

EXECUTIVE SUMMARY

The purpose of Smart Moves is to provide the City of Vaughan (“**Vaughan**”) with a set of key performance indicators (“**KPIs**”) to assess the progress of the MoveSmart Mobility Management Strategy (“**MoveSmart Strategy**”). The KPIs listed in this report are based on research on Vaughan, other domestic and international jurisdictions, and academic literature. The twenty KPIs proposed for Vaughan are informed through a road safety and equity lens and best suited for Vaughan’s context to measure the future success of the MoveSmart Strategy.

How Vaughan Moves is auto-oriented but municipal policies seek to improve sustainable transportation networks and intensify residential land-use. Collision statistics, spatial analysis and news media analysis identified the following Vaughan contextual findings to inform the set of KPIs

- KPIs cannot rely solely on police-reported collisions.
- Intersections are the site of most collisions, including ones involving pedestrians.
- Quantifying collision data by mode, vehicle size, and age can highlight systemic barriers related to road safety.
- Mapping socio-economic information with collision data can help transportation planners and engineers make equitable and evidence-based decisions and justify decisions to residents.
 - Areas of concern include Fossil Hill and Alba Avenue, Ashley Grove and Windflower Gate, Promenade Shopping Centre, and Mosque Gate and Ahmadiyya Avenue.
- News media has been used by Vaughan to promote municipal traffic policies, support police investigations, and notify residents regarding delays and road closures.
- Vaughan residents have mixed opinions regarding the effectiveness of traffic calming initiatives and cycling infrastructure investments and KPIs can be used to inform residents on MoveSmart Strategy progress.
- Speed, impaired driving, and collisions involving children are urgent concerns for Vaughan residents, which are largely portrayed as an effect of poor individual behaviour, with enforcement being portrayed as an effective deterrent to these behaviours.

Risky Moves cause traffic collisions and injuries. A comprehensive literature review identified factors that can effectively decrease the risks of collisions and be measured directly and indirectly through KPIs.

- Systemic determinants of traffic injuries and collisions are more prominent than determinants based on individual behaviours.
- Vulnerable road users are at greater risk for traffic collision and fatality.

- There can be multiple compounding factors that increase a vulnerable road user's exposure to vehicles which increases their overall risk of injury and fatality.
- Designing intersections and roadways for the maximum protection of vulnerable road users has been a successful strategy for improving overall road safety.

How Cities Move is by enhancing road safety and implementing mobility strategies like the MoveSmart Strategy. A comprehensive jurisdictional review of interviews and document analysis identified KPIs for each of the MoveSmart Pillars and the unique features that municipalities provide in their strategies.

- Suburban municipalities are likely to be car-dependant and there is a recognition of a paradigm shift or a new way of thinking. Both encouraging sustainable modes of transportation and creating a culture of road safety requires refocusing attention to non-vehicle road users.
- Many strategies contain long- and short-term goals and have their own “pillars” organised by themes, policies or focus areas and it is common to identify which department or staffing position is responsible for each activity or metric.
- Data-driven models can be proactive in addressing road condition deficiencies. When used in tandem with resident complaints, it can address equity concerns. A data-driven model can make more information available to be shared with the public on a periodical basis. At the same time, it is important to recognize resident lived experiences when addressing inequities and systemic barriers related to transportation.

Smart Moves are twenty measurable, meaningful, realistic, and understandable KPIs to measure the short-term and long-term progress of the MoveSmart Strategy (See Table i.i).

- All KPIs work together using a combination of outcome and output KPIs
- With measures to track progress and publicly share through transparency and accountability, it is possible that measures will trend in an undesirable direction.
- Data availability should not limit KPI adoption especially for demographic information of vulnerable road users and one way to address data availability concerns is through collaboration and partnerships































	Nine outcome KPIs measure the effect of Vaughan's transportation system
	Eleven output KPIs measure tangible projects and programs administered

Table i.i: Twenty Smart Moves for the MoveSmart Strategy by pillar and by outcome and output KPI.

Key Performance Indicator				
Rate of killed/seriously injured per 100,000 population				
Rate of killed/seriously injured per 100,000 population at intersections				
Number of engineering improvements installed in high-collision areas				
Number of community presentations given				
Number of in-service road safety reviews completed				
Number of engineering improvements for standalone active transportation projects completed				
Number of automated enforcement cameras installed				
Number of community safety zones implemented				
Percentage change in high speeds				
Number of streets with posted speed limit of 40 km/hour or below				
Curbside parking utilisation rate				
Average commute time by transportation mode				
Vehicle kilometres travelled per capita				
User perception of walking, cycling or transit as a transportation option				
Percentage of students using active transportation to school				
Percentage of residents with access within 500m (or 10 minutes non-auto travel time) from bicycle route and transit network				
Mode shares for all trips				
Kilometres of new, protected bicycle infrastructure constructed each year				
Number of data collection and analysis reports completed within one year				
Number of active transportation volumes counts administered				

Moving Forward is a set of recommendations to enhance the MoveSmart Strategy in the following ways:

- 1) Incorporate specific and actionable measures, responsible partners, and a theory of change, in ways that integrate social, environmental, and financial sustainability.
- 2) Describe how equity is understood in relation to road users, equity deserving populations, and the City of Vaughan's decision-making and capital expenditure process.
- 3) Limit the use of information-oriented public education campaigns.
- 4) Commit to Vision Zero language and terminology within the MoveSmart Strategy.
- 5) Support, integrate, and evaluate mixed land-use development policies which aim to decrease overall vehicle kilometres travelled of Vaughan residents.