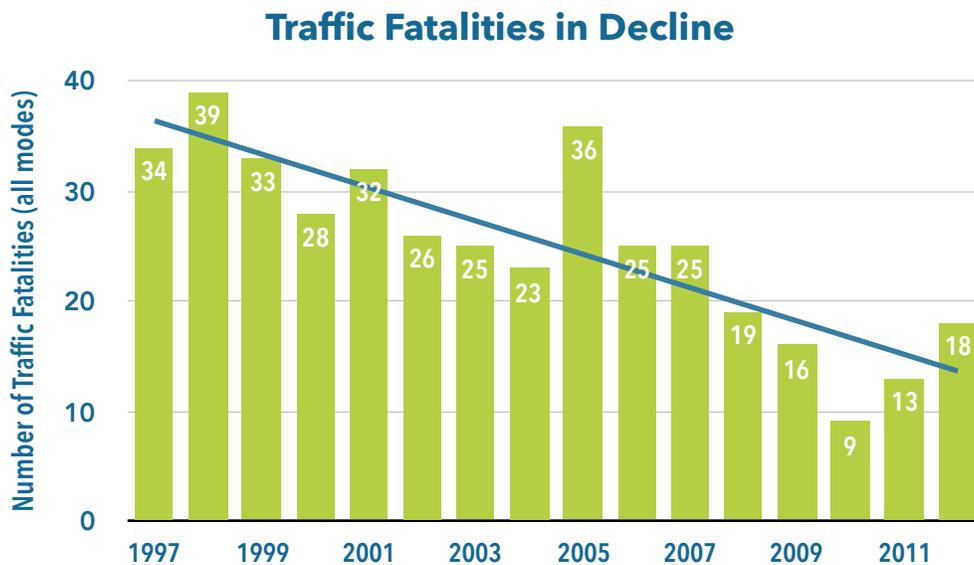
The strategy involves nine concrete action items centred around three E’s of traffic safety, including:

- ◆ Engineering
- ◆ Education and awareness
- ◆ Enforcement

Vancouver

Why Vision Zero?

In 2012 the City of Vancouver set a target of zero traffic-related fatalities and a 15-year trend analysis of fatal collision data (pictured below) suggests they are heading in the right direction.



Source: [City of Vancouver, Transportation 2040](#)

However, with the City's increased focus on active transportation there are concerns for the safety of vulnerable road users. A [pedestrian safety study](#) in 2012 found that pedestrians are involved in only 1% of collisions, but account for 45% of fatalities and between 2005 and 2010; the total cost of pedestrian collisions was approximately \$127 million per year.

What have they done so far?

In 2012, Vancouver City Council unanimously passed [Transportation 2040](#), which set a target of towards zero traffic-related fatalities and placed a special emphasis on safety for vulnerable road users.

One of the recommended actions in Transportation 2040 was the development of a citywide Cycling Safety Study to provide a better understanding of cycling safety hotspots and concerns and in 2015 the city released their [findings](#).

The following year City Councillor Heather Deal introduced a motion calling on staff to develop a strategy to get to zero fatalities and serious injuries for pedestrians and cyclists and Mayor Gregor Robertson announced he would support the action.

Then in May of 2016 City Council passed a resolution to direct staff to report back on a strategy for achieving zero traffic-related fatalities and serious injuries, including:

- ◆ A review of best practices from other jurisdictions,
- ◆ An action plan, and
- ◆ A funding strategy to accelerate implementation

Hamilton

Why Vision Zero?

Data from Hamilton's new collision analysis system suggests that fatal collisions have plateaued in recent years. However, in 2013 the Social Planning and Research Council

[reported](#) that Hamilton pedestrians and cyclists were at higher risk of getting hit by cars than the provincial average and that Hamilton had one of the highest rates of pedestrian deaths in Ontario.

What have they done so far?

In 2013 Hamilton City Council adopted a pedestrian mobility plan with 36 countermeasures to improve pedestrian safety and the city is reviewing its [Transportation Master Plan](#) for 2031 and beyond.

City council has recently taken an interest in Vision Zero and in January of 2016, they directed the Department of Traffic Engineering to produce a report on the program with options for implementation. A report is due back to the public works committee by May 15, 2017.

In the meantime, the City of Hamilton is conducting [an online survey](#) to assess public opinion on the safety of Hamilton's roads. To date 2040 people have responded and 91% agree Hamilton roads could be safer. Participants have identified 16 safety concerns with the top three being:

1. Distracted drivers
2. Motorists ignoring the laws
3. Other motorists driving too fast

A public engagement session was also held in November 22, 2016 to collect feedback from residents on Vision Zero.

Ottawa

Why Vision Zero?

According to the 2015 [City of Ottawa's Road Safety Report](#), there were 132 fatal collisions between 2011 and 2015. Seventy-six people died in motor vehicles, 12 on motorcycles, 34 pedestrians and 10 cyclists. These statistics motivated Ottawa City

Counsellor Catherine McKenney to write an op-ed for the Ottawa Citizen in September of 2016, calling for the city to adopt a “Vision Zero” policy.

What have they done so far?

Although there has been no action from Ottawa City Council on Vision Zero specifically, the City of Ottawa and other organizations are active in the road safety space. A few examples include:

The Safer Roads Ottawa Program:

- ◆ A partnership between Ottawa Fire, Paramedic, Police, Public Health and the Public Works Department with the goal of moving towards zero fatalities or serious injuries.
- ◆ In 2012, they developed “[Ottawa’s strategic road safety action plan](#)” which focuses on five broad emphasis areas, including distracted driving, vulnerable road users, aggressive driving, young drivers, senior drivers, and children with a series of initiatives and sub-goals assigned to each.

The City of Ottawa’s Safety Improvement Program (SIP):

- ◆ SIP Carries out in-depth studies of collision patterns and recommends countermeasures involving signage, pavement markings, traffic control signal timings and phases and/or the installation of skid-resistant asphalt and roadway geometric modifications.

The City of Ottawa:

- ◆ Provides online access to [annual Ottawa collision data reports](#) during a five-year period.

Complete Streets

In October of 2015, the City of Ottawa developed a [Complete Streets Implementation Framework](#). Since then they have transformed several streets but it remains unclear if this will increase protection for vulnerable road users.

Summary

- ◆ Almost all Canadian municipalities are new to Vision Zero and only Edmonton and Toronto have started to implement formal road safety plans.
- ◆ Those implementing Vision Zero have highlighted the importance of developing a road safety plan with clear targets, being data driven, involving multiple partners, raising public awareness of and demand for road safety, understanding traffic safety culture, securing buy-in from high level officials and implementing a combination initiatives that cover Engineering, Enforcement, Evaluation, Education and Engagement aspects of traffic safety.

Up Next

Case Study 2: *How Canadian cities are using data to deliver Vision Zero*

References

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