An apology from Steve
THE RAIL TECHNICAL STRATEGY 2012
IS PRODUCED BY THE TECHNICAL
STRATEGY LEADERSHIP GROUP (TSLG)
FOR, AND ON BEHALF OF, THE RAIL
INDUSTRY IN GREAT BRITAIN.

TSLG is an RSSB-facilitated cross-industry expert body made up of senior executive staff, charged with developing and championing implementation of the Rail Technical Strategy, supporting communication, managing strategic research, identifying opportunities, barriers and actions.

TSLG engages with the Rail Delivery Group (which endorses this strategy) and with other industry groups with a leadership role including the Planning Oversight Group and National Task Force. TSLG’s remit and terms of reference are agreed by the Board of RSSB.

TSLG members
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TSLG members

Network Rail, Department for Transport, Office of Rail Regulation, Crossrail, First, ALSTOM, DB Schenker, TSLG, RSSB, ATOC, Rail Research UK, Railway Industry Association, Transport for London, porterbrook, Bombardier.
Britain’s railway sets the benchmark for service quality, customer satisfaction and value for money by being safe, reliable and resilient, meeting capacity and service requirements and contributing to the growth of the economy.
Rail Technical Strategy 2012

6 Themes
3 Common foundations
7 Common design concepts

Brought together in a vision of the railway in 2040

To deliver the industry’s 4Cs
COMMON DESIGN CONCEPTS

OUTCOMES
Six themes

Control, command and communication

Energy

Infrastructure

Rolling stock

Information

Customer experience
Intelligent traffic management and control systems dynamically optimise network capacity and facilitate highly efficient movement of passengers and freight.
Control, command and communication strategy

Driver advisory systems

Centralised network control

ERTMS in-cab signalling

Intelligent traffic management systems

Automatic driver operations
Control, command and communication route map

DAS
Algorithms
ERTMS
4G/LTE
FuTRO
Network capacity
Traffic management
Train location technologies
A low carbon, energy-efficient railway
Energy strategy

More 25kV electrification

Energy-efficient specifications

Intelligent traffic management

Smart grid technologies

Low carbon materials
Energy route map

- Electrification cost reduction
- Energy reduction opportunities
- Rolling stock design
- Technology watch
- Timetabling
- Sensors
- Technologies for storage, generation and harvesting
A simple, reliable and cost-effective rail infrastructure which meets customer requirements and is fit for the 22nd century
World-class asset management

Future-proofing strategies

Embedded sustainable development

Cost-saving generic designs
Infrastructure route map

Whole-system reliability programme
Intelligent infrastructure
RCM
4Cs long-term requirements
Shift2Rail JTI
Asset design
Station capacity
R&D for low carbon infrastructure
Mass- and energy-efficient, low whole-life cost rolling stock meets the evolving needs of its customers.
Rolling stock strategy

New technologies for cost and operational improvements

Alternative traction power sources

Standard architectures for sub-systems

Operational capabilities of freight
Rolling stock route map

Shift2Rail JTI
Technology watch
RCM
DRACAS
Mechatronic bogies
Drive systems
Traction
Right-mass design
Open standards
Information is a valued rail asset that improves customer services, reduces operating costs and generates revenue.
Information strategy

Common information architectures and protocols

Cross-industry information flow model

Exploitation of rail information
Information route map

- Data management strategy
- Whole-system architecture
- Storage
- COTS
- Security
- Resilience
- NISC
- Innovation
Rail is customers' preferred form of transport for reliability, ease of use, and perceived value.
Customer experience strategy

Door-to-door journey experience

Customer access

Health, safety and security risks

Information distribution

Integrated rail and freight customer information systems
Customer experience route map

Strategic relationships
Transport hubs
PRM-compatible
Ticketing
Contactless technology
Safety and security
Anti-fraud technology
Personal communications
Apps for freight
Three common foundations

Whole-system approach

Innovation

People
Whole-system approach

A whole-system approach enables the rail industry to implement change easily and improve reliability, availability, maintainability and safety.
Whole-system approach strategy

An industry whole-system approach

Whole-system modelling capability and tools

Aligned asset management plans
Whole-system approach route map

A holistic view
Knowledge exchange
Leadership
ISO55000
Whole-system reliability
RCM
DRACAS
A dynamic industry that innovates to evolve, grow and attract the best entrepreneurial talent.
Innovation strategy

Remove barriers

Innovation Capability Maturity Model Level 5

Commercial models for intellectual property

Support for innovators
Innovation route map

Barriers
Commercial models
Transport Systems Catapult
ICMM
Facilities
Funding
Skilled, committed and adaptable people delivering an efficient and customer-focused railway
People strategy

Skills for the future railway

A common standard

Learning methods

Technology for people

Automated repetitive tasks
Graduate courses
Partnerships
NSARE
BS11000
Future operations
Tools
Seven common design concepts

Whole-system reliability
Resilience
Security and risk mitigation
Automation
Simplicity
Flexibility
Sustainability
Links with the strategies

Whole-system reliability

Resilience

Security and risk mitigation

Automation

Simplicity

Flexibility

Sustainability
Links to RTS 2012 materials

PDF version:
http://www.futurerailway.org/RTS/About/Pages/Download-the-RTS.aspx

RTS 2012 web version:
http://www.futurerailway.org/RTS/Pages/Intro.aspx

Video and animation:
http://www.futurerailway.org/RTS/Vision/Pages/On-Video.aspx
http://www.youtube.com/user/TheFutureRailway
Questions?

Thank you!

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www.futurerailway.org/RTS