TRIPS - A Year On: Progress, Insights, and the Road Ahead

Dr. Supun Perera
Senior Research Fellow
Institute of Transport and Logistics Studies (ITLS) | University of Sydney Business School
Email: michael.bell@sydney.edu.au

Prof. Michael Bell
Professor, Chair of Ports and Maritime Logistics,
Institute of Transport and Logistics Studies (ITLS) | University of Sydney Business School
Email: michael.bell@sydney.edu.au

Ben Wood
Partner,
Hadron Group
Email: ben@hadrongroup.com.au

Abstract

Land use-based trip generation data is vital for transport planning, influencing development assessments, infrastructure investments, and policy decisions. However, while this data is collected across various projects, Australia lacks a centralised system for data curation and standardisation. As a result, practitioners often rely on outdated, fragmented, or small-sample datasets, leading to inconsistent assessments and suboptimal decision-making.

The Trip Rate Information Processing System (TRIPS), co-funded by iMove CRC, TMR QLD, and the University of Sydney, aims to bridge this gap by developing Australia's first national land use-based trip generation survey database. TRIPS is designed as a data-driven analytical platform, integrating socio-demographic data, transport accessibility metrics, and land use variables to improve transport planning and forecasting.

At the AITPM 2024 National Conference, we conducted a workshop to gather industry insights on data gaps, system requirements, and practitioner needs. Since then, TRIPS has made significant progress, incorporating stakeholder feedback to enhance data structures, analytical tools, and user interface design.

This presentation will provide an update on TRIPS' progress, share early insights from collected data, and explore the next steps, including machine learning integration for predicting transport and land use trends. Attendees will gain a firsthand look at TRIPS, its practical applications in a real world case study involving trip generation calculations, and opportunities to shape this national resource for smarter transport planning in Australia.

This paper aligns with the 'smart data management and analytics' theme of the conference, emphasising TRIPS' role in enhancing transport data accessibility, usability, and integration for evidence-based decision-making.

Dr. Supun Perera

Supun is a Senior Research Fellow at the Institute of Transport and Logistics Studies (ITLS) at the University of Sydney. He is currently leading the TRIPS (Trips Rate Information Processing System) project which seeks to develop the first national database for curating multi-modal data from land use based trip and parking surveys in Australia. This tool will help transportation planners and engineers to better understand the movement demands generated by various land uses under different contexts.

Supun is a transportation engineer with over twelve years of industry experience in Australia. Before joining ITLS, he was an Associate Director in the Transport Advisory team at Urbis. He has also held senior transportation engineer/planner roles at Stantec and Transport for NSW. Supun is a co-founder of Fernway Engineering, a transportation engineering and planning consultancy.

Supun hold a bachelor's degree with first-class honours in Civil engineering from the University of Auckland in New Zealand, a master's degree in transportation engineering from the University of California at Berkeley, and a PhD in transportation network modelling from the University of Sydney.

Prof. Michael Bell

Michael Bell is the Foundation Professor of Ports and Maritime Logistics in the Institute of Transport and Logistics Studies at the University of Sydney. Prior to his commencement at the University of Sydney in August 2012, he was Professor of Transport Operations and Director of the Port Operations Research and Technology Centre (PORTeC) at Imperial College London. Having graduated in 1975 from Cambridge University with a BA in Economics, he obtained an MSc in Transportation (1976) and a PhD on Freight Distribution (1981), both from Leeds University.

Michael's research and teaching interests span from ports and maritime logistics, transport network modelling, traffic engineering, and intelligent transport systems. He is the author of many papers, a number of books (including *Transportation Network Analysis*, published in 2007) and was for 17 years an Associate Editor of *Transportation Research B*. In 2005 he founded the Port Operations Research and Technology Centre (PORTeC), a virtual centre spanning both Civil Engineering and the Business School dedicated to research and consultancy in the field of ports and maritime logistics.

Ben Wood

Ben is a founding partner of Hadron Group, an economics and strategic advisory firm that started in 2019. Ben has a track record of leading engagements that involve diverse stakeholders and support different teams and organisations to effectively communicate and collaborate. His proactive approach to clear communication and stakeholder engagement, combined with his candour, drive optimal outcomes from the Hadron engagements he leads.