

Presenting the 13th

# Heavy Haul Rail

13-14 March 2024 | Crown Perth

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**CONFERENCE DAY ONE | Wednesday 13<sup>th</sup> March 2024**

*Future readiness for Heavy Haul Rail*

*All timings are in Australian Western Standard Time (AWST)*

## **07:30-08:40 YOUNG RAIL PROFESSIONAL'S BREAKFAST**

*Proudly sponsored by Speno Rail Maintenance Australia*

Join us for a nourishing start to Heavy Haul Rail 2024 as we get together to reflect, review and discuss career pathways, possibilities and opportunities.

Welcomed by our Breakfast Chat MC, Mark Green, *Managing Director, Speno Rail Maintenance Australia* hear career insights from:

- Matt Connelly, *Operations Manager, Speno Rail Maintenance Australia*
- Georgia Nicholls, *General Manager Rail Freight & Heavy Haul, Australasian Railway Association*
- Carly Wilson, *Rail Standards and Asset Management Specialist, RISSB*
- Michael Crocker, *A/Delivery Manager, Radio Systems Replacement | PTA Project Delivery, PTAWA & Deputy Chair, RTSA WA Chapter*

## **08:00 REGISTRATION & WELCOME COFFEE**

### **08:40 Welcome to Country**

Ingrid ngoorlak Cumming, a Whadjuk Balardong Noongar woman & and recognised young leader within the First Nations community

### **08:50 Admin and safety briefing**

### **08:55 Opening remarks from the chair**

Megan McCracken, *Chair, Freight and Logistics Council WA, & Leadership Coach, Pleiades Consulting, & Non-Executive Director, Pacific Energy Limited*

## **09:00 MINISTERIAL MESSAGE**

Hon Catherine King MP, **Minister for infrastructure, Transport, Regional Development and Local Government**

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## **REGULATION**

### **09:10 KEYNOTE ADDRESS | The regulator's perspective**

Dr Natalie Pelham, *Chief Executive, ONRSR*

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## **INNOVATION**

### **09:40 KEYNOTE ADDRESS | The innovation and technology driving heavy haul sustainability**

Wendy McMillan, *Senior Regional Vice President (ANZ and SEA), Wabtec Corporation*

## FREIGHT

### 10:10 The future of freight

Georgia Nicholls, *General Manager Rail Freight & Heavy Haul*, **Australasian Railway Association**

### 10:40 Networking & refreshment break

## FUTURE OUTLOOK

### 11:10 How the economy and energy transition is shaping HHR

Vivek Dhar, *Director - Mining and Energy Economist*, **Commonwealth Bank Australia**

### 11:40 Advantages of rail in supporting decarbonisation and the energy transition

Cat Peppler, *Group Executive Corporate*, **Aurizon**

### 12:10 **KEYNOTE ADDRESS** | Heavy Haul – Shaping the future of rail

Richard Cohen, *Managing Director Port, Rail & Core Services*, **Rio Tinto Iron Ore**

### 12:40 Accelerating innovation and transformation to ensure future readiness for heavy haul rail

Renee Hakendorf, *National Lead*, **CORE Innovation Hub**

### 13:10 Networking & lunch break

#### CONCURRENT INNOVATION STREAMS

TRACK 1: DECARBONISATION	TRACK 2: MAINTENANCE
<b>14:10 Welcome from Chair</b> Candis Rhodes, <i>Manager Sustainability, Rail Strategy</i> , <b>Rio Tinto</b>	<b>14:10 Welcome from Chair</b> Professor Ravi Ravitharan, <i>Director, Monash Institute of Railway Technology</i> , <b>Monash University</b>
<b>14:15 <b>PANEL DISCUSSION</b>   Incremental change opportunities for decarbonisation as we head towards 2050</b> <b>Moderated by:</b> Candis Rhodes, <i>Manager Sustainability, Rail Strategy</i> , <b>Rio Tinto</b> Roger Buckley, <i>Fleet Decarbonisation Manager, Asset Management and Strategy</i> , <b>Aurizon</b> Georgia Nicholls, <i>General Manager Rail Freight &amp; Heavy Haul</i> , <b>Australasian Railway Association</b> Carina O'Brien, <i>Head of Strategy</i> , <b>Siemens Mobility</b>	<b>14:15 Recent developments in applying artificial intelligence to the rail industry</b> Mark Wood, <i>Chief Technology Officer, 4AI Systems &amp; General Manager, Communications &amp; Electronics</i> , <b>4Tel</b>
<b>15:00 Innovative modelling and simulation techniques for improved heavy haul freight operations</b> John Deppen, <i>Director Engineering</i> , <b>Amsted Rail</b>	<b>14:45 The next frontier in automation for heavy haul railways: maintenance robotics</b> Saad Khan, <i>Co-Founder &amp; Director</i> , <b>Future Maintenance Technologies</b>
<b>15:30 Global case studies in decarbonising railway track</b> Anthony Sacca, <i>General Manager - Composite Sleepers</i> , <b>Unipart Rail</b>	<b>15:15 Beyond wear and tear: Advanced rail grinding for optimal productivity and sustainability in Australian heavy haul railways</b> Ash Athukoralalage, <i>Wheel/Rail Interface Engineer</i> , <b>Speno Rail Maintenance</b> Mark White, <i>Business Development Manager</i> , <b>Speno Rail Maintenance</b>



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16:00 Networking, stretch & refreshment break

15:45 Networking, stretch & refreshment break

CONCURRENT INNOVATION STREAMS (continued)	
TRACK 3: GREEN TECHNOLOGY	TRACK 4: INNOVATION
<b>16:25 Lithium batteries in your fleet – An idling retrospective</b> Roger Buckley, <i>Fleet Decarbonisation Manager, Asset Management and Strategy, Aurizon</i>	<b>16:25 In it for the long haul — The case for virtual reality and digital training twins as a dynamic, long-term asset to help combat labour market shortages</b> Ethan Scott, <i>VR Instructional Designer, Nexefy</i>
<b>16:55 Electrifying Australia's heavy haul rail networks</b> Janis Emolins, <i>Systems Manager - Engineering, Rail Electrification, Siemens Mobility</i>	<b>16:55 Improving the sustainability of heavy haul rail infrastructure - Learnings from South African heavy haul railways</b> Shunturi Govender, <i>Senior Rail Civil Engineer, Arup</i>
<b>17:25 Closing remarks from the Chair</b>	<b>17:25 Closing remarks from the Chair</b>

**17:30 End of Day One & Exhibition Networking Drinks Function**  
*Proudly Sponsored by Salcef*

## CONFERENCE DAY TWO | Thursday 14<sup>th</sup> March 2024

**08:30 Admin and safety briefing**

**08:35 Welcome from the chair**  
Tamara Mahes, *Director Operations and Maintenance, Curtin University*

**08:40 INTERNATIONAL KEYNOTE ADDRESS | Highlights from North America's research program**  
Kari Gonzales, *President & CEO, MxV Rail*

**09:10 INTERNATIONAL KEYNOTE ADDRESS | On track for success - Key elements in heavy haul infrastructure maintenance and track construction**  
Antonio Merheb, *Chairman, IHHA*

### SAFETY

**09:40 KEYNOTE ADDRESS | Thinking differently about rail safety**  
Warren Wellbeloved, *General Manager Rail, WA Iron Ore, BHP*

**10:10 PANEL DISCUSSION | What is your psychosocial safety culture? How are we continuing to evolve as an industry?**  
**Moderated by:** Tamara Mahes, *Director Operations and Maintenance, Curtin University*  
Debra Watson, *Managing Director, Satarla Australia*  
Anita Payne, *Executive Coach, Team & Culture Coach, Facilitator, Grow Communications*  
Chris Warner, *Senior Leader Coach, BHP & Author, 'Flick The Switch' & 'Why Care'*  
Sue McCarrey, *CEO, NOPSEMA*

**10:55 It all begins with culture**  
Brian Ross, *WA/SA Operations Manager, DT Infrastructure*

**11:15 Networking, stretch & refreshment break**



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## PEOPLE & SKILLS

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### 11:45 **PANEL DISCUSSION | Workforce planning & tackling labour market shortages**

**Moderated by:** Lily Meneghel, *GM Integrated Remote Operations Centre*, **Roy Hill**

Jasmine Veaney, *Superintendent Asset Integrity*, **BHP**

Agnes Kang, *Superintendent Reliability Engineering Rail*, **Roy Hill**

Cameron Wylde, *People Manager, Northern Hub*, **Fortescue**

Rob Ramsden, *Principal Energy, & Climate Change Capability*, **Rio Tinto**

Kath Wallace, *Portfolio Director – Energy and Transport*, **North Metropolitan TAFE**

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## GOVERNMENT UPDATE

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### 12:30 **STATE MINISTERIAL ADDRESS**

Hon Rita Saffioti MLA, **Deputy Premier; Treasurer; Minister for Transport; Tourism WA**

### 13:00 **Networking & lunch break**

#### **TECHNICAL SITE TOUR | AUTONOMOUS WAGON DEMONSTRATION AT ARC INFRASTRUCTURE, KEWDALE FACILITY** \*Attendance must be registered with event managers

13:30 Departure from Crowne, Perth

14:00 Arrive at Kewdale Facility for Demonstration

14:40 Depart Kewdale

15:10 Arrive back at Crowne, Perth

Arc Infrastructure invites you to attend a demonstration of the autonomous wagon prototype at the Kenwick Rail Freight Facility. Hiivr Rail is the exciting name Arc Infrastructure has given the autonomous wagon and its real-world application in the WA context, after more than three years of development. Designed with the future Westport in mind, the Hiivr Rail concept would see containers move directly from a vessel to a future network of intermodal freight terminals and be available to customers within hours of being unloaded from the vessel. Intermodal locations which have a constrained footprint would be unlocked by the Hiivr Rail wagon.

Hiivr Rail's autonomous wagon leverages self-driving technology that is already being used all over the world and tailors it to the rail environment for Westport. It will include technology which connects to logistics systems, providing safe, autonomous operations with real-time visibility of container movements. The future Hiivr Rail fleet would be comprised of individual, battery-powered, autonomous wagons which can operate as a single wagon, or together as a fleet, reducing the number of trucks on the road as rail modal share increases. The Hiivr Rail wagon will have positive social and sustainability outcomes, including improved road safety through a reduction in the number of trucks on the road and zero greenhouse gas emissions, with batteries capable of being charged by 100% renewable energy.

PPE requirements: Long pants and closed-in shoes.

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## CYBER SECURITY & AI

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### 14:10 **PANEL DISCUSSION | AI & modernisation**

How we use AI and advanced optimisation to make better decisions for operations, maintenance and general rail movements

**Moderated by:** Brett Elkington, *Manager Autonomous Road Trains*, **Hexagon**

Charlotte Moss, *Superintendent Delivery Rail Systems – Sustaining Capital Rail*, **Rio Tinto**

Ksenija Stanic-Colic, *Manager Engineering Civil & Mechanical*, **Roy Hill**

Mark Wood, *Chief Technology Officer, 4AI Systems & General Manager, Communications & Electronics*, **4Tel**

Kaylyn Chandran, *Senior Integration Engineer and Chief Remote Pilot*, **Future Maintenance Technologies**

### 14:55 **AusRRIN: Framework to strengthen research and innovation to shape the future of Australian Railways**

Professor Ravi Ravitharan, *Director, Monash Institute of Railway Technology*, **Monash University**

### 15:25 **Lessons from the collision between freight trains 7MP5 and 2K66 at Jumperkine**

Tomas Austen, *Senior Transport Safety Investigator*, **ATSB**

**15:55 Closing remarks from the chair**

**16:00 End of conference**

**CONFERENCE DINNER | 7:00pm – 10:30pm**

***Proudly sponsored by Amsted Rail***

Commencing with pre-dinner drinks at 6.30pm

The Heavy Haul Rail Conference dinner takes place on the evening of the 14 March at the Crown Perth. Join us for this unique networking function which includes pre-dinner drinks and presentation to our **Next Generation Conference Scholarships**. Attendees must register to attend the conference as well.

**TECHNICAL SITE TOUR \*Attendance must be registered with event managers**

**Friday 15 March | TOUR THE AUSTRALIAN AUTOMATION & ROBOTICS PRECINCT (AARP) & DIRT LAB DEMO**

9:30	Departure from Crowne, Perth
10:00	Welcome + Acknowledgments at the AARP site office
10:15	Innovator Introductions
10:30	Innovator Showcase on Site
11:15	Attendees to return back to the AARP site office
11:30	Panel session + Open Q&A
12:00	Lunch, Networking & Tour Close
13:00	Arrive back at Crowne, Perth

Join us for an onsite AARP Demo Day, where several innovators will demonstrate their technology with open Q&A with the innovators to conclude.

The 51-hectare site, which has been made available by Development WA, and being activated and operated by CORE Innovation Hub, includes multiple test beds that can accommodate a range of vehicles, equipment, field robots, drones and other technologies. It is an exciting chance to visit as the Precinct develops and a vibrant innovation ecosystem is built up around it. The test areas are being developed to provide a Dirt Lab - Innovation Mine with drill pad, haul ramp, and load and unload areas as well as New Energy, Heavy Haul, Urban and Flex Zones for drones and collaborative projects.

Construction is underway on the Precinct HQ (or common user facility) - which will be a commercial and collaborative space equipped with co-working space, meeting rooms and offices, a control room and training facilities, lab and maker space and exhibition areas. The AARP caters to startups, small and medium-sized businesses, mi-tier miners and Tier 1 operators - across sectors including mining, resources and energy, construction, agriculture, manufacturing, defence and space.

PPE requirements: Long pants and closed-in shoes.



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