

Program Outline

MONDAY 17 AUGUST 2026	
0700 – 1230	Exhibition Build
0730 – 1700	Technical Tours <i>(limited space available, so book now)</i>
1230 – 1700	Exhibitor Move In
1400 – 1800	Registration Desk Open
1730 – 1900	Welcome Reception

TUESDAY 18 AUGUST 2026					
0700 - 1800	Registration Desk Open				
0700 - 1800	Exhibition Open				
0830 – 1000	Day One Plenary Session				
0830 - 0900	Welcome to Country				
0900 - 0905	Welcome, Master of Ceremonies				
0905 - 0915	RTSA Welcome				
0915 - 0925	Official Opening				
0925 - 1000	Keynote Address - Michael McQueen				
1000 – 1030	Morning Tea <i>Served in the exhibition space</i>				
1030 – 1230	Concurrent Sessions - Concurrent sessions are 20-minute presentations + 5-minute question time				
	SESSION 1 LIGHT RAIL AND METRO SYSTEMS	SESSION 2 ROLLING STOCK DESIGN, CONSTRUCTION & MAINTENANCE	SESSION 3 SAFETY & RISK MANAGEMENT	SESSION 4 SIGNALS & COMMUNICATIONS	SESSION 5 TRACK DESIGN & CONSTRUCTION
1030	Small Network, Big Change: Adelaide's Tram Grade Separation Project and Innovative Track Solutions Jason Williams, Aurecon & Tram Grade Separation Projects Alliance, VIC, Australia	Investigation of Systemic Wheel Impact Failures in an Operational Fleet Damian Birkin, Aurizon, QLD, Australia	Rail Surveying Safety Innovations Transforming Shutdown Delivery, Machine Control and Workforce Protection Olan Healy, McDonald Surveys, WA, Australia	A Practical Playbook for Signalling & Engineering Management for Brownfield ETCS Level 2 Migration Subhajit Dey, UGL Limited, NSW, Australia	Evaluating Railway Optioneering: A Gis-Based Analysis Of The Napier-Wairoa Railway (PNGL) Alignment Post-Cyclone Gabrielle Gesmar Almeida Junior, Black Creek Global Consulting, Canterbury, New Zealand
1100	Energy-Centric Design & Maintenance Framework (ECDMF) for GoA4 Depots Vinod Kumar, Mott Macdonald Australia, VIC, Australia	Before Things go off the Rails: Shedding Light on Dynamic Vehicle Simulation With Vampire Pro Andre Volpato, Rail Confidence, NSW, Australia	Integrated Dynamic Track Quality Assessment for Australian Rail Networks Using TGI, Vehicle Dynamics, And Standards Yan Sun, CQUniversity, QLD, Australia	When Legacy Systems Fail Catastrophically: Lessons from the RFS 520 Midlunga Incident Matt Cole, Keolis Australia & New Zealand, SA, Australia	Buffer Stop Design for Varying Requirements for Bellevue Depot Surendra Bisht, Aurecon, WA, Australia
1130	Keeping Adelaide Trams Running Through Grade Separations: Temporary Stabling and Network Isolation on Glenelg Line Tom Kerr, McConnell Dowell, SA, Australia	Asset Management Planning in Decarbonisation of Heavy Haul Rail Rolling Stock Adriane Ho, Aurecon, WA, Australia	Effective Bowtie Diagram Development – Supporting Safety and Risk Management Steven Gibson, ESR Consulting, WA, Australia	Applying EN 50701 Cybersecurity To Etcs Level 2 Brownfield Delivery Across Eulynx And Legacy Architectures Cassandra Ingham, Quantum Rail, VIC, Australia	Flood Resilience of Inland Rail Ali Ayub & Hartley Bulcock, Inland Rail, QLD, Australia
1200	Digital Twin Modelling of Complex Light Rail Intersections Robert Lambert, Monash IRT, VIC, Australia	A Risk-Based Signalling Compatibility Assessment Framework for Rail Infrastructure Maintenance Vehicles Chinmay Sankhe, Rail Confidence, NSW, Australia	Talk Isn't Cheap: Examining The Effectiveness of Risk Triggered Commentary in Rail Driving Anjum Naweed, CQUniversity Adelaide, SA, Australia	Transition From RRI to CBI Zhe Xu, Siemens Mobility, NSW, Australia	Development of a State-of-the-art Boef Application for Static and Dynamic Analysis of Railway Track Structures Mahan Yoldashkhan, MTM, VIC, Australia
1230 - 1330	Lunch <i>Served in the Exhibition Hall</i>				

Plenary Two					
1330 – 1530 Concurrent Sessions - Concurrent sessions are 20-minute presentations + 5-minute question time					
	SESSION 6 ENERGY, ENVIRONMENT & SUSTAINABILITY	SESSION 7 INSPECTION & CONDITION MONITORING	SESSION 8 SYSTEMS ENGINEERING	SESSION 9 TRACTION SYSTEMS	SESSION 10 TRACK DESIGN & CONSTRUCTION
Room					
1330	A Multi-Objective Corridor Resilience Assessment Framework For Battery Electric Trains Sakura Mukhopadhyay , Arcadis, NSW, Australia	Inspection to Intervention: Using Eddy Current to Produce Focused, Optimized Rail Repair Plans Ben Muscat , Goldschmidt, NSW, Australia	Reliability Growth Demonstration as a Decision Tool for Operational Readiness of Complex Rail Projects Adam Versteeg , Vida Metro, VIC, Australia	Challenging the EN 50122-1 OCLZ for Catenary and Contact Systems David Stuart-Smith , Arup, NSW, Australia	Topographical Vertical Alignment Design Using a Rolling Stock Derived Method Joel Walsh , Inland Rail, Qld, Australia
1400	Net Zero Rail For South Australia Jorge Martin Gistau , Ricardo, NSW, Australia	Implementation of Hot Traction Detector System to Monitor Traction Motor and Gearbox for In-Service Trains Arnab Roy , Sydney Trains, NSW, Australia	Data-Driven Decision Systems in Rail Abdurrahman Beg , Monash Institute of Railway Technology, VIC, Australia	What's the Big Inrush? Modelling Traction Power Transformer Energisation: Case Studies and Procedures Reece McIntosh , Incite Energy, QLD, Australia	A Simple Conceptual Model to Predict Lateral Ballast Resistance due to Rail Compression Buckling Shah Neyamat Ullah , Central Queensland University Centre for Railway Engineering QLD, Australia
1430	Numerical Assessments of Energy Saving From Improved Rolling Stock Designs Qing Wu , CQ University, QLD, Australia	From Symptoms To Solutions: A Prescriptive Approach to Rail Risk Nithurshan Nadarajah , Monash Institute of Railway Technology, VIC, Australia	Maintenance Change Evaluation Using Reverse MRA and RCM Logic Michael Siminski , Downer, NSW, Australia	High-Voltage Risk: Critical Controls for Safer, Smarter Railways Joe Percy , WSP, QLD, Australia	Numerical Modelling of Ballasted Railway Track Stability Enhanced by Lateral Supports Using FEM-DEM Approach Milad Alizadeh Galdiani , Central Queensland University Centre for Railway Engineering QLD, Australia
1500	Quantum-Enhanced Energy Management for Hybrid Battery-Diesel Locomotives Daniel Roi Agustin , Central Queensland University Centre for Railway Engineering, QLD, Australia	Speaker to be announced	Applying Principles of Space Mission Analysis to Australian High Speed Rail David Venn-Brown , MTR Australia, NSW, Australia	Developing the OLE Sectioning Arrangement for Auckland's Waitematā (Britomart) Station and Tunnel Ralph Moulang , Aurecon, VIC, Australia	
1530 – 1600	Afternoon Tea served in Exhibition Hall				
1600 – 1730 Concurrent Sessions - Concurrent sessions are 20-minute presentations + 5-minute question time					
	SESSION 11 TRACK MAINTENANCE	SESSION 12 TRAIN OPERATIONS	SESSION 13 TRAIN-TRACK & WHEEL-RAIL INTERACTION	SESSION 14 TUNNELS, BRIDGES & STRUCTURES	SESSION 15 RAILWAY ECONOMICS
1600	High Speed Monitoring to Detect Process Instabilities in Rail Flash Butt Welding Fangzhou Zhang , Monash University, VIC, Australia	AI-Driven Event-Triggered Model Predictive Control for Rail Train Platooning Under External Disturbances Yufeng Lin , Central Queensland University, Centre for Railway Engineering QLD, Australia	Prediction of Track Geometry Degradation Using Iterative Multibody Dynamics Simulation With Monte Carlo Fleet Variability Esteban Bernal , Central Queensland University Centre for Railway Engineering QLD, Australia	Design Renewals Methods of Corrugated Steel Culverts Mostafa Emara , Metro Trains Melbourne, VIC, Australia	Speaker to be announced
1630	Sensitivity Analysis of Endpost Material on Insulating Rail Joints Nirmal Mandal , Central Queensland University, Centre for Railway Engineering, QLD, Australia	Interoperability in Rail Systems - Economic Drivers, International Lessons, and Implications for Australia Brychan Morris , Network Rail Consulting, QLD, Australia	From Grinding to Compliance: Monitoring Rail Roughness Evolution in Noise-Sensitive Railways Ash Athukoralalage , Speno Rail Matenance Australia, NSW, Australia	Designing Elevated Side Walkways for Real-World Tunnel Variability Opinderjit Samra , Arup, NSW, Australia	Rail Projects That Have Gone Well Philip Laird , University of Wollongong, NSW, Australia
1700	Increase in Rail Stress Over Mud Spots Franco Fanucci , Loram Maintenance of Way, MI, United States	What Is Capacity? A Review of Measurements and Applications in Literature and Industry David Bannister , Minerva Transport Planning Company, VIC, Australia	Speaker to be announced	Platform Screen Door Façade Glazing – Benefits and Challenges Steven Wong , Metro Trains Melbourne, VIC, Australia	Major Passenger Rail Projects – Failing the Social And Economic Tests, Again and Again Simon Lane , Rail Advisory Services, WA, Australia
1830 – 2230	Gala Dinner				

WEDNESDAY 19 AUGUST 2026					
0700 - 1800	Registration Desk Open				
0700 - 1800	Exhibition Open				
0830 - 1030	Day Two Plenary Session				
	Sponsor Address				
	Keynote Address: David C Clark, Senior Vice President – AREMA & Director Construction Engineering - CSX Transportation				
	Keynote Speaker: Ed Groulton				
	Panel Discussion - High Speed Rail				
	RTSA University Challenge				
1000 - 1030	Morning Tea Served in the exhibition space				
1030 - 1230	Concurrent Sessions - Concurrent sessions are 20-minute presentations + 5-minute question time				
	SESSION 16 RAILWAY ENGINEERING MANAGEMENT	SESSION 17 RAILWAY RESEARCH AND MATERIALS	SESSION 18 SAFETY & RISK MANAGEMENT	SESSION 19 SIGNALS & COMMUNICATIONS	SESSION 20 SYSTEMS ENGINEERING
Room					
1030	Managing Technical Debt in Legay Tram Fleet: Systems Engineering Perspective on Safety Critical Uplift Programs Ali Tamaddon , Yarra Trams, VIC, Australia	Governance Barriers to Integrated Railway and Spatial Planning: Evidence From New Zealand Policy Frameworks Behnaz Shaabani , University of Auckland, Auckland, New Zealand	What is a Safety Integrity Level (SIL) Useful for? And How Do They Work? Andrew Gabler , Acmena Group, QLD, Australia	Optimising Level Crossing Audible Warning Systems in Urban Settings Graeme Miles , Metro Trains Melbourne, VIC, Australia	Speaker to be announced
1100	Recent Developments in Undergraduate Education in Rail Engineering Graham Holden , Edith Cowan University, WA, Australia	Development of Next Generation Recycled Plastic Composite Sleepers for Mainline Railway Application Le Quan Ngoc Tran , Institute of Railway Technology, Monash University, VIC, Australia	Assessing the Future Role of Railways Safe Workers Kevin Anderson , Kevin J Anderson & Associates, VIC, Australia	Intelligent Self-Learning Optimization Algorithm Enhanced Accurate Stopping Yaju Wang , Traffic Control Technology, VIC, Australia	Integration: When Simplicity is the Key to Managing Project Complexity Nicolas Teulier , Acmena, NSW, Australia
1130	Improving Civil Structures And Rail Bridges Delivery and Acceptance – Through Discipline Based Engineering Assurance Faranak Fahimi Hanzaee , Public Transport Authority, WA, Australia	Evaluation of Aged Proper Synthetic Sleepers Follow-Up Survey for Major Applications and Predictable Life Span Yi-hsuan Lee , Sekisui Chemical Co Tokyo, Japan	Integrating Safety and Security in Risk Assessments Keerthy Mysore , Shakti Corp, NSW, Australia	Signalling Axle Counter & Supervised Section Sivachidambaram Thangavelu , Public Transport Authority, WA, Australia	A Systematic Approach to Standards for Railway Modernisation Michael Paul , Network Rail Consulting, VIC, Australia
1200	Insurance Pays for Damage. Assurance Prevents It. Engineering Confidence in a Fragmented Rail Environment Stephen Muscat , Rail Confidence, NSW, Australia	Evaluation of Methods to Extend IRJ Asset Life Through Optimisation of Track Structure Support Daniel Cumming , Worley Consulting, WA, Australia		Planning for Complexity in Signalling Project Delivery Raj Menon , Network Rail Consulting, NSW, Australia	Fail-Safe or Fail-Secure? Security Gaps in Rail Soroush Tazerji , Sener, VIC, Australia
1230 - 1330	Lunch Served in the Exhibition Hall				
1330 - 1530	Concurrent Sessions - Concurrent sessions are 20-minute presentations + 5-minute question time				
	SESSION 21 INSPECTION & CONDITION MONITORING	SESSION 22 ROLLING STOCK DESIGN, CONSTRUCTION & MAINTENANCE	SESSION 23 TUNNELS, BRIDGES & STRUCTURES	SESSION 24 ADVANCING THE FUTURE OF RAIL THROUGH ENGINEERING, SAFETY, AND SUSTAINABILITY	SESSION 25 TRACK DESIGN & CONSTRUCTION
Room					
1330	Speaker to be announced	Reducing Emissions Through Repurposing Ageing Rolling Stock Josh Steed , Metro Trains Melbourne, VIC, Australia	Speaker to be announced	An Efficient Wear Simulation Method for Railway Wheel Life Prediction Philipe Pacheco , IF Sudeste MG, Minas Gerais, Brazil Guilherme Santos , Federal University of Espirito Santo, Brazil	New Approach to Estimate Bearing Capacity of Strip Footings on Geogrid-Stabilised Granular Layer Over Clay Boon Chua , KBR Australia, SA, Australia

1400	Augmenting Track Inspection With AI to Enhance Track Asset Management Strategy Darren Tan, Monash Institute of Railway Technology, VIC, Australia	Mitigating Vibration-Induced Failures in Locomotive OPG Brackets Through Vibration Analysis, FEA Correlation and Field Validation Ramsha Asif, Siemens Mobility, VIC, Australia	From Point Clouds To Prediction - The Emerging Role of AI in Transit Space Assurance Shaina Minchin, Aecom, WA, Australia	E-Mobility Devices on Rail: An International Review of Risks, Controls and Emerging Practice Lauren Fraser, GHD, ACT, Australia	Increase Track Stability by Innovative Fastening Systems Jefferson Fern, VFS Australia, Vossloh, QLD, Australia
1430	A Dynamic Laser-Based System for Track Geometry And Rail Wear Monitoring Armin Ehrampoosh, Monash University Institute of Railway Technology, VIC, Australia	Variation of Residual Stresses in Railway Wheels Leading to Hot Spots Lily Tran Monash University Institute of Railway Technology, VIC, Australia	Integrating RAMS Engineering for Successful Project Delivery in Railway Systems Harry Li Metro, VIC, Australia	Rail Network Planning: Incorporating Strategic Integrated Method in New Zealand Behnaz Shaabani, University of Auckland, Auckland, New Zealand	Bottom-Up Slab Track as a Driver Of Tunnel Fitout Sequencing and Programme Optimisation Gian Luca Vicchi, VIXRAIL Solutions, WA, Australia
1530 – 1600	Afternoon Tea served in Exhibition Hall				
1600 – 1730	Closing Session				
	Panel Discussion: High Speed Rail				

The Organising Committee reserves the right to alter the program as circumstances dictate.