



ETCS Experiences in Great Britain



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ETCS Deployment Strategy



GB approach to ETCS is to deploy at point of signalling renewal - only way to sustainably and affordably deal with future signalling renewal requirement



A vertical graphic on the left side of the slide, consisting of a series of blue and white horizontal bars that resemble the cross-sections of a railway track, extending from the top to the bottom of the page.

Great Britain's ETCS Deployment Journey

The Pilot - Foundational technical development - *Cambrian Line*

2007-2011

Projects Building on Pilot– Heathrow & Thameslink Lines began operation 2018

National Specification Development –Development of generic application specifications

2011-2022

National Facility Development – Development of test laboratory & test track

2011-2022

The Pathfinder – Delivery and commercial model development – *Northern City Line*

2020-2024

The Pioneer – To migrate tens of organisations to operate with digital signalling -*ECDP*

2018-2028

The Portfolio – Building the industry capability & delivering multiple route deployment

2024-

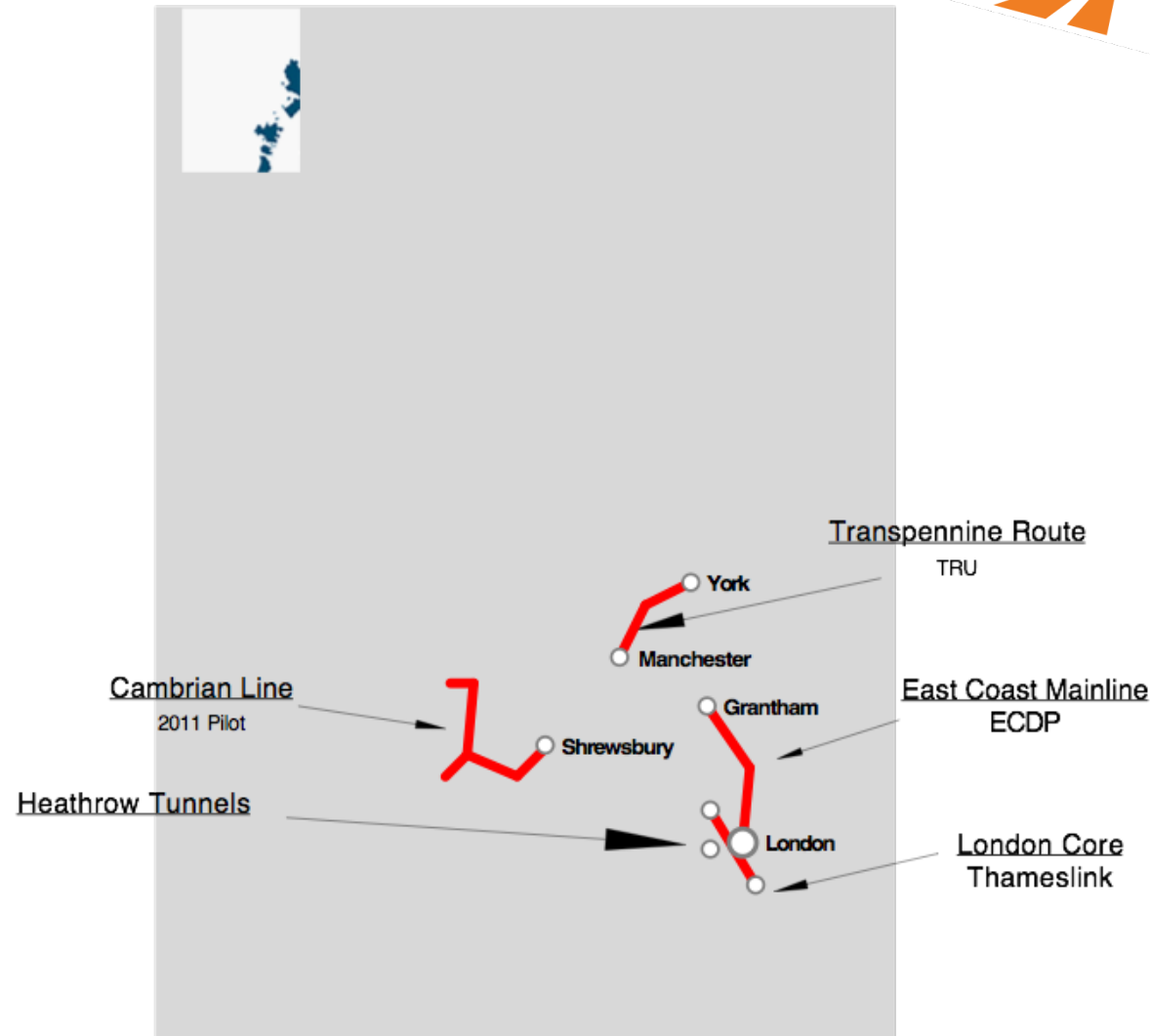


GB Current ETCS

As of 2023, ETCS areas completed and/or underway includes:

- Cambrian Line (Complete)
- London Thameslink (Complete)
- Heathrow Tunnels (Complete)
- East Coast Digital Programme (including the Northern City Line)
- TransPennine Route Upgrade

Each of these have, and continue to, develop the UKs approach to what is the largest industry-change programme in a generation.



National ETCS Specifications

OFFICIAL

Reference	153821-NWR-SPE-ESE-000017
Issue/Ver:	2.0
Date:	22/10/2021

Digital Railway Requirements – ETCS Onboard

Prepared by:
Riza Samavati
Lead Architect – ETCS Onboard
RS-221021-0063 Date: 22/10/2021

Reviewed by:
Peter Martell
Principal Systems Architect
PM-221021-139 Date: 22/10/2021

Approved by:
Rubina Greenwood
Head of System Requirements & Integration
RNG-221021-364 Date: 22/10/2021

OFFICIAL

Reference	153821-NWR-SPE-ESE-000016
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Date:	22/10/2021

Digital Railway Requirements – ETCS Trackside

Prepared by:
Riza Samavati
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RS-221021-0061 Date: 22/10/2021

Reviewed by:
Peter Martell
Principal Systems Architect
PM-221021-137 Date: 22/10/2021

Approved by:
Rubina Greenwood
Head of System Requirements & Integration
RNG-221021-362 Date: 22/10/2021

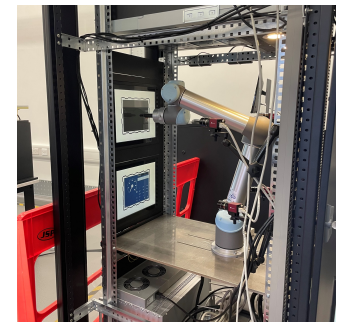
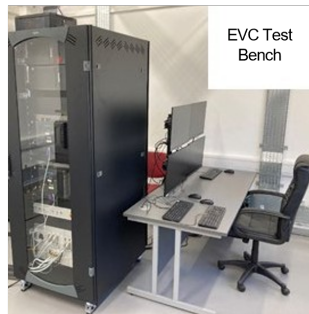
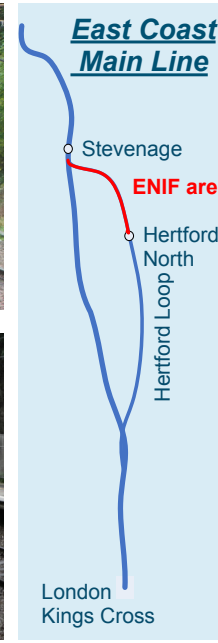
Working together for a better railway:

Working together for a better railway:

System Requirements and Integration GB Generic Requirements Suite - Network Rail



ETCS National Integration Facility (ENIF)



Multi-Route Strategy

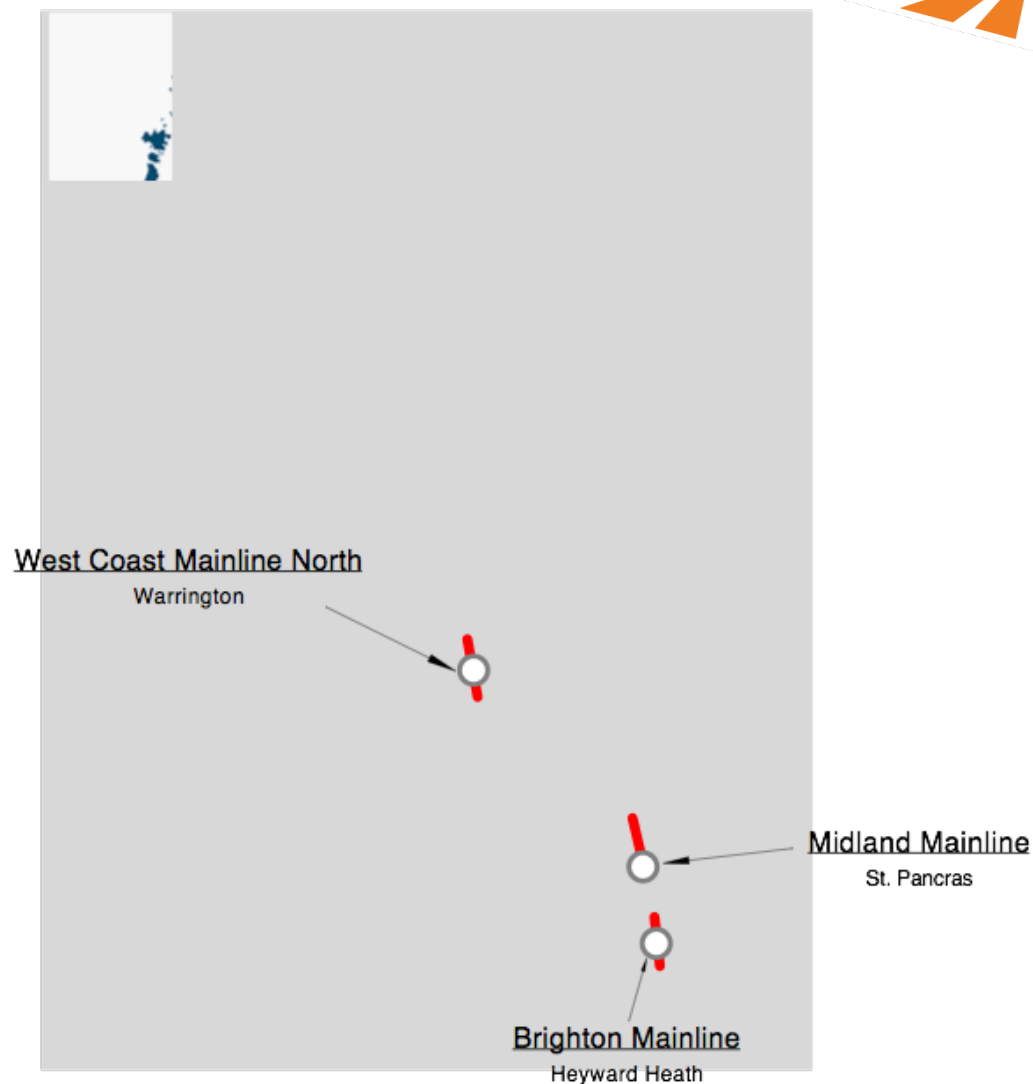
2024 will see the beginning of Network Rail's Control Period 7 (CP7).

NR's strategic plan for CP7 includes the development of ETCS projects across 3 arterial routes.

- West Coast Mainline (North)
- Midland Mainline
- Brighton Mainline

The initial fitments of rolling stock and operational readiness on each route will enable a progressive line of route rollout over coming years.

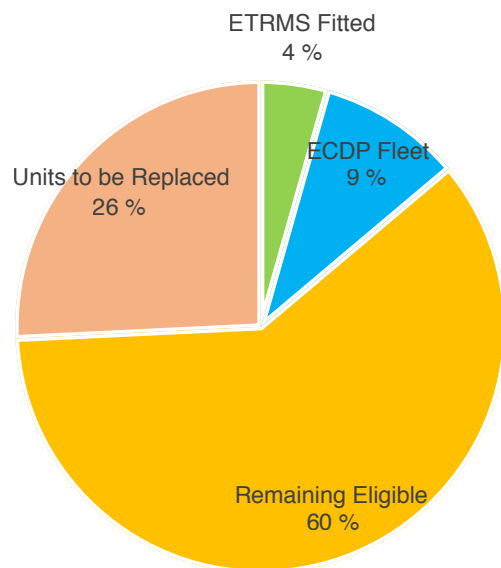
This will be complemented by the continuation of ECDP & TRU programmes initiated in CP6



Rolling Stock

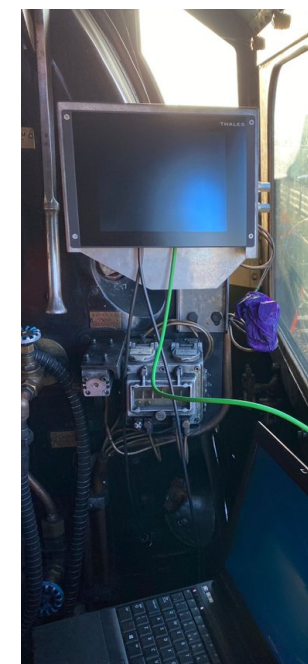
We are building knowledge and expertise in ETCS onboard fitment through retro-fitment and baseline upgrades being progressed across multiple suppliers' fleets as part of ECDP

Currently only around 4% of GB fleets operate in ETCS. Remaining unfitted fleets will be fitted in line with the planned deployment sequence. For new fleet procurement, ETCS fitment should be considered by default. We are also undertaking pathfinder ETCS fitments on heritage vehicles



In CP7 NR will :

- continue retro fitment / upgrade of passenger vehicles in line with planned trackside schemes
- continue the required network-level fleet fitment for freight, heritage & charter vehicles and on-track machines



Long-Term

The long-term strategy for England & Wales is to deploy ETCS as the default signalling technology at the point the existing assets require renewal.

The migration will favour line-of-route deployment where this aligns with renewal, to make best use of fitment and business readiness and to minimise multiple transitions over the course of a train journey.

