



VISION ZERO

Pathways Toward a Safer City

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ABSTRACT

Over the past several years, the urban fabric of Winnipeg has experienced notable changes: new pedestrian plazas, wider sidewalks, narrower intersections, and dedicated lanes for bicycles and bus rapid transit. These changes add to the vitality of the city and improve upon the safety of its citizens. And while the majority of Winnipeggers are in support of these changes, they have nonetheless drawn considerable criticism and controversy. Hardly a week goes by without one of the city's newspapers covering this debate about the city's new transportation plans.

This Case-In-Point investigates policy and on-the-ground changes happening on Winnipeg's streets in terms of its key strategic goal of "a safe, efficient and equitable transportation system for people, goods and services" (Winnipeg 2011, 10). Achieving this goal is critical; despite decades of progress, traffic crashes still poses a risk to the health and safety of occupants of the city's streets. Each year Winnipeg sees an average of 16 fatalities, 108 serious injuries, and 6,805 other injuries, accounting for 71% of total victims on public roadways in Manitoba (2010-2014 average) (MPI 2016, 91). This is most alarming because vast majority of traffic deaths and injuries can be avoided.

1.0 / INTRODUCTION

Based on the belief that the loss of a single life on our roadways is unacceptable, Vision Zero is a leading traffic safety strategy with an overall aspiration of zero serious injuries or fatalities. The philosophy of Vision Zero states is that “the chain of events that leads to a death or disability must be broken, and in a way that is sustainable, so that over the longer time period loss of health is eliminated” (WHO 2015, 20). By taking a systems approach to enhancing safety, Vision Zero shares the responsibility for human safety with the overall system design by addressing infrastructure design, vehicle technology, and enforcement.



FIGURE 2 | Cyclist on Sherbrook Avenue



FIGURE 1 | Memorial for a Pedestrian on Whyte Avenue

This Case-In-Point has three aims: 1) to consider the framework of Edmonton’s recently adopted Vision Zero transportation policies; 2) to illustrate the critical need to improve street safety in the City of Winnipeg, citing the cost of inaction in human terms, and; 3) to offer constructive advice about how the City of Winnipeg can build consensus and momentum in order to prevent road fatalities and serious injuries in the future.

2.0 / BACKGROUND

Vision Zero originated in Sweden when it was unanimously passed by parliament in 1997. Twenty years since it was adopted, Sweden has one of the lowest annual rates of road deaths in the world (2.8 out of 100,000 as compared to a global average of 17.4) (WHO 2015). Moreover, pedestrian fatalities continue to fall across the country. The movement has since spread to many countries across the world, with cities like Berlin, Paris and New York pursuing zero fatalities and traffic injuries on their streets. Recently, the Canadian Council of Motor Transportation Administrators adopted Vision Zero into their Road Safety Strategy 2025. This national strategy provides a framework intended to influence road safety policy and action at the territorial, provincial, and municipal levels. As attention for Vision Zero grows across Canada, “it is important to understand what defines this road safety approach, the resources that are available, and practices that have proven effective in other jurisdictions” (Peterniak 2016, 1).

3.0 / Road Safety Strategy 2016-2020

In 2015, Edmonton became the first major Canadian city to adopt Vision Zero into its transportation strategy. With 121,645 reported collisions and 127 deaths on city streets between 2011 and 2015, Edmonton was failing to provide a safe and inviting experience for its citizens (Edmonton 2016). The Road Safety Strategy 2016-2020 was unanimously passed by Edmonton City Council in 15 September of 2015 with the long term goal of eliminating fatal and serious motor vehicle collisions.

The policy assesses major injuries and traffic fatalities through the adoption of the Safe Systems Approach, which enables road users and those who design, maintain, and operate all parts of roads to take part in accountability of the road transportation system. Furthermore, the Edmonton Road Strategy 2016-2020 utilizes the five E's of Traffic Safety - Engineering, Enforcement, Evaluation, Education & Engagement - to guide and support the strategy and the implementation of the Safe Systems Approach (Edmonton 2016, 2).

ENGINEERING

The "fundamental key" in the Safe Systems Approach is the "design and operation of Edmonton roads that prevent collisions from occurring or reduce the severity while minimizing the possible role of human error in precipitating crashes" (Edmonton 2016, 8). This approach sets the Strategy apart from other road safety strat-



FIGURE 4 | Edmonton's 5 E's of Traffic Safety

egies employed by the city. Especially in light of ongoing modal shifts in the transportation system, such as changes to public transportation and the increasing demand for multi-model options, greater emphasis has been placed on a proactive and holistic approach to the design and operation of Edmonton roadways.

EDUCATION

To leverage a stronger educational component, a traffic-safety culture study was conducted to determine the behaviors and beliefs held by the community. The survey will be undertaken biannually to measure progress and support development of a safety oriented traffic culture in Edmonton.

ENFORCEMENT

While engineering and education hold incredible potential for traffic fatality reduction, driver behavior continues to be identified as a leading contributor to the problem. Enforcement is a proven method to reduce collisions that result in fatalities or injuries. Law enforcement is slated to become involved in several new initiatives in Edmonton that expand upon unsafe driving behavior, such as following-too-closely, distracted driving, and the identification of high-risk drivers for traffic-related offenses.

EVALUATION

As stated in the Strategy, "the demand for greater efficiency and effectiveness in road-safety resource use and management requires the use of an evidence-based principle and rigorous evaluation" (11). Edmonton established and utilized the Urban Traffic Safety Research Chair to "evaluate ongoing state-of-practice transportation-related initiatives and develop state-of-art methodologies and practices" (ibid.). Similarly, a Law Enforcement Research Chair was created to



FIGURE 3 | Edmonton's Vision Zero Policy and Plans

increase the efficient and effective use of police resource for road safety.

Additionally, road-safety audits and assessments with criteria geared to every phase of the transportation-system's life cycle are conducted to make Edmonton roadways safer and encourage safe driver behavior.

ENGAGEMENT

The communications component of the Strategy centers around a smart-phone application intended to increase two-way communications with the community and road-safety stakeholders. The app is being developed to "provide one-way road-safety warning and conditions and will eventually be developed into a two-way communications device for road safety and road users" (Edmonton 2016, 12).

By and large, the discussion of road safety into public consultation on transportation-related projects will be enhanced through community engagement. Ultimately, enhanced community engagement will lead to broader community understanding and improve Edmonton's traffic-safety culture (ibid.).

Wherever people might fail,
the road system should not.

-Rebecca Peterniak, Road Safety Specialist

4.0 / LESSONS LEARNED

Drawing on lessons from Edmonton and other jurisdiction that have successfully implemented Vision Zero, principles for effective adoption relate to the kind of funding, partnerships, policy statements, public engagement, training and access to expertise required to mobilize road safety initiatives.

FUNDING

Road safety improvements cost money and navigating budget constraints and coordination among stakeholders can prove to be difficult. It is important to take stock of the programs obtaining money already and determine if they are achieving anticipated safety outcomes. Owner-

ship-based silos of information and funding are barrier to funding, and must be removed when they make sense. In Edmonton, the budget for road infrastructure was already large, and spending money on safety redesigns, Mayor Iveson argued, would not cost substantially more (Finkelman 2017).

PARTNERSHIPS

Partnerships are instrumental to the successful adoption of Vision Zero. Through greater integration and collaboration of road-safety stakeholders, Winnipeg's own Vision Zero strategy will have greater capacity and support. This capacity should extend beyond government to include citizen groups and grassroots organizations. As stated in the Road Safety Strategy 2015-2020, "the systemic integration of road safety in Edmonton depends on external road-safety stakeholders" (14).

POLICY STATEMENTS

Policy statements about Vision Zero provide a mandate to task forces and member organizations in their efforts towards road safety. This step is critical for Vision Zero to be meaningfully mobilized by the city. By creating a vision of a far safer street system and present the cost of inaction in human terms, citizens in Edmonton had something to rally behind that councilors could not argue against.

PUBLIC ENGAGEMENT

As one of the five E's of Edmonton's Road Safety Strategy, engagement is instrumental to Vision Zero's success. While there have been a few attempts at public engagement, Vision Zero is still considered Edmonton's 'best kept secret' (Finkelman 2017). Engagement must go beyond superficial billboard campaigns and actually engage citizens.

TRAINING & ACCESS TO EXPERTISE

Decisions about improvements in road safety performance and management must be made by "individuals who are well informed on the science of road safety and the broadening scope of the field" (Peterniak et al. 2016, 4) Providing training and access to expertise for these individuals is integral. Recently, ATS Traffic hosted the Vision Zero Advocate Conference in Edmonton. The conference gathered together technical experts, industry leaders, and inspiring speakers to foster and further discussions on Vision Zero.

5.0 / WINNIPEG CONTEXT

Despite decades of progress, traffic collisions still poses a risk to the health and safety of occupants of Winnipeg’s streets. Between 2012-2015, 54 people were killed and 523 were seriously injured in traffic collisions.

- On average, there are more than 35 collisions each day on Winnipeg streets;
- 1 out of 5 collisions result in serious injury or fatality;
- 63% of traffic collisions in Manitoba occur in Winnipeg. (MPI 2016)

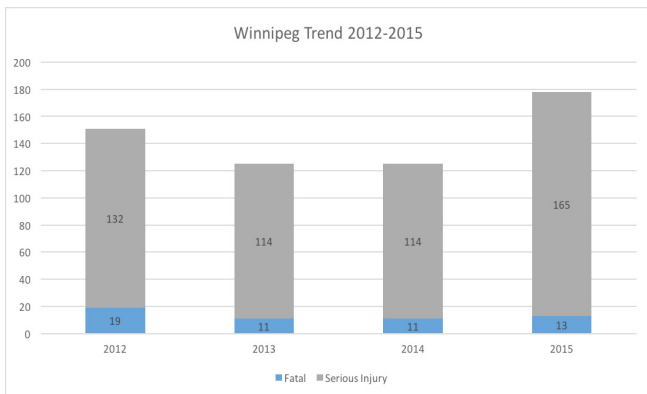


FIGURE 5 | Fatalities and Serious Injuries on Winnipeg Streets

At the federal, provincial, and to a limited extent municipal level, there are policies in place that support the initiatives of Vision Zero in Winnipeg. Moreover, advocates of safer street systems in Winnipeg have proven invaluable to the development of civic Vision Zero policy.

POLICIES IN PLACE

While Winnipeg does not have a council approved road safety strategy system in place, it does have several policies and plans that reflect Canada’s Road Safety Vision. Winnipeg’s Transportation Master Plan (2011) speaks to “safe, efficient and equitable transportation for people, goods, and services” (3). Our Winnipeg’s Complete Streets includes aims to make streets safer through road narrowing, on-street parking, bicycle lanes, bus lanes, sidewalk expansion, streetscape, and speed limit reduction - all of which are consistent with Vision Zero policies.



FIGURE 6 | Bike Advocates have Rallied around Vision Zero

More recently, the award winning Pedestrian & Cycling Strategies set out a long-term vision for providing accessible, convenient, and safe walking and cycling facilities for people of all ages and abilities.

In 2014, Manitoba initiated a Provincial Roads Committee with a purpose to guide a more strategic and holistic approach to addressing road safety issue in Manitoba. The committee developed the Road Safety Plan which identifies their priorities and goals. Federally, the Road Safety Strategy 2025 recommends that each jurisdiction develop their own action plans. It encourages road safety stakeholders from all levels of government - as well as private sector and non-governmental stakeholders - to collaborate and unite efforts to make Canada’s roads the safest in the world.

ROAD SAFETY CHAMPIONS

Ultimately, Winnipeg needs a strong advocacy program and high profile media attention to really sell Vision Zero its citizens.

Janice Lukes, Councilor of South Winnipeg, in addition to lobbying for road safety from within council, recently organized and participated in a forum on Vision Zero policy in the city. The fate of Vision Zero relies on support from council, and Lukes’ efforts have added to the discussion.

Advocacy groups have also been an asset to the development of road safety programming across the city. BikeWinnipeg, the Green Action Centre, and Winnipeg Trails but a few of the group’s in Winnipeg whose programs align with Vision Zero policy. Their activism has meaningfully sparked and sustained discussion.

6.0 / RECOMMENDATIONS

CREATE A VISION

While the call for traffic safety is coming from the grassroots level, the vision must be taken up by the municipal government to move forward. It is the recommendation of this report that the Mayor's Office present Winnipeggers with a vision of a far safer street system and address the cost of inaction in human or ethical terms. If city policymakers approach the issue of traffic safety from a high human-value, ethical perspective rooted in the basic principle that it is unacceptable for the current rate of traffic fatalities and injuries to continue, it would be impossible to argue against it.

ENCOURAGE COMMUNITY ENGAGEMENT

Once this vision is articulated, it is important that the city engage the city's diverse communities. The Mayor's Office should work with pre-existing committees, and establish any necessary committees and advisory groups within the government. These groups should hold regular, open public forums to solicit community feedback, identify community concerns, and to report on the city's progress reducing traffic fatalities and injuries. These can be modeled after Edmonton's establishment of strategic, tactical, and operational road safety committees, which created new governance structures that increased engagement of key road-safety stakeholders. These stakeholder groups could include, but are not limited to, seniors, fleet operators, business groups and grassroots organizations.

As Winnipeg works to change the city street, the use of community liaisons to communicate it's goals and to inform residents is important.

Major street redesigns will require open public comment processes to fine-tune new designs and address community concerns. Working with local institutions, such as the University of Manitoba, to create a web-based tool for residents to report dangerous street conditions, concerns about new designs, and other feedback has been shown to be impactful. Edmonton pursued a similar program with a local institution and was able to gather and display information via online maps. The data should also be analyzed with the city's own crash data to determine high-risk areas.

COORDINATE EXISTING PROGRAMS

Winnipeg should reaffirm the Transportation Master Plan's goal to improve street safety, both to the public and among the different departments. As identified above, there are existing safety programs among different government agencies and advisory bodies in Winnipeg. These programs must be coordinated to strengthen their overall effect. By establishing a hierarchy of new executive committees and working groups within city government, Winnipeg will be able to coordinate street safety initiatives across departments and agencies. These groups should include all city departments that have a stake in eliminating traffic fatalities and injuries. The agencies should compile and publish monthly reports and maps and issue an annual report on traffic safety, including progress towards its targets and achieving the city's road safety vision, as well as notable success, challenges, and next steps.

RESEARCH & DEVELOPMENT

Unsafe speeding is a leading contributor to fatalities and major injuries. This report recommends that Winnipeg continue implementing street designs that reduce dangerous speeding. The transportation department should continue to work closely with the Police department to develop enforcement strategies that stem excessive speeding and set targets for reducing excessive speed. Through the pilot study with the MPI, the Winnipeg Police Service and CAA Manitoba, the department of Transportation is now in the process of identifying the city's most dangerous streets and intersections and redesigning them to curb dangerous speeding and improve safety (MPI 2016).



FIGURE 7 | Complete Streets possibilities

7.0 / CONCLUSION

The impact of traffic deaths and injuries is felt more acutely in Winnipeg than anywhere else in Manitoba. The transportation policies are out of sync with our priorities for improved health, sustainability, equity and economic well-being. Increasingly, leaders in the community and in council are calling for the City to adopt a Vision Zero mandate.

And while this Case-in-Point supports Sweden's Vision Zero, it is important to carry out focus groups and round-table discussions to identify the vision that best fits the unique character of Winnipeg and its residents. How Vision Zero is realized in practice in Canada is still being determined. Programs will need to be flexible and responsive to changes in the industry, "such as the legalization of marijuana and the growth of automated and connected vehicles and infrastructure" (Peterniak et al. 2016, 21).

As this Case-In-Point has explored, the goal of zero traffic fatalities and serious injuries is only achievable when the whole city is involved. Vision Zero is fundamentally a partnership between city departments, other public agencies, community groups, citizens and occupants. By working with the police department, MPI and other stakeholders, Winnipeg can save lives, prevent severe injuries, increase physical activity, while also benefiting the environment, the local economy, and advancing equity. As outlined above, these objectives can be achieved through simple strategies, such as:

- Create a vision in human terms;
- Actively engage community;
- Coordinate existing committees, and;
- Conduct research and development.

Achieving a urban safety program such as Vision Zero is a nuanced but critical goal; an acknowledgment that any deaths on civic streets is unacceptable. Building on the momentum from the national Vision Zero campaign, and cities like Toronto and Edmonton that have adopted local policies, Winnipeg is on the path to transform its streets into safe spaces for everyone.

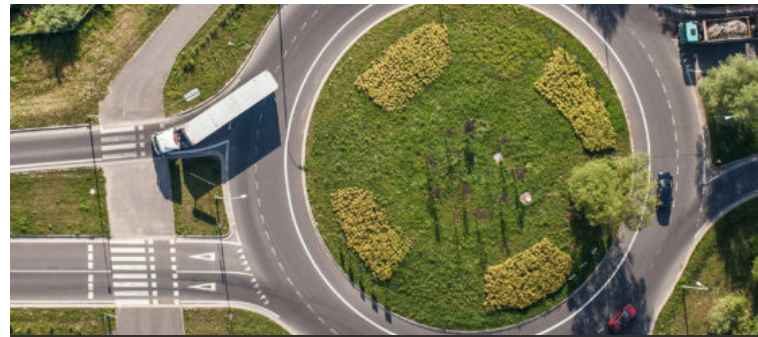


FIGURE 8 | Engineering Possibilities for Safer Streets

ACKNOWLEDGEMENTS

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