EROAD

Speeding vs Travel time in Urban Areas

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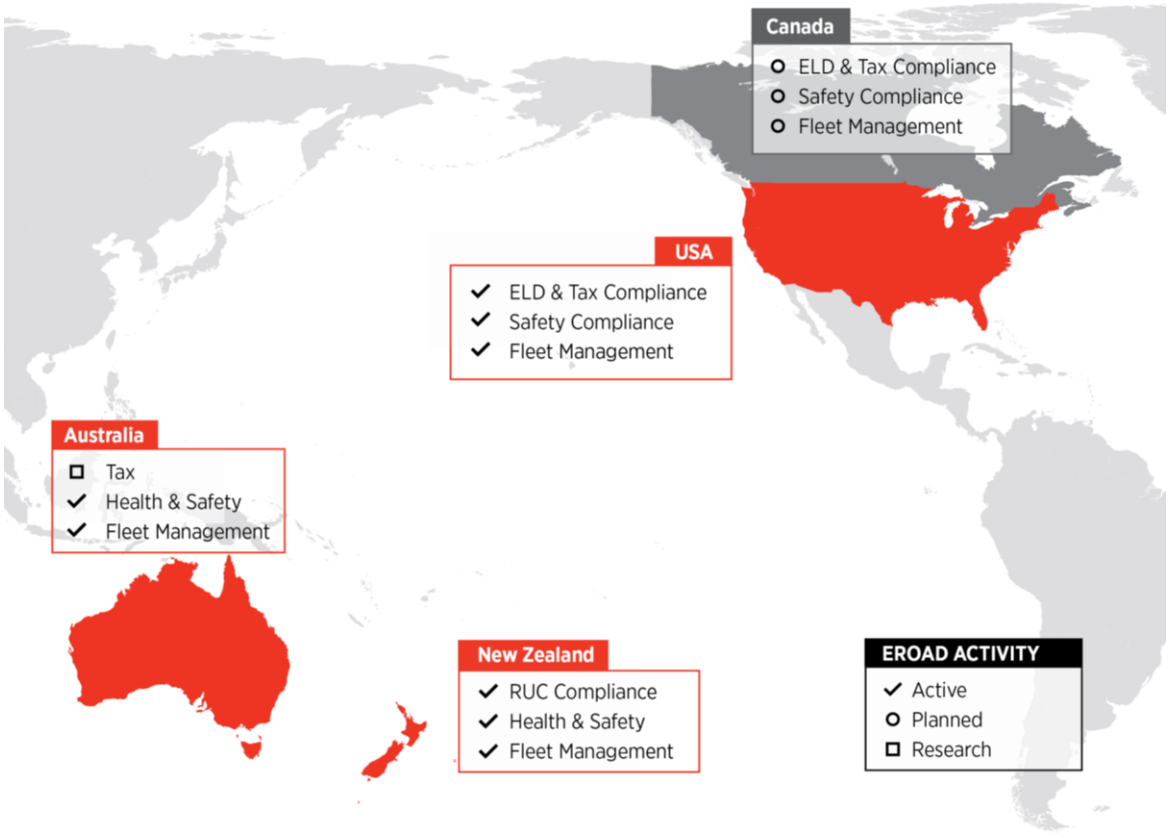
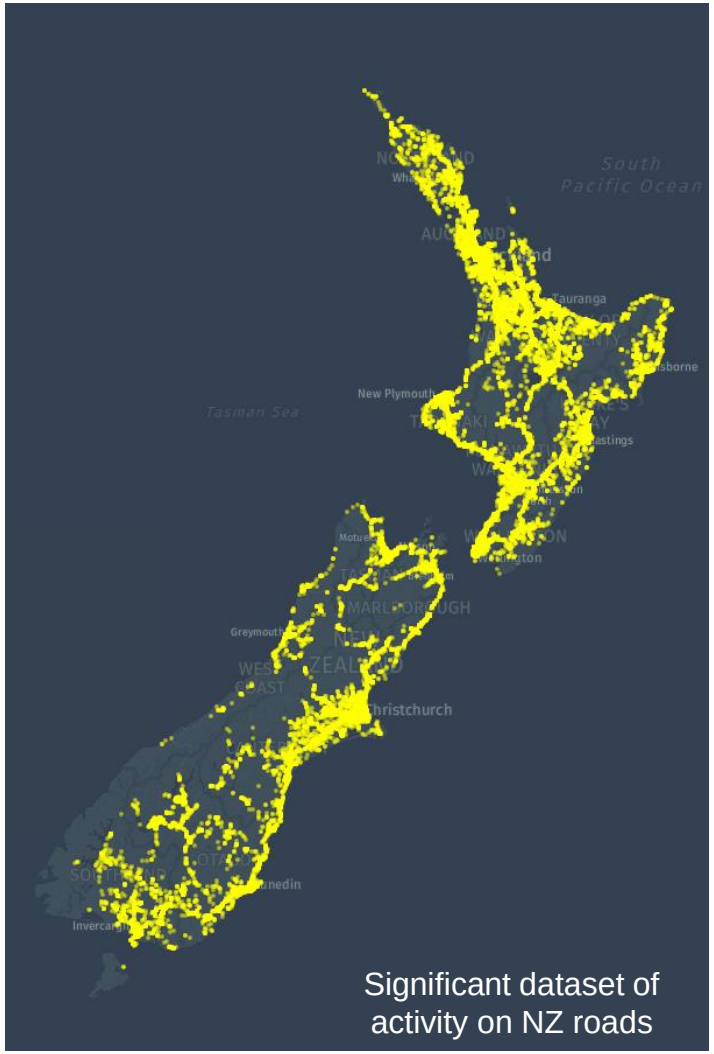
November 2018

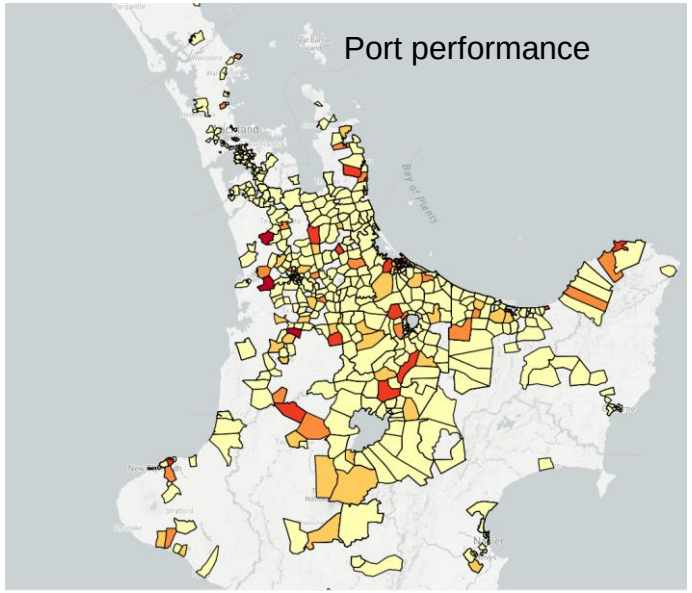
About EROAD

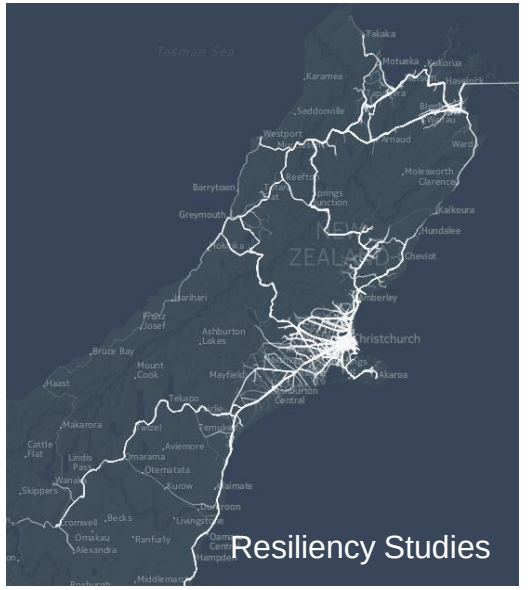
- **World First – EROAD was the first company** to implement a national network wide GNSS based eRUC solution (New Zealand – Feb 2010).
- EROAD developed **an integrated tolling and services technology** to provide RUC, compliance and commercial services with the same platform to lower overall client and delivery costs.
- **86,240 units** across three countries (September 2018)
- Collected more than **NZ$2.1 billion of Road User Charges** for New Zealand Transport Agency.

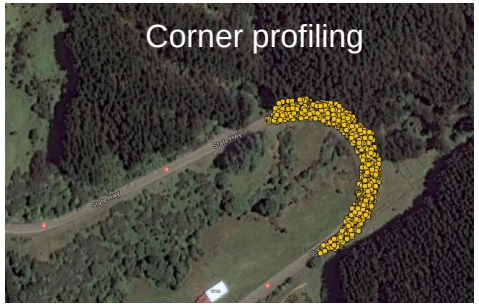


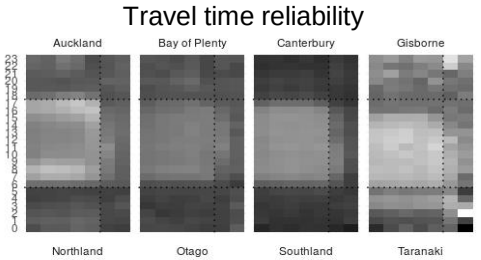
Downstream benefits

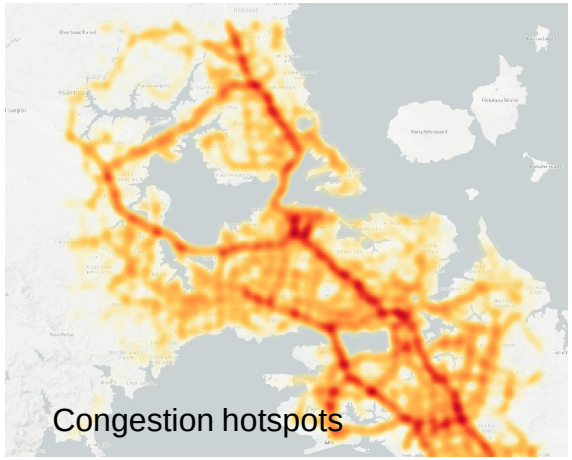


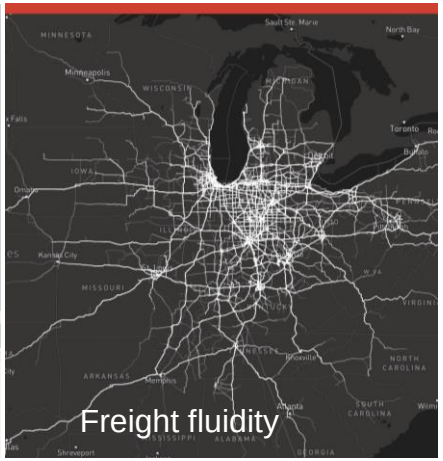


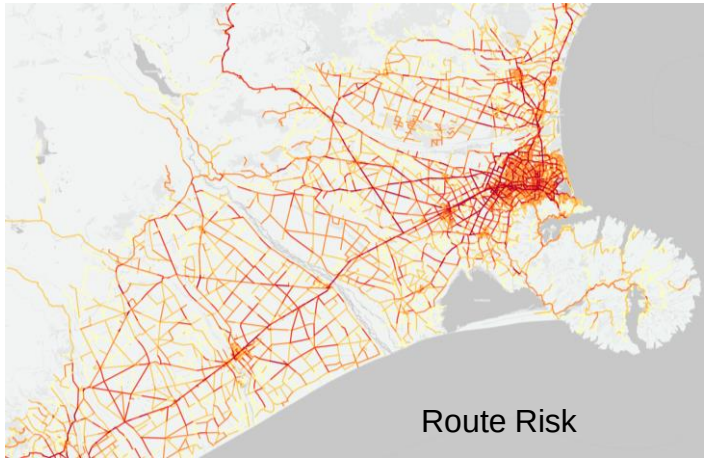




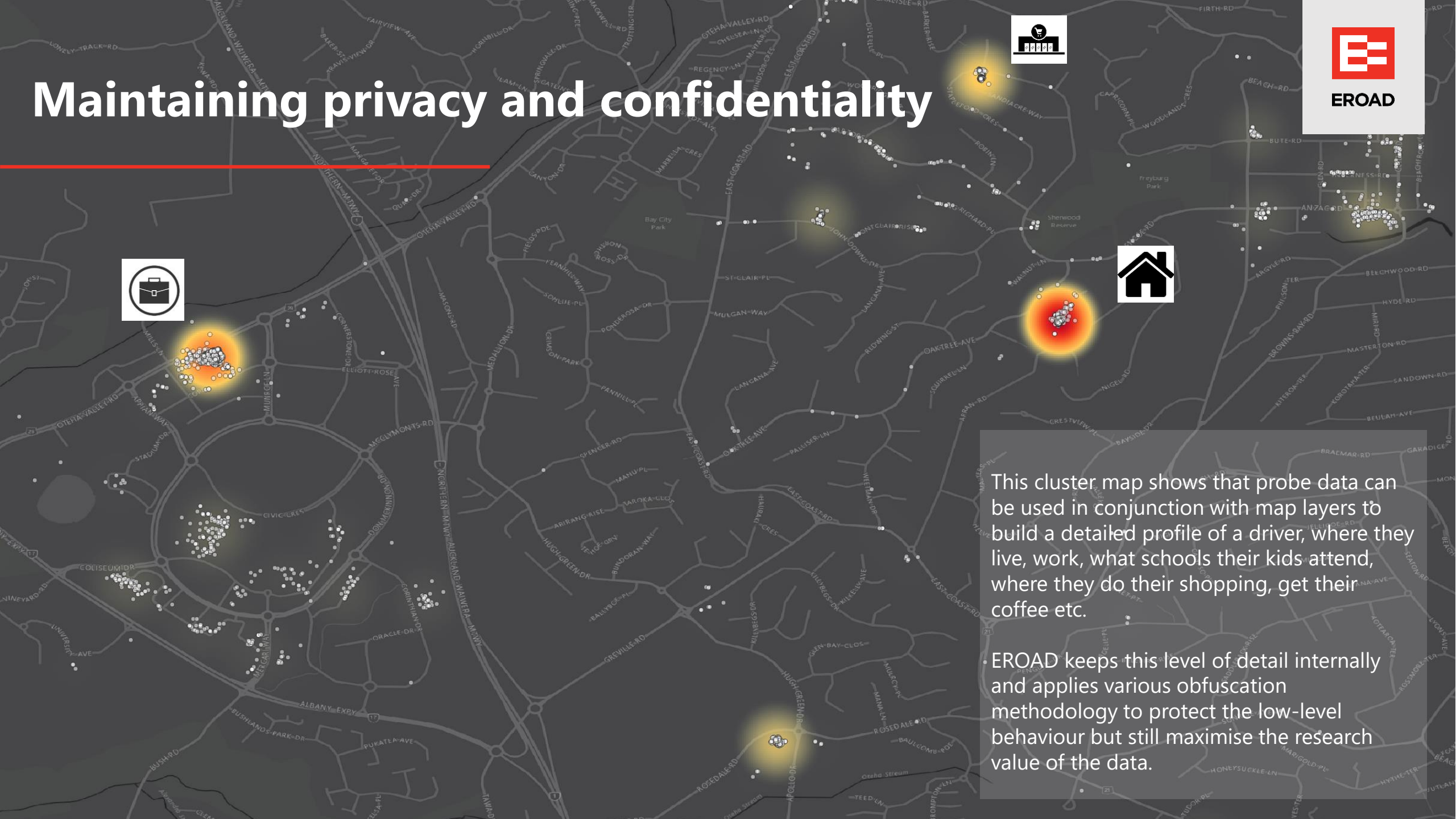








Maintaining privacy and confidentiality

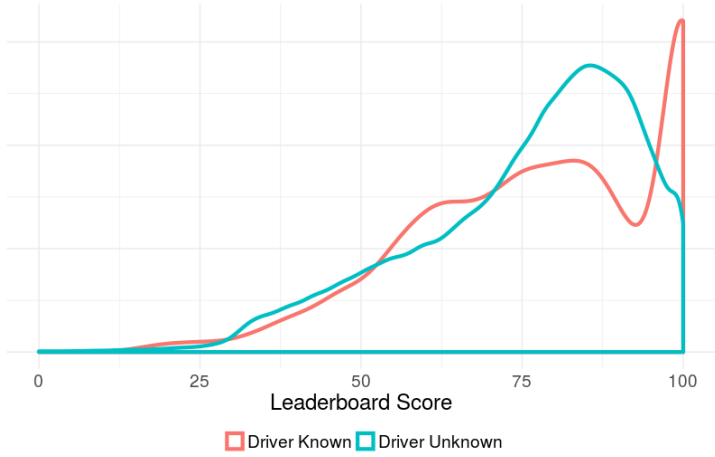


This cluster map shows that probe data can be used in conjunction with map layers to build a detailed profile of a driver, where they live, work, what schools their kids attend, where they do their shopping, get their coffee etc.

EROAD keeps this level of detail internally and applies various obfuscation methodology to protect the low-level behaviour but still maximise the research value of the data.

Improving Driver Behaviour

Posted Speed on our Ehubo enables drivers to self-coach their speeding



Driver ID encourages drivers to take responsibility and results in better leaderboard scores.

Rank	Vehicle Name		Trend
1	[redacted]	★★★★★	↗
2	[redacted]	★★★★★	↘
3	[redacted]	★★★★☆	→
4	[redacted]	★★★★☆	→
5	[redacted]	★★★★☆	↗
6	[redacted]	★★★★☆	↗
7	[redacted]	★★★★☆	→
8	[redacted]	★★★★☆	↗
9	[redacted]	★★★☆☆	↘
10	[redacted]	★★★☆☆	↘

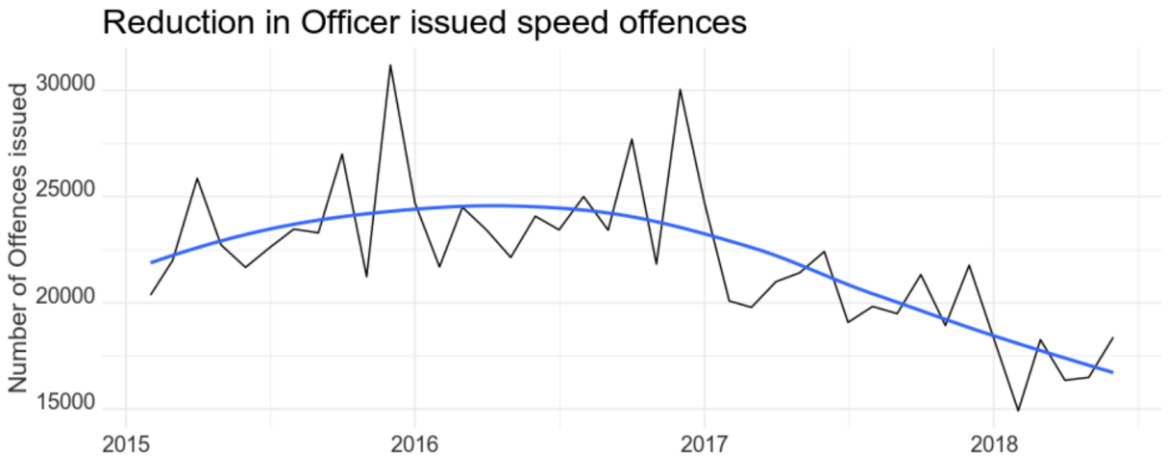
The Leaderboard enables operators to encourage better driving through positive reinforcement

Organisations that use EROAD's driver behaviour analytics have 38% fewer speeding events than organisations that don't view them at all.

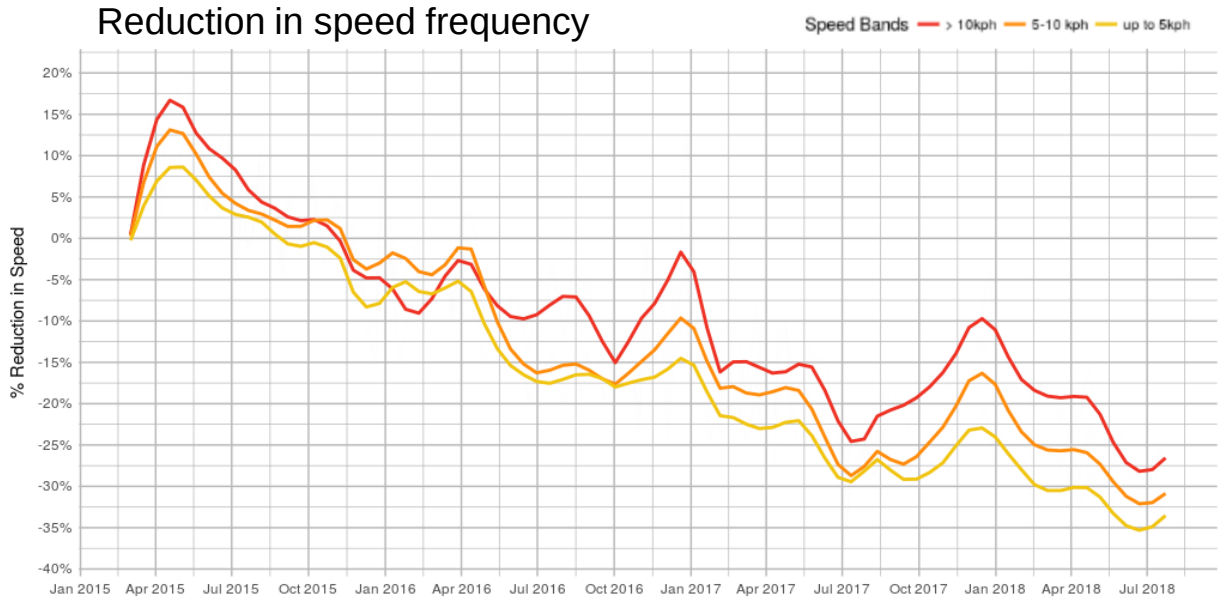
Empowering operators to implement a road risk management system to improve driver behaviour across the board.

Speeds are reducing

- Officer issued speed offences down 21% (last 12mo vs prev 12mo)
- EROAD Identified Speeding frequency (events per 100km) reduction of 26%
- Both trends show the seasonal increase around Christmas.



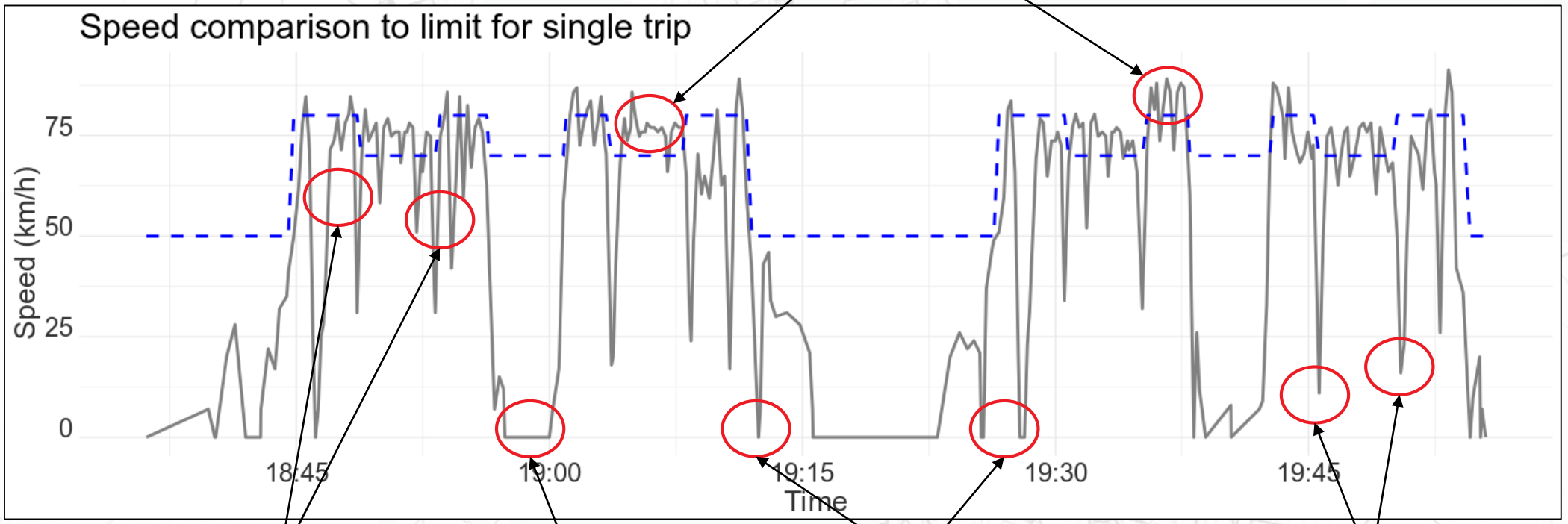
http://www.police.govt.nz/about-us/publication/road-policing-driver-offence-data-january-2009-june-2018



Auckland Speeding and Travel time

- 830,000 trips in Auckland Area
- Over 13,000 vehicles
- 28 million km combined distance
- 13,258 days of combined travel

Trip Analysis



Exceeding Speed Limit

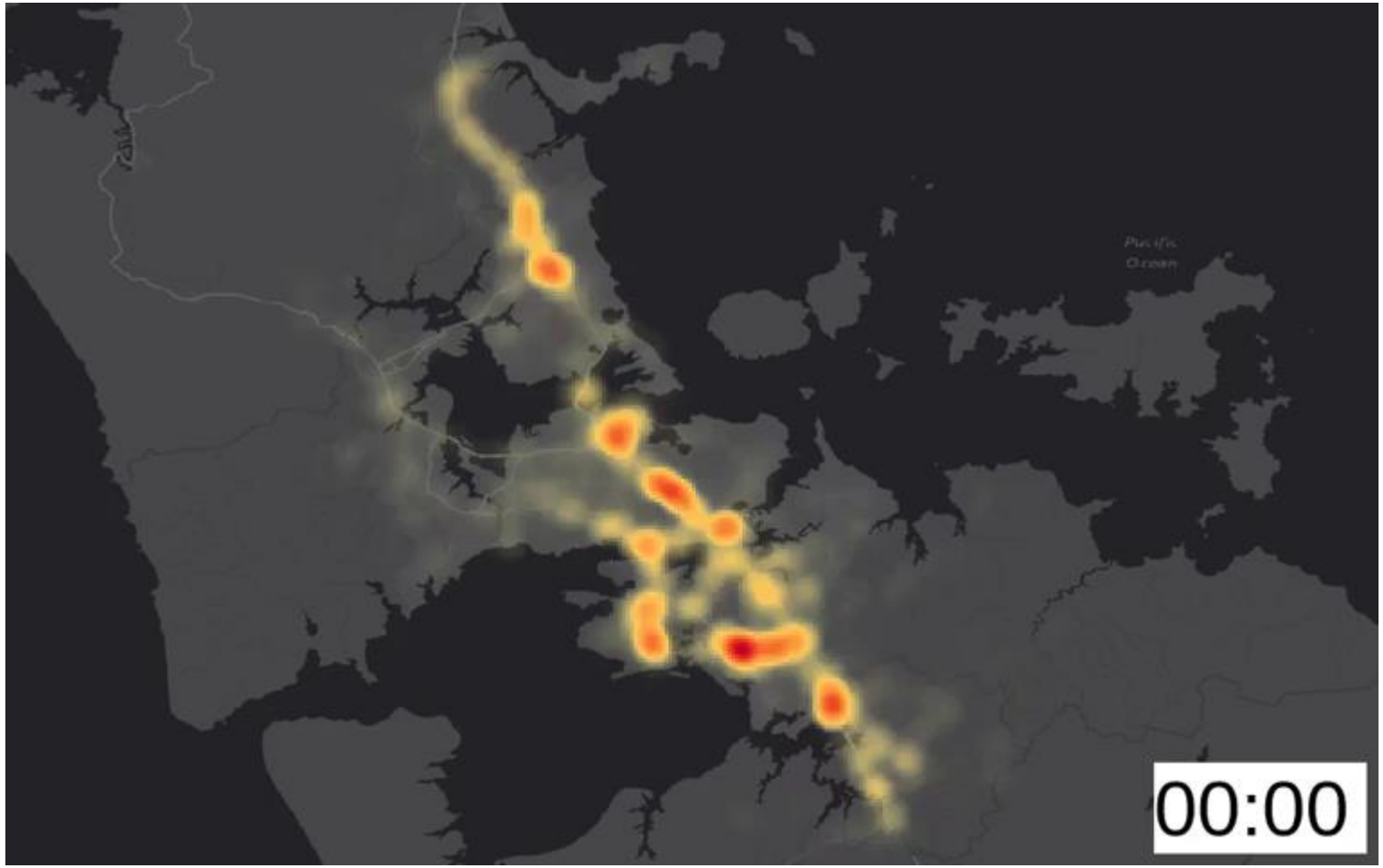
Congestion

Delivery

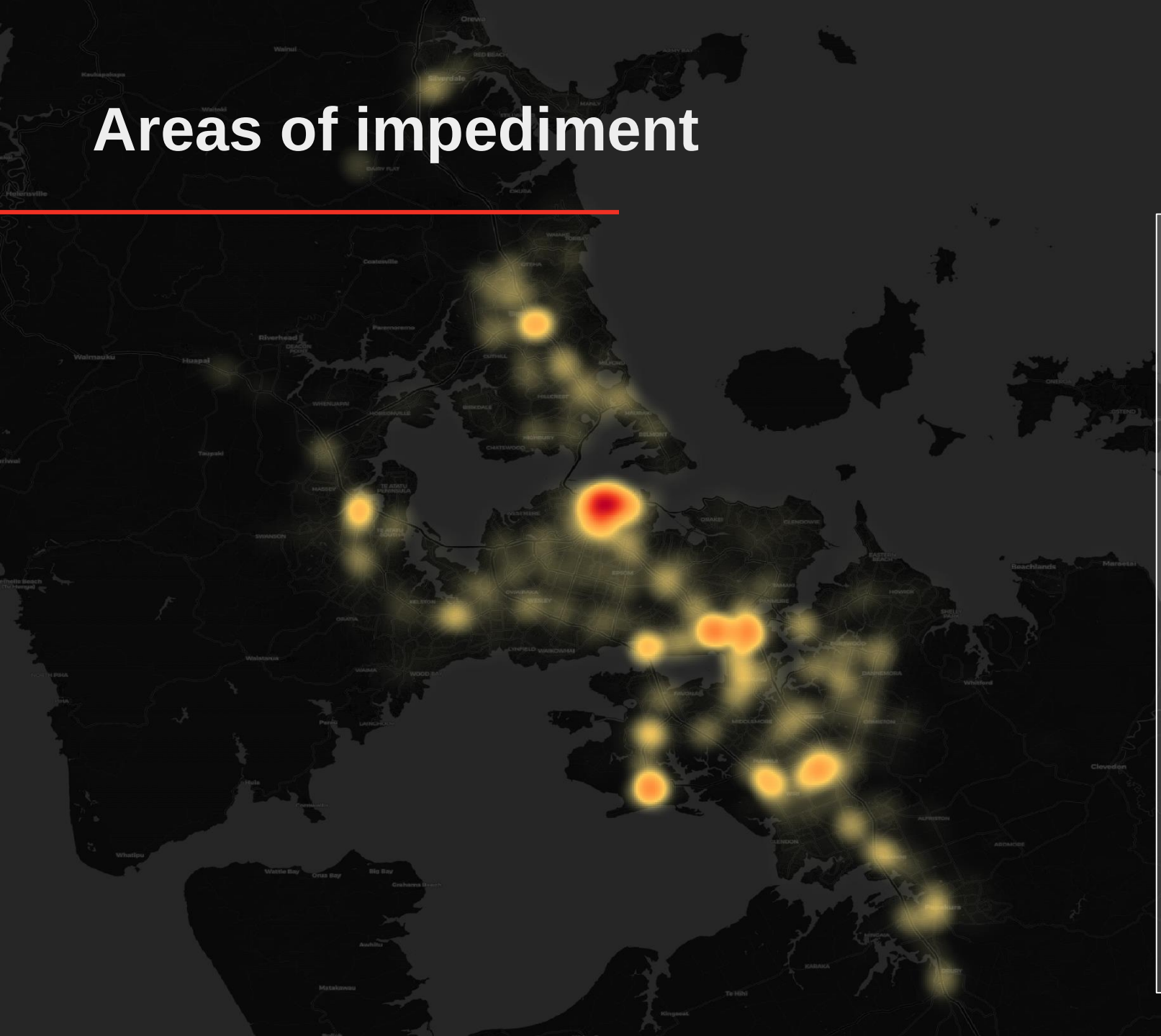
Stopped at Lights

Reduced speed when turning corners

Areas of Congestion



Areas of impediment



Cluster analysis to determine areas of frequent stoppage at intersections and traffic lights on the network.

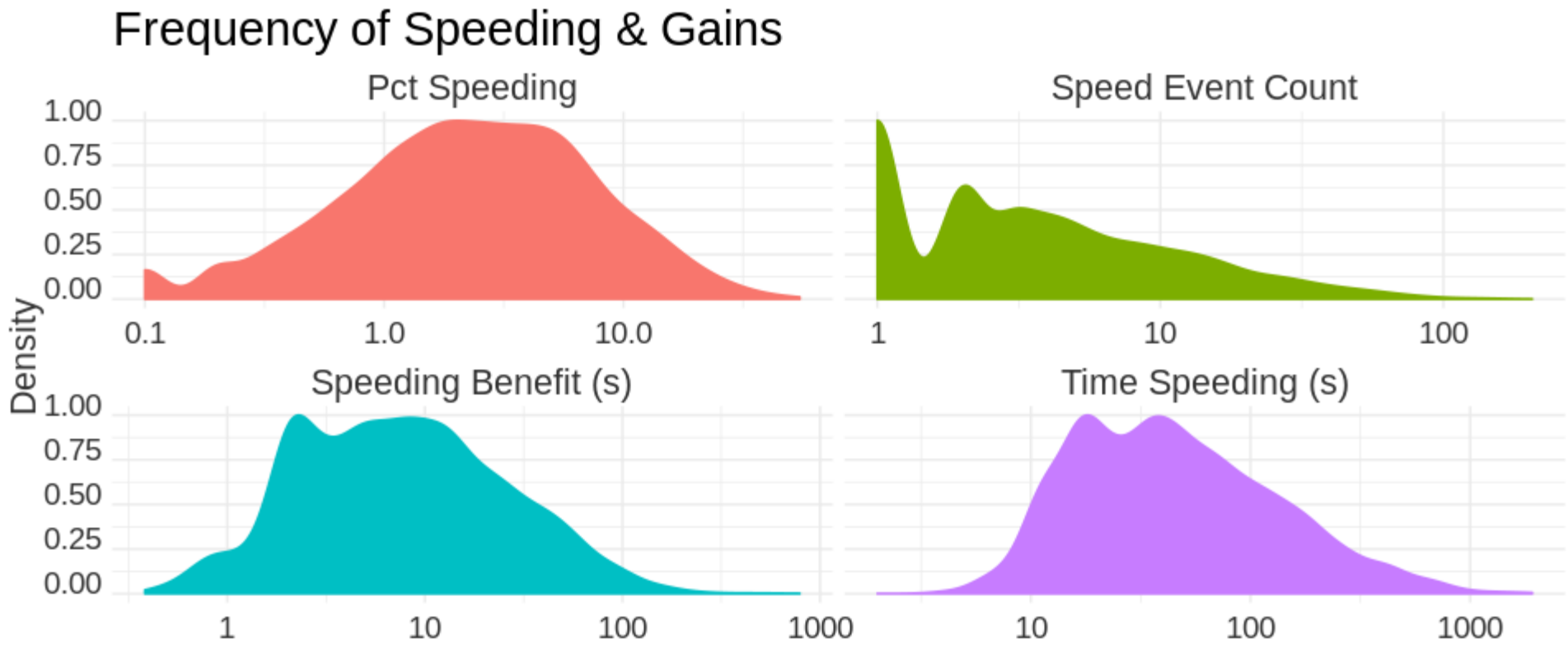
Ignoring areas of kerbside deliveries, or stops off-road.

On average vehicles stop 14 times on their route for an average of 6% of their trip time.

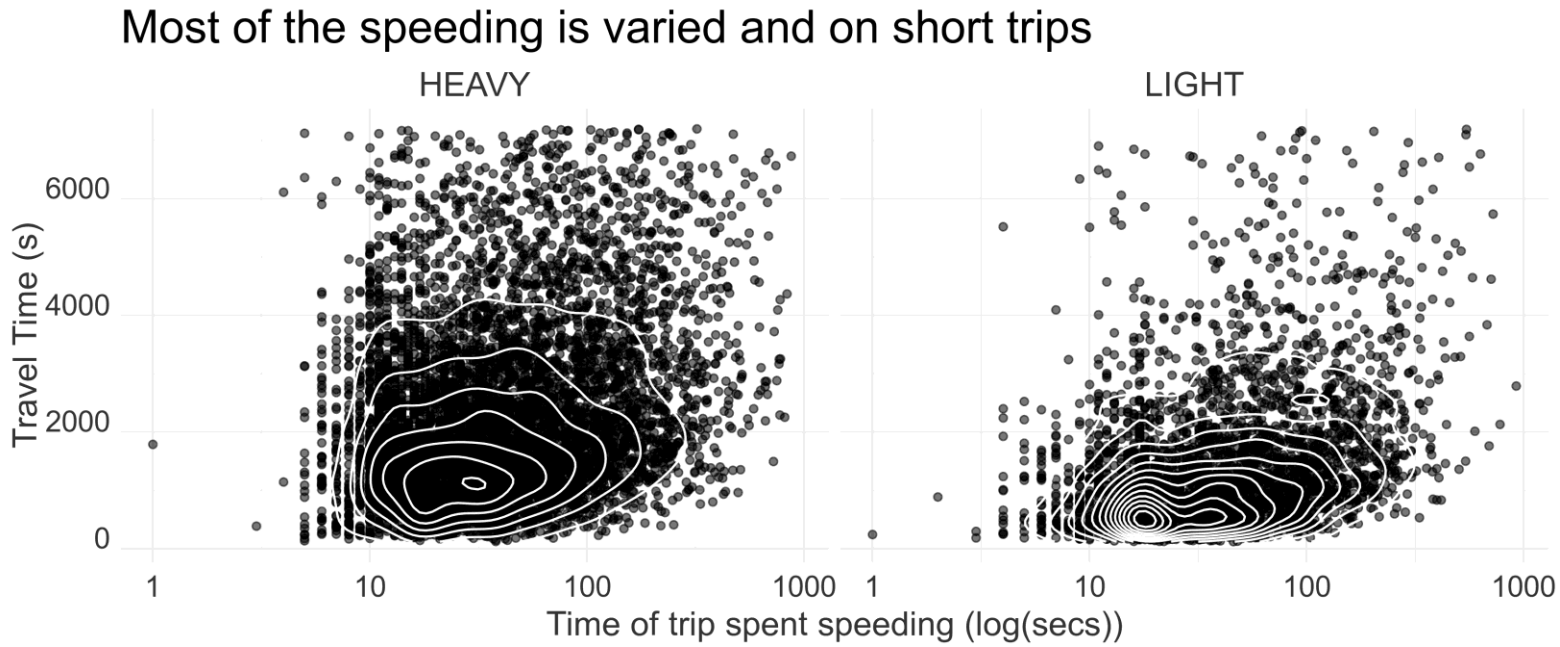
In one month 12,000 vehicles spent 751 days stopped at controlled and uncontrolled intersections.

Areas of Speeding

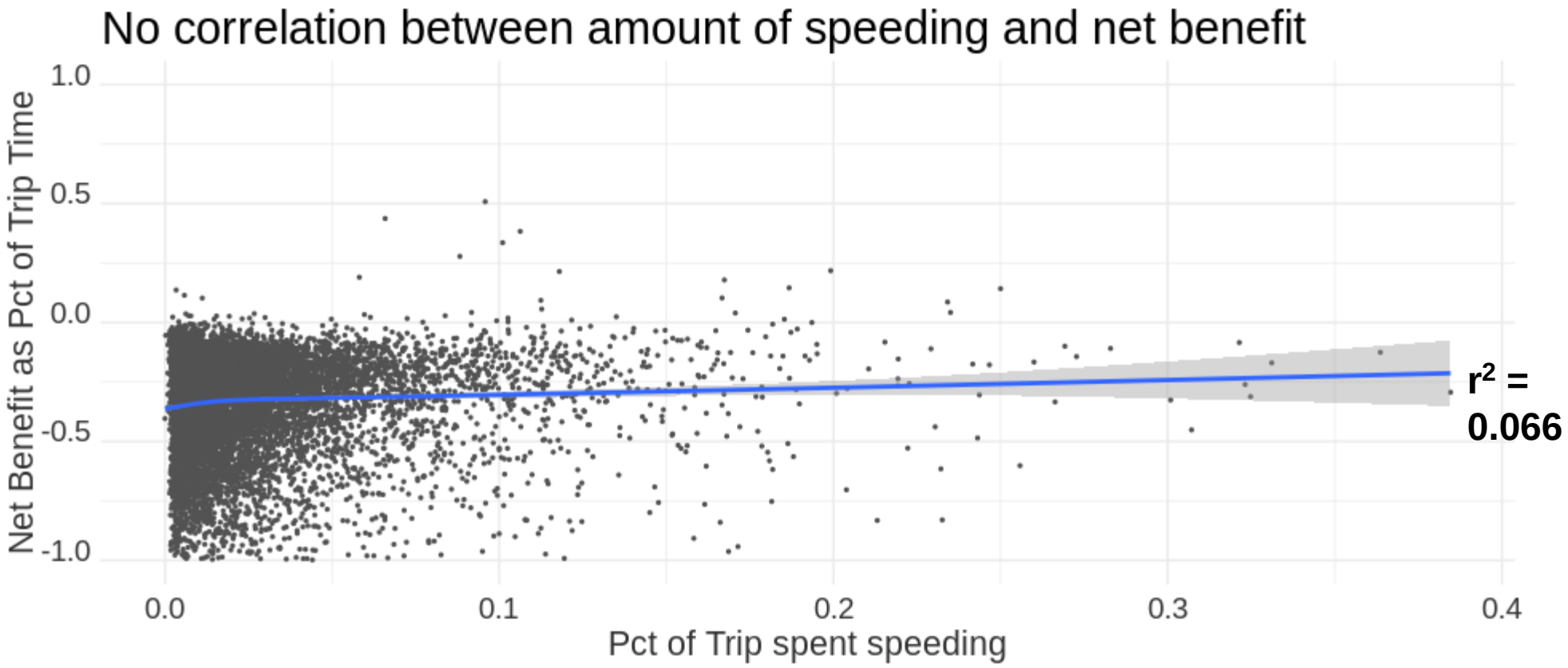
Results


Frequency of Speeding & Gains
Pct Speeding
Speed Event Count
Density
1.00
0.75
0.50
0.25
0.00
0.1
1.0
10.0
1
10
100
Speeding Benefit (s)
Time Speeding (s)
1
10
100
1000
10
100
1000

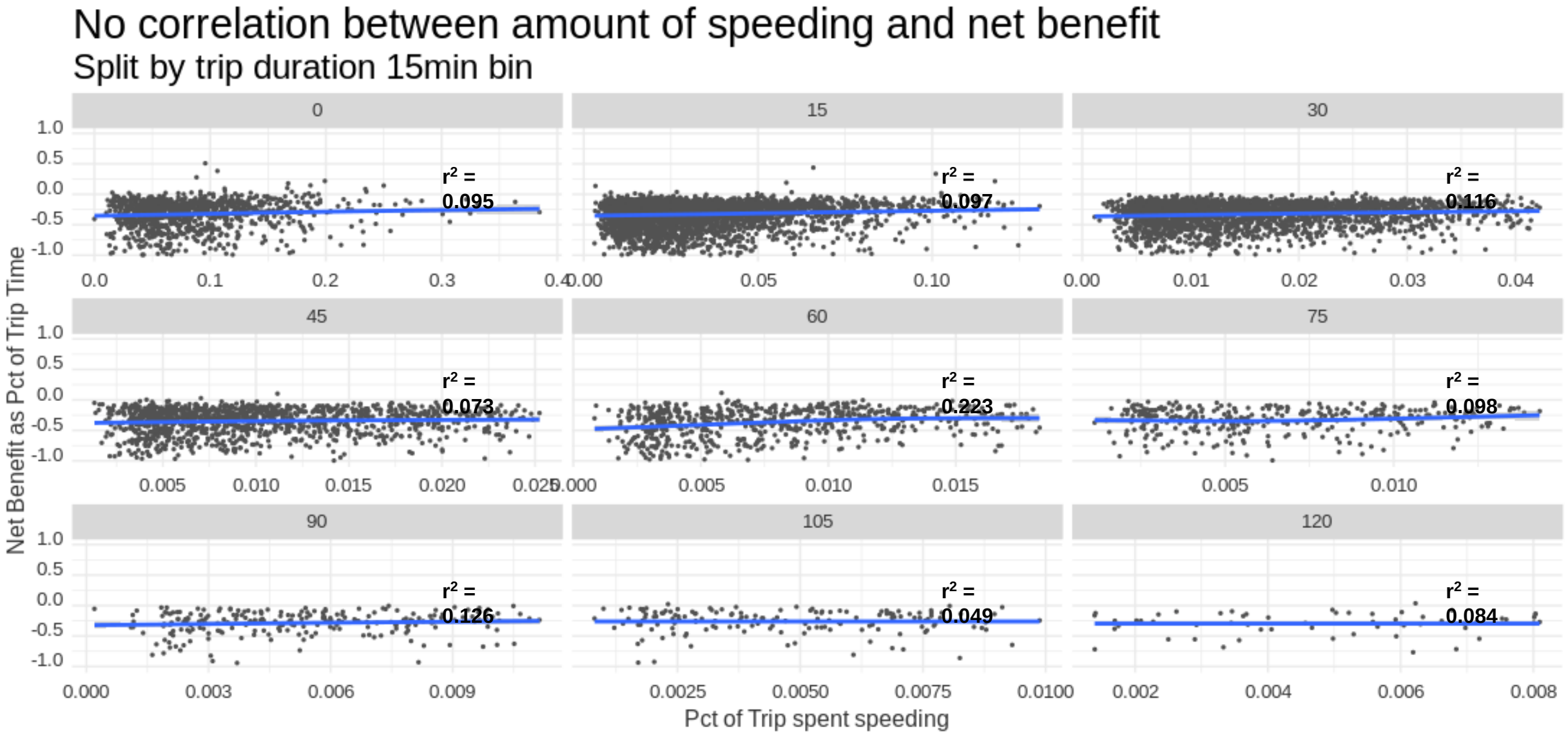
Speeding associated with shorter trips



No real world benefit to speeding



Longer trips = less speeding benefit



EROAD


Less speed
Less harm
New Zealand Government
Safer Journeys

THANK YOU

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