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2026 Annual Awards Showcase

Celebrating excellence in the Australian ITS industry

ISFO

5th International Symposium on Freeway and Tollway Operations

25 – 28 May 2027
Melbourne Convention &
Exhibition Centre
Melbourne, AUSTRALIA

Innovation Driving the Future of Traffic Management

The 2027 International Symposium will bring together operators, managers, traffic engineers, practitioners and researchers from around the world to exchange insights, showcase innovation, and explore the future of freeway and tollway operations.

Globally recognised for its advanced traffic management practices, Australia is proud to host the 5th Symposium and warmly welcomes delegates to the vibrant and dynamic city of Melbourne. Be part of this landmark event and help shape the future of traffic management.

Scan the QR code
to find out how you
can be a part of
the International
Symposium in 2027.

Co-hosted by

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TRB

Host State Partner
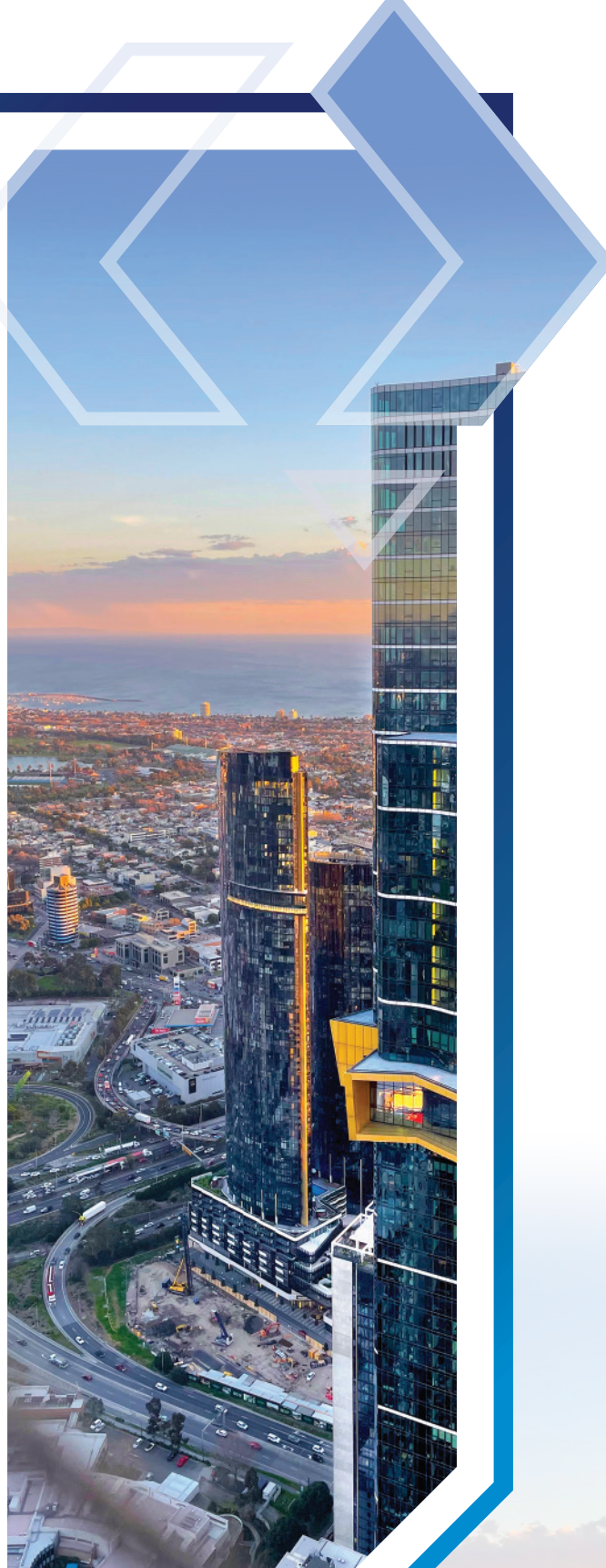
VICTORIA State Government | Department of Transport and Planning

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Hosted by

itsaustralia Intelligent Transport Systems

Content

Welcome from the Awards Committee Chair

Welcome to the ITS Australia Awards!

This year marks the 16th anniversary of the Awards – an incredible milestone for an event that continues to grow in prestige and impact each year. The ITS Australia Awards are the premier celebration of excellence across the intelligent transport systems sector, bringing together innovators, leaders, and practitioners from across the country.

I am also delighted to welcome you to Melbourne – my home city and one renowned not only for its vibrant arts and coffee culture but also for its extensive tram network, the remarkable new Metro Tunnel, West Gate Tunnel and, the continuous investment in innovation and infrastructure which perfectly reflects our industry.

For the third consecutive year, I had the privilege of chairing the Awards Committee. It has been a joy working alongside my fellow judges to review the exceptional calibre of submissions. Across the 29 finalists in our six general award categories, you will see outstanding innovation, collaboration, and creativity applied to Australia's transport systems, driving a future that is safe, sustainable, productive, and accessible through technology.

This year, we are also proud to celebrate the second year of the **ITS Australia Woman of the Year Award**, complementing the prestigious **Max Lay Lifetime Achievement Award**.

I extend my heartfelt thanks to my 24 fellow judges – ITS leaders from commercial, government, and academic sectors – whose volunteer efforts were essential in fairly and meaningfully evaluating all submissions. I also sincerely thank our major sponsors for their generous support: Victorian Department of Transport & Planning as our Host State Partner, Transurban, iMOVE Australia, Daktronics, Amazon Web Services and Q-Free Australia as our Award Category sponsors and our Premium Sponsors Cubic, Main Roads Western Australia and Queensland Government's Transport & Main Roads.

As the Awards kick off another exciting year of activity for ITS Australia, I look forward to connecting with all of you at events nationwide as we collectively drive Australia's vibrant, innovative, and collaborative ITS community forward.

Dean Zabrieszach

Chair – ITS Australia Awards Committee /
ITS Australia International Ambassador
CEO – HMI Technologies / Ohmio Automation

Judging Panel

Adele Beachley
Executive Director, SCATS
Transport for New South Wales

Edward Beak
Acting Director, Mobility Policy and Insights
Queensland Department of Transport & Main Roads

Shane Bedford
Sales Manager, ANZ
INIT

Richard Delplace
Director Emerging Technologies
Federal Chamber of Automotive Industries

Alicia Dole
Director Transport Digital Solutions and Service
Victorian Department of Transport and Planning

Scott Fennelly
Director Realtime and ITS Operations
Main Roads Western Australia

Manuel Gonzalez Arrojo
Managing Director
SICE

Sebastien Glaser
Professor of Intelligent Transport Systems
Queensland University of Technology

Cassie Hames
Programmer – Transport
SAGE Automation

Trevor Hockridge
Partner AI & Data
Deloitte Australia

Chris Koniditsiotis
Advisor & Consultant
Chris K Phronesis

Graham Lawrence
Principal Account Executive
Amazon Web Services

Timothy Lim
Regional Head of Professional Services
Aimsun

Paul Marwick
Head of Transport and Addinsight
SAGE Group

Anita Matuszewski
General Manager Transport Technology
Transurban

Tim Mercer-Cook
Senior Engineering Fellow
Cubic Transport Systems

Associate Professor Dr Simona Mihaita
Leader of the Future Mobility Lab
University of Technology Sydney

Professor John Nelson
Chair of Public Transport
The University of Sydney

Professor Flora Salim
Deputy Director Engagement, UNSW AI Institute
University of New South Wales

Cristopher Surace
Consulting, Engineering Research
IAG

PaoYi Tan
Head of Automated and Emerging Technologies
National Transport Commission

Professor Hai Vu
Deputy Dean (Research) Faculty of Engineering
Monash University

Monique Williams
Project Director
Ventia

Felicity Williams-Lovegrove
Business Development Director ANZ
Yunex Traffic

Dean Zabrieszach
CEO
HMI Technologies / Ohmio Automation

Award Categories

CONNECTED AND AUTOMATED VEHICLE AWARD

Awarded to an organisation that has made outstanding contributions towards the deployment of connected and automated vehicles in Australia.

EXCELLENCE IN RESEARCH AND DEVELOPMENT AWARD

Acknowledges and congratulates R&D activity undertaken solely or in collaborative research programs that recognises an organisation for its groundbreaking transport technology, research, development or innovation.

EXCELLENCE IN TRANSPORT DATA AWARD

Awarded to an organisation to recognise its outstanding contribution in the use of transport data delivering outstanding outcomes for the community.

INTELLIGENT MOBILITY AWARD

Recognises an organisation or project that delivers innovative transport solutions offering outstanding mobility services for people and their communities.

SMART TRANSPORT INFRASTRUCTURE AWARD

Recognises an organisation for its technology innovation delivering excellence in transport infrastructure and network management.

YOUNG PROFESSIONAL AWARD

This award recognises an individual's passion and contribution to the Australian transport technology industry early in their career.

It includes sponsorship to attend this year's ITS Australia Summit, the leading transport and technology event in Australia. This Award is open to members only.

MAX LAY LIFETIME ACHIEVEMENT AWARD

This award honours a leader who exemplifies the highest standards in the ITS field and the organisations they have led. It celebrates champions of ITS's vision and its impact on the community. Named after Dr Maxwell Lay (AM), an ITS pioneer and advocate, the award recognises his significant contributions to road infrastructure, contract management and education.

ITS Australia congratulates John Gaffney as the recipient of the 2026 Max Lay Lifetime Achievement Award.

WOMAN OF THE YEAR AWARD

Recognising a woman's significant contributions to the ITS industry. This award acknowledges the historical underrepresentation of women in ITS and aims to highlight their growing impact. It complements the Max Lay Lifetime Achievement Award and celebrates women's achievements.

ITS Australia congratulates Distinguished Professor Fang Chen as the recipient of the 2026 Woman of the Year Award.

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Global Summit
2026

22–24 September 2026
Melbourne Convention &
Exhibition Centre

Program Topics

- Smart Infrastructure and
  Data Ecosystems
- Sustainable and Inclusive Transport
- Electric, Connected, Automated Transport
- Future Mobility
- Governance Frameworks
- Freight and Services

Shaping the Future of Connectivity

The ITS Australia Global Summit 2026 will explore approaches to accelerating smarter, safer, sustainable transport by leveraging the ever-expanding capabilities of technology.

Summit 2026 is where industry leaders come together to discuss cutting-edge themes and innovations driving transportation progress. Tackle the critical issues and help shape the future of transportation alongside government, industry and academic experts from around the world. Don't miss your chance to be part of these important conversations.

50 sessions

3 conference days

5 social networking functions

5,000+ social media followers

Connect with attendees

2,400 sqm exhibition space

Technical tours & demos

Onsite vehicle displays

700+ attendees

40+ exhibitors

National & overseas speakers
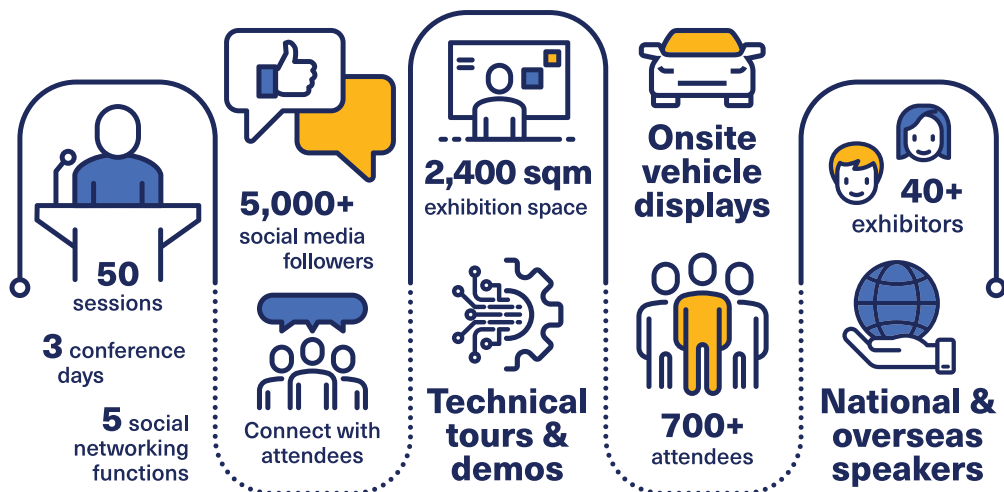
Contact ITS Australia for information on abstract submission, sponsorship and exhibition opportunities.
Website: its-australia.com.au | **Email:** admin@its-australia.com.au

John Gaffney Awarded Max Lay Lifetime Achievement Award

John Gaffney, one of Australia's most respected transport innovators and a global authority in Managed Motorways, is this year's Max Lay Lifetime Achievement Award recipient – ITS Australia's highest honour – recognising his outstanding and enduring contribution to intelligent transport systems.

Over a career spanning more than 30 years, John has fundamentally reshaped how urban motorways are planned, designed and operated in Australia. Few award recipients have had such a direct and lasting impact on day-to-day motorway operations and practitioner practice.

A defining achievement of John's career was his conception and leadership of a holistic managed motorway approach as part of the Monash–CityLink–West Gate (M1) Upgrade Project. This integrated model – combining coordinated ramp metering, network-wide operations, traveller information and data-led decision-making – has demonstrated sustained on-road success and now forms the foundation for all Victorian urban motorway projects.
The "Melbourne approach" has since been adopted by jurisdictions across Australia and recognised internationally as best practice.

John also led the development of the HERO dynamic coordinated ramp metering system, initiated in 2007 through partnerships with the Technical University of Crete and Queensland-based developer Transmax. HERO is widely regarded as one of the world's highest-performing ramp metering systems, delivering measurable improvements in safety, reliability, throughput and congestion management.

His leadership extended beyond delivery into knowledge sharing and capability building. John co-authored cornerstone guidance documents including the VicRoads Managed Motorways Framework, the Managed Freeways: Freeway Ramp Signals Handbook, and the VicRoads Motorway Design Volume Guide, translating complex traffic science into practical tools used nationally.

Through ARRB's Knowledge Transfer Program, he also led managed motorway workshops in Brisbane, Sydney, Perth and Adelaide, accelerating national adoption of these principles.

Awarded a Churchill Fellowship in 2016, John's work has influenced projects in the United States, including Colorado, Utah and California. Widely respected as a mentor and communicator, his legacy is evident every day in safer, more reliable and more productive motorway networks.

At the core of John's philosophy is the belief that Intelligent Transport Systems (ITS) are not merely about vehicles, roads, or traffic – they are a powerful enabler to enhance and better serve our communities. As he puts it, "To the next generation of ITS practitioners: the work ahead will be complex, the tools more responsive, the data richer, and the stakes higher." By working collaboratively, Australia stands poised to unlock a wave of transformative ITS opportunities – including innovations yet to be imagined.

Distinguished Professor Fang Chen Named 2026 ITS Australia Woman of the Year

This award is proudly sponsored by Q-Free Australia

Distinguished Professor Fang Chen, an internationally acclaimed leader in intelligent transport systems (ITS) and data science, has been named the 2026 recipient of the ITS Australia Woman of the Year Award in recognition of her exceptional career shaping the application of artificial intelligence and advanced analytics in transport.

Across her career, Professor Chen has delivered a series of landmark achievements that have fundamentally changed how transport systems are analysed, managed and optimised in Australia. As Executive Director of the Data Science Institute at the University of Technology Sydney, she built and led multidisciplinary teams translating cutting-edge research into operational tools used by transport agencies nationwide.

One of Professor Chen's most significant achievements is her leadership of the world's first comprehensive, data-driven model for evaluating train timetable robustness, developed with Sydney Trains. Applying machine learning to predict network-wide delay propagation in real time, the model has transformed operational decision-making and has since been adopted for Victorian rail operations, supporting over 4,000 kilometres of track and more than 13 million passenger journeys each week.

She has also delivered advanced disruption forecasting and resilience tools for regional rail networks through her work with V/Line Victoria, enabling operators to anticipate incidents, optimise responses and improve service reliability for regional communities.

Professor Chen's impact extends beyond rail. In collaboration with the Australian Energy Market Operator and Transport for NSW, she led the team that pioneered integrated transport-energy modelling to assess how electric vehicle uptake affects both road congestion and electricity demand—providing critical evidence to inform national infrastructure planning and policy.

Earlier in her career, Professor Chen played a pivotal role in delivering a world-first, multimodal congestion intelligence platform for Transport for NSW, integrating Opal, traffic signal, GPS and vehicle data to transform traffic management and travel time forecasting.

Her achievements have been recognised through multiple ITS Australia National Awards, including the 2025 Award for Data Excellence in Transport and ITS Australia Research Excellence Awards in 2014, 2015, and 2018, as well as her appointment to the ITS Australia Board in 2021.

Her contributions have also been recognised through national science and innovation honours, including the nation's Leading Science Award, Australian Museum Eureka Prize for Excellence in Data Science, the NSW Premier's Prize for Science and Engineering, the Australian Financial Review AI Award for Sustainability (2025), and multiple other awards.

Young Professional Award Finalists

This award is proudly sponsored by Transurban

Tahlia Kowald – Vix Technology

Tahlia is a standout Senior Software Engineer at Vix Technology, leading Android POS expertise across Vix and Kubapay. She drives the technical delivery of Vix's Flex software with an international team, contributing to major deployments in Europe and North America. Her achievements include expanding supported hardware from two to seven device models and enabling new fare media globally, significantly improving flexibility and accessibility for operators, agencies, and travellers.

Harrison Newitt

Harrison is a high-performing Junior ITS Engineer, rapidly establishing himself since completing the Graduate Program in 2024. He has contributed to major ITS upgrades and integrations, including MNCS improvements, OMCS development, control system upgrades, and leading a proof-of-concept computer-vision tool for pothole detection. Known for his proactive, hands-on approach and strong collaboration skills, Harrison is already delivering smarter, safer, and more resilient transport outcomes.

Kalan Ralph – Main Roads Western Australia

Kalan is an emerging leader committed to improving safety and resilience across Western Australia's transport network. As ITSA NextGens Co-Chair, he has elevated national visibility of regional transport challenges through the "Outback ITS" webinar series and represented young professionals at major industry events. At Main Roads, he champions youth engagement while delivering real network improvements, optimising Smart Freeway algorithms, automating ITS monitoring, and advancing research that links devices to the services they support.
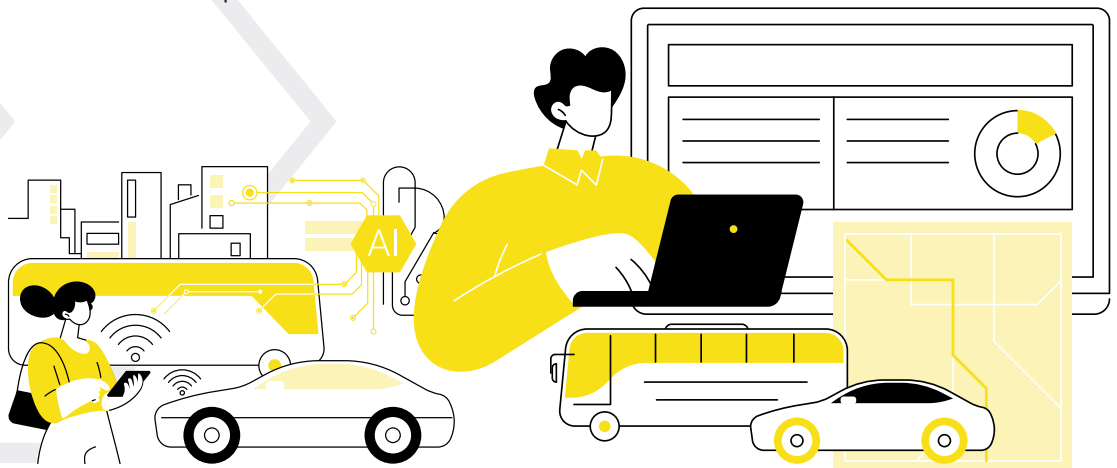
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Roads, Tolling & Tech 2026

25 – 26 March 2026
Swissotel, Sydney

Smart Roads, Smart Data

Australia leads in pioneering technologies across road operations. As the demand for infrastructure and software grows, ITS Australia's Roads, Tolling & Tech 2026 conference provides a hub for industry leaders to forge partnerships and gain insights. Explore themes like smart infrastructure, international perspectives, network optimisation, future tolling, and more. Join us for a conference that broadens horizons and connects you with the latest in road operations and technology.

Program Topics

- Major Project Updates
- Telematics
- Data Sharing
- Trusted Data, Security and Privacy
- Sustainable Smart Infrastructure
- Future Vehicles
- Charging Infrastructure
- Digital Transport
- Tolling and Transport Pricing
- Cooperative Networks and Communication
- Safety, Resilience and Sustainability
- Technology Innovations
- International Perspectives and Case Studies
- Curb Side Management, Payments and Parking
- Drones, Logistics and Freight
- Roadworks and Traffic Management
- Sustainable and Socially Responsible Procurement

REGISTER TODAY!

National Future Transport Summit

Category

Connected and Automated Vehicle Award

Submitting Organisation

National Transport Research Organisation (NTRO) – Centre for Connected and Automated Transport (CCAT)

The National Future Transport Summit, delivered by the Centre for Connected and Automated Transport (CCAT), was Australia's first national platform dedicated to achieving industry-wide agreement to maximise the benefits of connected and automated transport. Held in Brisbane in September 2025, the Summit brought together leaders from more than 100 organisations spanning government, industry, academia and community sectors.

The event was the catalyst needed to move beyond fragmented trials and establish a coordinated national approach, producing Australia's first nationally agreed recommendations for the safe, sustainable and productive deployment of future transport technologies.

The Summit focused on the transformative potential of connected and automated transport to improve safety, reduce congestion, strengthen supply chains and deliver more sustainable mobility solutions.

Through structured collaboration, it examined critical issues such as safety assurance, data sharing, regulation, infrastructure planning and community engagement, ensuring recommendations addressed both technical requirements and social legitimacy.

A defining outcome of the Summit was the development of a nationally endorsed blueprint for action, supported by durable cross-sector partnerships and informed by international engagement with key markets.

This blueprint provides a pathway to fast-track regulatory reform and technology deployment while embedding principles of accessibility, inclusion and sustainability. The Summit delivered consensus on the future of transport in Australia where others have failed.

Its success was grounded by the coordinated vision and collaborative spirit of the diverse, yet united delegation. The Summit's is template for cooperation and its outcomes guide coordinated action, accelerate innovation and build global competitiveness, ensuring that Australia is prepared for the safe, efficient and sustainable mobility systems of the future.

Smoother, Safer Motorway Merging with Collective-Perception-Based Speed Advice

Category

Connected and Automated Vehicle Award

Submitting Organisation

Transurban

Collaborating Partner

Toyota Motor Corporation Australia

On one of Melbourne's busiest motorways, Transurban and Toyota Australia are advancing connected vehicle safety through an innovative trial of Cooperative Intelligent Transport Systems (C-ITS).

The initiative targets one of the most challenging and high-risk driving scenarios – merging onto high-speed motorways – by delivering real-time speed guidance to drivers via Collective Perception technology.

The trial takes place on Melbourne's West Gate Freeway, where Toyota HiLux vehicles equipped with V2X communication capabilities receive live data from roadside infrastructure to help reduce crash risk and smooth traffic flow. Transurban's AI-powered cameras detect the real-time location, speed and heading of vehicles on the motorway.

This information is packaged into high-frequency Collective Perception Messages (CPM) and, alongside local high-definition maps, transmitted to vehicles approaching the freeway on-ramp using a geofenced cellular interface. Toyota's newly-developed Optimal Merge Speed Advisory (OMSA) C-ITS application then processes the CPM and map data to determine speed guidance for the driver, and delivers an OMSA notification via an in-vehicle display.

This is Australia's first trial to deliver Collective Perception Messages via cellular networks, and supports advancement in scalable C-ITS deployment. It bridges today's human-driven vehicles with tomorrow's connected and automated transport systems, demonstrating how smart infrastructure and vehicles can work together to enhance safety, efficiency, and sustainability.

The initiative reflects a shared commitment to innovation and road safety, and aligns with national transport technology strategies aimed at creating safer, smarter roads. It shows how smart infrastructure and connected vehicle technologies can complement existing traffic management systems to reduce crash risk and improve traffic flow.

By integrating with existing infrastructure and delivering scalable, transferable outcomes, this initiative showcases how cooperative technologies are already delivering meaningful safety benefits and paving the way for future mobility.

C-ITS for Motorcycle Safety: Start today, prepare for tomorrow

Category

Excellence in Research and Development Award

Submitting Organisation

La Trobe University

Collaborating Partners

Department of Transport and Main Roads
Victorian Transport Accident Commission
iMOVE

Motorcyclists face the highest fatality rate of any motorised road user group in Australia, accounting for 20% of road deaths while making up just 0.7% of vehicle kilometres travelled. In 2024, 278 riders died- the highest toll since 1989.

Despite advances in vehicle safety, motorcycle protection has lagged. This project demonstrated that Cooperative Intelligent Transport Systems (C-ITS) can help. It asked three questions: Is it technically feasible? Do riders want it? Does it work? Collaborating throughout the project with hundreds of riders, the team co-designed and tested warning systems- ranging from helmet audio to LED mirrors- via the world's first motorcycle simulator integrated with C-ITS, followed by live trials at Toyota's proving ground.

The results were clear: warnings improve reaction times, especially in scenarios like blind intersections or forward collisions. Warnings provided more time to react; for intersections, warnings doubled the distance riders had to react- from 15 metres to 30.

Participants reported greater awareness, improved confidence, and high acceptance- especially when they could customise how alerts were delivered. What makes this work so impactful is its feasibility. The technology is available today. Government road hazard data can power infrastructure-based warnings, while manufacturers can offer C-ITS enabled bikes and Bluetooth-integrated wearables and dashboards.

The project created a scalable, transferable model. Motorcycle safety doesn't need to wait for the future. It can start now.

FleetPREDICT

Excellence in Research and Development Award

Submitting Organisation

WHG Telematics Pty Ltd

Collaborating Partner

Sleep Advice Technologies SRL – SAT

WHG's collaboration with Garmin and SAT has led to the acquisition of a groundbreaking technology algorithm known as PredictS.

This innovative algorithm has been rigorously tested and proven to accurately monitor fatigue and drowsiness, providing timely warnings to drivers.

Through this collaboration and development PredictS has been transformed into a market-ready fatigue solution called FleetPREDICT. FleetPREDICT is an app that runs on a smart device, designed to monitor the alertness status of drivers. The app is installed on an Android or iOS device, which is placed in the cabin of the truck. To ensure accurate monitoring, the driver wears a Garmin smartwatch that operates as a smart wearable sensor.

This comprehensive system allows for real-time monitoring and alerts, significantly enhancing driver safety and reducing the risk of accidents caused by fatigue.

The collaboration between WHG and SAT has not only resulted in a cutting-edge technology but also demonstrates the potential of innovative partnerships in addressing critical safety issues in the transportation industry. FleetPREDICT stands as a testament to the power of technology in creating safer driving environments and improving overall road safety. This achievement highlights the importance of continuous innovation and collaboration in developing solutions that have a tangible impact on society.
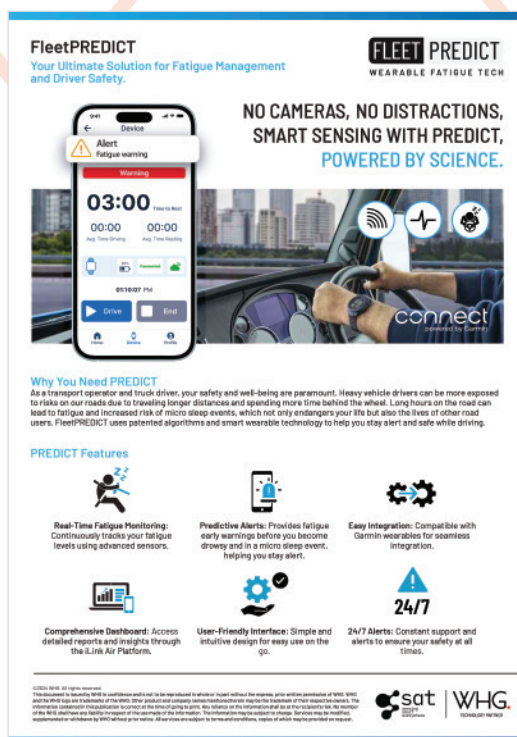
The WHG-Garmin-SAT collaboration believes that this innovative technology has the potential to revolutionise road safety in the heavy commercial truck industry and contribute significantly towards reducing road trauma and fatalities. In 2023, this ground-breaking work was recognised at the Garmin Health Summit, where it won the top spot in the Insurance & Employee Health Category.

WHG is proud to be a leader and pioneer in the smart wearable technology arena which is exciting, innovative and life-saving.

Innovative Protection of Flood Prone ITS Equipment – Flood Tuff

Category

Excellence in Research and Development Award

Submitting Organisation

Queensland Department of Transport and Main Roads

Collaborating Partners

Tri Underground Australia
University of Queensland

During a six-day deluge in February 2022, Brisbane recorded nearly 793mm of rain- 78% of its annual average and the highest six-day total in almost 50 years. The heavy rain caused severe flooding, inundating electrical cabinets housing TMR's Intelligent Transport Systems (ITS) along key Brisbane routes. COVID-related supply chain issues delayed replacement hardware, with some rectifications taking up to 15 months.

To mitigate future flood damage, TMR partnered with civil construction manufacturer Tri Underground and The University of Queensland. This project was delivered through the 2021–22 Betterment Fund, with extraordinary disaster assistance provided through the jointly funded Commonwealth-State Disaster Recovery Funding Arrangements (DRFA).

The collaboration led to the development of a protective device prototype, later named Flood Tuff. Flood Tuff, made from low-density polyethylene (commonly used for water tanks), uses an active pressure system powered by compressed air to safeguard ITS equipment.

After rigorous testing, Flood Tuff demonstrated the ability to protect equipment from water damage in floods up to, and exceeding five metres high.

Compact and easy to install, Flood Tuff units can be stored locally and deployed quickly, even in challenging conditions. In 2025, 25 Flood Tuffs were deployed in Brisbane during Cyclone Alfred. Despite five of the sites reaching up to 1.6m floodwater depth, Flood Tuff successfully prevented any water damage to the equipment contained within.

Cabinets with uninterrupted power continued operating throughout the entire flood event, while those that were isolated from power during the flood resumed normal function immediately when power was restored. Flood Tuff has proven to be a reliable solution for protecting critical ITS infrastructure during extreme weather events.

2026 Engineering, Innovation, and Technology Forum

Visionary minds shaping the future of transport

The Queensland Government Department of Transport and Main Roads' **Engineering, Innovation, and Technology (EIT) Forum** is back!

Since 1994, this premier event has united engineers, technologists, policymakers, and industry leaders to shape the future of transport.

With the theme *Delivering value—where risk and opportunity converge*, the EIT Forum inspires innovation, collaboration, and bold solutions.

Don't miss your chance to reimagine Australia's transport future – be part of the conversation!

Brisbane 18-20 August 2026
www.eitforum.tmr.qld.gov.au

DELIVERING
FOR QUEENSLAND | Queensland Government

Authorised by the Queensland Government, William Street, Brisbane.

Main Roads and iMove Freight Route Traffic Signal Priority Trial

Category

Excellence in Research and Development Award

Submitting Organisation

Main Roads Western Australia

Collaborating Partners

iMove Australia – Cooperative Research Centre
Telstra
MTData
PATREC

The Perth Freight Route Priority System Trial Evaluation, a significant initiative led by Main Roads Western Australia (MRWA) and completed with the support of its partners, including iMOVE and Curtin University researchers, evaluated an innovative approach. This research, also backed by the Australian Government's Cooperative Research Centres program, assessed the potential of providing traffic signal priority to Heavy Freight Vehicles (HFVs) to reduce travel time, number of stops, road congestion, and emissions, while also enhancing safety at intersections.

The trial, conducted from November 2024 to February 2025 across Leach Highway, involved 72 HFVs undertaking over 4000 trips. HFVs used On-Board Units (OBUs) to request priority from the SCATS Priority Engine (SPE). Key results from the Leach Highway trial demonstrated a positive impact when priority was enabled.

HFVs experienced statistically significant travel time reductions of 24 seconds (3.7%) eastbound and 33 seconds (4.6%) westbound. Average speeds improved by 1.8 km/h (4.4%) eastbound and 2.2 km/h (5.7%) westbound. Idle time decreased by 23 seconds (22.3%) eastbound and 30 seconds (18.4%) westbound, leading to estimated emission reductions of 50g for CO_2 and 0.54g for NOx per trip.

The system fulfilled 73.8% of priority requests, and no adverse impact on overall traffic signal performance was observed. This trial successfully showcased meaningful gains in speed for HFVs and tangible environmental impact on a corridor already optimised for traffic signals.

These promising results highlight the potential for broader implementation and future testing on diverse routes.

World Class mobility for Western Australians across an intelligent, safe, sustainable and optimised network

Smart Lane Merge Gate (SLMG)

Category

Excellence in Research and Development Award

Submitting Organisation

Traffic Tech

Traffic Tech's Smart Lane Merge Gate (SLMG) is redefining safety and efficiency in traffic and incident management.

As the world's only MASH TL3-certified deployable boom gate, it represents a major advancement in how road operators manage live lanes, closures, and access points. Traditional boom gates and traffic cones provide little crash protection and require personnel to work in hazardous environments. The SLMG eliminates these risks by offering a crash-rated, highly visible barrier that can be deployed or retracted in seconds without crews on the roadway.

Built for flexibility and strength, the SLMG withstands highway-speed impacts and provides clear driver guidance through LED lighting, reflective chevrons, and dynamic taper designs. It integrates seamlessly with existing traffic management systems, enabling operators to control ramps, tunnels, bridges, and incident zones remotely from a Traffic Management Centre or in-vehicle device. This level of automation and visibility not only improves safety but also reduces response times, maintenance costs, and operational risk.

Already proven on the West Gate Tunnel in Melbourne and the Pennsylvania Turnpike in the USA, the SLMG has demonstrated its ability to adapt to varied road and regulatory environments. Scalable and versatile, it can be applied to emergency contraflow, reversible lanes, security access points, railway crossings, ports, and even military bases, setting a new global benchmark for intelligent lane management.

TRIPS (Trip Rate based Integrated Planning System)

Category

Excellence in Transport Data Award

Submitting Organisation

Institute of Transport and Logistics Studies (ITLS), University of Sydney

Collaborating Partner

Hadron Group

TRIPS is Australia's first national database for land use–based trip generation surveys, developed to overcome decades of fragmented and inconsistent transport impact assessment practices.

Currently, trip generation data are collected in silos by consultants and authorities, often with small samples, limited multi-modal coverage, and no central repository. This reliance on outdated, vehicle-centric rates reinforces car dependence, increases congestion, and misses opportunities to support sustainable modes.

Developed by the University of Sydney's Institute of Transport and Logistics Studies, TRIPS centralises and standardises survey data into a single, reliable platform. Its innovation lies in providing consistent, high-quality data that allows planners and engineers to assess travel demand for all user classes, for a range of land uses.
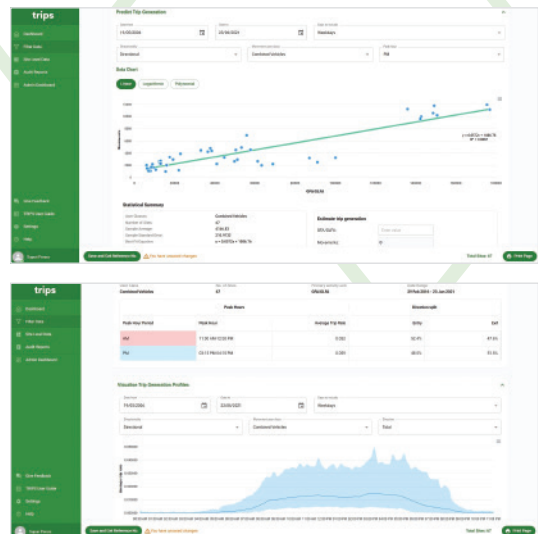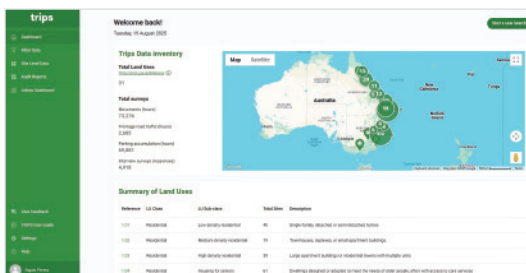
By integrating Census and Household Travel Survey datasets, TRIPS offers powerful analytical tools to correlate land use and socio-demographic factors with trip generation by mode.

The development of TRIPS has been guided by a Project Reference Group of more than 20 organisations and shaped by practitioner input through a comprehensive workshop at the AITPM National Conference in 2024. The design of TRIPS platform has been informed by global best-practice tools including TRICS (UK), ITE TripGen (USA), and Ver_Bau (Germany), ensuring international alignment while adapting to Australia's unique land use and transport context. The long term success of TRIPS is secured through the establishment of a not-for-profit TRIPS Hub at the University of Sydney, which will curate the tool beyond the life of the project.

By bridging academia, government, and industry, TRIPS creates a lasting evidence base for smarter, data-driven planning and investment that will shape Australia's transport and urban future.

aws

Transform mission-critical operations with AWS data and AI

AWS Cloud and AI capabilities allow organizations to unlock the full potential of their data, accelerating innovation and delivering measurable outcomes at scale. From machine learning and generative AI to advanced analytics and real-time insights, AWS provides the comprehensive tools and infrastructure needed to turn data into strategic advantage.

Organizations worldwide leverage AWS to build intelligent applications, automate complex workflows, and make data-driven decisions with confidence. With proven security, unmatched scalability, and continuous innovation, AWS empowers teams to reimagine what's possible—transforming operations, enhancing customer experiences, and driving sustainable growth.

Discover how AWS data and AI solutions can accelerate your organization's transformation. Reach out to your AWS representative or visit aws.amazon.com to explore the possibilities.

Aimsun Start – Accelerating Transport Model Creation with TomTom Data

Category

Excellence in Transport Data Award

Submitting Organisation

Aimsun

Aimsun Start is redefining transport modelling by automating the creation of scalable, ready-to-calibrate network models. By integrating TomTom's trusted traffic and map data, Aimsun Start delivers a streamlined, reliable, and efficient approach to transport model development, addressing long-standing industry challenges such as inconsistent data, manual processing, and lengthy project timelines.

Traditional model creation often involves time-consuming manual data handling, which introduces risks of human error and data inconsistencies. Aimsun Start eliminates these bottlenecks through automated workflows and seamless data integration, significantly reducing project risks and accelerating delivery. Recent deployments in Australia and New Zealand have shown that Aimsun Start can cut the lead time for base model development by up to 76% compared to conventional methods. This enables transport planners and operators to respond more quickly and confidently to changing infrastructure and mobility needs.

Developed through a strategic partnership between Aimsun and TomTom, Aimsun Start combines high-quality, high-penetration traffic datasets with advanced modelling automation. This collaboration ensures that every model is grounded in accurate, up-to-date real-world data, providing a robust foundation for scenario testing, infrastructure planning, and operational analysis. The platform's modular architecture and standardised data inputs—including

TomTom's global coverage—make it highly transferable across regions and applications. Aimsun Start can be rapidly deployed with minimal customisation, serving governments, consultants, and private operators worldwide.

Aimsun Start's innovative design unifies data sources and modelling workflows into a single, adaptable solution. By bridging data, modelling, and automation, it supports initiatives such as smart cities, digital twins, and integrated mobility. Cloud-based workflows remove manual bottlenecks, enabling faster scenario testing and more responsive traffic management. This not only improves operational efficiency but also supports safer road networks by enabling better-informed decisions that reduce congestion and accident risks.

To further enhance its capabilities, Aimsun Start offers optional integrations with public transport data feeds (such as GTFS) and traffic signal and control systems (including SCATS and SCOOT). These add-ons provide additional realism for multimodal planning and intersection performance analysis, making Aimsun Start highly versatile for complex transport environments.

Contractor Call ON/OFF App

Category

Excellence in Transport Data Award

Submitting Organisation

ConnectSydney

Collaborating Partner

Mooven

ConnectSydney, in collaboration with Mooven, has delivered the Contractor Call On/Off app – the first Australian solution to digitise contractor access to the road network in real time.

Traditionally, contractors phoned the Control Room to log on and off the network, a process that consumed thousands of hours annually and limited visibility of works in progress. The Call On/Off app replaces this with a simple mobile and web interface, giving the Control Room instant oversight of who is on the network, where they are located, and what works are being delivered.

The system integrates AI-enabled geomapping, geofencing, and anomaly detection to provide visibility across Sydney's 1,000 kilometre road network and more than 200,000 monthly events. Operators can identify emerging congestion, respond faster to incidents, and contact crews directly.

The app has reduced Road Occupancy Licence overruns, eliminated over 3,000 hours of manual call-ins each year, and significantly reduced crew exposure to traffic risks. Mooven's live data has also enabled landmark improvements in project delivery. At Lane Cove, real-time insights halved the program length and saved $500,000 in traffic management costs. On the Gore Hill Freeway, ConnectSydney successfully delivered four shifts under a full closure – the first time this main arterial had ever been closed. The data revealed how the network performs at full capacity and clarified impacts on adjoining corridors such as the Lane Cove Tunnel and Warringah Freeway, enabling safer, more efficient coordination.

Built on a scalable cloud-based platform, the Call On/Off app is embedded in ConnectSydney's operations with strong subcontractor uptake. By linking operational data to economic costs and emissions impacts, it sets a new benchmark for safety, sustainability, and accountability, with potential for adoption across the wider TfNSW network and beyond.
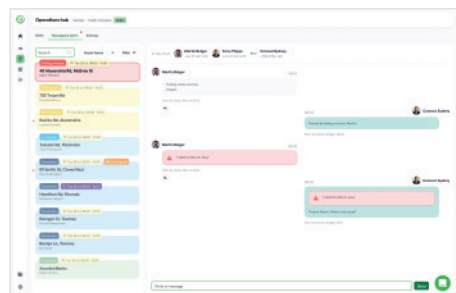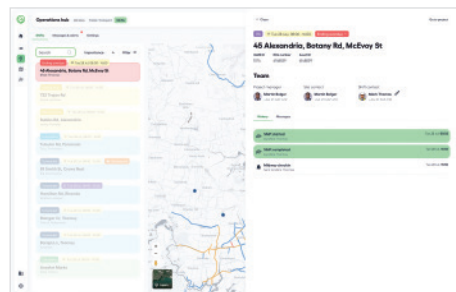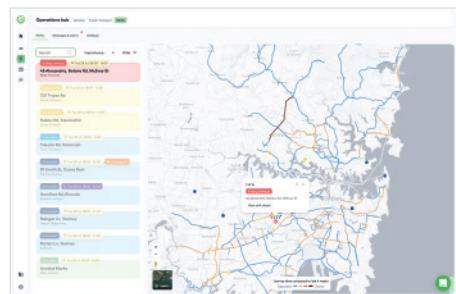
Transport Victoria Open Data Portal

Excellence in Transport Data Award

Submitting Organisation

Victorian Department of Transport and Planning

The Victorian Department of Transport and Planning (DTP) created the Transport Victoria Open Data Portal to be a world-class, one-stop-shop for consistent and accurate open data about the public transport and road network available to anyone who wants it.

The new portal consolidated DTP's multiple open data platforms and presences into one centralised hub, with a range of benefits including:

• Ability to access a wide range of accurate and consistent static and real-time public transport and road data on one platform.

• Access to transport open data in the global standards and formats widely used by the open data community.

• Download and use all transport open datasets for free. It also includes world-class features based on feedback from open data users

• Follow a dataset: subscribe to datasets and receive real-time notifications when updates occur.
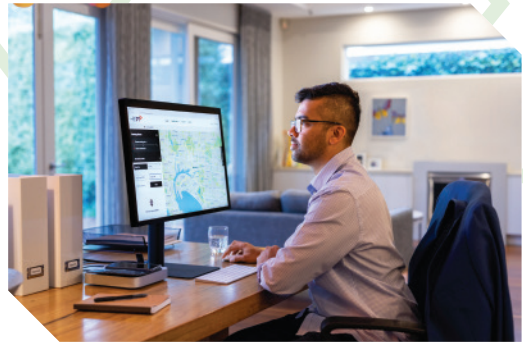
• Advanced reporting: Power BI reports will be embedded on dataset pages where relevant, allowing data users to get key data insight without the need to download data and create their own reports.

• Open Data Spatial Viewer: Esri spatial maps have been integrated where relevant, allowing data users to visualise complex data (such as GTFS transport data) without requiring specialised tools and skills.

Ultimately, this allows public transport and road users to confidently choose where they get their travel information and be sure it's coming from a trusted source.
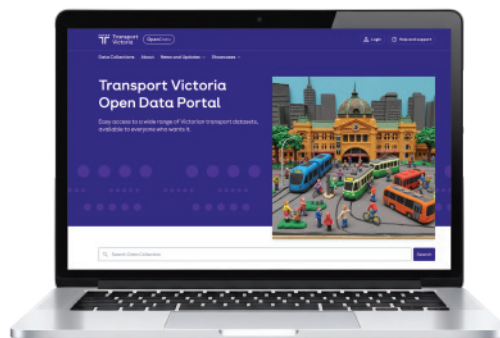
Safety Through Connection: Revolutionising Roadworker Safety

Category

Excellence in Transport Data Award

Submitting Organisation

Transurban

As Sydney continues to expand, the M7 and the new M12 motorway are critical to supporting the region's growing population and economy. The M7-M12 Integration Project, which includes the widening of 41 bridges along the M7 Motorway, will provide faster, more direct access to key commercial centres and residential growth areas. With the project spanning a 26km corridor – much of it alongside live traffic – speed-limit non-compliance and changing traffic conditions pose dangers to both motorists and roadside workers.

To address these challenges, Transurban leveraged ITS and connected vehicle data to implement an advanced traffic analytics platform. This innovative solution leverages telemetry-based records from connected vehicles to identify speeding hotspots and high-risk periods.

The insights gained enable targeted safety interventions, such as speed-activated signage and increased police presence, leading to a 19% reduction in serious crashes, even as traffic volumes remained constant. What distinguishes this solution is its innovation and scalability. Unlike traditional video monitoring systems, this platform offers comprehensive route coverage at a fraction of the cost and has already been successfully replicated on some of Transurban's other projects, including the M2 pavement works and the West Gate Tunnel Project. The platform's design incorporates automated data pipelines, minimizing the need for manual input, and stems from continuous collaboration between Transurban, Compass IoT, and Transport for NSW. This ensures the platform's long-term impact and adaptability.

It represents a smart, sustainable approach to road safety, already making a significant difference in safeguarding motorists and road workers across Australia.

Design and build your career

As the operator of some of the world's most sophisticated roads, everything we do works to get people where they want to go, as quickly and safely as possible – from installing and supporting advanced control systems, working on major projects, developing future tolling solutions to researching autonomous vehicles and road safety technology.

A career at Transurban means helping create city-shaping solutions, working with leading professionals across several fields including ITS engineering, maintenance and support, project management, innovation and technology strategy.

To learn more about a career at Transurban, visit us today at
careers.transurban.com

Road Transport Realtime Data Platform

Category

Excellence in Transport Data Award

Submitting Organisation

Victorian Department of Transport and Planning

The Realtime Data Platform represents a nationally leading example of how Intelligent Transport Systems can deliver measurable, lasting benefits for communities. The platform provides a real-time digital twin of Victoria's road and public transport networks, processing millions of live data points every hour to create a single, trusted view of network conditions. Built on an established disruption management system, it enables proactive network operations, faster incident response and quicker recovery from unplanned events, directly improving safety, reducing congestion and enhancing the reliability of journeys for millions of travellers.

By integrating data from traffic signals, managed motorways, CCTV and operational systems, the platform empowers DTP, emergency services and local governments to act with confidence using consistent, real-time information.

Its scalable, future-ready architecture embeds flexibility, intelligence and agility, ensuring the solution remains durable as transport needs evolve and supporting ongoing innovation through third-party development. Originally designed for complex, high-speed environments, the platform's core capabilities are readily transferable to other jurisdictions and transport applications.

As a cornerstone of Victoria's Intelligent Transport System, it delivers people-first, place-based outcomes while optimising existing infrastructure, reducing emissions and supporting a more sustainable transport future.

its australia ‹›

Mobility 2026

27–28 May 2026
QUT, Kelvin Grove
Brisbane
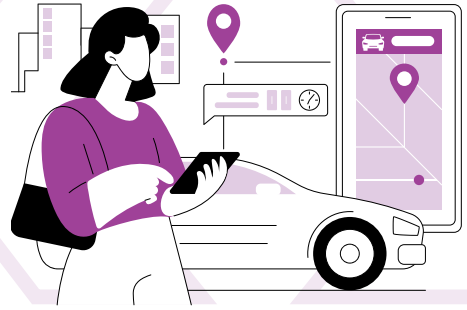
Powering Seamless Mobility

ITS Australia's Mobility 2026 conference is the leading forum for experts and innovators from Australia's growing mobility sector to engage on the critical issues that will shape our transport landscape in the years to come.

Over two days, the conference will examine a range of fascinating topics including sustainable transport, on-demand and active transport, smart payments and seamless ticketing, energy transition and grid management, accessible and inclusive transport, and more.

Program Topics

- Payments and Ticketing
- Sustainable Transport
- Mobility Pilots, Trials, Early Deployments
- Active Transport and Micro Mobility
- Seamless Journeys
- Customer Insights
- Data Enhancing Mobility
- OnDemand Mobility
- Regional and Outer Urban Transport
- International Case Studies
- Inclusive Transport
- Parking Technology
- Platforms, Policies, Governance

ABSTRACTS NOW OPEN

Reservations Renewed: Delivering New Mobility Options to Regional NSW Commuters

Category

Intelligent Mobility Award

Submitting Organisation

Spiketech Pty Ltd

Spiketech partnered with NSW TrainLink to deliver a transformative upgrade of its aging legacy train reservation system, successfully implementing Turnit Ride, a modern, cloud-based Software-as-a-Service (SaaS) solution that redefines the passenger and staff experience.

This project replaced decades-old technology with an innovative, future-ready platform designed to support seamless operations, enhance customer engagement, and unlock long-term efficiency for NSW TrainLink.

At the heart of the project was the deployment of cutting-edge SaaS architecture, eliminating the constraints of a closed architecture legacy system. The solution provided by Spiketech provides unmatched scalability, resilience, and continuous innovation, ensuring the platform evolves with passenger demand and industry standards. The solution integrates advanced inventory management, real-time seat allocation, dynamic pricing, and multi-channel sales capabilities into a single, streamlined ecosystem.
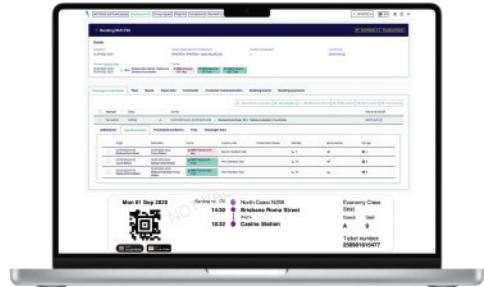
For passengers, Turnit Ride delivers a more intuitive and reliable booking journey. Customers now enjoy simplified online and mobile reservations, greater transparency around seat availability and fares, and a consistent, user-friendly interface. The system's real-time updates enhance confidence in journey planning while supporting flexible travel options.

For NSW TrainLink staff, the transformation has been equally significant. The new platform equips frontline and back-office teams with powerful tools for reservations, deviation management, and reporting. With more automation of complex tasks and more efficient workflows, staff can focus on delivering higher-value services to customers. Integrated data insights also enable better decision-making, operational optimisation, and strategic planning.

This project represents more than a system replacement- it is a step-change in digital capability for NSW TrainLink. By introducing world-class technology, Spiketech has delivered a solution that NSW TrainLink now benefits from in a robust, future-proofed platform that elevates the passenger experience, empowers its workforce, and positions NSW TrainLink at the forefront of transport innovation in Australia.

My Way+ NEC Australia and Transport Canberra

Category

Intelligent Mobility Award

Submitting Organisation

NEC Australia

Collaborating Partner

Transport Canberra

MyWay+ is reshaping how Canberrans move around their city, setting a new standard for intelligent mobility in Australia.

Designed by NEC in partnership with Transport Canberra, this innovative platform delivers a fully integrated experience that connects passengers, vehicles, and operations in real time. What sets MyWay+ apart is its ability to unify multiple fare media- EMV cards, QR tickets, and smartcards- under a single user account. For the first time in Australia, passengers can manage their travel through one digital identity, with real-time journey planning, paperless ticketing, and automatic concession linking all at their fingertips.

Behind the scenes, MyWay+ runs on a cloud-native, modular architecture designed for growth. Open APIs and a rule-based fare engine allow for seamless integration with other systems, on-demand services, and future transport modes. Operators benefit from live network data, fleet analytics, and flexible fare policy management- empowering them to adapt services as communities evolve.

Importantly, MyWay+ is not just built for performance, but for people. Its inclusive, mobile-first design makes travel simpler for families, students, and occasional users alike. Its digital-first model reduces paper waste, supports electric fleets, and encourages broader adoption of public transport.

While MyWay+ was purpose-built for Canberra, the technology behind it was designed to flex. That same platform is now forming the foundation of new transport solutions in other regions- adapting to different networks, policy settings, and community needs. Its modular design and open architecture make it easy to configure, scale, and evolve. As cities across Australia and beyond seek smarter, more connected transport systems, the MyWay+ platform is helping show what's possible.

Mattersoft LIVE, an INIT Solution

Category

Intelligent Mobility Award

Submitting Organisation

INIT ANZ

The Department of State Growth, Tasmania introduces the LIVE system, a centralised, modular, and web-based Software-as-a-Service (SaaS) developed by Mattersoft, part of the INIT Group. The system consists of LIVEavl, for automatic vehicle location and dispatch, and LIVErtpi, for real-time passenger information. It launches on buses in Hobart and southern Tasmania, as well as ferries, and expands to northern routes, with a state-wide rollout underway.

LIVE enables operators to track and monitor vehicles while providing passengers with accurate, second-by-second updates on departures, arrivals, and service changes via web browser, app, or Google Maps. This transparency improves passenger confidence and satisfaction, while also supporting sustainability through more efficient service planning.

For operators, LIVE delivers powerful tools for real-time passenger information, route and schedule optimisation, and data-driven decision-making. Fleet performance is monitored and analysed continuously, helping to align services with demand and enhance operational efficiency. The platform is highly scalable and flexible, allowing new operators to be integrated easily.

As a cloud-based SaaS, LIVE is centrally managed, updated, and secured by INIT. Supervisors access critical information from any device with an up-to-date browser, without the need for specialised hardware. Vehicles only provide basic GPS and trip data, reducing complexity while ensuring comprehensive visibility across the network.

The introduction of LIVE marks a decisive step in modernising Tasmania's transport system. According to INIT's Shane Bedford, the partnership enhances operational efficiency and the passenger experience: "By leveraging our advanced cloud technology, we enhance operational efficiency and passenger satisfaction, ensuring Tasmanians have access to reliable and real-time transport information."

With its state-wide rollout, LIVE becomes a cornerstone of Tasmania's public transport future.

Reimagining Journey Planning with AI: Smarter, Inclusive, Personalised

Category

Intelligent Mobility Award

Submitting Organisation

SkedGo

SkedGo's TripGo Assistant is reshaping the way people plan their journeys, combining conversational AI with proven journey-planning technology to make mobility more intuitive, inclusive and sustainable. Users can interact naturally with the Assistant – through chat, voice, or contextual cues – to plan, update and adjust trips in real time.

Powered by SkedGo's robust mobility platform, the TripGo Assistant integrates accurate timetables, pricing, weather forecasts and personal preferences to deliver tailored recommendations. This allows individuals to make informed, confident decisions that reflect both their needs and changing conditions. Accessibility is central to its design.

For blind and vision-impaired travellers, hands-free planning and real-time updates provide greater independence and safety. Auto-translation opens access to non-English speakers, while personalised features such as favourite locations and map integration ensure usability for a wide range of communities.

What sets the TripGo Assistant apart is its unique blend of AI and user interface integration. Users can, for example, drag pins on a map and ask the Assistant to update trips, or request details to be proactively displayed. This creates a truly dynamic travel companion that bridges conversational and visual interaction, supporting travellers throughout their journey.

With its modular architecture and API-driven design, the TripGo Assistant can be deployed across cities worldwide, adapting to local languages, cultures, and transport systems.

By empowering more sustainable, safe and accessible travel choices, SkedGo's TripGo Assistant advances inclusive mobility and delivers lasting benefits for individuals, communities, and transport ecosystems across Australia and globally.
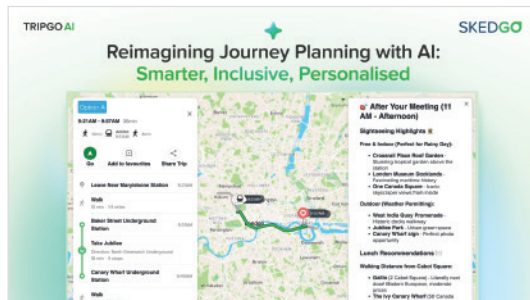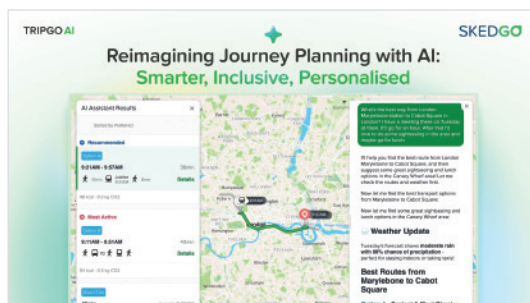
Public Transport Data Program

Public transport users in Victoria are receiving more timely, accurate and consistent public transport information whenever, wherever and however they need it, thanks to the Department of Transport and Planning's (DTP) Public Transport Data Program (PTDP).

The Victorian Government is investing in public transport infrastructure to meet the needs of a growing population. PTDP has modernised travel data and systems so that passengers have the information they need as the public transport network is transformed with new hubs, stops and ways of travelling. PTDP is improving information to create a better travel experience by:

• Improving the reliability of arrival and disruptions information.

• More reliable, up-to-the-minute details about the status and location of services across all public transport modes.

• Update public transport stop information and Updated public transport network information including locations of stop platforms, entry and exit points and vital accessibility features such as ramps and lifts.

• Provide better network interchange information: Updated interchange and transfer information to support travel between modes, switching services or taking rail replacement buses to show passengers the best connections for their trip.

• Create and share more accurate and consistent open public transport data

Standardised DTP's transport open data feed formats and shared more public transport data with the open data market so they have access consistent, accurate and trusted data sources. This helps make sure passengers can confidently choose where they get their travel information.

PTDP has helped make sure passengers can confidently navigate the public transport network and effectively plan their journeys whether they are at home or on the go.

Drones For Roads

Category

Smart Transport Infrastructure Award

Submitting Organisation

Transport for NSW

As the first BVLOS (Beyond Visual Line of Sight) approval in Australia to operate alongside and across the M1 highway – where vehicles travel at speeds of up to 110 km/h – the Drones for Roads program represents a ground-breaking initiative that has transformed the management of traffic incidents and special events throughout New South Wales. Through the innovative use of real-time aerial intelligence, the program delivers enhanced safety, operational efficiency, and coordination across complex transport networks.

By providing unprecedented situational awareness, drones help reduce the risk of secondary crashes, minimise congestion, and optimise emergency vehicle routing. This capability strengthens decision-making through data-driven insights, bridges CCTV coverage gaps, and improves resource allocation during both everyday operations and major events.

The program empowers the Transport Management Centre (TMC) with critical, real-time information, enabling proactive incident response and streamlining event oversight. It has proven especially valuable during high-attendance events, where drone monitoring of crowd and traffic movements ensures seamless multimodal coordination and improved pedestrian safety.

Expanding beyond road networks, the program has collaborated with NSW Maritime to support the management of major aquatic events including Sydney Harbour's New Year's Eve celebrations, SailGP, and the Sydney to Hobart yacht race. By livestreaming aerial observations, drones have enhanced situational awareness, reduced the need for on-water patrols, and supported more efficient response coordination. They have also contributed to better monitoring of boating infrastructure and improved asset management across NSW waterways.

Recognised by TMC operators and drone pilots alike for its transformative impact, Drones for Roads exemplifies innovation, cross-agency collaboration, and sustainability. It challenges traditional practices with bold, forward-thinking solutions, fostering excellence in public service and setting a new benchmark in safety, efficiency, and resilience across the transport sector.

Smart Motorway Development and Optimisation (for Australia and Overseas)

Category

Smart Transport Infrastructure Award

Submitting Organisation

National Transport Research Organisation (NTRO)

Collaborating Partner

Victorian Department of Transport and Planning

Australia is leading the way in intelligent transport systems, evident in the development and optimisation of Smart Motorway technology pioneered in Melbourne. This best-practice system, centred on coordinated ramp metering and advanced Intelligent Transport Systems (ITS), has transformed how motorways operate, delivering measurable improvements in safety, efficiency, and sustainability.

Developed by a visionary team in Victoria, the Smart Motorway technology has been deployed across metropolitan Melbourne and is now being adopted across Australia and internationally. Its implementation on major corridors such as in Perth and by the Colorado Department of Transportation for the Smart 25 Pilot Project on I-25 in Denver highlights its relevance and adaptability. What sets this system apart is its dynamic, data-driven approach.

Unlike traditional ramp metering, which often relies on fixed-time signals, the Victorian model uses real-time traffic data to coordinate multiple ramp meters across a corridor. This enables the system to target and relieve the most critical bottlenecks, preventing congestion before it occurs. Resulting in a typical 15% increase in vehicle throughput and a substantial reduction in daily crashes resulting in fatalities and serious injuries. The technology is underpinned by rigorous scientific principles and state-of-the-art traffic flow theory, including predictive modelling of congestion risks.

These foundations have culminated in the Vic DTP Managed Motorway Design Guide and Motorway Capacity Guide, cornerstones of the upcoming Austroads NEG 6527 project, which will update national guidelines for motorway capacity analysis. Beyond increased traffic flow and safety, the system contributes to environmental sustainability by reducing congestion-related CO_2 emissions. Its effectiveness has been validated through comprehensive evaluations, including a three-year post-implementation review of the Kwinana Smart Freeway Northbound project.

This submission recognises an Australian innovation that is reshaping transport infrastructure, nationally and internationally. The nominated team is ensuring Smart Motorway technology continues to deliver safer, smarter, and more sustainable journeys.

RJAWS Lite: Scalable Smart Safety for Rural Intersections

Category

Smart Transport Infrastructure Award

Submitting Organisation

SAGE Automation

Collaborating Partners

City of Onkaparinga
Centre for Automotive Safety Research
Department for Infrastructure and Transport (SA)

RJAWS Lite (Rural Junction Active Warning System) is a solar-powered intelligent transport system developed through a unique consortium of industry, academia, local government, and state government- SAGE Automation, the Centre for Automotive Safety Research (CASR), the City of Onkaparinga, and South Australia's Department for Infrastructure and Transport (DIT). The current five operational installations were funded by the South Australian Government.

Designed to reduce crashes at high-risk rural intersections, RJAWS Lite delivers real-time driver alerts using radar detection and wireless communications. The system has demonstrated a 66% reduction in crashes at its initial deployment site and has since been expanded to five additional locations across the region. Its modular, low-cost design enables rapid deployment without trenching or grid connections, making it ideal for remote or under-resourced areas. The system is solar-powered, battery-backed, and remotely monitored, ensuring long-term durability and minimal maintenance. It also supports temporary installations that can be relocated as needed, further enhancing its sustainability and flexibility.

RJAWS Lite is part of a broader initiative to improve safety at rural intersections and un-signalled level crossings. A similar system, LCAWS (Level Crossing Active Warning System), is being trialled in other jurisdictions. A published CASR design guide supports consistent application across states and territories, enabling scalable adoption and reducing duplication.

This project exemplifies how cross-sector collaboration can deliver innovative, data-driven transport technology tailored to Australia's unique challenges. By integrating radar, solar power, and wireless communications into a single, deployable unit, RJAWS Lite offers a nationally relevant blueprint for ITS-led safety upgrades, especially in areas where traditional infrastructure is impractical or cost-prohibitive.

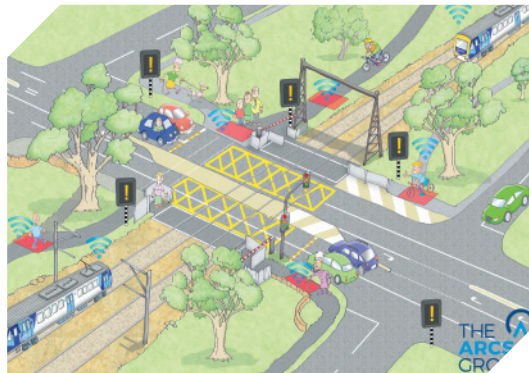# Influencing Driver Behaviour via Directive VMS Messaging

Category

Smart Transport Infrastructure Award

Submitting Organisation

National Transport Research Organisation (NTRO)

Collaborating Partners

ARCS Group
HMI Technologies

The National Transport Research Organisation (NTRO) is a recognised leader in road safety innovation, applying its expertise to address some of the nation's most pressing transport risks. Among its most impactful developments is a rapidly deployable, directive messaging augmented safety system, specifically designed to reduce collision risks at high-risk road and rail interfaces.

Understanding that traditional signage and line marking alone are insufficient in many high-risk areas, NTRO has created a self-powered, low-cost system that delivers immediate improvements to driver awareness and compliance. The system integrates advanced technologies, including AI-driven video detection to monitor driver behaviour, radar to track approach speed, and full matrix variable message signs (VMS) that deliver clear, adaptive, and directive instructions in real time. This combination of monitoring and intervention has proven to significantly reduce unsafe behaviours, lowering both the likelihood and severity of crashes.

The system's durability and modular design allow it to be deployed rapidly across multiple locations, from rural black spots to busy urban crossings, providing scalable safety improvements wherever they are most needed. Its automated data reporting and site alerts ensure that operators can respond quickly to emerging risks, while also creating a valuable evidence base for future planning and targeted maintenance.

By aligning advanced technology with NTRO's multidisciplinary expertise, the solution extends benefits beyond immediate risk reduction. It contributes to long-term behavioural change, enhances network resilience, and lays the foundation for integration with future smart transport and autonomous vehicle systems.

In combining innovation with proven research capability, NTRO is delivering a solution that not only reduces collisions but also provides measurable societal and economic value. It sets a new benchmark in proactive, data-driven road safety management, with the potential for lasting impact across Australia's transport network.

WestConnex Tunnel Communication Network

Category

Smart Transport Infrastructure Award

Submitting Organisation

RFI Technology Solutions

RFI Technology Solutions delivered the communications lifeline for WestConnex, Australia's largest transport infrastructure project and one of the most complex underground motorway networks in the world.

Extending over 33 kilometres and valued at $16.8 billion, WestConnex is designed to ease congestion, connect communities, and support economic growth for decades. Within this vast project, reliable communications were not optional – they were critical. Without them, the tunnels could not open or operate safely. RFI was entrusted with designing, delivering, and commissioning a fully integrated Radio Re-Broadcast (RRB) and multi-carrier mobile coverage system across the M4, M8, M4–M8 Link, and Rozelle Interchange, ensuring safety, resilience, and connectivity for every tunnel user. The system provides continuous AM/FM/DAB+ coverage with emergency "break-in" announcements, dedicated UHF channels for Police, Fire & Rescue, and Ambulance, and operational two-way radio for tunnel staff.

Full integration with Telstra, Optus, and TPG ensures seamless mobile coverage for millions of motorists. With over 138 km of specialised cabling, 168 RRB cabinets, and 308 Mobile Remote Units, RFI applied modular engineering, advanced digital mapping, and resource optimisation to deliver at scale and with precision.

The outcome is a future-ready communications backbone that enhances motorist safety, empowers emergency response, and supports uninterrupted connectivity across Sydney's road lifeline. The design reduces congestion and travel delays, cutting emissions while improving traffic flow and community connectivity.

Built with scalability and durability in mind, the system lowers maintenance demand and extends asset life, contributing to long-term sustainability. By integrating complex technologies into a single resilient system, RFI has set a new national benchmark for tunnel communications in Australia.

WestConnex is more than a road project- it is critical transport infrastructure of its generation, enabled by RFI's innovation, expertise, and commitment to safety and sustainability.

Western Distributor Smart Motorway

Category

Smart Transport Infrastructure Award

Submitting Organisation

Aurecon Pty Ltd

Collaborating Partners

Stantec
Armitage Group

The Western Distributor Smart Motorway project advances intelligent transport infrastructure, enhancing safety, efficiency, and real-time traffic management on one of Sydney's busiest and highest-risk motorway.

Serving 120,000 vehicles daily between ANZAC Bridge and the Sydney Harbour Bridge- where accident risk is 1.5 times above average- the project addresses existing challenges and is prepared for rising traffic from the Westconnex tunnel. With bridge structures dominating the corridor, conventional loop detectors were impossible, so Aurecon designed a non-intrusive detection system using TrafiCam AI cameras and TrafiBot incident detection. They preserve bridge integrity by avoiding saw cutting and costly roadworks. The cameras form a comprehensive surveillance network delivering continuous vehicle data and rapid incident identification. Purpose-built gantries support Integrated Speed and Lane Use Management Signs (ISLUS) and Electronic Message Signs (EMS), along with the cameras, enabling dynamic lane control and real-time instructions to drivers.

This intelligent signage eliminates lane conflicts, minimises congestion, and guides vehicles safely during incidents and during peak periods. This project also included Transport for NSW's integration of multiple video detection and management devices into their motorway management system (MMS), advancing centralized traffic control.

Research from the Australian Transport Research Forum shows smart motorway technologies like these can reduce crash rates by approximately 27%, highlighting the project's substantial safety benefits. By reducing congestion-related idling and facilitating quicker incident clearance, the project also lowers vehicular emissions, supporting public health and environmental goals.

The Western Distributor Smart Motorway sets a new standard for deploying AI-based traffic detection and intelligent signage in structurally challenging environments. Its innovative design, system integration, and forward planning deliver measurable safety, efficiency, and sustainability benefits and establish a scalable model for future smart motorway projects in Australia and beyond.

Next Generation Tolling: Video-Only TaaS Enabling ITS Safety Services

CBS Group and TfNSW have developed Australia's first video-only tolling solution combined with a Tolling as a Service model, delivered through a two-phase approach that demonstrates both innovation and practical implementation. Phase 1 demonstration on Sydney Harbour Bridge validated that tolling infrastructure costs could be dramatically reduced by rationalising existing ITS infrastructure, eliminating the need for seven new gantries while proving video tolling improvements that meet or exceed traditional tag-based performance levels.

Building on this success, Phase 2 comprehensive solution design for the Western Harbour Tunnel creates a transformative system that "designs out exceptions" by removing physical tags and complex backend matching systems.

The solution enables existing ITS CCTV infrastructure to support both traditional ITS functions and advanced tolling operations, with tolling video analytics generating new data streams that enhance both ITS and safety systems capabilities.

One of the innovation's most significant breakthrough lies in enabling tolling capabilities to support ITS and safety functions. Advanced video analytics create real-time rolling lists of all tunnel vehicles. When coupled with other data sources, this enables direct personalised communication during emergencies and marks a transition from legacy Public Address and Radio Rebroadcast systems to intelligent device-based safety management.

The Tolling as a Service model provides cost certainty to government through performance-based payments, where fees are charged only for successful transaction processing. Built-in incentives encourage continuous technological advancement, with suppliers retaining benefits from automation improvements while government enjoys predictable costs over long-term asset management periods.

The innovation demonstrates how video-based tolling technology can be successfully implemented while maintaining performance standards equivalent to traditional tag-based systems, providing a proven foundation for future intelligent transport system deployments across various infrastructure applications.

Empowering Active Transport Through Real-Time Data

Category

Smart Transport Infrastructure Award

Submitting Organisation

Q-Free Australia Pty Ltd

Collaborating Partners

Department of Transport and Main Roads
HMI Technologies
Wombat

Q-Free's Brisbane Counter Display Trial Q-Free, in collaboration with ITS Australia members including HMI Technologies and the Queensland Department of Transport and Main Roads, delivered a pioneering active transport project in Brisbane that showcases the power of intelligent transport systems to improve community wellbeing.

Installed along the Canon Garland Overpass, the solution integrates Q-Free's HI-TRAC® CMU detection units with HMI smart signage and Wombat battery technology, all powered by the Kinetic® Mobility platform. This end-to-end system captures and displays real-time pedestrian and cyclist activity, encouraging sustainable travel and informing infrastructure planning. The Kinetic platform enables seamless data collection, analysis, and public engagement through dynamic messaging, while also sharing mobility data as part of a broader traffic management ecosystem. This allows transport authorities to monitor active transport trends, optimise infrastructure investment, and support policy development.

The solar-powered Wombat battery ensures energy efficiency and resilience, making the solution suitable for both urban and remote deployments. The project not only supports Queensland's active transport strategy but also demonstrates how collaborative innovation can deliver scalable, transferable solutions for future urban mobility challenges- including major events like the Brisbane 2032 Olympics. By combining advanced technology with public-facing design, the project sets a new benchmark for how ITS can promote safety, sustainability, and smarter transport choices across Australia.

The initiative highlights the value of cross-sector collaboration, bringing together hardware, software, and energy solutions to create a replicable model for cities seeking to enhance active transport infrastructure and community engagement.

Policy, Advocacy and Research

ITS Australia is committed to shaping the future of intelligent transport through policy leadership, research, and industry engagement. Our work spans ongoing research projects, completed initiatives that have influenced best practices, and strategic advocacy efforts that drive collaboration between government, industry, and academia. Through these initiatives, we contribute to the development of policies and technologies that enhance mobility, safety, and sustainability across Australia's transport networks.

Behavioural Change for Sustainable Transport

ITS Australia, in partnership with iMOVE, ITLS, the Queensland Government, and the Department of Infrastructure, Transport, Regional Development, Communications, Sports and the Arts, is leading a project to encourage sustainable public and active transport across Australia. Recognising that decarbonising vehicles alone won't solve transport challenges, the project uses a collaborative, evidence-based approach to understand how policy and infrastructure can drive real behavioural change. An Australia-wide online survey has captured citizen attitudes, travel choices, and support for new initiatives, informing recommendations for policymakers and operators. By combining expertise across sectors, the project aims to deliver practical pathways for modal shift, improved accessibility, emissions reduction, and long-term environmental and societal benefits, ensuring sustainable transport solutions are both effective and widely adopted by Australian communities. The project is in its final stages and outcomes will be published in 2026.

Future Freight through Transport Technology

Australia's freight sector is at a crossroads, facing growing volumes, aging infrastructure, workforce shortages, and environmental pressures. This collaborative project, uniting ITS Australia, iMOVE, Swinburne University of Technology, and the University of Melbourne, explores how advanced transport technologies can transform the sector. By combining real-time tracking, automation, digital logistics tools, and Cooperative Intelligent Transport Systems (C-ITS), the research aims to improve efficiency, safety, sustainability, and resilience. Through literature reviews, industry consultations, and stakeholder workshops, the project identifies high-impact technology use cases, evaluates practical benefits, and builds consensus around solutions that work in real-world freight operations. By bringing together research, industry, and government, the initiative ensures evidence-based recommendations that can be scaled nationally, helping Australia lead the way in smarter, safer, and more sustainable freight systems.

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Intelligent Transport Systems

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