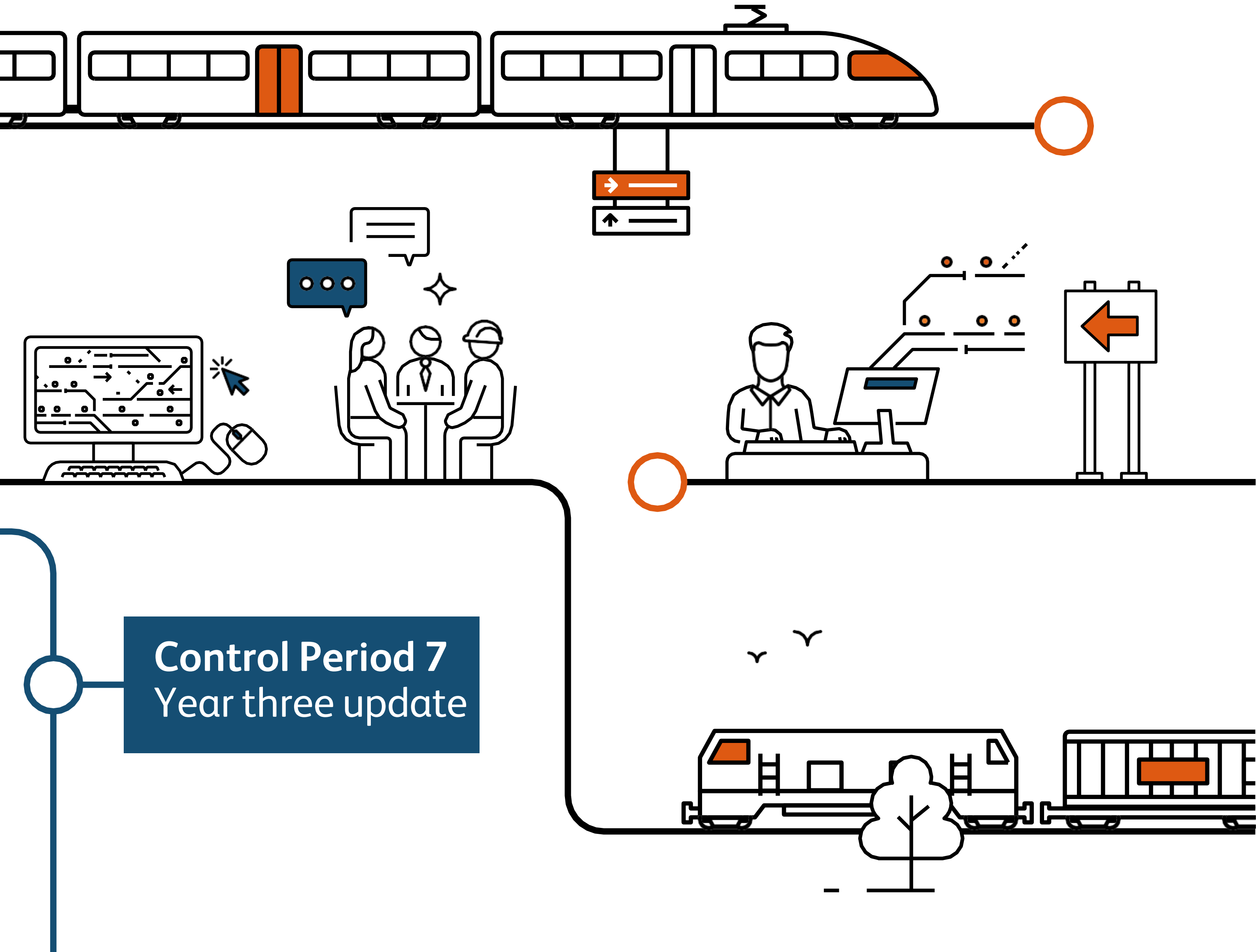
# Our delivery plan for Digital Signalling



Control Period 7
Year three update

# Foreword

**In Control Period 7 (CP7) we are beginning to migrate the railway network to use digital signalling, in the form of the European Train Control System (ETCS), to improve safety, lower our costs, and deliver a more capable railway for the future.**

Migrating to digital signalling across the network is a long-term strategy: to keep things affordable, we will only switch over when the existing signalling is at the end of its life, or when ETCS is needed to deliver an improved timetable, or better network performance.

Digital signalling requires us not only to change the infrastructure, but also to train staff and change our systems, and to fit new equipment on board trains. Our focus in CP7 so far has been on getting these things ready to support infrastructure schemes that will commission in Funding Period 1 (FP1) – the period between 2029 and 2034 (previously referred to as CP8).

In Year 2, we've continued work to procure, design and fit ETCS onboard equipment to trains, and to fund operators to begin to prepare their businesses for working with an ETCS railway. ETCS remains a new activity for GB, and it's taking longer to procure and mobilise some fitment contracts than we planned at the start of the Control Period. We're drawing lessons from initial procurement and delivery activities to refine and mature our forward plans, and have adjusted spend accordingly, whilst seeking to maintain current infrastructure deployment dates.

In May 2025, the Northern City Line became the first commuter mainline railway in Britain to run using digital signalling with no lineside signals – the first 'no signals' deployment here since Cambrian in 2011. Delivered as part of the East Coast Digital Programme, this deployment has helped us to test and prove some of the key building blocks of a digitally-signalled railway.

Other digital signalling schemes, such as the TransPennine Route Upgrade, West Coast North Modernisation, Midland Main Line and Brighton Main Line are undertaking early development work with their allocated signalling partners to confirm the migration strategy and delivery approach and certain areas of specification and requirements.

Together with this, core ETCS product development continues for each of the four infrastructure suppliers under the Train Control Systems Framework with final products expected before the end of this Control Period.

Alongside infrastructure and vehicle activity, we've continued with policy and strategy activities with industry partners to get ready for ETCS deployments, looking at areas such as future delivery models, approaches to driver training, standards, requirements and integration testing.

Across the wider portfolio, work on Technical Authority's Target 190+ research and development programme, the Speed Management Programme, and Network Rail Training's Digital Learning for Digital Railway programme continue – all of which enable more efficient future delivery – with suppliers appointed or shortly to be appointed for the next stages of work.

In Year 3, we will move increasingly from strategy and planning into mobilisation and delivery. We are making corresponding changes to our organisation, operating model and governance, reflecting the alignment of digital signalling with GBRX's core principles, and to best support this next crucial phase in delivering the digital signalling masterplan.

**Toufic Machnouk**
Managing director, GBRX

GBRX

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# Our CP7 Year 2 outcomes

In the second year of CP7 we have refined our plans in partnership with our stakeholders to develop the digital signalling projects that will follow the East Coast Digital Programme pioneer scheme and align plans for non-infrastructure enabling activities to support the continuing rollout of ETCS.

**Delivery plan outcomes 2025-26:**

### Sustainable growth

- **Train Control Systems Framework (TCSF) and Market Application Readiness** – We have awarded development contracts under the TCSF to each of the four suppliers, for both core product development and early work in support of scheme definition and requirements clarification, recognising the impacts of scheme deferrals that took place in year 1 & 2

### Efficiency

- **Scope definition –** We have reviewed vehicle fitment plans in light of scheme deferrals and have identified opportunities for fleet replacement as a less costly alternative to retrofitment in some sectors
- **Sourcing strategy –** We are concluding the development of sourcing strategies for vehicle fitment activity across sectors, identifying opportunities for more efficient procurement through grouping orders of similar vehicle types
- **Strategy & Policy** – We have mobilised a number of 'solve once' workstreams aimed at setting out policy and strategy for future digital signalling deployments, working with industry partners.

### Safety

### Train service delivery

- **Fitment and business change delivery** – we have continued procurement, design and fitment activity to vehicles, and are continuing to fund operators to deliver business readiness for infrastructure schemes.

### Customers & communities

- **Expanding capability and maturing governance across the portfolio** – bringing together our funders, operators, Office of Rail and Road (ORR), industry bodies, the supply chain and rolling stock companies through structured governance and engagement, so we can best co-ordinate, monitor and govern infrastructure, fleet modification and capability development.

### People

- **Building future capability**– We are concluding initial scoping work to understand the impacts digital signalling will have on staff across the industry, plans to grow skills & capability and new ways of working.

# Introduction to this document

## Purpose and background

In March 2024, we published our Control Period 7 (CP7) Delivery Plan which set out our planned activities, outputs and expenditure between1 April 2024 and 31 March 2029 and last year we provided an update on our progress in delivering our CP7 Delivery Plan.

This document provides an overview of our updated plan for years 3-5 of CP7, identifying key changes compared to our March 2024 update to the delivery plan.

Financial values expressed in this document are in cash prices (using the Office for Budget Responsibility's (OBR) November 2025 inflation forecast), unless otherwise stated.

## Overview

Within GBRX, the Industry Partnership Digital Railway (IPDR) team manages and co-ordinates the activities required to migrate Britain's railway from a conventionally signalled network to a digitally signalled one, working closely with industry partners through the Digital Signalling Portfolio.


## How we've updated our plan

We engage our stakeholders in the progress and development of our plan, and manage change to it, through our governance framework. This includes our Delivery Programme Board, Portfolio Progress Board and Direction Boards, which are also attended by funders and ORR, as well as the cross-industry Digital Signalling Industry Champions' Council, which represents sector-specific stakeholder and industry groups.

## Funding gap

Network Rail's CP7 GB Delivery Plan included a funding gap of nearly £1bn, representing the difference between the bottom-up plans and the funding available. This arose from the materially high levels of inflation after the Statement of Funds Available was agreed. This year, at an England & Wales level, we've cleared the remaining funding gap which has resulted in changes to our plans for the control period, which includes reductions in renewals expenditure and outputs. For GBRX this includes a reprofiling of spend from CP7 into FP1 based on revised delivery assumptions, and scope efficiencies.

# Our vision and strategy

In this section we provide an overview of our vision, strategy and outcomes and highlight any changes since our March 2024 CP7 Delivery Plan.

## Our vision: simpler, better, greener

**Simpler.** We'll play our part in improving the service we give to customers, unifying the railway to make it easier for people to choose rail, growing passenger numbers and freight. We'll root out waste and duplication and stop doing things that don't add value.

**Better.** We'll continue putting passengers first and shifting more goods by rail, encourage local accountability and be more commercially minded. We'll create a new type of rail leader, invest in the skills and safety of our colleagues, help rebuild the railway with our partners and play our part in rail reform.

**Greener.** And by making rail simpler and better, we'll attract more people to the cleanest, greenest form of mass transport, while reducing our own carbon footprint.

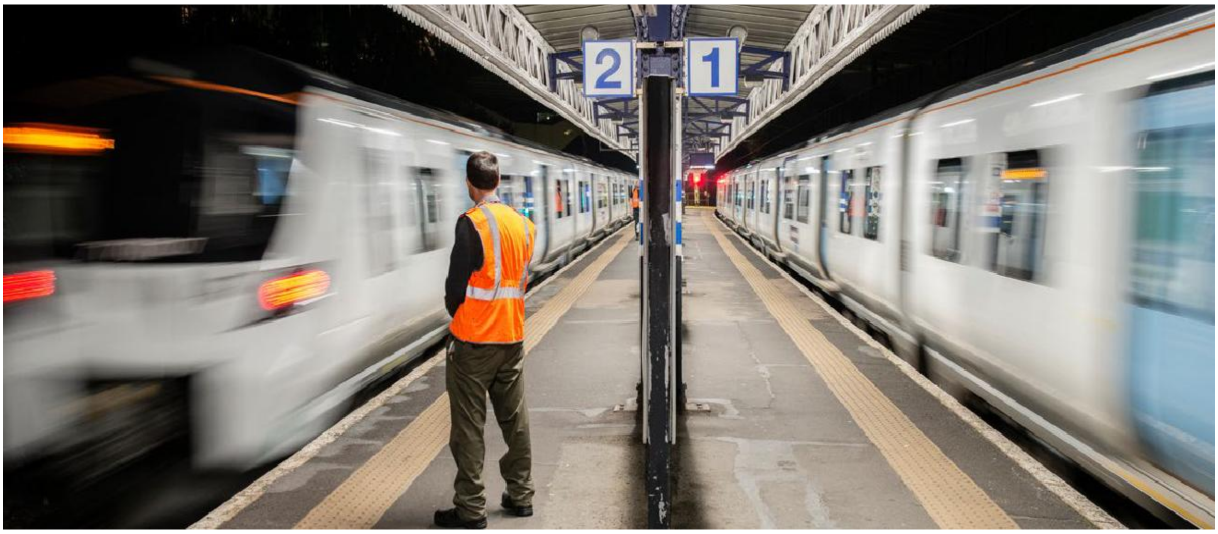
## Our vision: the Digital Signalling Portfolio

In deploying ETCS through the Digital Signalling Portfolio, our vision is to deliver a railway network that works better for everyone.

Our mission is to lead, co ordinate and enable the efficient and affordable transition to digital signalling, delivering the next generation railway.

Our strategic objectives, through making the transition to ETCS-based signalling renewals, are to:

- co ordinate activities, strengthen advocacy and establish capacity and competence to achieve the industry transition to ETCS
- drive down the industry cost of signalling renewals
- deliver train fitment, business change and network systems and services to enable the transition to ETCS
- drive the maximisation of benefits in delivery and operation.



## Our strategic themes

We have six national strategic themes that underpin our vision for Network Rail, with our plans for CP7 aligned to each theme: safety, train service delivery, customers and communities, efficiency, sustainable growth and people.

Our devolved structure means that regions and functions can adapt their strategies to their unique circumstances and local stakeholder priorities, while contributing to the network-wide objectives. We included the contribution that ETCS makes towards these strategic themes in our Year 3 update.

ETCS represents a major leap forward, creating a 21st century transformation of the railway defined by our Victorian pioneers.

Migrating to ETCS through renewals supports delivery of our six national strategic themes by providing a path to a safer, higher performing and more resilient railway, offering the opportunity to address the cost, deliverability and technology challenges we would otherwise have if we were to continue to deploy conventional signalling.

Through effective strategic portfolio organisation and governance, we're developing the necessary resources, capabilities and capacity required to deliver this transformation. We're delivering the work necessary to allow ETCS to become business-as-usual, growing the supply-chain and wider industry capability and capacity to deliver the benefits of ETCS to passengers and rail users over the decades to come.

| | |
|---|---|
| Safety | **Everyone home safe, every day.** |
| Train service delivery | **Delivering reliable and punctual train services.** |
| Customers & communities | **Dependable partner with customer service at the heart of everything we do.** |
| Efficiency | **Run a safe, reliable and efficient railway.** |
| Sustainable growth | **To serve the nation with the cleanest, greenest mass transport.** |
| People | **Become a high performing, service led organisation.** |

# Our expenditure

## Introduction

In this section we provide an overview of our CP7 years 1 and 2 expenditure and planned expenditure for years 3–5 of CP7, based on a forecast as at February 2026, and highlight any changes from our March 2024 CP7 Delivery Plan.

Key digital signalling activities in CP7, summarised in Table 1 below, include:

- £0.2bn investment in ETCS **signalling renewals**, funded through regional plans in CP7
- £0.5bn of **fleet modifications** across passenger, freight, charter and on track machine fleets through IPDR plans to enable the deployment of ETCS signalling
- £0.2bn of **enabler and capability-building** activity through IPDR plans, to make the transition to ETCS easier and more efficient.

Table 2 sets out our rephased activity and expenditure for IPDR-led activities.

In light of the financial challenges across NR e.g. inflation increases, our latest plan accounts for a reallocation of some funding to our regions to support the delivery of wider renewals activity in CP7. GBRX has contributed c.£260m to closing this gap, as a result of changes to infrastructure scheme dates, scope efficiencies, and to take account of lessons learnt from ongoing fleet fitment activity.

## ETCS signalling renewals

There has been limited change to our CP7 signalling renewals plans in year 2, as most digital scheme development activities fall in future years.

In Eastern Region, there is ongoing work with ECDP's signalling supplier and operators to enter into service the first ETCS 'with signals' area on the East Coast Main Line, and to finalise the scope, costs and approach to subsequent deployment.

On North West and Central region, the West Coast North Modernisation is progressing with early development work with its suppliers and operators to develop its roadmap for ETCS deployment, in parallel with planning for the upcoming renewals stages that will enable digital signalling.

## Fleet modifications and business change

We have continued with delivery of the national freight programme, prioritising the First in Class for the Class 66 locomotive, the most widely-operated vehicle in GB. Design approvals for this class have been delayed but first fitment to some vehicles is underway, and we are reviewing the longer-term impacts on the schedule. In parallel with the vehicle fitment activity, we are continuing to engage with freight operators as they prepare their businesses to operate with ETCS, initially as part of ECDP.

In the passenger sector, we are continuing development studies on ETCS fitment to the Turbostar, Desiro and Aventra passenger fleets required to support schemes in FP1, with sourcing activities planned from year 3. We are working with CrossCountry and Northern to fund ETCS fitment to some of their fleets, with mobilisation now expected in year 3 rather than year 2, but with delivery still forecast in time for the relevant infrastructure schemes. Provision of long lead materials continues to enable fitment to the first Electrostar fleets in year 4. We are also funding the mobilisation of teams in several passenger operators to support their ETCS business readiness activities.

In the On Track Machine (OTM) and charter sectors, we are on target to conclude fitment requirement activities by the end of year 2; taking account of changes to scheme dates. For OTM, some scheme dates now align with fleet replacement timescales, allowing us to make efficiencies in fitment. In the charter sector, we have undertaken early market engagement activities with suppliers and operators as we seek to establish the sourcing strategy for these vehicles and have brought forward vehicle survey activities into year 3 to support procurement.

**Table 1:** Network Rail-wide spend for ETCS in CP7 (£m in cash prices).

| ETCS portfolio spend in CP7 (£m) | March 2024 delivery plan | March 2026 delivery plan |
|---|---|---|
| **ETCS Signalling renewals** | | |
| Eastern | 233 | ^236 |
| North West & Central | 305 | ‡10 |
| Southern | 7 | 7 |
| Wales and Western | *0 | †4 |
| Scotland | | |
| **Network ETCS renewals total** | **545** | **257** |
| **IPDR enabling activity** | | |
| Fleet modification | 812 | $535 |
| Enablers / capability development | 115 | 131 |
| **Total ETCS funding allocated to IPDR in plan** | **927** | **666** |
| Technical Authority supporting activity – including R&D | 47 | 48 |
| Route Services supporting activity - training capability development | 25 | 23 |
| **Network Rail-wide total** | **1,544** | **994** |

^ Includes the rollover of some ECDP scope from CP6 into CP7, offset by efficiency targets in the region
‡ West Coast North Modernisation reprofiled; digital delivery now focused on ETCS development work (as above), plus c. £200m signalling enabling and life extension works in CP7
* Rounded down to zero, but there is a nominal amount for early development in Western
† Includes rollover of some digital signalling scope from 2023/24 omitted from our March 2024 figures
$ Fleet modification activity reprofiled to reflect maturing commercial strategies and procurement timelines

## Enablers and capability building

Digital signalling suppliers have continued developing their core ETCS trackside products to meet Network Rail's requirements.  We have worked with suppliers to mitigate, in part, the impacts on them of delays to infrastructure schemes, through early development work and the establishment of working groups to help clarify our ETCS requirements, taking account of lessons learnt from ECDP.

We continue to monitor digital signalling delivery, using data to update delivery assumptions, unit cost models, the impact on the overall digital signalling deployment strategy and future control period planning. We are also developing a range of technical capabilities to enable and support deployment across the network, alongside new processes, tools and competences to broaden the capability across industry to transition to ETCS. This includes work to complete the national rollout of telecoms upgrades and security systems to support ETCS, as well as maturing our ETCS delivery models, driver training approaches (with Rail Delivery Group) and technical policy clarification (with Rail Safety and Standards Board).

In parallel GBRX is establishing portfolio capability and mechanisms to enable system-wide adoption of strategic digital, data and AI technologies across Network Rail and the wider sector; developing a sector-wide technology strategy and roadmap, identifying technology pathfinders,  and considering workforce and capability-building programmes to support digital innovation in areas such as data science and AI.

**Table 2** - IPDR enabling activity expenditure in CP7 (£m, cash prices).

| | March 2026 delivery plan | | | | | |
|---|---|---|---|---|---|---|
| **Enabling activity funding** | 2024/25[2] | 2025/26 | 2026/27 | 2027/28 | 2028/29 | CP7 total |
| Fleet modifications | 54 | 60 | 53 | 103 | 266 | **535** |
| Enablers / capability development | 8 | 25 | 31 | 35 | 32 | **131** |
| **Total expenditure** | **62** | **85** | **84** | **138** | **298** | **666[3]** |

[2] CP7 year 2 expenditure is based on a forecast as at February 2026.
[3] Numbers subject to rounding.

## Digital signalling portfolio activities in other parts of our Delivery Plan

Our research and development programmes led by Technical Authority, prioritise the key elements that will support our renewals and enabling activities to maximise efficiency of the rollout of ETCS.

This includes the Synthetic Environment, part of the Target 190+ programme, which will improve our scheme development, testing and simulation processes, and the Speed Management Programme, which is identifying how to reduce train over-speeding risk by the provision of real-time speed management information.

The Synthetic Environment is concluding procurement activities for its next stage, and the Speed Management Programme has completed its first 'discovery' phase and is also in procurement for its next stage, which focuses on system requirements development and proof of concept.

The development of training capability in maintenance and operation of ETCS, now known as Digital Learning for Digital Railway (DL4DR), is underway with learning scenario development ongoing as part of the first phase of work, and will start providing training for ECDP during 2026, before rolling out to other deployments later in CP7.

# Risks, uncertainty and opportunities

This section summarises IPDR's high-level risks and opportunities for the remainder of CP7:

- **Digital signalling pipeline –** Funding pressures and delivery challenges in CP7 have driven changes to scheme, readiness and fitment dates, meaning the deployment of digital signalling is taking longer across track and train than was forecast at the start of CP7, with impacts on skills development, capability growth and benefits realisation. We recognise that a stable pipeline is crucial to long term delivery confidence, and we are working with Routes, operators and partners to develop plans, noting these are subject to funding available in future funding periods.

- **Changes to fleet strategy** – our fleet fitment plans are based on our current knowledge, developed with industry partners, of which vehicles will require modification to support future schemes. Changes to where fleets run, as leases are renewed, service patterns are changed and vehicles are cascaded, or as new vehicles are introduced onto the network can change our assumptions around which vehicles are required to be fitted. Similarly, misalignment between infrastructure and fleet planning can lead to a need to fit ETCS to vehicles approaching the end of their life, which may not represent a value-for-money investment. We work with funders and operators to align infrastructure and fleet deployment / renewal plans wherever possible and hold risk provision to cater for fleet changes.

- **Changes to ETCS requirements and specifications** –ECDP is the first programme to follow our national requirements set for ETCS deployment. As it progresses through development and delivery, it is identifying, as expected, potential changes and clarifications to requirements that we may need to instruct to all suppliers to include in their core products. We are assessing and managing such specification changes, with supplier working groups, from year 3.

- **Industry capability growth** - As we invest through CP7 in more digital signalling we need to grow ETCS awareness, skills and capability across industry, through targeted activities and a sustained pipeline of investment. We have initiatives planned through the Control Period, such as in market application readiness, in training and through the portfolio to develop this capability, and are dependent on continued investment in digital signalling in future Control Periods.

- **Rail reform** – In CP7, we'll see the creation of Great British Railways (GBR), bringing DfT procured operators back into public ownership and providing a single guiding mind for track and train. We welcome the Government's commitment to establish GBR and the progress made so far in transitioning operators into DfTO and the introduction of the Railways Bill into Parliament in late 2025. We are working to explore and take advantage of the opportunities reform provides for digital signalling as the business units operating infrastructure and trains become closer integrated.

- **Inflation** - General inflation and our own input price inflation is higher than assumed in the Statement of Funds Available and continues to put pressure on our funding.

- **Buying new with ETCS** – we know that in most instances it is more cost-effective to fit ETCS equipment to vehicles at build, rather than to retrofit. Where the opportunity arises, we are working with vehicle owners and operators to align vehicle renewals decisions with ETCS deployments.

# Delivery for the year ahead (2026-27)

## Summary of our CP7 year 3 targets

Our 2026/27 goals and other key outcomes are set out below and broadly support mobilisation for greater fitment delivery through the remainder of the Control Period. We'll monitor delivery against these throughout the year through our business and executive level monitoring and through Digital Signalling Portfolio governance. Specific activities for the year ahead will include:

### Infrastructure

- continued delivery of ETCS on East Coast Digital Programme and development on West Coast North Modernisation and Transpennine Route Upgrade,
- conclusion of early development activities on Midland and Brighton Main Line schemes.

### Fleet fitment and business change

- start of First in Class activity, delayed from year 2, for certain of Northern and CrossCountry's passenger fleets
- sourcing activity for design and fitment across Turbostar, Desiro and Aventra fleets required for schemes in FP1.
- continuation of the freight programme, including conclusion of the First in Class for the 66 and continuation of (pre-)series fitment.
- launch of the Locomotive Fitment Framework contract with suppliers and early survey activity for charter vehicles.
- fitment and sourcing activity for On Track Machines in support of ECDP and the wider portfolio.
- implementation of funding agreements with remaining operators as needed for year 3 to support infrastructure scheme requirements.

### Enablers and capability building

- continued development of signalling supplier core products to comply with the GB application requirements for ETCS
- start of progressive Network Rail testing of ETCS supplier products through national test facilities.
- conclusion of strategy work on driver training approaches with RDG, with next activities identified
- commencement of strategy and policy work on configuration management, integration testing, speed management and industry skills and capability.
- first use of national systems to support ETCS – the Online Key Management system and the DRACAS product to manage fault data for system improvement
- continued rollout of enhanced data radio capability across telecoms cells nationally.
- commencement of digital-based ETCS training for operations staff as part of ECDP and preparation for wider deployments.
- update to signalling pipeline and ETCS deployment assumptions to inform Funding Period 1 planning scenarios
- updates to the digital signalling strategy, delivery plan, framework and capability roadmap based on actual delivery progress.

# Annex

## A. CP7 financial summary

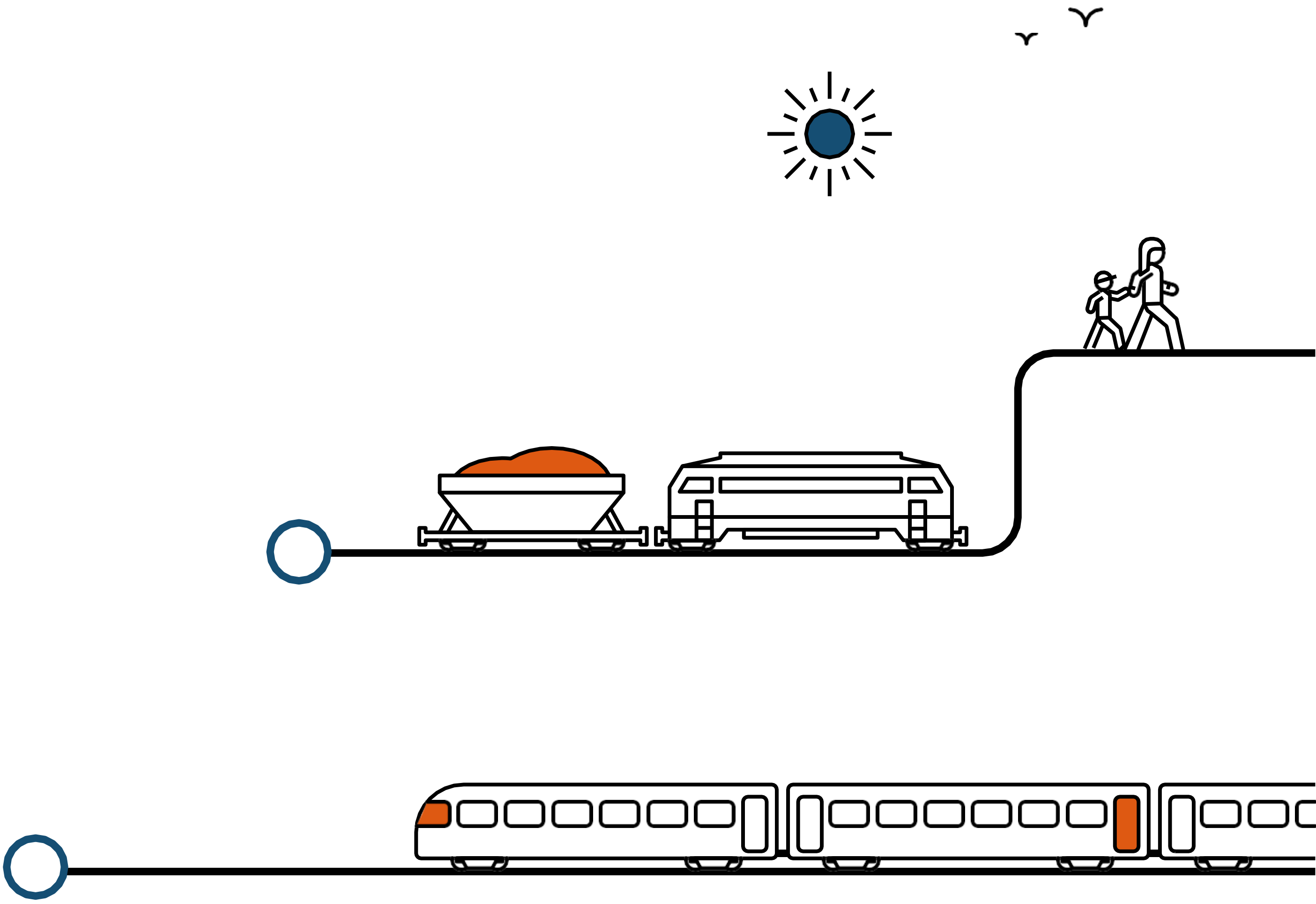
**CP7 expenditure on enabling activities led by IPDR**

**Table B1.** CP7 expenditure (March 2026 CP7 Delivery Plan update and March 2024 CP7 Delivery Plan).

| | March 2026 Delivery Plan | | | | | |
|---|---|---|---|---|---|---|
| **£m in cash prices** | 2024/25[1] | 2025/26 | 2026/27 | 2027/28 | 2028/29 | **CP7 Total** |
| Fleet modifications | 54 | 60 | 53 | 103 | 266 | **535** |
| Enablers / capability development | 8 | 25 | 31 | 35 | 32 | **131** |
| **Total expenditure** | **62** | **85** | **84** | **138** | **298** | **666** |

| | March 2024 Delivery Plan | | | | | |
|---|---|---|---|---|---|---|
| **£m in cash prices** | 2024/25 | 2025/26 | 2026/27 | 2027/28 | 2028/29 | **CP7 Total** |
| Fleet modifications | 39 | 149 | 189 | 230 | 205 | **812** |
| Enablers / capability development | 25 | 24 | 22 | 22 | 22 | **115** |
| **Total expenditure** | **64** | **174** | **210** | **252** | **227** | **927** |

[1] CP7 year 2 expenditure is based on a forecast as at February 2026.



**Network Rail Limited**

Waterloo General Office, London, United Kingdom, SE1 8SW

Website: www.networkrail.co.uk

Company number: 04402220