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Roads, Tolling & Technology 2024

20–21 March 2024
Emporium South Bank
Brisbane/Meeanjin

its-australia.com.au

Program

Wednesday 20 March 2024

8:00 – 9:00	REGISTRATION & ARRIVAL BARISTA COFFEE / TEA Name Badge Collection

Welcome to Country Ceremony
We acknowledge the Jagera people and the Turrbal people as the Traditional Custodians of Meeanjin (the land now called Brisbane).

9:00 – 10:30	OPENING PLENARY SESSION 1 – Major Project Updates	Frangipani Ballroom 2&3

Explore major road projects with exclusive updates from industry leaders, highlighting how these initiatives transform landscapes and enhance connectivity.

MODERATOR
Rita Excell Head of Transport – ANZ, Amazon Web Services

Vincent Doran General Manager, Statewide Network Operations,
Department of Transport and Main Roads QLD
Update on Network Operations in Queensland

Duncan Elliott CEO Major Roads Projects Victoria
Big Build Big Impact
Major Road Projects Victoria CEO Duncan Elliott will provide the latest on Victoria's mega road projects and outline the key strategies that are maximising the outcomes for community.

Roy Brown Director of Technology, SCATS Transport for NSW
Evolution of SCATS: Achievements, Enhancements, and Future Vision
Hear an update on the significant enhancements being made to the SCATS product, what's been achieved and the vision going forward.

Doug Wilson Associate Professor & Director of Transportation Research Centre, University of Auckland
Decarbonising Transport Systems by Energy Snacking' from Wireless Charging of Electric Vehicles
Exploring the opportunities and challenges that need to be overcome to install wireless technologies efficiently and effectively within transport infrastructure to enable an affordable and equitable transition to a low carbon transport system.

10:30 – 11:00	MORNING TEA BREAK

Roads, Tolling & Technology 2024

11:00 – 12:30   BREAK-OUT SESSION 2

2A – International Perspectives and Case Studies
Frangipani Ballroom 2&3

2B – Technology Innovations
Frangipani Ballroom 1

MODERATOR Kyle Tuite A/Principal Advisor (Commercial Roads – Transport System Governance), Department of Transport and Main Roads QLD

Revolutionising Roadways: Tech Solutions for Global Traffic Challenges
Inger Gartner Senior Business Development Manager, Cubic Transportation Systems

Global transportation agencies grapple with road system challenges. Emerging tech offers solutions. This talk examines strategies—Intersection Optimisation, Adaptive Signal Control, and Active Transport—to ease congestion, each backed by case studies. Factors like population density and infrastructure shape road planning, while AI aids informed decision-making for sustainable urban development.

The journey to High Performance Video Based Tolling and Key Success Factors to Achieve
Daniel Shaw Senior Solutions Consultant, Kapsch TrafficCom Australia

Daniel Shaw explores Kapsch's global video-based tolling system, employing advanced technology for cost-effective tolling with a reduced environmental footprint. The presentation objectively compares radio and video detection, offering insights for global city adoption. It also delves into Kapsch's journey, overcoming challenges to establish this state-of-the-art video-only tolling system.

Tolling Trends in Europe
Dr Boris Wagner Head of Business Unit Traffic, VITRONIC

The presentation explores the open marketplace model of tolling in some European countries. It explains the reasons and consequences of this trend for the toll system infrastructure. It also questions if this model is the future of tolling worldwide.

National Approach to Tunnel Management - Switzerland
Fabian Seelinger Managing Director Finance APAC, Yunex Traffic

The Federal Roads Office (FEDRO) in Switzerland has expanded the route equipment on the national roads and significantly improved operational traffic management over a 10-year period. The new system with a uniform traffic management logic offers FEDRO many expanded and new functionalities, such as central and subregional traffic control.

<< Session cont'd next page. . . >>

MODERATOR Samira Namin Technical Director – Electrical Engineering, Roads and Highways, South Qld, GHD

Changing Behaviours and Saving Lives in Queensland
Alexander Jannink CEO and Managing Director, Acusensus

Acusensus runs two successful programs in Queensland (QLD), the Mobile Phone Detection and Seatbelt Program and the Queensland Speed Detection Program. 'Heads-Up' and Harmony are utilised in these respective programs, which provide enforcement at all times and in all weather conditions. Fatalities have declined in QLD since these programs commenced.

Video Analytics for Multi-Objective Optimisation of Traffic Safety and Efficiency: The Case of Permissive Versus Protected Turns
Ashutosh Arun Chief Product Officer, Advanced Mobility Analytics Group

Video analytics-based approaches with reliable conflict analysis provide objective evidence regarding the intersection between traffic safety and operational efficiency. This new insight and knowledge will enable combined optimisation of safety and operational efficiency. Through real-time applications, permissive-protected transitions can be automated for 24x7x365 operations delivering optimal safety and efficiency outcomes.

Application of Large Language Model on Major Infrastructure Projects
Henry Wu Director, JYW Consulting
Bob Langridge Senior Consultant – AFC and ICT, JYW Consulting

Application of LLM to drive major infrastructure cost saving and productivity gains.

Leveraging AI for Automated Road Condition Monitoring: Insights from NEC's Japanese Case Studies
Simon Ryley Manager - Global Smart Transport Solutions, Smart Transport, NEC

Explore the use of AI driven solutions for automating the monitoring of road conditions and roadside assets through live use cases in Japan.

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Q-Free's Innovative Tolling Technology at Sydney Harbour Bridge

Lance Brand Senior Solutions Manager, Q-Free Australia

Q-Free presents its innovative tolling system at Sydney Harbour Bridge, a heritage site with a stunning view of the Opera House. Learn how Q-Free overcame the challenges of detection, classification, and charging for this unique project.

Q&A + Discussion with Speakers

Advanced Perception AI in Transport

Phirence Tan Business Development Manager, Yunex Traffic

AI technology for new ways to perceive and manage traffic by unlocking the power of your intersection/road/toll gantry with the AI solutions. A revolutionary approach creates a real-time digital replica of your road network, fuelling AI-enhanced ITS applications, ensuring your traffic management is at the forefront of innovation and efficiency.

Q&A + Discussion with Speakers

12:30 – 1:30	LUNCH BREAK
1:30 – 3:00	BREAK-OUT SESSION 3

3A – Digital Technology and Future Vehicles
Frangipani Ballroom 2&3

MODERATOR Rich Mitchell Associate, Integrated Transport and Mobility, Aurecon

Intelligent Transportation Systems of the Future

Charles Karl Chief Technology Leader, NTRO – National Transport Research Organisation

This presentation is an attempt by an Australian ITS practitioner with 30+ years industry experience to make sense of the current ITS developments and suggest what the future ITS world might be.

Optimise your Transportation Network with AI Visual Analytics

Michael Swanander Sales Director Cities & Transport, Unleash live

Uncover the transformative impact of real-time computer vision on transportation. Explore AI Use Cases spanning Roads, Public Transport, Smart Cities and Planning, optimising operational efficiency, elevating safety and enriching the commuter experience. From counting vehicles to achieving net zero, delve into a future shaped by innovative technology.

Self-Aware Road Infrastructure using C-ITS to Increase Value

Christian Chong-White National Traffic Algorithm Development Manager, SAGE Automation

SAGE Automation has pioneered self-aware functionality for various automated infrastructures to elevate the capabilities of smart road signs, encompassing variable speed limits and messaging while employing radar to measure passing vehicle speeds. These signs provide a streamlined setup and ongoing operations for cost reduction, ease of use, and safety enhancement.

3B – Roadworks and Traffic Management
Frangipani Ballroom 1

MODERATOR Ben Jones Customer Success Director, Transmax

Temporary Traffic Management Certification

Patsy Thomas National TTM Operations Manager, Austroads

Gain valuable insights as she discusses the crucial aspects of certification in ensuring safe and efficient traffic management. Explore the latest standards and practices, empowering professionals in the ever-evolving field of temporary traffic management.

Driving Forward: Innovations across Traffic Management, and insights from Traffic Management Association of Australia Annual Conference

Matthew Bereni CEO, Traffic Management Association of Australia

Get exclusive updates from the Transport Management of Australia Association's CEO on the latest advancements in transportation technology, directly from their annual conference.

Safety, Resilience and Sustainability in Western Brisbane

Samira Namin Technical Director - Electrical Engineering, Roads and Highways, South Qld, GHD

Seamless network operations, redundant communications architecture, Qld's State's recovery, resilience, and future prosperity.

A hybrid Approach to Scaling Up C-ITS Technology

Brittany Croft Solution Consultant, Kapsch TrafficCom Australia

Cooperative Intelligent Transport Systems (C-ITS) are vital for Australia's safety and emissions goals. Retrofitting extensive road infrastructure with C-ITS roadside units poses challenges, especially with older vehicles. Kapsch proposes a hybrid solution, integrating physical and virtual infrastructure, like virtual RSUs (vRSU), to smoothly transition towards C-ITS for long-term transport efficiency.

Leveraging Digital Twins to Optimize Active Transport and E-Mobility Safety

Ian McCarthy Managing Director, AIMSUN

This presentation explores optimizing active transport and e-mobility safety using Aimsun Digital Twins and SSAM. The study employs advanced simulations to analyze various network configurations, identifying critical intersections and safety concerns. Incorporating SSAM, it assesses collision probabilities and user vulnerability, offering insights for designing safer urban networks and informing decisions for sustainable mobility.

Q&A + Discussion with Speakers

Demonstrating Improved Safety in Australian Roadworks Using Portable C-ITS Roadside Stations

Harsh Trivedi a/Principal Engineer (ITS), Cooperative and Automated Vehicle Initiative, Department of Transport and Main Roads QLD

Cooperative Intelligent Transport Systems (C-ITS) has the potential to save lives when infrastructure is deployed on roads: particularly at roadworks, intersections, and motorways. This presentation outlines the standard functionality provided by C-ITS roadside stations, how they apply to common temporary traffic scenarios and the lessons learned from the Roadworks Warning Proof-of-Concept.

Q&A + Discussion with Speakers

3:00 – 3:45	AFTERNOON TEA BREAK

3:45 – 5:00	PANEL DISCUSSION SESSION 4	Frangipani Ballroom 2&3
	Sharing Data vs Community Expectation for Privacy	

Moderated Panel Discussion

Our panel of industry leaders will expertly navigate the delicate balance between leveraging data for smart infrastructure and respecting community privacy expectations.

Tackling a significant challenge—establishing clear frameworks for data governance and transparent communication channels—the session, moderated by experts from both government and industry, will explore strategies for responsible data sharing. Gain insights into innovative approaches that drive transportation technology forward while upholding the highest standards of privacy.

MODERATOR
Stacey Ryan Policy Manager ITS Australia

PANELLISTS
Dennis Walsh Chief Engineer, Department of Transport and Main Roads QLD
Rita Excell Head of Transport – ANZ, Amazon Web Services
Chris Koniditsiotis Advisor and Consultant, Chris K Phronesis
Dr Yandong Fan Head of ITS Strategy and Planning, Transurban
Geoff McDonald Principal Technician CAVI, Department of Transport and Main Roads QLD
Carla Hoorweg Chief Executive, ANCAP Safety

6:30 – 8:30	WELCOME RECEPTION – cocktail function
	The Terrace, Emporium Hotel South Bank – Level 21

Elevate your networking to new heights at The Terrace, with unrivalled views and world-class beverages at Brisbane's premier open-air rooftop.

Enjoy breathtaking panoramas of Brisbane River and city skyline while networking and mingling with fellow attendees in a relaxed and elegant setting.

Joshua Till Head of Transport Technology QLD, Transurban

Silje Troseth President ITS Australia
Vice President APAC & General Manager
Australia / Q-Free Australia

Sponsored by
Transurban

Included with your conference registration – drinks and canapes served
Dress: Business casual

Thursday 21 March 2024

8:30 – 9:00	ARRIVAL BARISTA COFFEE & TEA

9:00 – 10:30	BREAK-OUT SESSION 5

5A – Safety, Resilience and Sustainability	5B – Tolling and Road User Charging
Frangipani Ballroom 2&3	Frangipani Ballroom 1

MODERATOR Renata Berglas Mobility Futures Business Group Leader, NTRO - National Transport Research Organisation

Creating Safer Intersections Using Real-Time Video Analytics: Providing pedestrian priority at intersections

Jason Deller Senior Transport Engineer / Road Safety Engineer, Advanced Mobility Analytics Group

Dynamic signal timing is crucial for preventing accidents and promoting safer roads for pedestrians. Real-time video analytics categorizes and detects vehicles and pedestrians, enabling precise quantification of data. This information facilitates the intervention in signal prioritisation for vulnerable road users.

Making Use of the Existing Fibre-Optic Cables to Monitor Stability of Rock Surrounding a Tunnel

Richard Lynch Business Development Manager – Australasia, Egis Road Operation Australia

Oliver Leupold ANZ General Manager Operations, Egis Road Operation Australia

Underground road and rail tunnels are critical infrastructures which need to be stable over the intended life. Ambient seismic noise monitoring is a relatively new technique that uses background uncontrolled vibrations recorded simultaneously by multiple sensors to monitor the rock. An effective use can extend the lifecycle of infrastructure assets.

Traffic Analysis and Operational Planning for M7-M12 Integration Project

Karan Pedramrazi Manager of Customer Analytics, Transurban

Paul Hanna Technology Manager, NorthWestern Roads Group (NWRG)

Effective application of advanced analytics and strategical planning to enhance road safety and improve customer experience.

Additional presentations being finalised

Q&A + Discussion with Speakers

MODERATOR Clifford Brake Advisor and Consultant Tolling Professional

SPONSOR VIDEO: Advanced Tolling Solutions for Future Mobility SICE

Congestion Charging & Tolling – Two Converging Worlds

Pablo Ruiz Head of Operations – Australia, SICE

Building unified systems to enable improved and cost-efficient road user charging schemes combining tolling and road user charging schemes into one unique platform.

Road User Charging in Australia: Can Australia Catch Up with the World?

Scott Wilson Client Service Lead Road User Charging Australia and New Zealand, CDM Smith

The ruling that Victoria's Zero Emission Vehicle fee is unconstitutional has raised questions about how Australia might advance road user charging (RUC) for light vehicles. The case for RUC is compelling from revenue and fairness perspectives, but Australia can learn much from experiences in the USA, Europe and New Zealand.

SPONSOR VIDEO: Transurban Careers. Be You Transurban

Future Tolling – Opportunities and Challenges

Andreas Goldhorn ITS Domain Lead Tolling, Transurban

This talk provides an overview on the different scenarios how future tolling could look like and shows which are the opportunities and challenges of each of these scenarios.

Road User Charging – How to get away from fuel-duty dependency?

Luke Normington Senior Vice President – EMEA, Neology

This presentation will highlight some of the work being done in Europe, with a particular focus of the Danish RUC Pilot, commissioned by their Department of Finance, in order to understand the practical considerations of moving to a new RUC model. This presentation will provide an overview of how the Danes are undertaking an 18mth trial, using a mixture of consumer-grade technology, along with Tolling and Enforcement technology.

North East Link Toll Collection Capability Project Update

Zoltan Maklary Director Tolling, North East Link
Gillian Dirckze Project Manager, North East Link

North East Link State Tolling Corporation (STC) was established in accordance with the North East Link Act 2020 (the NEL Act) and was provided powers to fix, collect and enforce tolls and administration fees on the North East Link tollway. The primary objective for STC is to set, administer and maximise the toll revenues from the NEL Road to provide government with a range of future options. Prior to the operating period commencing late 2028, STC is assigned responsibility for the delivery of the Toll Collection Capability (TCC) Project. STC will engage a Toll Collection Capability Contractor (TCCC) or multiple TCCC to provide tolling gantries, roadside & back-office systems, enforcement / compliance, active network communication systems and will establish arrangements with 3rd parties and suppliers as needed. This presentation is to provide an update on the status and timelines of the TCC project.

Q&A + Discussion with Speakers

10:30 – 11:00	MORNING TEA BREAK
11:00 – 12:30	BREAK-OUT SESSION 6

6A – Urban Mobility: Innovations in Parking and Traffic
Frangipani Ballroom 2&3

6B – Technology and Freight
Frangipani Ballroom 1

MODERATOR Gillian Dirckze Project Manager, North East Link

MODERATOR Inger Gartner Senior Business Development Manager, Cubic Transportation Systems

Revolutionising Parking: Insights and Innovations from Parking Australia
Jeremy Irvine Chief Executive Officer, Parking Australia
Daniel Hitchcock Managing Director, First Parking

Explore innovative solutions reshaping the parking industry, as experts share transformative perspectives and advancements in parking technologies and management strategies.

National Automated Access System (NAAS) for Heavy Vehicles
Dr Geoff Allan Chief Executive Officer, Austroads

Exploring seamless, efficient, and standardized access control for heavy vehicles, transforming transportation logistics.

How Can Smart Signs Improve Our Cities
Mark Henaway Technical Director, Roads, Aurecon

How can smart app technologies be used as a tool to dynamically reallocate underutilised road space for other transport purposes or urban functions without critically impacting current road users?

Future of Tech-Based Heavy Vehicle Access Regulation
John Barry Digital Products Manager – Digital Enablement, Data & Technology, National Heavy Vehicle Regulator

The future of technology-driven heavy vehicle access regulation, featuring the latest NHVR National Network Map. Explore cutting-edge solutions shaping the landscape of transportation regulations and logistics.

Roads, Tolling & Technology 2024

Leading-Edge Projects in Tolling and Traffic Management

Hashan Mendis Lead Tolling Engineer, VITRONIC
Lohita Rajesh Lead Tolling Engineer, VITRONIC

This presentation will focus on leading-edge projects in tolling and traffic management, demonstrating significant advancements in road infrastructure across Australia and Poland.

Tolling Technology for the Western Harbour Tunnel

Nick May Principal Advisor, Western Harbour Tunnel Tolling, Transport for NSW

Transport for NSW intends to deploy a tagless tolling solution for the Western Harbour Tunnel and has commenced a formal market engagement process to ensure international best practice and innovation can inform solution and specification development. This presentation provides an overview of the strategy and approach Transport has adopted.

Q&A + Discussion with Speakers

Axle-based Vehicle Classification Using Tracking Radar

Victor Deville Radar Support Engineer, Sensys Gatso Australia

Introducing a radar system that exploits the micro-Doppler effect to classify vehicles based on their axles. Enhancements are presented to improve the radar algorithm's performance in vehicles moving in parallel scenarios. This non-invasive solution requires no road infrastructure, enabling cost-effective, vandal-resistant deployment on various roads.

Decarbonising Transport – Big on Announcements, Slow on Delivery?

Renata Berglas Mobility Futures Business Group Leader, NTRO - National Transport Research Organisation

Navigating the colossal challenge of achieving global emissions reduction targets demands accelerated action. Despite having the necessary technology and skills, progress remains slow. Overcoming barriers involves addressing production challenges, upfront costs, and exploring incentives, government policies, financial mechanisms, and collaborations to propel advancements in reducing scope 3 transport emissions.

Additional presentation being finalised

Q&A + Discussion with Speakers

12:30 – 1:30	LUNCH BREAK

1:30 – 2:30	PLENARY SESSION 7	Frangipani Ballroom 2&3
	PANEL DISCUSSION – Future of Tolling for Australia	

Join our moderated panel discussion where government and toll road operators delve into the key future technology challenges and opportunities in operating and managing motorway tolling systems. The panel will discuss the evolution of tolling systems, technology trends, innovation and explore how industry and government can work together to enhance the future of tolling technology in Australia.

MODERATOR
Angus Carter Consultant, JYW Consulting

PANELLISTS
Joshua Till Head of Transport Technology QLD, Transurban
Andreas Goldhorn ITS Domain Lead Tolling, Transurban
Felicity Finlayson Director Motorway Partnerships & Planning, Transport for NSW
Zoltan Maklary Director Tolling, North East Link
Matthew McLeish Executive Vice President | Asia Pacific, Kapsch TrafficCom Australia
Lance Brand Senior Solutions Manager, Q-Free Australia

Q&A + Discussion with Panellists

| 2:30 – 3:00 | **CLOSING PLENARY SESSION 8** | Frangipani Ballroom 2&3 |

Don't miss the insightful keynote talks by industry leaders in the closing plenary session, as they share their vision and strategies for shaping the future of transportation.

Update on National Heavy Vehicle Charging Pilot
Matthew Rendle Assistant Director, National Heavy Vehicle Charging Pilot, Department of Infrastructure, Transport, Regional Development, Communications and the Arts, Australian Government
Sebastian Jezierski General Manager, Inloop (Nuonic)

Update on ITS Australia Summit 2024 Sydney (13-15 Aug 2024)
ITS Australia Activities, Conference Close and Thank You
Susan Harris Chief Executive, ITS Australia

About ITS Australia
ITS Australia is the peak body for advanced transport technology, supporting the delivery of safer, more efficient, sustainable transport solutions. We are a Not for Profit association and serve the interests of our members in Australia and globally. We represent the Australian ITS sector within Australia and Australian ITS interests on the world stage. We concentrate on land-based transport activities and interfaces to air and sea modes, and related entities.

We represent 150+ member organisations nationally and globally.

members

event calendar

| 3:00 – 3:30 | CLOSING NETWORKING REFRESHMENTS | |

| 3:30 – 4:30 | **OPEN WORKSHOP – ALL ATTENDEES WELCOME**
Integrated Connected Data for Safer More Efficient Traffic Management Operations | Frangipani Ballroom 2&3 |

This workshop will investigate the findings by University of Melbourne following an intensive literature review, stakeholder consultations and modelling of large data sources from a range of partners. Join this workshop to hear about the findings and share your thoughts on potential opportunities going forward.

By integrating CV data with traditional sensors and infrastructure information, the study reveals valuable insights into traffic patterns, efficiency, safety risks, and violations. The findings underscore the significance of CV in improving overall efficiency and safety of road networks. We present a structured framework for effectively integrating CV data with modern traffic management systems and practices, aiming to develop cost-effective and integrated intelligent traffic management systems.

Facilitated Q&A Discussion – This is an important project for our sector, and we are keen to engage with subject matter experts in our industry. We look forward to welcoming conference delegates join us for this workshop – if you have any questions or comments please reply directly to ITS Australia: admin@its-australia.com.au

MODERATORS
Neema Nassir Senior Lecturer, The University of Melbourne (by remote presentation)
Stacey Ryan Policy Manager, ITS Australia

Facilitated Q&A Discussion

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