



Photo from Laura Cros on Unsplash

Our vision and mission

Transport is a major contributor to greenhouse gas emissions and accounts for 18% of emissions in Australia. The transition to net zero transport is essential if Australia is to achieve net zero emissions by 2050.

Evidence demonstrates that land use patterns, infrastructure investments and supportive policies can dramatically influence the carbon intensity of travel. Managing reliance on private cars will also be critical, particularly with new transport behaviours emerging from Covid-19 disruptions.

Our research aims to reduce the use of fossil fuels in transport through better policies and technologies.

Our approach

Travel demand management is a sustainable transport strategy that can reduce the amount of travel we do. University of Sydney brings together expertise from engineering, business, planning and science in order to analyse transport demand and identify ways to reduce costs and emissions.

Our research

A key Enabling Research Theme of the Net Zero Initiative (NZI) is 'Emissions Avoidance through Demand Reduction'. An important focus of our research in this space is the improvement of transport infrastructure and policies based on a better understanding of transport demand. Under the pillar 'Transport' our researchers are:

- Rethinking land use patterns in our cities so that we can work, learn, shop, socialise and be healthy without needing to travel as far, or drive at all.
- Designing algorithms to maximise the benefit of the next generation of shared and automated transport services.
- Investigating the factors – including the built environment, weather and disruption – that influence use of sustainable transport modes such as walking, biking and public transport.

Meet our research experts

Our interdisciplinary research team leverages outstanding capabilities and infrastructure. Experts working under this pillar include:

School of Civil Engineering

Professor David Levinson: Specialises in transport and land use.

Dr Emily Moylan: Specialises in resilience and reliability.

Institute of Transport and Logistics Studies.

Professor John Nelson: Specialises in public transport.

Professor Stephen Greaves: Specialises in active travel and micromobility.

Professor John Rose. Specialises in sustainable transport futures.

Professor Michael Bell: Specialises in sustainable logistics.

Professor Michiel Bliemer: Specialises in emerging mobility.

Dr Geoffrey Clifton: Specialises in public transport.

School of Architecture Design and Planning

Dr Jennifer Kent: Specialises in car dependency and the built environment.

A/Professor Somwrita Sarkar: Specialises in transport equity and urban science.

How your business will benefit

By partnering with us, your business will be able to:

- Collaborate with leading academic and industry experts from the University of Sydney to address the challenges faced by your business;
- Help shape the next generation of postgraduate students with skills relevant for your business needs;
- Host one of our talented PhD students, who will be placed in your business for up to one year; and
- Benefit (pending eligibility) for the Australian Government's R&D Tax Incentive Scheme.

Projects

Measurement of social impacts of the NSW Electric Vehicle Strategy: we partnered with NSW Dept of Planning and Environment to check for unintended equity outcomes of the portfolio of electric vehicle policies. Outcomes will be incorporated into guidelines for monitoring and evaluating government programs.

SDG International Collaboration Grant on Big Data for Sustainable Cities: we partnered with IIT Bombay to develop a real-time urban expansion tracker for India using satellite imagery, machine learning and geographic data science.

Sustainable Urban Mobility Study for the City of Liverpool: we partnered with Arup and iMove CRC to assess the suitability of key transport and land use.

Contact us

For further information or to discuss in greater detail, please contact:

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