

Great British Railways

Rolling Stock & Infrastructure Strategy

September 2026



**Great British
Railways**



Contents

Executive summary: GBR's opportunity for positive change	P4
1. The need for an integrated strategy	P9
1.1 The railway GBR inherits	
1.2 The forces shaping the next forty years	
1.3 What GBR makes possible	
2. GBR's train fleet	P15
2.1 GBR's train design approach	
2.2 Innovation in train procurement through 'fleet families'	
2.3 Standardisation of GBR train fleets	
2.4 Managing GBR's train fleet assets for the long term	
3. Integrating GBR's train fleet and infrastructure	P34
3.1 GBR's traction choices	
3.2 Expanding GBR's electrified railway network	
3.3 Securing GBR's electrical power supplies	
3.4 GBR's digital signalling transformation	
3.5 Integrating train and infrastructure asset management	
4. GBR's depot and maintenance plans	P46
4.1 The need for an integrated GBR maintenance approach	
4.2 The need for a new approach to train fleet maintenance	
4.3 The need for a coordinated approach to parts, materials and logistics	
5. Funding GBR's trains and infrastructure	P58
5.1 GBR making better decisions through integration	
5.2 Funding and prioritising GBR's investments	
5.3 Ownership and leasing of train fleets	
5.4 Procuring new trains for GBR	
6. Building GBR's pipeline	P63
6.1 The Fleet & Infrastructure Plan (FIP)	
6.2 How GBR's FIP will be produced	

Executive summary: GBR's opportunity for positive change

The UK Government's rail reform programme is creating Great British Railways (GBR) as the unified directing mind for track and passenger train operations. The Government's Long Term Rail Strategy (LTRS) will set the long-term direction and expectations for the railway, including meeting customer needs, securing financial sustainability, supporting economic growth, improving connectivity and reducing inequality, and improving environmental sustainability. The Rolling Stock and Infrastructure Strategy ("the RSI Strategy") sets out how GBR will respond to that direction through better

long-term decisions about trains, track, traction power, signalling, depots and maintenance.

Trains and the infrastructure that supports them are expensive, interdependent assets with working lives measured in decades. They shape reliability, punctuality, accessibility, capacity, operating cost and environmental performance long after the people who commissioned them have moved on. Yet, under the railway model that has been in place since 1993, decisions have often been taken by different organisations through uncoordinated processes

working to varied timescales. The result is fragmented train fleet procurement decisions often misaligned with required infrastructure, constrained maintenance and depot arrangements and a stop-start work pipeline for

suppliers, leading to reduced flexibility and higher costs. For passengers, getting these decisions right means trains that are comfortable and accessible, services that are more reliable, and a railway that provides better value.



The RSI Strategy is GBR's response to these challenges, by unifying train and track to replace fragmented asset decisions with a coherent national approach. It will:

Put passengers at the centre of train design

- including making level boarding a baseline expectation for new fleets, using engagement with passengers and their representatives to shape more accessible, consistent and attractive trains that better meet the needs of passengers, families and communities, encourage greater use of rail and support revenue growth. All decisions will continue to need to be assessed for affordability and value for money

Manage train fleets as a national portfolio - structured around a smaller number

of fleet families, aligning procurement, refurbishment, life extension, replacement and redeployment with infrastructure and operational needs, while retaining flexibility to reflect different markets and communities

Move progressively away from diesel towards electric traction

- principally through battery-electric trains with targeted electrification, supporting a more reliable, sustainable and lower carbon railway while considering affordability and value for money and recognising that diesel fleets will remain necessary during the transition

Plan trains and infrastructure as a single integrated system - aligning decisions on rolling stock, electrification, traction power, digital signalling, depots and maintenance to improve value, reduce delivery risk, and accelerate benefits for passengers, while making greater use of passenger trains to support infrastructure monitoring and asset management

Treat depots, maintenance, materials and logistics as core parts of the system's design - moving towards more condition-based and predictive maintenance to identify issues earlier, helping to improve reliability, reduce disruption, make better use of assets over their full lives and support a safer, more productive railway

Act as a stronger and more coordinated national customer - bringing greater consistency to train procurement and securing better whole-life and whole-system value for passengers and taxpayers

Take a more strategic approach to train ownership and financing - assessing direct ownership, leasing and other financing arrangements on a case-by-case basis rather than relying on a single financing model, to secure the strongest overall outcomes for passengers and taxpayers

Establish a Fleet & Infrastructure Plan (FIP) - creating a more credible, coordinated and deliverable long-term pipeline of rolling stock and enabling infrastructure activity to support planning for funders and delivery partners and provide confidence for suppliers

The direction set out in the RSI Strategy does not remove the need for individual business cases, funding decisions or engagement with the relevant partners and stakeholders, including passengers, workforce representatives, recognised trade unions, devolved and local government, funders, freight and non-GBR operators and the supply chain. Instead, it provides the common strategic framework within which decisions can be made more consistently.

The RSI Strategy, therefore, establishes both a direction and a different way of acting. It aims to deliver noticeable and enduring improvements for passengers, stronger whole-system value for taxpayers and a more stable basis on which the rail supply chain for the UK can plan and invest in skills, apprenticeships, facilities and innovation, supporting economic growth and opportunity across the country.



1. The need for an integrated strategy

1.1 The railway GBR inherits

Great Britain's railway is an interconnected system. Trains derive their incredible ability to move large numbers of people and goods safely and at speed because they are designed to have dimensions, performance and power sources that work closely with the track, signalling, electrical supply and depots on which they depend. Passenger experience is therefore shaped by how well the whole system works together.

The model established in 1993 divided responsibility for that system. Passenger operations were franchised, infrastructure was separated and the principal passenger train fleets were placed with private-sector rolling stock companies. This brought investment, competition and innovation, including many new trains, but also

created a railway in which train fleets, infrastructure, depots, maintenance and financing were governed through different contracts, incentives and decision cycles.

Making sense in isolation, the cumulative effect of fragmented decisions is now a diverse and sometimes bespoke train fleet with limited commonality. Passengers find similar services being operated by trains with different layouts, capabilities and interfaces, increasing costs and making trains harder to upgrade, maintain, recover, redeploy or substitute, especially during disruption. For passengers, this can mean greater inconsistency between services, longer recovery from disruption and a railway that is less able to adapt as travel patterns and expectations change.

Fragmentation has affected the relationship between trains and infrastructure. Decisions about traction power, signalling, depots and maintenance have often been taken separately from fleet choices or on different timescales, leading to increased costs and delays in retrofitting fleet and infrastructure to achieve compatibility. Orders have arrived in peaks and troughs, making it harder for suppliers to retain skills, invest confidently and deliver efficiently.

GBR inherits a railway with many high-quality assets and capable suppliers but one that has lacked consistent management as a whole system over the long term. The creation of GBR does not instantly remove these challenges, but it does create the conditions to address them more effectively. For the first time in a generation, decisions on train fleets, infrastructure, maintenance and financing can be considered as part of an integrated railway system. The RSI Strategy sets out how GBR intends to use that opportunity.

1.2 The forces shaping the next forty years

The decisions now facing GBR are pressing. A substantial proportion of the existing train fleet is approaching the point at which decisions on replacement, refurbishment or life extension will be needed if services are to continue to be delivered safely, reliably and efficiently.

What passengers want is changing. Reliability remains fundamental but passengers increasingly expect straightforward and independent boarding, clear information, digital connectivity, personal security and facilities suited to a wider range of journeys.

The railway must serve an ageing and diverse population, support leisure and tourism as well as commuting and business travel and make train travel attractive enough to grow revenue and reduce reliance on subsidy.

Technology and environmental obligations are also changing. The digital railway (in the form of European Train Control System, “ETCS”) moves important signalling capability from the trackside onto trains, making fleet and infrastructure changes inseparable. The increasing use of train-borne monitoring can provide rich information about infrastructure condition, helping identify emerging issues earlier and reducing disruption for passengers. Meanwhile, ageing diesel fleets, fuel and maintenance costs, local air quality and the economy-wide legally binding net zero carbon 2050 commitment all point towards a long-term move away from diesel. At the same time, battery-electric technology

creates the opportunity to secure most of the benefits of electric traction without providing overhead electrification everywhere.

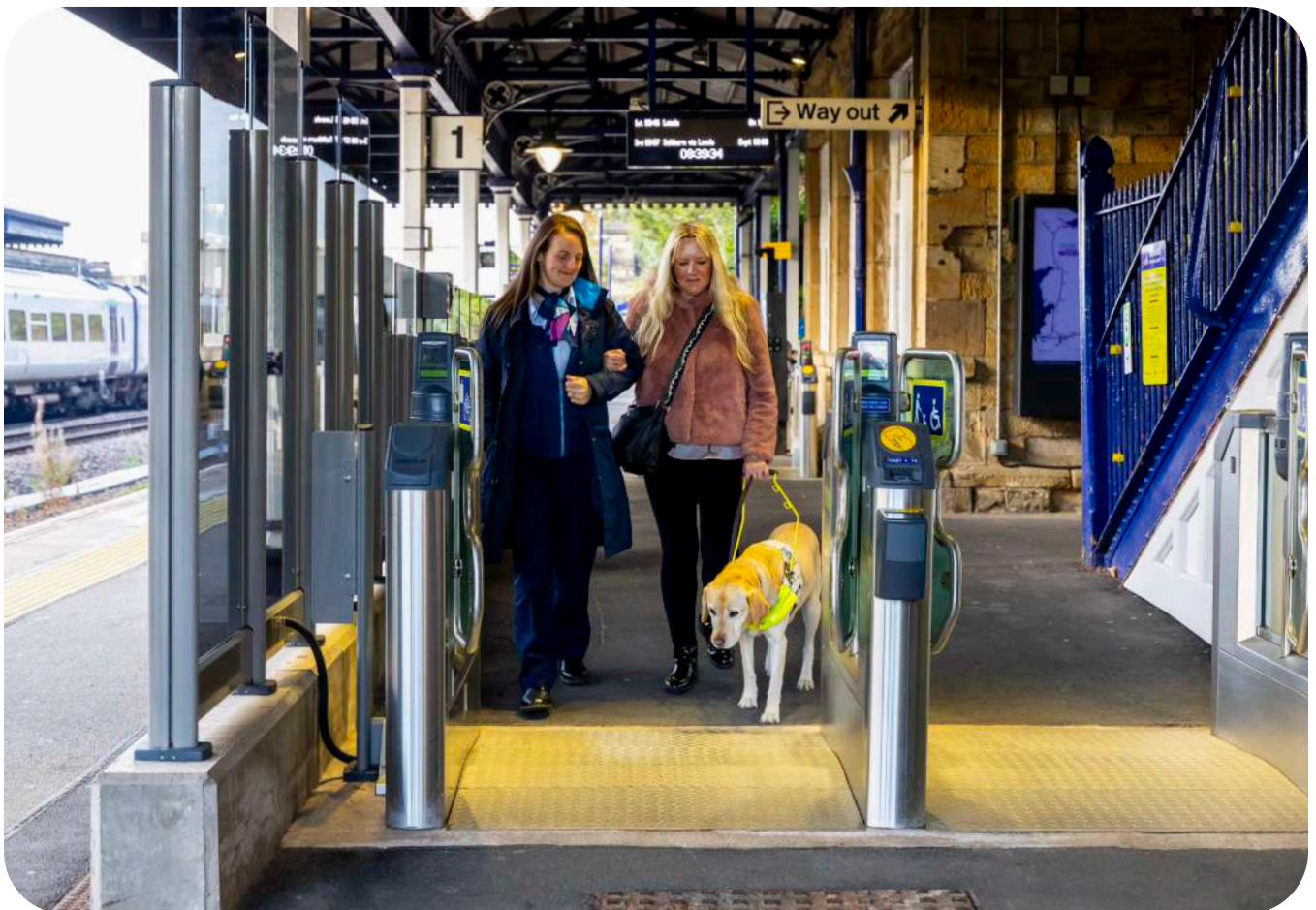
These changes must be managed within the wider context of the economy and public finances. Globally, there is a challenging context, including shocks which may be worldwide, but are felt keenly here in the UK. This economic backdrop reinforces the importance of fiscal discipline and stability, being clear on our priorities and prepared to reprioritise to fund them.

Within that responsible fiscal framework, decisions must respond to changing passenger expectations, demand, technology and environmental sustainability while recognising the long lead times associated with train procurement, infrastructure delivery and electricity-grid connections.

GBR will make decisions about assets that will operate for decades, as new trains and their supporting infrastructure will shape the railway for 35-40 years.

Decisions must also sustain the UK's precious rail industrial capability. Unclear and volatile

demand has contributed to job uncertainty, repeated mobilisation and demobilisation and ultimately higher costs. A credible direction and smoother pipeline can help all suppliers invest in people, apprenticeships, facilities and innovation, while allowing competition and private sector capability to flourish.



1.3 What GBR makes possible

GBR brings responsibility for passenger train operations and infrastructure under a unified directing mind, not recreating the railway of the late 20th century but building a new organisation taking national, long-term decisions. This role will be set out within the LTRS, which will establish the outcomes expected from the railway over the coming decades. GBR will also support delivery of Better Connected: A Strategy for Integrated Transport¹ by helping rail play its full part in a more integrated transport system. This RSI Strategy supports those outcomes by establishing how GBR will translate long-term strategic objectives into practical decisions on fleet and infrastructure.

This RSI Strategy focuses on the passenger train fleets that will form part of GBR and the infrastructure needed to

support them. Rail freight is an important sector in its own right, supporting economic growth, supply chains and the movement of goods across Great Britain. Freight operators and other non-GBR train operators will continue to make their own fleet and investment decisions and this Strategy does not seek to establish policy for those fleets. However, GBR recognises that it operates within a shared railway system and will continue to engage those operators and consider their requirements where relevant to infrastructure, traction, signalling, power supply and wider network planning.

Integration on rail means that choices about trains can be made with a clear understanding of the requirements they create for power, signalling, depots and maintenance, while infrastructure constraints and opportunities can shape fleet

¹<https://www.gov.uk/government/publications/better-connected-a-strategy-for-integrated-transport>

choices early enough to secure better whole-system value. GBR can manage trains as a national portfolio over their full lifecycles, establish common outcomes to be met and capabilities to deliver them while retaining local flexibility to meet the needs of different markets and communities.

National coherence and local responsiveness are central to passengers experiencing a more consistent and comprehensible railway, including clearer standards for accessibility, comfort, and information. GBR will engage with devolved, regional and local government to understand local priorities and ensure they are appropriately considered in decisions on trains, infrastructure and services, while remaining consistent with national objectives.

GBR will be a more powerful and informed customer, coordinating train purchasing, maintenance, materials and logistics across a larger portfolio. Acting at this

scale will reduce duplication, support greater standardisation and flexibility, and secure better whole-life value from railway assets. GBR will give the market clearer demand signals, preserve competition at renewal points and compare ownership, leasing and other financing arrangements rather than relying on a single default model for financing rolling stock, providing the strongest overall outcomes from a position of evidence.

Delivering a more integrated railway does not mean making decisions in isolation. It requires an understanding of passenger needs, local priorities, operational realities and market capability. GBR will therefore engage with passengers and their representatives; devolved, regional and local government, freight and non-GBR operators, workforce representatives, suppliers and other relevant stakeholders where appropriate as it develops and implements its plans.

2. GBR's train fleet

The train is the principal product passengers experience when they choose rail. Yet trains serving similar journeys can differ significantly in layout, accessibility, facilities and usability, meaning passengers cannot always predict what they will find. GBR has an opportunity to create a more consistent and comprehensible passenger offer while still reflecting the different needs of routes and markets.

Train design inevitably requires choices between accessibility, comfort, capacity, maintainability and operational performance. With many of the existing trains requiring replacement or major intervention over the coming decades, GBR has a generational opportunity to create a more coherent, passenger-focused national fleet.



2.1 GBR's train design approach

New and refurbished trains meeting passenger expectations

GBR will secure new trains that meet the needs and expectations of today's and tomorrow's passengers and, where appropriate and cost-effective, modify existing trains to achieve similar standards. Doing more to meet passenger needs through train design can help make rail more attractive and easier to use, supporting demand and revenue growth over time.

A more consistent proposition for passengers from GBR's trains will be aligned to the different types of journeys the railway enables, reflecting the importance of onboard design and specification as a primary driver of customer satisfaction, usability and repeated patronage. Clearer expectations for passengers' experiences will be defined by

service type through the 'fleet families' approach described later in this chapter.

Passenger expectations for modern rail travel vary by journey type and market but commonly include features such as much easier accessibility, unassisted boarding and alighting, family provision, personal security, toilets, effective climate control, Wi-Fi and reliable passenger information. Where such features are required, they can often be incorporated most efficiently and at lower cost when they are designed into trains at the point of procurement rather than added later. GBR will therefore use its scale, common specifications and fleet families approach to encourage the market to incorporate these features into future train designs where appropriate, affordable and supported by passenger need. While some features,

such as low-floor designs, may require new rolling stock, many others may be delivered through the refurbishment and retrofitting of existing trains, often bringing benefits to passengers more quickly than waiting for a new replacement fleet.

There are many demands for the limited space inside a train, and the total number of seats needs to be considered alongside competing factors such as family friendly facilities, wheelchair spaces, toilets, bicycles and luggage. A train that offers seating together but no practical luggage space or that lacks a suitable toilet performs poorly as a passenger proposition. GBR will make these trade-offs more transparently, reflecting the needs of passengers, value for money and the overall objectives of the railway.

Getting the right trains for the right journeys requires a deep understanding of how passengers and communities use the railway. GBR therefore commits to engagement directly with passengers, the Passenger Council and other appropriate representative bodies on the key aspects of train design that have the greatest effect on passenger experience. This means that when GBR secures new trains or refurbishes fleets, it can be confident they meet the needs of the people that will use them. This will be supported by detailed inclusive design guidance being developed with organisations representing passengers with disabilities. GBR will continue to engage with the Disabled Persons Transport Advisory Committee (DPTAC), disabled passengers and other accessibility stakeholders as standards, train specifications and implementation plans are developed.

Unassisted level boarding and alighting

Improving accessibility is a priority for rail reform. Therefore, a central part of this RSI Strategy is a progressive transition towards unassisted level boarding and alighting of trains, delivered primarily through rolling stock design and future fleet replacement where practicable and cost-effective.

For many passengers using a wheelchair, moving heavy luggage or accompanied by young children, boarding and alighting from the train can be the most difficult parts of the journey. At unstaffed stations, using the train may simply be too challenging.

The current system for assisted boarding and alighting usually relies on staff assistance, ramps or workarounds, limiting passengers' independence and reducing the railway's attractiveness and usability.

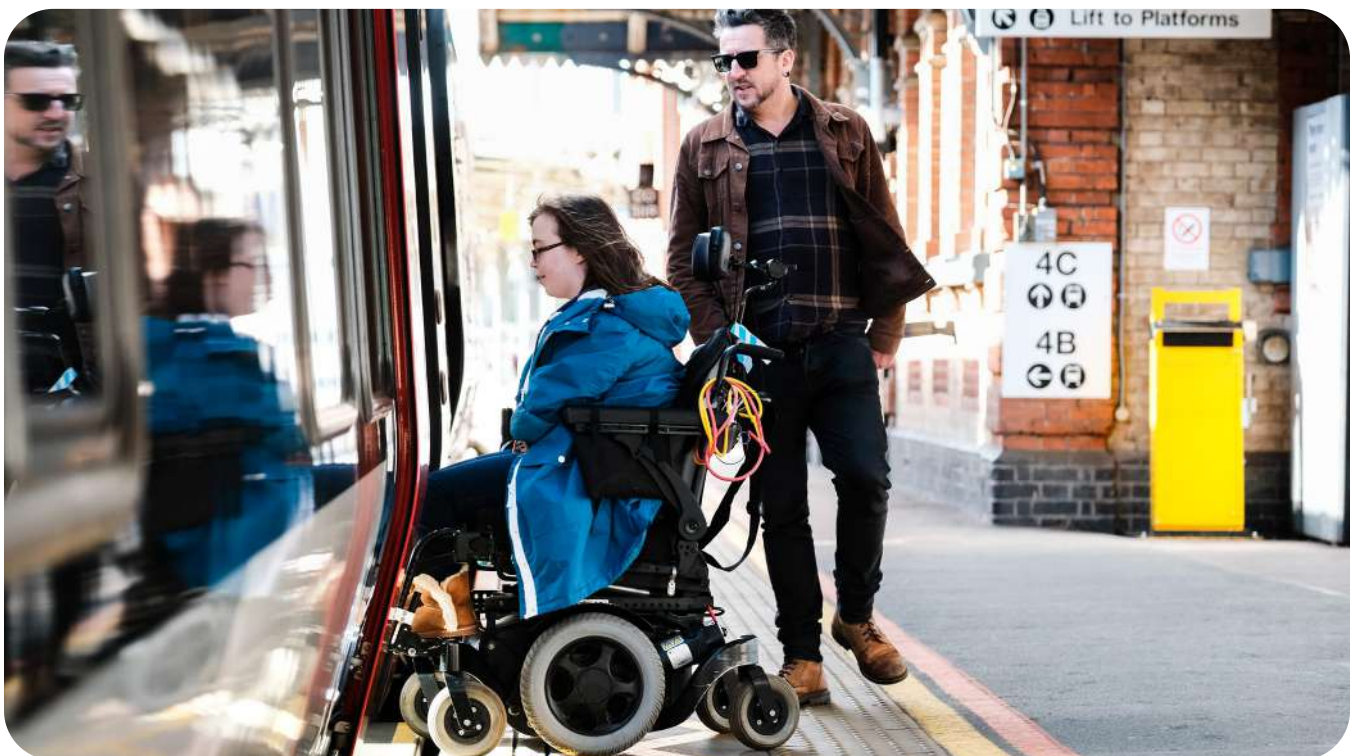
It is entirely right, therefore, that unassisted level boarding and alighting between the platform and the train will become GBR's baseline expectation wherever practicable, with the ambition over time of removing the need for passengers with mobility impairments to have to seek help from a member of staff across most of the network.

The infrastructure of the railway has evolved over the last 200 years, meaning that it would be extremely challenging to deliver level boarding at every platform. Platform heights vary across the network and are often curved, making it difficult for a single train design to provide level access at every station. In line with the Accessible Railways Roadmap², a network-wide platform study is already being undertaken with Network Rail, which will identify what would be needed to achieve level boarding. This will inform future train specifications, supported by an Accessible Travel Charter and

inclusive design guidance co-developed with accessibility panels and disabled travellers.

Advances in low-floor train design mean that future fleet replacement is the most practical route to faster progress. This technology is already in use on Greater Anglia, Merseyrail and the South Wales Metro and will be introduced on Transpennine Trains. GBR's new trains will therefore normally be designed

with low floors and doors at the Network Rail standard platform height of 915mm, supported where appropriate by deployable gap fillers or other bridging measures. In some circumstances there are specific challenges that will require innovative designs, which GBR expects to be considered carefully by manufacturers. Exceptions will be made where operational or technical constraints



make this impracticable or disproportionately expensive.

These proposals have been designed to increase the proportion of rail journeys achievable with level boarding and alighting, but GBR recognises that they will take time to deliver and will not provide a complete solution across its entire network.

Accessibility and inclusive design throughout the journey

Beyond boarding and alighting, passengers need to be able to move through trains easily,

access information readily and use essential facilities with greater independence and confidence.

Train design will be shaped by a consistent, system-wide approach to accessibility, ensuring that vehicles are specified with passengers' needs in mind from the outset. GBR will establish a clear and consistent benchmark for accessibility requirements across new and refurbished fleets. This will be informed by best practice, lived experience, passenger engagement and affordability considerations, helping to



improve the railway for everyone, including visitors exploring Great Britain by rail.

Clearer layouts, better circulation space and more consistent wayfinding in addition to dedicated spaces reserved for wheelchair users will feature, and the inclusion of multi-use areas will be considered. Passenger information will also be presented more consistently across GBR's fleets, even where the equipment used differs. GBR will reflect this through specifications for new trains and major refurbishments that emulate the specific passenger information requirements on other transport modes for users with visual impairments and people who are deaf or have hearing loss.

Family provision and flexible use of space

Family-friendly provision on trains is often incidental or poorly defined, even though it affects how attractive and usable rail travel is for a wide range of

passengers. This offer needs to be considered in a travel market where leisure and tourism are becoming increasingly important for rail patronage and growth in the wider visitor economy.

GBR will, therefore, make the specific needs of families an active consideration within the train design remit, informed by passenger engagement and balanced alongside other demands on space within the train. Appropriate provision for travelling with children, luggage, prams and buggies, including suitable changing facilities, will take account of this engagement and vary according to the type of service being operated and passenger demand.

Cycles

Cycling and rail can provide a powerful combination for passengers, particularly for leisure and first- and last-mile travel. In line with the Government's Better Connected strategy, GBR will support improved integration between

the two through better station access and cycle storage. GBR will also consider opportunities to improve provision for cycles on trains where justified by passenger demand, service type and the effective use of available space to deliver value for money. Future procurements and refurbishments will take these considerations into account alongside other demands on capacity within the train.

Supporting secure journeys

GBR wants every passenger to feel safe, secure and confident when travelling by rail. Trains are public spaces and are not immune to the problems of wider society including crime. Supporting the Government's wider ambition to tackle violence against women and girls will be an important consideration in future train design. GBR will work with the British Transport Police, passengers and their representatives and other partners to identify opportunities for train design, technology and operational practice to reduce

risks, improve confidence and support rapid responses when incidents occur.

Northern Trains is trialling onboard video systems designed to enhance operational visibility and passenger experience. By combining high-quality video with AI-enabled analytics, these systems aim to support more timely interventions and contribute to a more visible and reassuring environment for passengers. GBR will similarly consider how technology, train layout and other design interventions might support personal security and passenger confidence.

Toilets as a core component of attractive rail travel

GBR recognises that functioning, reliable and hygienic toilets are a core requirement of the modern rail passenger experience. All too often, passengers' experience of train toilets is inconsistent, which can lead to discomfort, embarrassment and even distress.

GBR will therefore establish clearer and more consistent expectations for toilet provision. Overall the precise number and location of toilets will depend on factors such as train length, service type, passenger demand and wider trade-offs in the use of available space. Future train procurements will be designed around a higher and more consistent level of accessible provision from the outset,

subject to consideration of value for money and affordability.

Having a fully integrated railway will allow GBR to look at toilet provision on trains and stations holistically so that passengers will have access to facilities at a variety of points during journeys. The key goal is that passengers are clear on what the toilet provision on journeys will be, before they get on board.



More easily maintainable and reliable toilet systems will be considered through new train procurement and refurbishments, including wider use of bioreactor technologies wherever appropriate, improving cleanliness for passengers and staff alongside improved operational flexibility.

Connectivity and cyber resilience

Reliable passenger Wi-Fi and digital connectivity are important features of rolling stock, supporting passenger information alongside operational functions such as CCTV and train and infrastructure condition monitoring. These or equivalent capabilities will be specified in future procurements and refurbishments.

The Department for Transport is exploring investment to roll out connectivity with Low Earth Orbit (LEO) satellites for all mainline trains, while Network Rail's

'Project Reach' backed by the UK Government will tackle signal blackspots in 57 tunnels across Great Britain's railways. Delivery of these will be considered through the appropriate funding, commercial and implementation processes.

A more digitally enabled and connected railway will need to be increasingly resilient to the risks of cyber-attacks. Future GBR trains will rely on secure connections to a growing range of operational, maintenance and passenger-facing systems. GBR will therefore require cyber security and resilience to be considered from the outset in the design, procurement and refurbishment of rolling stock, helping to ensure that trains can connect securely to the systems they need, while minimising the risk of unauthorised access to safety-critical and operational systems. Systems and protections must be both secure now and able to evolve over time to respond to emerging threats.

Trains designed for ease of operation and maintenance

GBR's principles for design, procurement and refurbishment of train fleets will support the needs of the people who operate, clean and maintain them. This includes identifying opportunities to create cabs for drivers, onboard working environments for train crew and facilities for cleaning and maintenance staff that meet modern workplace standards.

GBR will consult appropriately with trades unions and draw on the practical experience of frontline staff in the design process, while considering the affordability and value for money of any proposals. Designing trains that take into account the needs of those who operate and maintain them will help improve reliability, efficiency and the passenger experience while supporting GBR's ability to attract and retain a skilled and engaged workforce.

2.2 Innovation in train procurement through 'fleet families'

While train manufacturers increasingly design and build their products around a relatively small number of core types known as 'platforms', Great Britain's passenger fleet has evolved as a diverse collection of vehicles specified for individual operators, routes and contracts. As a result, similar journeys are often provided by trains that

differ significantly in layout, facilities and capability.

The challenge for GBR is to retain sufficient flexibility to meet the needs of different routes and markets, while creating a more coherent national fleet that is easier to procure, operate, maintain, upgrade and redeploy over time.



GBR's new train procurement approach

At the heart of GBR's new train procurement approach is the recognition that passengers in varying markets experience the railway differently, so the purchasing of new trains will properly reflect this reality. GBR's future train orders will be structured around a small number of defined 'fleet families' specified to align to the main passenger markets in Great Britain and the broad train design

product platforms already available from manufacturers.

GBR will not prescribe designs or detailed technical solutions, but will generally focus on specifying the outcomes, capabilities and interfaces required from future fleets. This means building on train design platforms already available in the market rather than requiring wholly bespoke designs for individual

procurements. Manufacturers and suppliers will therefore be provided with a clearer and more consistent national framework within which to innovate, while ensuring trains continue to meet passenger, operational and whole-system requirements.

Fleet families will be configured through variations in interior layout, capacity, performance and onboard facilities and need not require a wholly distinct train type where a platform can meet multiple requirements. By establishing a clearer and more consistent basis for train specification, they will support a better and more predictable passenger experience while enabling greater standardisation, stronger competition, economies of scale and lower whole-life costs. Such profiles will also make it easier for GBR to align demand, procurement strategy, the passenger proposition and future asset management.

Crucially, while fleet families will be sufficiently defined to ensure

that future train purchasing decisions are made from a position of national coherence, they will also empower those responsible for delivering services to shape interior layouts, facilities and operational characteristics to meet the needs of the passengers and communities they serve.

The fleet families model will support a more efficient, competitive market in which train manufacturers and their supply chains will be able to plan and invest with greater certainty. Not every train within each family will be identical, but they will share common design principles, capabilities and interfaces. This will create a stronger foundation for the transfer of fleets around Great Britain and greater clarity for train refurbishment suppliers.

The following describes the characteristics of each fleet family, broadly aligned to the typical distance and duration of the journeys they serve.

Intercity

GBR's intercity fleets will operate high-speed, long-distance services between major cities. They will prioritise comfort, high-quality seating, tables, luggage space, cycle storage, family spaces and appropriate catering, creating an attractive alternative to the private car and domestic aviation. The overall proposition will be one of reliable, comfortable and productive long-distance travel.

Regional Express

GBR's regional express fleets will operate medium to long-distance services on routes with a range of line speeds, connecting cities, towns and rural communities. They will prioritise seating capacity and passenger comfort while providing appropriate luggage and cycle space. Some standing capacity may be appropriate on specific routes, but the overall design emphasis will remain on seated travel.

Commuter

GBR's commuter fleets will serve suburban and outer-suburban passenger flows into and around major cities. They will balance seating and standing accommodation, with layouts designed to support high passenger volumes, efficient boarding and alighting and changing demand through the day, including appropriate cycle provision.

Metro

GBR's metro trains will operate high-frequency, high-density urban services where rapid boarding, alighting and passenger circulation are the primary requirements. They will place greater emphasis on standing space and passenger flow, with facilities proportionate to shorter journeys. A subset of the Metro family could address the particular needs of more remote rural and coastal services, including seasonal tourism demand and greater provision for luggage and cycles.

2.3 Standardisation of GBR train fleets

The current passenger fleet contains significant variation in interfaces, systems and operating characteristics. This limits flexibility, increases training and maintenance complexity and makes it harder to redeploy trains or recover services efficiently during disruption. GBR will therefore establish a clearer and more consistent level of compatibility and capability across fleet families. This will support a more resilient railway, enabling passengers to benefit from a more consistent experience and more reliable services while reducing unnecessary complexity and cost across the system.

Flexibility

Trains within each fleet family will be designed so that they can be used more flexibly across different parts of the network.

GBR's intention is to move away from bespoke, geography-specific fleets and instead enable the creation of a more national pool of capability within each fleet family where this works operationally.

Requirements for trains of different fleets to work together in routine passenger-service operation will be applied only where they deliver clear operational benefits and represent value for money, but trains of the same fleet family should be able to be substituted on routes without avoidable technical barriers. Greater standardisation across fleets will also support more efficient and flexible maintenance and parts and materials supply described in Chapter 4.

Couplings and interfaces

Common mechanical, electrical and pneumatic interfaces will be specified so that trains can assist one another and support recovery from disruption. Where future fleets depend on external charging, fuelling or power-supply infrastructure, GBR will seek common interfaces and standards wherever practicable to reduce fragmentation, support interoperability and secure better whole-system value.

Cabs

More consistent cab layouts and operational interfaces will be built in where these provide clear value, reducing driver training complexity, supporting workforce mobility and improving service resilience. For new train fleets, GBR will consider the benefits of end gangways so that passengers and staff are able to move through the whole train when units are coupled together.

Capabilities

Minimum expectations for key capabilities across fleet families will be defined. These will include in-cab signalling (ETCS) capability, already required as a baseline expectation for new fleets, aligned with the long-term signalling strategy and at least passive provision for Automatic Train Operation (ATO) where future use might be plausible and beneficial, particularly on metro and high-capacity commuter fleets.

Futureproofing

GBR's new train fleets will be designed with future adaptability in mind. GBR cannot fully predict how assets will be used over 30 to 40 years and technologies such as automation, digital control and system integration will evolve, as will the way passengers use the trains. GBR will, therefore, favour train designs that allow future

upgrades and adaptation without major redesign or reconstruction where this represents good value for money.

This will include the replacement or upgrading of batteries and digital systems, the introduction of new technologies as they mature and the ability to respond efficiently to changing operational requirements. As temperatures change and passenger expectations evolve, this will include future train designs that provide effective and reliable climate control and thermal resilience.

Systems

A more consistent approach to passenger-facing and operational systems will be taken, particularly passenger information systems, Wi-Fi connectivity and the exchange of operational and asset-management data. Passenger information should be presented consistently across the network while train data should be more easily integrated into operational, maintenance and condition-monitoring systems.





2.4 Managing GBR's train fleet assets for the long term

Trains are long-life assets, but they have not consistently been managed as such at the system level under the existing model. Responsibility for delivering services will remain at the

local levels of GBR, closely connected to the passengers and communities they serve. However fleet planning and asset management require a whole-system perspective.

GBR's integrated railway needs the ability to understand fleet condition, performance and cost at the system level, to determine the optimal timing for replacement, refurbishment or life extension and to align fleet decisions with wider system constraints, such as infrastructure, depots, maintenance and traction changes.

Therefore, GBR will establish a new train fleet management function, providing strategic oversight of the national fleet while supporting those responsible for individual services to make the best use of their assets. A collaborative approach will be developed with existing train owners to use these and new fleets more efficiently.

GBR's procurement, refurbishment and replacement decisions will be aligned more closely across the trains'

lifecycles. Refurbishment and retrofit will be used more actively as strategic tools, particularly when they can more rapidly and cost-effectively improve accessibility, passenger experience or performance and when full replacement is not yet justified. GBR will use cascades to consolidate similar fleets, targeting interventions where ageing or poorly performing trains are most problematic.

Finally, train fleet asset management will be closely aligned with infrastructure and maintenance planning, bringing the benefits of the integration established by the Railways Bill. Train fleet replacement must be coordinated with traction and power, depot and maintenance provision and the wider timing of enabling works, ensuring that replacement decisions are made at the right time and in a way that maximises whole-system value.

3. Integrating GBR's train fleet and infrastructure

3.1 GBR's traction choices

A major challenge is posed to GBR by the decision regarding the traction power to replace the diesel engines that have played such a significant role in Britain's railways since the 1950s. Around 4,000 diesel and diesel-hybrid passenger railway vehicles will reach the end of their asset lives over coming decades, creating a significant opportunity to reshape the railway's costs, performance and environmental profile for the subsequent 35 to 40 years.

Many generations of diesel trains have come and gone from Britain's railways since the 1950s. Today, while providing continued flexibility and good service, diesel fleets require more intensive and costly maintenance than electric and battery-electric alternatives.

The market for new diesel products has reduced and ageing fleets face increasing obsolescence risks. This is before taking into account the volatile, rising cost of diesel fuel and the risks to supply from international events.

Rail represents a relatively small proportion of transport emissions and already provides a lower-carbon alternative to many forms of transport. However, the binding legal commitment to the UK economy being net zero by 2050 means that any use of diesel traction after that point will require some form of carbon removals with all of the associated costs. GBR will also take seriously its responsibilities on improving local air quality and reducing exposure to diesel emissions,



particularly in stations, depots and densely populated areas as well as the totality of emissions in the context of the 2026 Rail Air Quality Policy Statement³ which sets the approach in this field.

For GBR, the challenge is not just in the way diesel replacement is planned and delivered but how to introduce replacement traction at an affordable cost and a deliverable pace which brings the greatest benefits to the most passengers and communities as quickly as possible. That in turn depends on some factors beyond the control of GBR itself, in particular the availability of electric power from the grid.

Existing diesel and diesel-hybrid fleets will therefore continue to play a role on the network for some time. Where the infrastructure, funding or operational conditions needed for replacement traction are not yet in place, GBR will need to make other choices such as to retain, redeploy, refurbish or extend the use of existing fleets to protect service continuity. This will not alter the long-term traction choice to move away from diesel but recognises that it must be affordable, deliverable and coordinated with the readiness of the wider railway.

³<https://www.gov.uk/government/publications/rail-air-quality-policy-statement>

GBR's traction choice approach

Train fleet renewal through battery traction

GBR intends to replace life-expired diesel trains by progressively moving to the greater use of electric traction, delivered in most cases through Battery Electric Multiple Units (BEMUs) using both battery power and electrified infrastructure. This traction choice will be subject to value for money and affordability considerations and will need to be supported by targeted electrification and associated power upgrades. Discontinuous electrification will be installed on routes where BEMUs are replacing diesel trains, meaning that additional infrastructure will only be needed on limited sections of the route, with gaps between electrified sections where the trains use their battery power.

Electric traction delivers well-established benefits in reliability, performance, operating cost, accessibility and passenger experience while also reducing noise and local emissions. Battery electric operation supported by discontinuous electrified infrastructure allows GBR to secure most of these benefits while avoiding a significant proportion of the cost, disruption and delivery risks associated with full electrification, reducing both the amount of new infrastructure and the unit cost of delivery. For example, avoiding the need to electrify complex junctions and around structures, and reducing service suspensions and road closures which are disruptive for passengers, freight customers and the public. GBR will use detailed route-level analysis to determine the right level of electrification to support the removal of diesel traction. This

will generally require around a quarter of the currently non-electrified railway to be energised, or an equivalent level of capability provided through alternative battery charging technologies.

BEMUs are proven technology in use internationally and in Great Britain. In Great Britain, BEMUs have been deployed in Liverpool City Region where successful operation beyond the electrified Merseyrail network under battery power has been demonstrated using a Class 777 train, and by Transport for Wales with its Class 398 and 756 units. Recent major fleet replacement programmes have also selected battery-electric traction including the TransPennine Express order, reflecting growing confidence in the capability, deliverability and value of the technology. BEMUs require a different approach to operation, with infrastructure carefully planned to ensure trains can continue to operate reliably during network disruption.

GBR is taking the battery-led approach because this is where the best balance of passenger benefits, value, deliverability and flexibility lies for most passenger services. Full overhead electrification will nevertheless remain the preferred solution where route-level analysis demonstrates that freight train operators' needs, sustained high speed operation or wider network integration make this necessary or justify the additional investment.

Deployment of battery traction also establishes a basis for sequencing train and track replacements and upgrades. Interventions will be prioritised according to the overall benefits they deliver fastest, taking into account value for money and affordability. Train cascades and the retrofitting of batteries to existing trains will also be considered where this is technically feasible and represents good value for money.

A commitment to BEMU deployment provides greater certainty over the future direction of traction policy while allowing emerging technologies to continue to be considered.

Alternative traction sources

Interventions that support different traction choices, including alternative technologies or even continuing diesel where that is appropriate, are not precluded as long as they have been tested through business cases and delivery planning. This could apply, for example, where the obstacles to introducing battery charging systems are insurmountable or would not guarantee the level of service expected.

A growing number of alternative traction technologies are starting to become available, notably hydrogen and renewables such

as Hydrotreated Vegetable Oil (HVO), and they may play a role in specific contexts.

However, none are currently sufficiently developed to provide a credible, scalable, long-term solution across GBR's national network when compared to electric and battery-electric traction, particularly in terms of cost and performance. Where battery-electric solutions cannot yet be deployed, the most likely response would be the redeployment of newer existing diesel trains, potentially retrofitted to support more renewable fuels such as HVO. GBR is not permanently excluding alternative technologies and will continue to assess their potential as they mature.

3.2 Expanding GBR's electrified railway network

Transferring a large part of the motive power and fuel from the train to the infrastructure can lead to significant benefits in transport efficiency, which is why electrification is so widely used around the world. Electrified traction remains one of the most effective means of creating a lower-cost, higher-performing and more attractive railway.

GBR's principal response to diesel replacement for most passenger applications is the deployment of BEMUs, supported by Electric Multiple Units (EMUs),

where appropriate. Both depend on the expansion of the electrified railway network. The challenge for GBR is delivering the electrification infrastructure needed to support it affordably, efficiently and at the required scale.

Electrification has too often been delivered poorly under the railway system GBR is inheriting. Improving how it is planned and delivered is therefore essential to realising the benefits of the traction choice set out in this strategy.

GBR's electrification approach

The traction choice being made by GBR as the directing mind for both train and track will simplify the technical client remit, reducing unnecessary project development activity to tackle the indirect costs of electrification, increasing repeatability, contestability and competition while driving down delivery costs.

GBR is determined to learn the lessons from recent projects to improve delivery and reduce

costs. Traction choice will determine where electrification is required, what form it should take and how it should be timed so that infrastructure and fleets are ready to serve passengers together.

GBR will aim to sequence new fleets and infrastructure such that they create a controlled and smooth profile of delivery for the supply chain, reducing the costs that come with stop-start activity, subject to affordability.



3.3 Securing GBR's electrical power supplies

GBR's traction choice fits precisely with a national commitment towards reducing dependency on the volatile international fossil fuels market through decarbonising the transport network and wider economy. It also creates an opportunity for the integrated railway and energy sector to plan together more effectively, ensuring future rail requirements are considered alongside wider electricity-network development. Additional power supplies required for GBR's network and, in a context of unprecedented demand for new grid connections, their timely availability could become a serious constraint on future train fleet and infrastructure choices.

GBR will treat electricity supply as a critical system component requiring forward planning, capability, early engagement and stronger cross-sector coordination.

This means planning electricity supply options as part of the same decision set as train fleet replacement and electrification. GBR will use its collective scale of demand for power more effectively as a customer in engagement with the electricity supply industry so that future demand, connection point locations, innovative supply models and the timing of connections are considered strategically rather than solely on a project-by-project basis. This approach will allow GBR to compare the full costs and practicalities of different traction solutions before finalising procurement decisions. Planned effectively, it can help both the railway and electricity sectors make better-informed long-term investment decisions.

This will require earlier and more strategic engagement with the National Energy System Operator and electricity network

operators. As rail electrification and battery charging demands increase, future railway requirements will need to be considered alongside wider energy system planning to help ensure that the necessary capacity is available when and where it is required.

There are a wide range of factors beyond grid connection that affect how power is

delivered. Local distribution network connections, static frequency converters, smart-grid approaches, battery storage, renewables and ‘behind the meter’ generation, including solar, on GBR land may all help reduce costs, improve resilience and support more flexible delivery in some locations. Network Rail’s Technical Authority is already examining these and other options.

3.4 GBR’s digital signalling transformation

Digital signalling is already being progressively adopted across GBR’s network at the point of signalling renewal. ETCS can improve safety, reliability and performance while creating opportunities to increase railway capability and capacity and reduce whole-life costs. Unlike conventional signalling, ETCS requires equipment to be fitted to trains as well as infrastructure, making decisions about rolling

stock and signalling closely interdependent.

New trains are required under the rail interoperability framework to arrive fitted with ETCS, while many newer vehicles have been designed with future upgrade in mind. However, retrofitting ETCS to existing fleets is costly and time-consuming, with design and fitment typically taking five to ten years.

GBR's ETCS approach

GBR needs a clear and coordinated approach to ETCS deployment across both trains and infrastructure. If train replacement, redeployment and signalling programmes are not aligned, GBR risks unnecessary retrofit costs, wasted capability and delays in securing the benefits of digital signalling.

The opportunity to equip Britain's railways with ETCS has arrived at a particularly important moment. For the first time in a generation, train and infrastructure decisions can be planned together by a single directing mind, allowing the benefits of digital signalling to be realised more effectively.

ETCS is planned as an integrated programme spanning train fitment and signalling infrastructure renewal. Where ETCS deployment and opportunities to remove

conventional signals materially affect rolling stock decisions, these dependencies will be reflected explicitly in GBR's FIP, and in the planning and funding of signalling renewals. This will help ensure that fleet, infrastructure and funding decisions are coordinated in a way that supports affordability and value for money.

Fleet replacement, redeployment and ETCS roll out will therefore be considered together where digital signalling benefits depend on compatible fleet fitment. This will help GBR avoid unnecessary retrofit costs, make better decisions about the future of existing fleets and secure the benefits of digital signalling at the right time. Realisation of those benefits will also depend on ensuring that other operators using affected routes are ready for the change.



3.5 Integrating train and infrastructure asset management

It is in the DNA of GBR to integrate track and train information, capability and monitoring much more closely. The ability to use passenger trains as a widespread infrastructure monitoring platform represents a major opportunity to improve how the railway understands, manages and maintains its assets. The more quickly issues can be identified and understood, the sooner they can be addressed,

helping to avoid incidents that disrupt services and threaten the safe and reliable operation of the railway. As the integrated directing mind, GBR is uniquely placed to realise these benefits by combining information from rolling stock and infrastructure to support better whole-system decisions.

As new trains are introduced and existing fleets modified, GBR will make greater use of

train-generated data to support infrastructure monitoring and fleet management.

This will help identify emerging issues earlier, support more effective maintenance and asset planning and reduce the risk that important information is trapped in separate rolling stock, operations, and infrastructure systems.

This approach may also allow for more strategic use of the existing specialised infrastructure monitoring train fleet. By supplementing the work of these engineering trains with information gathered from passenger trains operating across the network every day, GBR will be able to increase coverage, reduce the need for manual inspections and focus resources where they are most needed.

Recent operational challenges, including periods of disruption and temporary speed restrictions, have underlined the importance of understanding

asset condition early and intervening before problems affect passengers. Good maintenance is not simply about efficiency. It is fundamental to preventing failures, reducing disruption and supporting the safe and reliable operation of the railway.

Low wheel-rail adhesion provides a good example of the benefits of an integrated GBR. Train-borne technologies, including enhanced wheel-slide protection and variable-rate sanders can improve safety, reliability and performance significantly. Historically, this has required retrospective fitment to fleets. GBR will instead consider such technologies, and others that offer similar benefits, as part of the specification of new fleets from the outset. Fundamentally, GBR will use the information available from both track and train to make better-informed decisions about maintenance, renewal and investment across the whole railway.

4. GBR's depot and maintenance plans

4.1 The need for an integrated GBR maintenance approach

Train depots are largely invisible to passengers but have a major influence on whether journeys are completed safely, comfortably and on time. The people responsible for maintenance, cleaning, servicing, stabling and logistics ensure trains are available for service, faults are resolved and the railway can recover from disruption. These activities are absolutely core to the passenger railway, and every additional train made available for service through effective maintenance and depot management represents both a better outcome for passengers and better value from existing railway assets.

Depots and maintenance are also a major area of expenditure. The Office of Rail and Road (ORR) found that around £1.5bn⁴ is spent annually on maintaining train fleets across Great Britain. Yet fleet issues accounted for around 2.6 million delay minutes or 15.7% of all delays in 2025/26 with the proportion rising year on year. Similar fleets maintained at different depots can also produce markedly different performance, demonstrating that outcomes depend on how trains are maintained, supported and organised.

Depot access and capability are shaped by a mixture of ownership structures,

leases, control arrangements and fleet-specific maintenance contracts. A depot may be in the right location but unavailable on terms that allow GBR to deploy a different fleet, change the maintainer, or use the site more flexibly.

Parts of the depot estate have also lacked sustained investment. Outdated layouts,

equipment and working practices can require unnecessary empty train movements, limit productivity and make cleaning, servicing and defect rectification more difficult. Staff facilities are too often poor, weakening recruitment and retention at a time when GBR needs skilled people to maintain and develop increasingly sophisticated fleets.



GBR's depot organisation approach

GBR will treat depots, maintenance, stabling, and supply logistics as core operating activities through its new train fleet management function. They will become key parts of GBR's system design, incorporated into strategies for cascading train fleets and in planning the procurement of new trains.

GBR's plans do not assume that one maintenance model is always right. There are many high-quality suppliers with their own dedicated employees in the depots serving GBR that need to continue delivering to the highest standards for passengers. Even as GBR becomes established, many of these companies will continue to have vital roles and should be able to plan their UK investments in equipment and people with greater certainty.

Therefore, GBR will take an evolutionary approach to depots,

maintenance and logistics and how these will increasingly be planned and managed as part of the integrated railway system. GBR will set out a clear direction of travel and apply it consistently through procurement, lease transfers, contract renewals, refurbishment, life extension and train fleet replacement.

This means that future decisions in these areas will increasingly be taken to improve reliability, enhance value for money and increase flexibility through:

- Securing reliability and resilience at the system level
- Extracting better value for money from train fleets over their entire lifetimes
- Achieving greater flexibility, for example by undertaking maintenance nearer to terminus stations where practicable

- Increasing certainty over intentions and levels of demand for suppliers, leading to healthier, more capable and more investable businesses

The proposals in this chapter will be reviewed in due course to take into account the outcome of the ORR's 'Rolling stock maintenance market review' launched in April 2026⁵. GBR will also continue to engage with maintainers, depot facility owners and recognised trade unions at the appropriate points in implementing this strategy.

Integrated depot management and capability

By planning depots alongside fleet and infrastructure decisions as part of the integrated railway, GBR will ensure that maintenance capability, capacity, depot access, materials and logistics are available in the right places.

GBR's depot capability will be built at a more integrated level with a stronger system-wide

view that supports the delivery of services at a local level. GBR will therefore develop greater understanding of depot utilisation, maintenance regimes, materials, supply risk and overhaul planning to be better able to compare options, benchmark costs and performance and make effective interventions where needed.

GBR will also seek opportunities to modify current practices where these do not represent best value for money or bring the best performance outcomes. Where contracts, leases or renewals allow, GBR will consider how arrangements will be reset so that it is not unnecessarily constrained by inherited site control, exclusive access arrangements, limitations on technical information or dependence on a single supply route. As with fleet management, a collaborative approach will be pursued wherever possible, recognising the important and ongoing role of existing partners.

⁵<https://www.orr.gov.uk/rolling-stock-maintenance-market-review>

Successful depots depend on a skilled and motivated workforce. The changes described in the RSI Strategy provide a significant opportunity for GBR to invest in its people, developing the skills and capabilities needed.

Enhanced GBR control of depots

GBR will implement three major changes to reform the control of depots by:

- Moving progressively towards arrangements that preserve or improve its control over depots as opportunities arise
- Avoiding a presumption that it would enter into exclusivity or long-term lock-in to particular manufacturers or financiers that reduce competition
- Planning depot capability around the fleet families described in Chapter 2 as well as new service patterns and future traction requirements

Reform of depot control will be delivered through a managed transition rather than a sudden restructuring. As leases, Depot Facility Owner (DFO) agreements, and other control arrangements come up for renewal, GBR will consider the most appropriate future model for each site. In some cases, this will involve agreeing new arrangements that broadly retain the current structure while securing changes that improve access, flexibility, and value for money. In others, it may involve replacing existing arrangements with more direct GBR control where this offers greater strategic benefit. The approach taken will be determined on a case-by-case basis, reflecting operational requirements, value for money, and the need to support a more integrated railway.

Where DFO status is transferred to GBR, the process will be managed smoothly with sufficient advance notice for all stakeholders to prepare for an

orderly transition. Access rights must be made fair for all parties.

Depot investment plans

As the integrated directing mind for both train operations and infrastructure, GBR will be able to take a more active role in identifying, prioritising and coordinating depot investment, ensuring that decisions reflect the needs of train fleets, maintenance, operations and the wider railway. GBR's objective from investment in depots is to inject funding where this will unlock performance benefits and savings in maintenance, for example:

- Modernising layout and access to reduce wasted train movements and create a production line ethos
- Expanding the range of work that can be carried out across a wider set of sites
- Improving management of depots as assets, including staff facilities and working environments

- Enabling future traction or charging needs
- Updating the depot equipment to unlock more efficient maintenance of current and future fleets.
- Reducing the need to move train fleets long distances to access a single specific piece of equipment or tooling at another facility
- Supporting the people and future skills required to maintain the new fleets coming onto the railway

By moving away from diesel traction, GBR will significantly reduce how frequently a train needs to return to a fully equipped depot. It should be possible to increase the sizes of train fleets without requiring more maintenance capacity to be built. With trains visiting depots less frequently, GBR will seek opportunities to invest strategically in additional secure stabling for operational benefits.

4.2 The need for a new approach to train fleet maintenance

For new train fleets, maintenance arrangements are often established by the manufacturer in a way that favours them as the incumbent support provider once trains have fully entered service. While competition is usually strong when a new fleet is being procured from the manufacturers and financiers, this often does not persist into later life, particularly when Train Service Agreement (TSA) and Technical Support and Spares Supply Agreement (TSSSA) contracts come up for renewal, limiting GBR's choices and potentially leading to poorer operational outcomes.

Potential alternative maintainers can face challenges accessing depots, have limited access to tooling and diagnostics, be

dependent on train manufacturer controlled technical documentation and encounter barriers in parts sourcing and design authority.

Were this landscape allowed to continue, GBR risks finding itself with reduced leverage over the cost, quality, and flexibility of provision and thus unable to secure best value for money. The challenge is not solely commercial as maintenance is driven too heavily by fixed, periodic interventions rather than the actual condition of the trains and smart anticipation of failures.

GBR's approach for train fleet maintenance

A maintenance model will be established by GBR that protects reliability in early train fleet life, preserves genuine choice over the full asset lifecycle and progressively moves the integrated railway towards a more open, capable and data-led system.

Transparency and competition

GBR will utilise its purchasing power on behalf of passengers and taxpayers to secure the best possible maintenance deals from manufacturers as new train fleets are procured or contracts are renewed.

There are undoubtedly benefits in some cases from maintenance of new trains being led by their manufacturers, so this model will continue to play an important role where it provides the best route to reliability growth and smooth entry

into service. GBR will expect manufacturers and suppliers to introduce trains that have been appropriately tested, meet their contractual requirements and enter passenger service with a clear pathway to achieving the required levels of reliability and performance. For longer-term maintenance, GBR does not see manufacturer-led support as a default arrangement where more efficient and cost-effective options may be available. Procurements for longer-term maintenance of new train fleets will be designed by GBR so that later-life decisions can be taken on the basis of value for money, reliability and strategic control.

For new train fleets, maintenance will normally be structured as a staged model. Early-life manufacturer-led support will be used to manage defects, protect service introduction and grow reliability as fleets are deployed.

During that period, however, GBR will not simply buy an output but will also seek to secure the capability needed to make later decisions from a position of strength, including:

- Defined knowledge transfer and training obligations
- Access to technical documentation, intellectual property, instruction manuals, drawings, software diagnostics, and historic data
- Treatment of tooling, diagnostics and software interfaces
- Clarity on parts use, supply and obsolescence responsibilities
- Simplification and transparency of contractual arrangements that preserve, from the point of procurement, choice over provider and delivery model as well as fair risk allocations that open up competition in the supply chain

Over time, this approach will allow GBR to determine whether, for each fleet, longer-term maintenance is best delivered by the manufacturer, in-house, by a third party or through a hybrid model so that GBR has a credible choice in a competitive market.

GBR will also develop its in-house maintenance capability, primarily in order to build understanding and resilience rather than as a commitment to direct delivery in all cases.

New maintenance regime

The scale at which major train maintenance is planned will be modernised by GBR. Heavy maintenance, overhaul, refurbishment, battery conversion, obsolescence interventions and life extension will increasingly be approached at fleet or fleet family level, allowing GBR's specification of work to be more consistent, reducing repeated mobilisation

while providing a more stable and investable programme of supplier work.

Remote condition monitoring and predictive and reliability-centred approaches based upon how an asset performs will be deployed more actively, as a key part of the specification for new trains and with the potential for high impact technologies to be added to existing trains. These will be prioritised where they allow GBR

to reduce low-value routine work and make better use of constrained maintenance windows.

Not all periodic maintenance will end but better evidence will be used to focus effort on interventions known to improve reliability for passengers the most, allowing GBR to consolidate resources and use them more effectively to support better fleet performance.



4.3 The need for a coordinated approach to parts, materials and logistics

The approach to train parts, materials and fleet logistics being inherited by GBR is fragmented. Operators, maintainers and fleet managers often procure, manage and hold materials separately,

even when components, demand patterns and risks are shared. This reduces purchasing power, increases duplication and weakens the ability to manage shortages, long-lead items and emerging obsolescence risks.

GBR's approach to parts, materials and logistics

GBR will establish a coordinated approach to materials procurement, inventory management, logistics and obsolescence planning. The aim is not to centralise every purchase but to coordinate categories where a system approach improves resilience, reduces duplication, increases commercial leverage over supply risk or provides the market with clearer, more stable demand.

This approach will build on existing railway industry logistics capability and, over time, be

extended into a more integrated model for the passenger fleet. The transition will be aided by the degree of standardisation flowing from GBR's fleet families approach for new trains described in Chapter 2.

Similar approaches are already used by Network Rail to support infrastructure, which the integrated GBR will be able to build on to support trains. If successful, collaborative work with owners and lessors should enable extension of this approach to additional parts

categories where justified by common fleets, shared demand or similar risks.

GBR will also develop much clearer visibility across its fleet of:

- What materials are held
- Where they are stored
- What is being consumed and
- Where critical risks lie (drawing upon Network Rail's approach to 'golden assets', which emphasises support, back-up plans and resources for the equipment that creates the largest impact on services)

Strategic inventory reserves may be justified for particularly critical, long-lead items or for items at risk of becoming obsolete.

Obsolescence will become actively and collectively managed so that, as fleets age and supplier bases change,

GBR will identify critical components and equipment earlier, coordinate demand forecasts and support alternative sourcing or redesign where dependence on a single supplier would otherwise risk increased costs or disruption to service continuity. GBR's ability to manage these problems intelligently is heavily driven by obtaining access to information, securing design authority, and obtaining technical rights to support coherent planning.

Finally, logistics will support wider train fleet maintenance by aligning materials planning with whole-fleet interventions. Heavy maintenance, refurbishment, life extension and major upgrades will increasingly be supported through more coherent logistics planning, reducing repeated mobilisation, smoothing supplier demand and ensuring that spares risk, inventory and delivery sequencing are managed together.

5. Funding GBR's trains and infrastructure

5.1 GBR making better decisions through integration

Delivering the RSI Strategy requires a step change from legacy arrangements in how GBR makes decisions about major investments and how they are funded and sequenced. As the directing mind for the integrated railway, GBR will take these decisions within the long-term direction established by the LTRS.

Many of the most consequential choices in the railway system, particularly those affecting rolling stock and infrastructure, are long-term, interdependent and difficult to reverse. They determine not only what is delivered but also when benefits are realised, how services perform and how costs are shared between passengers and

taxpayers. Too often in the past, these choices have not been sufficiently strategic or holistic.

GBR will establish a more strategic, considered and consistent approach, focused on ensuring that the right choices are made early, that they are arrived at on a whole-system basis and that their assessment makes trade-offs clear and outcomes explicit.

In practice, this will mean GBR making investment decisions, subject to wider governance processes, at the points where they have the greatest influence on long-term outcomes. These are the inflection points at which train fleets approach inevitable replacement, infrastructure

requires essential renewal or wider system constraints make significant change necessary. Identifying these clearly and early will allow options to be explored before they become constrained, enabling better alignment between trains, infrastructure and operations, while reducing the need for reactive or short-term remedial interventions.

This strategic approach places a greater emphasis on outcomes. Decisions will be guided by passengers and freight benefits, whole-life and whole-system value, affordability, deliverability, and risk. No single consideration will determine every decision. The purpose of this approach is to make the relevant benefits, costs, constraints and trade-offs explicit so that the best overall outcome can be identified.

5.2 Funding and prioritising GBR's investments

Delivering a whole-system programme of train fleet renewal and associated infrastructure will require a combination of public funding using established mechanisms and private capital, where it supports delivery and provides value for money, rather than reliance on a single source. GBR will use the available funding and financing approaches coherently, matching them to the characteristics of different investments and the outcomes they are intended to deliver.

The integrated approach to decision-making and funding that GBR will follow will be closely linked to the development of the FIP. The FIP will provide a forward view of expected activity across rolling stock and infrastructure dependent on those rolling stock choices. This will allow funding for strategic requirements, dependencies and potential sequencing to be considered as part of Spending Reviews, Funding Period settlements, and from other sources. The FIP will not determine or guarantee

investment but will support an iterative process in which the pipeline informs choices and funding settlements. This will help ensure that available

funding is directed towards the interventions that deliver the greatest whole-system value and can realistically be delivered.

5.3 Ownership and leasing of train fleets

New train fleets

One of the most important decisions facing GBR will be how new trains are owned and financed. Life-expired trains must be replaced or services risk being withdrawn, so GBR must consider the available ownership and financing models early and rigorously rather than allowing established commercial structures to determine the outcome by default. The aim is to identify the best possible commercial outcome for an integrated, publicly owned and system-led GBR. This means considering the possibility of direct GBR ownership.

Direct purchase of trains would represent a significant shift from the approach that has characterised much of the railway since privatisation, whereby the default approach was for trains to be leased from private sector rolling stock companies (ROSCOs) that have invested heavily in expanding and developing fleets. The ROSCO model has delivered significant benefits including access to private capital, specialist asset management expertise, long-term stewardship of rolling stock assets, and fleet enhancement and modernisation. Public ownership, however, provides greater direct control that could improve flexibility to manage the rolling stock fleet as part of a coordinated national railway system.

In that context, for each new fleet, GBR will assess leasing, direct ownership, and other appropriate financing arrangements on a case-by-case basis. Individual assessments will consider whole-life and whole-system costs and value alongside factors such as deliverability, risk allocation, operational flexibility, and GBR's capability to own and manage the assets effectively. Direct ownership will be pursued where this assessment demonstrates that it offers the strongest overall outcome.

Existing train fleets

The primary focus of any direct ownership would be on future train fleet procurements rather than existing rolling stock. Existing fleets are expected largely to remain leased and ROSCOs and other financiers will continue to play an important role in supporting them. GBR will, however, manage those arrangements more strategically through a portfolio approach, supporting more coherent decisions on lease extensions, refurbishment, replacement, life extension and redeployment.

5.4 Procuring new trains for GBR

GBR will act as the single coordinated buyer for new train fleets, replacing fragmented operator-led procurement with a national market interface aligned to system needs. Its procurement approach will focus on whole-life value rather than lowest initial cost, using its scale and clearer long-term requirements to support competition, innovation, supplier capability and better outcomes over the full life of the train. GBR will also place greater emphasis on quality, reliability, support and performance throughout an asset's lifecycle. GBR will seek not only high-quality trains but also expect their effective introduction into service, ongoing technical support and strong long-term performance for passengers and taxpayers.

As described in Chapter 2, GBR will seek more standardised fleet families procured on a repeatable basis through

anticipated framework arrangements while retaining sufficient flexibility to meet the specific needs of individual procurements. This approach is intended to reduce transaction costs, improve consistency of specification, provide greater visibility to the market, and support a steadier flow of work for the supply chain.

The Government wants public procurement to drive growth and deliver good jobs, skills and opportunities in communities across the UK. From 1 January 2027, central government departments, executive agencies and non-departmental public bodies, including GBR, will apply a minimum 20% social value weighting to covered procurement worth £5 million or more.

GBR will therefore have a central role, alongside government departments and other major

public infrastructure bodies, in ensuring rail-sector procurement supports UK skills and jobs. Clear forward pipelines, early market engagement and proportionate procurement requirements can enable UK

firms of all sizes to compete effectively for contracts. This can support investment in skills, innovation and resilient supply chains across the UK, while maintaining open, fair and non-discriminatory competition.

6. Building GBR's pipeline

6.1 The Fleet & Infrastructure Plan (FIP)

Building on the strategic and holistic approach to funding and decision-making described in Chapter 5, GBR will establish the FIP as the principal internal mechanism for planning and coordinating rolling stock and related infrastructure activity across the integrated railway. The FIP will provide a disciplined, whole-system view of the expected pipeline for trains and the infrastructure needed to support them. GBR will use the FIP to provide appropriate

information to the market on upcoming fleet and related infrastructure requirements. A more credible and coordinated pipeline will not only support better outcomes for passengers and taxpayers, but also provide the rail supply chain for the UK with greater confidence to invest in people, skills, facilities, and innovation here.

The FIP will not imply that every intervention identified has been approved or funded, which will

remain subject to consideration of business case, affordability and scheme governance. Rather, it will translate the direction set out in the RSI Strategy into a coordinated time-phased view of expected rolling stock and related infrastructure activity and will be maintained and refined as evidence, funding and delivery circumstances evolve.

An integrated and prioritised plan

Rolling stock and related infrastructure decisions will be integrated, sequenced and prioritised together to enable the cost-effective delivery of the services that passengers and, where applicable, freight customers need within GBR's available funding and to maximise value across the system. The FIP will align:

- Passenger train fleet refurbishment, cascade and replacement to support expected levels of demand growth

- Electrification (discontinuous, partial or full) and power availability, including taking account of the needs of freight operators
- Depot and stabling capacity
- Signalling and ETCS deployment
- Operational and maintenance readiness

Alignment will work in both directions, with infrastructure planned to enable fleet deployment and rolling stock decisions shaped by infrastructure constraints and opportunities, including aligning replacement and redeployment with electrification, ETCS deployment, traction choices, and delivery timing.

Interventions within the FIP will be assessed through a common whole-system framework to ensure proposals are developed consistently across rolling stock and related infrastructure. Prioritisation will consider



value for money, affordability, deliverability, and the expected outcomes for passengers and operations, ensuring that trade-offs are made consciously so that interventions deliver the greatest overall benefit.

Realistic and affordable delivery

A central function of the FIP is to create a smoother and more consistent pipeline of activity, reducing the historic boom and bust in train procurement, refurbishment and infrastructure delivery, thus supporting a more stable flow of work for the supply chain. This outcome will be achieved through active sequencing across the system,

including adjusting the timing of train fleet replacement, using refurbishment and life extension to manage transitions, grouping interventions where this improves value and aligning infrastructure programmes to support continuous delivery.

This approach reflects both delivery considerations and funding constraints. A more even profile of work is required to support supply chain capability and to ensure that expenditure remains manageable within Spending Review cycles and funding periods. The FIP, therefore, balances the efficiency benefits of a stable pipeline with realistic delivery

constraints. It will be refined as delivery performance, market capability, and evidence improve, ensuring that it remains grounded in what can be delivered effectively.

The information GBR provides to the market will support planning, investment and capability-building across the railway industry by providing appropriate visibility of the pipeline while maintaining discipline in decision making. It will also support better option selection and earlier development of interventions before major delivery commitments are made.

Responsive and planned evolution

The FIP is not intended to be a static, one-off plan but will be maintained and updated as required to reflect new evidence, changes in funding and affordability, delivery capability, emerging system

requirements and other relevant developments.

This will allow sequencing to be adjusted, priorities to be refined, and new interventions to be incorporated as circumstances evolve, while maintaining alignment with the overall direction set by the RSI Strategy. It will reflect how schemes evolve during their development, showing increasing confidence and definition closer to implementation while supporting early feasibility, scheme development and design activity to reduce delivery risk and drive the best possible value for money.

This approach will provide greater flexibility to refine priorities and develop interventions before delivery is committed, reducing the need for reactive tactical solutions, lowering delivery risk and improving the quality of future decisions.

6.2 How GBR's FIP will be produced

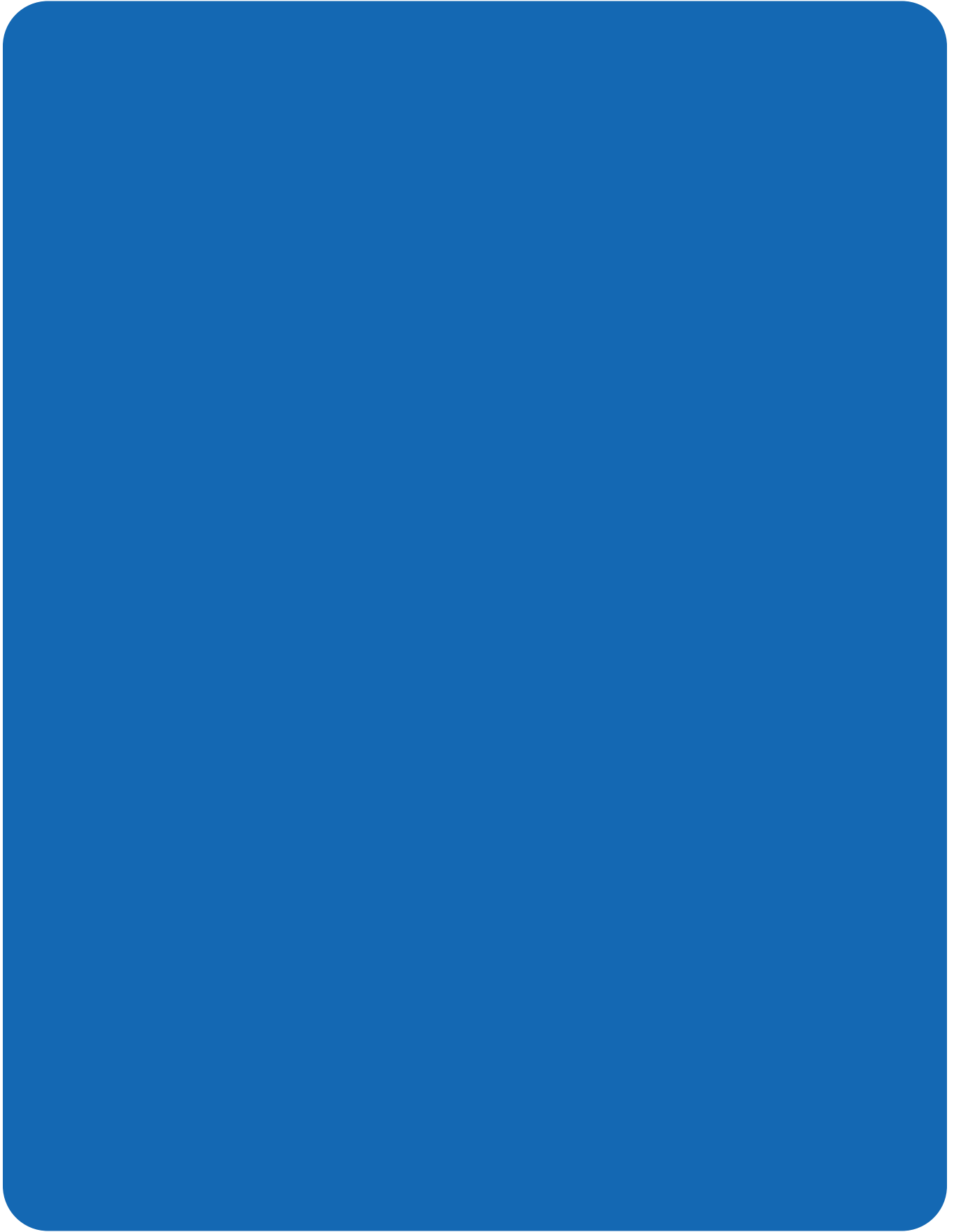
The FIP will be based on the principles above, responding to passenger and local needs, and embracing the LTRS, the RSI Strategy, other policy guidance and committed and likely future funding available from all sources. It will be developed and maintained as part of GBR's wider business planning, funding and delivery processes.

Most of the existing fleet is currently owned by ROSCOs or other financiers and leased to train operators. Therefore, some elements of the information provided to the market derived from the FIP will depend upon the outcomes of commercial negotiations so that GBR can deliver value for money for taxpayers, which may limit the information that can be made publicly available.

Nevertheless, the information derived from the FIP will set out the expectations and their level of certainty around the following key supply chain factors including:

- Expected new rolling stock requirements by fleet family and any potential framework procurements - information on the likely nature and operation of those frameworks will also be provided and will be subject to market engagement
- Expected areas of electrification and other major infrastructure projects, noting that the actual scope of individual projects will be the subject of feasibility and project development

GBR will provide information that will support effective supply-chain planning while reflecting commercial sensitivity and the maturity of individual interventions.



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