About Compass

Compass IoT is a Connected Vehicle data aggregator. Western Australian councils have access to Compass data for free under a state-wide licence with Main Roads Western Australia.

Compass' Road Intelligence platform uses Connected Vehicle data to provide insights about road networks. The software provides proactive, scalable, and passively collected insights to minimise reliance on hardware-based traffic data collection methods. It is used to solve complex transport problems across Road Safety, Network Operations, Asset Maintenance, Freight, Local Area Traffic Management, and Data and Analytics.



A connected vehicle has several sensors and picks up a variety of data points

The raw data is sent to the cloud where it is processed and cleaned.

Data is then fed through the Road Intelligence platform.

What Data is Avaliable?

Users can select any section of a road, compare roads, compare dates and times, and view historical data for any selection from mid-2020 onwards.

Data variants include:

- Vehicle Class (i.e., Car, LCV, HCV)
- Latitude and longitude
- Vehicle ID
- G-forces
- Speeds
- Harsh braking and accelerating
- Harsh swerving
- Make and Model
- Travel Time

In addition to our self-service platform, we also have a team of data scientists that provide custom data and dashboard outputs for unique use cases.

Get Access

All Western Australian councils can access Compass Road Intelligence at no extra cost as part of a state-wide license with Main Roads Western Australia.

Scan the QR code to organise access for your council.



Use Case: Identifying Rat Running in Local Streets

Ku-ring-gai Council used origin-destination data to understand where drivers taking shortcuts through residential areas.

Specifically, they wanted insights into:

- Do vehicles use one or more shortcuts when travelling from Clive St to Archbold Rd?
- Which shortcuts are the most used as a percentage of traffic?
- Are there any other shortcuts used in this area?
- What is the time difference between using the shortcut and using the main road?
- What percentage of vehicles are using the shortcut versus using the main road when travelling between Archbold Rd to Clive St and vice versa?



The Origin-Destination study area

Based on this information, the council wanted to implement measures to reduce rat running.

Using Origin-Destination data, the Council found that 48.9% of people were using shortcuts in the morning peak across different local roads.

A large percentage of traffic that was meant to be using main roads was actually using the residential areas. The council also found there were significantly more drivers using local roads Monday to Friday compared to weekends. The Council used this information to inform traffic changes to the area.



Visualisation showing the percentage of drivers using Moore St rat run path during PM Peak. 53% of traffic used this route.

Use Case: Creating Safe Routes to School with Speed Data

Sunshine Coast Council wanted to measure the impact of retrofitting speed cushions at a pedestrian crossing on driver speeds.

Specifically, they wanted to measure changes in vehicle speeds before and after the installation to create a safe route to school. Sidelines Traffic conducted the speed analysis on behalf of the Council to align the crossing with Safe Systems.

The crossing is located on Kalana Rd in Warana, in a 60km/h zone, en route to a local primary school. The cushions were retrofitted in January 2024.



Before the installation, Compass data indicated that average speeds at the crossing were 46km/h in both directions. The 85th percentile speeds were 59km/h westbound and 55km/h eastbound. At these speeds, there was a 95% likelihood that a child would be fatally injured if struck by a vehicle.

After the installation, speeds reduced by as much as 52%. The 85th percentile speed dropped to 30km/h westbound and 31km/h eastbound. The likelihood that a child would be fatally injured if struck by a vehicle reduced to less than 25%.





Read more about Compass Connected Vehicle data on our Learning Hub: <u>support.compassiot.com.au/en</u>