Welcome to ICN’s advanced technologies seminar

2012 FORMULA 1 QANTAS AUSTRALIAN GRAND PRIX
Thursday 15 March 2012, 2.00pm – 4.00pm
Tony Carney
National Sector Manager - Rail
ICN
Program

2.00pm  Introduction and event overview
2.10pm  Touring Cars / networking
2.30pm  Warwick Talbot - RRL: Rail Systems Project
2.40pm  Porsche cup / networking
3.00pm  Matthew Doolan- On Track to 2040: ANU edge
3.10pm  AMG v Touring Car v F1 / networking
3.30pm  Vote of thanks and networking
3.40pm  Formula Ford Championship / networking
4.00pm  Close – access to outdoor networking
• Industry Capability Network (ICN)
• Rail Industry Overview
• National Sector Manager, Rail – Tony Carney
• Rail Advocate – Bruce Griffiths
• ICN Rail Directory
• ICN & EC Rail Specialist’s
Warwick Talbot
Alliance General Manager
Regional Rail Link : Rail Systems
Regional Rail Link: Rail Systems

15 March 2012

Warwick Talbot
Alliance General Manager
Agenda

• Regional Rail Link project overview
• Rail Systems work package
• Technology
• Procurement
Background and scope of the project:

- Regional Rail Link (RRL) is a major new rail line that will provide capacity for thousands of extra passengers across the network in the peak hour.
- RRL separates regional trains from metropolitan trains – for the first time giving Geelong, Bendigo, and Ballarat trains their own dedicated tracks through the metropolitan system from Sunshine to Southern Cross Station.
- The project also includes new dedicated regional tracks from west of Werribee to Deer Park via two new stations in Wyndham Vale and Tarneit.
- The project is jointly funded by the Australian and Victorian governments, with the Commonwealth contributing $3.225 billion.
The Rail Systems work package will deliver train control and systems for the RRL project, including:

- Train Control
- Signalling
- ICT
- Communications
Key Milestones

• Signalling Arrangement Plan approval
• GO Power Supply for WP-D
• F Signalling Commissioning WP-D
• G1 Signalling Commissioning WP-D
• G2 Signalling Commissioning WP-C
• G3 Signalling Commissioning WP-E
• RRL Train Control System commissioning
Systems Engineering Approach

- Systems Approach
- Cenelec V Model
- RAMS
Safety in Design

• Systems Assurance Review Process

• Assess all design packages based on:
  o Constructability
  o Maintainability
  o Sustainability
  o OHS
  o RAMS
  o Environmental Impact
  o Sustainability
Technology

• Train Control
  • Building on the core replacement Metro Train Control for the new RRL TCS
  • Local control will be to existing standards

• Signalling
  • Best-for-project technology to be employed
  • Cubicles and cabinets - standard products
  • Signals, points – standard products
  • Cables – standard products
Technology

• Communications
  • Fibre Optic – standard Victrack assets
  • Radio – standard Victrack assets

• ICT
  • CCTV – standard Victrack assets
  • PA - standard Victrack assets
  • Miscellaneous items – standard Victrack assets
Procurement

• Long lead items – commencing in May 2012

• Peak procurement period around mid 2013

• Working closely with ICN as an integral part of our procurement process to optimise local industry and business
Tony Carney
National Sector Manager - Rail
ICN
Matt Doolan
Project Leader
The Australian National University
Rail Supplier Technology Roadmap – On Track to 2040 – Update
ANU Edge

• ANU - Australia’s national university
• ANU Edge
  – Delivering knowledge services informed by world-class research and practice
  – Designed to ‘commercialise’ the non-technical research output of the university
On Track to 2040

• 10-month project to identify strategic opportunities for the Australian rail supply industry – technology roadmap

• The project is funded by
  – The Commonwealth government
  – The state governments of New South Wales, Victoria and Queensland
  – The Australasian Railways Association (ARA) on behalf of industry
Project aims & outcomes

Tangible

• Build a shared vision for Australia’s rail supply industry
• Develop a strategic technology roadmap for short, medium and long term opportunities

Intangible

• United industry with common vision
• Greater collaboration and new opportunities
• Increased visibility of industry needs
Roadmapping

Where are we now?

How can we get there?

Where do we want to go?
Phase 1 – Establishing the Vision

Vision Workshop

*Where do we want to be?*

At this workshop industry leaders identified the trends and drivers affecting the rail industry.

This workshop also established a *vision* for the rail industry, determining where the industry wants to be in the long term.
Vision

• In 2040, the Australian Rail Supply Sector will be **innovative and cohesive**, having developed a strong sense of industry.

• The sector will have developed effective and integrated **national and international supply chains** linked to a **globally competitive manufacturing base**. Australian suppliers will achieve recognition as **innovative developers and integrators of technology and intellectual property**, collaborating with partners inside and outside the supply sector to develop scalable solutions.
Phase 2 – Industry Assessment

Opportunity Evaluation and Priority Area Workshops

Where are we now?

Surveys, interviews, workshops and ICN data were used to determine the market needs (attractiveness) and Industry capability.
Phase 3 – Opportunity Identification

Opportunity Evaluation and Priority Area Workshops

*How do we get to where we want to be?*

Industry leaders and technological experts identified (based on the information from Phase 2) which Opportunities are most important, and mapped their realisation.
Three Priority Areas

- **Monitoring & Management:**
  - Operations management, asset management, smart infrastructure, information systems, automated control, and safety.

- **Power & Propulsion:**
  - Energy regeneration, emissions reduction, electric motors, gaseous fuels, braking systems, and energy management.

- **Materials & Manufacturing:**
  - Low cost manufacturing, lightweight materials, simulation, advanced manufacturing, materials for heavy haul, and advanced design.
Phase 4 – Implementation (22nd Mar)

Prioritisation and Implementation Workshop

How do we get to where we want to be?

Based on the technological roadmaps, in this participants will develop an implementation plan, including: What needs to occur in government? How do we establish leadership? How can we best collaborate? What research needs to be done?
Final Delivery

Delivered to DIISRTE, the final report will contain an entire roadmap for the rail industry to best achieve its vision, using the opinions of many stakeholders within the industry, taking advantage of the trends and drivers affecting the industry.
Lasting Benefits

– “The process of developing roadmaps is as important as the roadmaps themselves”
  - Communication, Network building
– Direct engagement across the supply chain
  - Involvement of key decision makers essential
– Consensus building about key areas of concern and interest
– Focus for industry communication and direction
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Tony Carney
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Thank you

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