

# USING DATA TO DRIVE road system decisions



MAXIMUM  
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## You need data to:

- develop evidence-based, strategic and targeted interventions
- make informed, equitable decisions
- evaluate quality and effectiveness of interventions
- gain buy-in from funders and other key stakeholders (e.g., policymakers)
- humanize the problem

## Data help identify

- high-risk collision areas (e.g., intersections)
- how populations are affected differently (e.g., pedestrians, low-income communities, seniors, people with disabilities, indigenous communities)
- frequency of risky driving behaviours (e.g., speeding, distracted driving, impaired driving)

To achieve zero serious injuries and deaths on our roads, Vision Zero plans should include strategies to collect and analyze data on a variety of indicators. These may include data on:

### Injuries

- Number of serious injuries

### Fatalities

- Number of road fatalities

### Collisions

- Number of collisions
- Collisions involving a pedestrian, cyclist or motorcyclist
- Locations of collisions
- Circumstances of collisions

### Video and/or automated data

- Near misses, traffic volume, speed data

### Active transportation

- Number of residents who use active forms of transportation (e.g., walking, cycling)

### Demographics

- Gender, age, race, socioeconomic status, new immigration, disability

### Climate

- Air quality

### Public transportation

- Number of residents who use public transportation

### Built environment infrastructure

- Number of kilometres of roads, streets, paths, transit routes
- Number of kilometres of bicycle lanes, cycle tracks, multi use paths, trails, traffic calming
- Pedestrian generators: proximity to schools, libraries, malls, hospitals

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## Linking data tells a more complete story. Data sharing opportunities:



**Law enforcement**  
(e.g., collision reporting, traffic offences)



**Local government departments**  
(e.g., data from Parks and Recreation, Maintenance, Public Transit, Urban Planning, Environmental Services)



**Insurance companies**  
(e.g., claims)



**Public health**  
(e.g., demographics, physical activity, injuries, deaths, equity indicators)



**Hospitals**  
(e.g., emergency visits, hospital admissions, trauma cases)

## Data gaps and solutions

As road safety advocates we need to co-ordinate our efforts to address the gaps in our data and continue to look for new and innovative ways to collect and use road safety data.

### Gaps

The data currently being collected lack specificity, detail and frequency that could inform decision making.

Existing openly accessible data sources do not provide sufficiently detailed information on location and who is involved in collisions, and underreport certain types of collisions.

Data collected by individual organizations and government are often kept separate, not shared widely and are not harmonized.

### Solutions

To obtain quality, individualized data at the local level, municipalities need to invest in new technologies to collect and analyze collision data in real time. Exposure data (e.g., time spent cycling, kilometers driven) is needed to put data in context.

Reporting should be enhanced to capture demographic data and capture pedestrian and cyclist incidents that do not involve motor vehicles (e.g., a person thrown from their bike after hitting a pothole).

A centralized and well-maintained database of road-safety-related information is needed to make use of the available information more efficiently and effectively.