

RISSB product for prioritisation

Primary information	
Type of product being suggested:	<p>Code of Practice for implementation in the Australian interstate Context of an agreed interoperable protocol systems for ATC/In-cab signalling and train radio.</p> <p>Leverages existing RISSB Interoperability standards and global technology Standards in relation to train protection / in-cab signalling systems, and radio telecommunications.</p>
Title of product being suggested:	<p>Interoperability of Safe Working technologies for the Australian Standard Gauge Network.</p> <p>Industry Adoption of AS7450 Interoperability 2013, AS7666 Train Protection and Control Interoperability, and Guideline Rail Systems Interoperability</p>
Date of suggestion:	February 2018
Reason for suggestion:	<p>Despite the interoperability products being available for 5 years, there appears to be little evidence that standard gauge rail infrastructure managers are giving any consideration to interoperability in relation to business case development and procurement of safe working technologies, including Train Protection / in-cab signalling systems and radio Communication systems</p> <p>There is a real and present risk that Australian rolling stock operators will need to provision for 4 different train control technologies on interstate rolling stock: ATMS (Australian developed), a Nth American system (eg ITCS), ETCS (European) and CBTC (a bespoke high capacity system primarily intended for metros).</p>
Railway discipline area:	<p>Rollingstock (lead), TCS (support)</p> <p>Suggest rolling stock lead, because it is rolling stock operators who bear the impact of RIM investment decisions.</p>
Scope:	
<p>Active promotion and support for existing products AS7450 and AS7666 with interstate network Rail Infrastructure Managers, and the provision of practical guidance on how the standards can be used to drive efficient rail solutions is required.</p> <p>Facilitation of interoperability working groups to agree which international standard will be supported by RISSB for the interstate network, and the development of a suitable Code of Practice for that standard.</p> <p>RISSB to develop a “Certified Compliant” framework for RIMs seeking to provide an interoperable service.</p>	
Objective:	
<p>Ultimate objective is an agreed standards-based interoperable multi-vendor solution for Australian interstate network for train protection and in-cab signalling systems, and for train radio.</p>	

Hazard identification:			
1	N/A	6	
2		7	
3		8	
4		9	
5		10	
Benefits:			
<u>Safety</u>			
<p>Effective implementation of a standards based interoperable solution will result in lower costs, and improved competitiveness for the Australian rail sector through:</p> <ul style="list-style-type: none"> • More effective competition between system vendors • Avoiding duplication of equipment in rolling stock (often impracticable anyway) • Avoiding the need to train RTC in multiple systems • Reduced cost of bespoke railway specific R&D that results in stranded products with ongoing development and product maintenance costs spread over a very low user base • More cost effective deployment resulting in faster adoption of modern technologies. <p>This is the modern-day equivalent of the “gauge” issue. In Queensland, a “dual wayside fit” approach is needed to manage 2 gauges. Without specific action, a dual rolling stock fit may be required to pass from South Australia to Western Australia.</p> <p>From the RISSB Guideline:</p> <p>4.2 Vision for Interoperability</p> <p>Interoperability in and between Australia's rail networks is not a legislated requirement; it is a voluntary requirement, supported by Australian Standards. Interoperability relies on the foresight, leadership and responsibility of railway industry participants, and their commitment to achieving the short and long-term benefits of progressive harmonisation, interoperability and greater associated benefits.</p> <p>It is up to the stakeholders in the railway industry to commit to interoperability improvements and develop harmonisation between networks by working together to achieve commonality in standards and subsystems in order to establish interoperable rail systems.</p> <p>As rail system interoperability improves, the following practical outcomes can be expected:</p> <ul style="list-style-type: none"> • Uniform standards and specifications • Standardised components • Economies of scale • Operational flexibility • Minimal transshipment of commodities • Travel time savings • Facilitation of future network development 			
<u>Interoperabilityⁱ / harmonisationⁱⁱ</u>			
The project is intended to address the lack of adoption of existing interoperability standards.			
<u>Financial</u>			
<ul style="list-style-type: none"> • Reduced bespoke development of low volume systems, reducing lifecycle costs • Reduced dual fitting of equipment in rolling stock to accommodate lack of interoperability between Rail Infrastructure Managers • Reduced training costs associated with multiple systems 			

<ul style="list-style-type: none"> Improved competition through standards based multi-vendor systems
<u>Environmental</u>
N/A
Impacts:
N/A

i Interoperability - the ability of a process, system or a product to work with other process, systems or products (aka compatible systems through managed interfaces).

ii Harmonisation - the act of bringing into agreement so as to work effectively together (aka uniformity of systems).