Rail Technical Strategy
Innovating across Britain's railway

FUNCTIONAL PRIORITIES
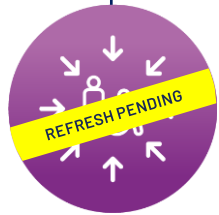
EASY TO USE FOR ALL
REFRESH PENDING

Rail will deliver an excellent travel experience to regular and occasional passengers thanks to dependable real-time information, innovative payment methods, and improved solutions for accessibility.
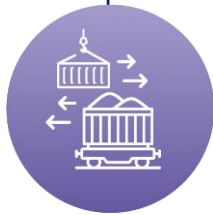
FREIGHT FRIENDLY

Freight growth on the rail network will be enabled through better use of existing and new capabilities of freight assets, and improved whole system thinking with freight at its heart.
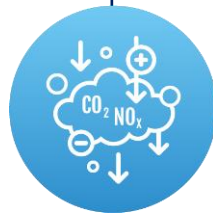
LOW EMISSIONS

Modal shift from road and air travel to rail, combined with actions to lower rail emissions, can make a substantial contribution to tackling climate change and air pollution. Rail emissions will be reduced by new – full and partial – efficient electrification, zero and low carbon vehicles, and a whole-system, whole-life approach to managing carbon.

OPTIMISED TRAIN OPERATIONS

Highly reliable train services and greater network capacity will be achieved through flexible and robust train planning and simpler and safer real-time operations. These are underpinned by a strategic approach to improving signalling and train capabilities.

EFFICIENT AND RELIABLE ASSETS

Rail assets will be more reliable and have lower whole-life costs, thanks to right time insights, efficient maintenance, improved resilience to a changing climate, speedier introduction of innovations, and better management of obsolescence.

CRITICAL ENABLERS

Data driven
Good exploitation of data underpins all the other priorities of the Rail Technical Strategy. It is the key enabler to many of the important and necessary goals that the future railway needs to achieve.

Improved implementation pathways
Collaborative research and innovation with a strong industry pull, drives and de-risks take-up, leading to reliable and timely deployment of novel solutions. Effective alignment with insertion points have a key role to play in ensuring the benefits are maximised. The critical roles that people and culture play are recognised.

Digitally talented workforce
Attracting and developing a vibrant and more diverse workforce is critical. The fast-paced developments of digital technologies pose a further attraction, retention and upskilling challenge. The railway continues to need people from a vast array of technical backgrounds and this increasingly needs to be underpinned by strong digital skills to successfully drive change and innovation.

DESIRED OUTCOMES

1. Support rapid **progress towards industry's strategic aims**
2. **Steer research funding and initiatives** to prioritise advances in agreed areas
3. **Inform long-term investment** for replacements and renewals
4. **Empower supply chain to deliver** the technical solutions required by industry
5. **Foster collaboration** and provide a conduit for **sharing successes** and challenges