Serious Accident Leading Indicators: Protecting Vulnerable Users Through Artificial Intelligence

Cyclists and pedestrians are 12 times more likely to be seriously injured or killed for every kilometer they travel on New Zealand roads, compared to people in vehicles* - a figure that sadly is increasing as we encourage more residents and visitors to adopt Active Transport. Sadder still is the fact serious accident data has traditionally acted as the catalyst for change, enabling action only able to be taken after multiple serious accidents resulting in life-altering consequences for those involved – with the impact of interventions judged using the same criteria.

Representing one of the most significant advances in road monitoring technology in decades, 3D computer vision now uses AI to accurately produce leading indicators of serious accidents between vehicles and cyclists, escooters, and pedestrians.

Authorities can now quantify dangerous interactions at road spaces; understand the causes; plan remedial action; and validate the results; before accidents occur.

The platform employs IoT sensor networks to detect vehicle & active classes, speeds, paths, and trajectories in near real-time; both relative to the roadspace and other users. Video of conflicts and near miss incidents (blurred for privacy) are captured to identify root and contributing causes.

The data collected provides scientifically robust support to engage stakeholders and the community; identify corrective action; prioritise projects; justify costs; and importantly,validate outcomes – all without waiting for further accidents.

The UK's VivaCity Labs Co-Founder and COO Peter Mildon will demonstrate how the technology works, citing a growing number of Near Miss case studies for review and discussion.

(*www.ehinz.ac.nz)

Peter Mildon, VivaCity Labs Co-Founder and COO peter.mildon@vivacitylabs.com

Ben Rippingale, VivaCity Labs ANZ Business Lead ben.rippingale@vivacitylabs.com +61 (0) 429 116 555