

On behalf of independent  
passenger and freight operators

# Whole Industry Strategic Plan

Call for Evidence -  
RDG operator-led  
response

***Rail Delivery Group***



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# Introduction

## **The challenges are significant but surmountable**

This is a crucial moment. The challenges facing Britain as a whole are significant, and the challenges facing the railway are unprecedented in scale. The nation's prosperity depends on sustainable and balanced economic growth. Our planet's future depends on our ability to reduce carbon emissions and adapt to climate change. Our industry's future depends on making it financially sustainable, which means improving efficiency in everything the industry does while reimagining the customer offer and experience to make it relevant in a world in which many of those customers have chosen a different lifestyle post-COVID-19, the widespread adoption of technology continues to accelerate, and rail cannot continue to take more than its fair share from taxpayers.

Notwithstanding this, there is a very real opportunity for rail to not only secure its own future but to realise its full potential as an integral part of the collective response to these economic, social and environmental challenges. A new vision and approach for rail is needed and, with the publication of the Williams-Shapps Plan for Rail White Paper, the establishment of Great British Railways (GBR), and the subsequent publication of this call for evidence, is now beginning to take shape.

In the past, the lack of clear strategic direction was keenly felt and led to an impression that the industry was not pulling collectively in the same direction. This material shortcoming was repeatedly identified in industry reviews as far back as the Rail Value for Money Study undertaken by Sir Roy McNulty and published in 2011. In this context, the commissioning of the Strategic Plan is, in itself, a real step forward – and gives the opportunity to articulate the much needed clear strategic direction while also addressing the more tactical priorities highlighted in the call for evidence. This will provide a compelling long-term vision of where the railway could be in 30 years alongside a recognition of the unprecedented scale of the challenge we currently face.

To achieve such a vision will require radical action and a wholly new approach; a clear sense of how it will be delivered and who will be accountable for its delivery, ensuring this is aligned with market demand and with the capabilities of the industry; a level of adaptability that means the plan continues to be reviewed and iterated during its lifetime; and transparency in defining how the plan interacts with other industry and national programmes, processes or consultations.

The Strategic Plan will be an important first step in enabling the railway to deliver the objectives and priorities set for it in the next 5, 10 and 30 years. Great economic and customer outcomes can be secured with a strong, independent public sector body in GBR at the centre, acting as the guiding mind and setting the direction of travel, and with the private sector in a position where its potential can be harnessed, and its efficiency and entrepreneurialism can be focussed on generating value and promoting innovation for the benefit of customers and taxpayers. If the Strategic Plan is too prescriptive or inflexible, and the private sector's contribution is merely transactional, our collective chances of success will reduce dramatically.

## **An unwavering focus on the customer must underpin our whole strategy**

Rail should be aiming to exceed customers' needs and expectations. This will drive passenger and revenue growth which will improve financial sustainability, deliver wider economic growth and support other objectives. Both the plan and Passenger Service Contracts (PSCs) therefore need to be agile and flexible enough to adapt to rapidly evolving customer expectations, enabling rail to be proactive and focus on continuing to provide a joined-up experience that exceeds customers' expectations.

This approach will grow patronage and revenue by offering a straightforward and seamless travel experience that is informed by customer insights, such as Wavelength data, and founded on the modernisation of fares, ticketing and retail. The priority should therefore be to invest in systems, data and people over the next 5-10 years, but setting ourselves up to be agile and proactive when customers' needs and expectations change, with the choices we make today adaptable for tomorrow.

The right actions in the next 5-10 years, focussed on improving efficiency of delivery and the customer experience, encouraging modal shift and boosting rail's environmental performance, are vital to underpinning progress against a number of the objectives set. In the short-term, it will accelerate recovery and improve efficiency so as to secure long-term financial sustainability. This will depend on strong collaboration between all industry parties, as well as a clear customer offer that attracts customers back to rail, retains their custom and drives revenue balanced with a sustained strategic programme to reduce waste.

### **Harnessing the private sector is an essential ingredient of success**

GBR should use PSCs specifically, and its approach to contracting more generally, to make best use of the private sector and its proven ability, when properly incentivised, to deliver for customers and taxpayers, to make best use of existing assets and to reduce waste. With the right contractual incentives, freedoms and flexibilities, private sector operators can use their in-depth knowledge of customer needs and markets to respond quickly to changing customer expectations and develop innovative products and services to attract customers, grow revenue and deliver multi-modal, end-to-end journeys.

Our ambition should be for rail to provide the backbone of a sustainable, resilient, zero-carbon transport network that connects communities and supports economic development across the country. Rail freight – which brings benefits of £2.45 billion to the UK annually – is critical to levelling up and needs an ambitious target of trebling volumes over the life of the plan, as well as other measures to incentivise the private sector to invest and enable freight to deliver even greater benefits for our economy, society and environment. There needs to be more emphasis on freight in the priorities, and more clarity on how GBR can influence the freight sector and enable it to grow substantially in the coming decades.

Rail must also continue to improve its own environmental performance. In the short term, available funding should shift to a whole-life cost approach and focus on 'no regrets' electrification schemes along with improvements to the environmental performance of existing rolling stock, including hydrogen and battery power. In the medium to longer term, a rolling programme of electrification remains the most cost-effective approach for decarbonising much of the network as well as supporting green jobs across the country.

There are wider opportunities to improve the whole rail system's environmental sustainability whether through station design, intelligent procurement, mobility as a service or renewable energy generation. Private sector operators have a wealth of experience and capability in these areas that can be unlocked through the right contractual incentives and freedoms.

### **The plan must deliver as much clarity as possible in a number of key areas**

Successful delivery of the Strategic Plan will depend on each part of the industry understanding its role and focusing on how to make the maximum possible contribution to achieving the strategic objectives. This depends on clarity in a number of key areas.

The call for evidence notes that the Strategic Plan is being produced for ministers. This suggests it will be ministers who will be accountable for delivery. Ultimately, the plan must provide the whole industry with a tool it can use to make the right decisions, based around a clear long-term vision. This would enable the industry to take responsibility for delivery and to respond effectively to ministerial direction without losing focus on the long-term strategic objectives.

Equally, there needs to be clarity on how the plan will interact with the priorities of the Scottish and Welsh Governments, both funders of services, given that the plan itself is in response to the UK Government's priorities. Similarly, this question can be applied to other funders such as mayors and other devolved bodies within England whose responsibilities may expand over 30 years.

The scope of the Strategic Plan appears to be continually evolving, which risks diluting the system-wide thinking which is essential to secure its delivery. The scope should include all aspects of the customer interface, including the reform and modernisation of fares, ticketing and retail.

There is little mention in the call for evidence of our people and how to take them with us on this journey. Collectively, we must address vital issues related to diversity & inclusion; workforce reform, skills and training; leadership and management capability; and employee engagement. These are critical to delivering the plan, improving efficiency, reducing duplication, increasing productivity and ensuring the railway is widely recognised as a great place to work, an industry which can attract and retain talent commensurate with the scale of the challenges it faces.

Open access operators have successfully provided much needed and welcome connectivity to communities and markets not previously well served by launching new services. This increased choice has consistently led to high levels of satisfaction and strong passenger growth. The plan should therefore consider the role open access services can play in meeting the needs of passengers and communities while reducing the level of risk taken by taxpayers.

Other key topics that the Strategic Plan should cover include customer service, for both passengers and freight; productivity; revenue generation; operations planning and delivery; engineering, in relation to infrastructure, rolling stock, facilities and interfaces; supply chain and wider contractual engagement and management; and innovation and change.

There needs to be much greater clarity on how the dual role of GBRTT and then GBR as both the central strategic body and infrastructure delivery manager will work, and where the boundaries of responsibilities and accountabilities will lie between these two parts of the organisation, as well as their relationship to operators.

The Strategic Plan should set out how future industry regulatory arrangements – economic, safety, operational and consumer rights – will be established so industry parties are held properly to account.

From 2032 (year 10) onwards, increased demand is likely to require further capital spending to expand the network and add resilience. In addition to the already committed enhancement programmes in the Integrated Rail Plan and the Rail Network Enhancement Pipeline (RNEP), this is likely to require the further roll out of both network electrification and the digital railway, as well as successful integration with HS2. Additionally, there will be a need to use the foundations put in place by year 10 to make clear and sustained progress in years 10-30 towards the long-term vision at the heart of the Strategic Plan.

#### **Operators are committed to making the plan a success**

This response has been developed in partnership with, and on behalf of, the owning groups represented on RDG's Owing Group Board, their passenger operating companies, and freight operating companies. In addition to this written response, RDG and its members will continue to be involved in detailed engagement and development of the plan.

The continued commitment from both government and GBR to harnessing the best of the private sector is welcomed – its expertise, innovation, investment, and resources can, if given the opportunity, enhance the development and help secure the delivery of the plan.

There can be no illusions about the major economic, social and environmental challenges but, working together, those challenges can be met and a successful future built, with customers at the heart of the collective vision.

# Question 1 - Strategic Objectives for the Whole Rail Industry

## Summary

- The strategic objectives emphasise that rail is not only well-placed to support government policy objectives, but also that rail cannot be considered in isolation. The Strategic Plan must reflect that, but also acknowledge the current industry financial position requires clear priorities, so rail can play the fullest possible role over the next 30 years.
- Rail's customer offer should aim to exceed continually evolving customers' needs, driving passenger and revenue growth, as well as modal shift and modal integration, which will improve financial sustainability and also support other objectives. We should be surprising and delighting our customers by delivering consistently reliable, accessible, sustainable and comfortable journeys.
- We need to develop and implement a sustained strategic programme to reduce waste and improve productivity, alongside efforts to drive revenue. Not simply cutting costs by reducing services, as this will make rail less attractive to customers and disproportionately affect revenue.
- Given financial constraints, and with travel patterns changing significantly, alongside improving the efficiency of delivery, effort should be targeted at opportunities to improve the customer experience and encourage modal shift to grow revenue, by investing in our people, systems and data, with investment in physical infrastructure focussing on projects already committed plus schemes which will also deliver customer experience benefits. The right actions can underpin progress against a number of objectives in the next 5-10 years and establish the tools and capabilities to be successful in the long-term.
- Having set out a clear direction of travel through the Strategic Plan, GBR should use PSCs to make best use of private sector operators and their ability, when properly incentivised, to deliver against the objectives, by growing patronage and revenue, reducing waste without cutting services, making best use of existing assets and driving modal shift.
- This depends on contracts having sufficient flexibility to enable the private sector to respond agilely to changing customer needs and an evolving external environment.
- Transport policy, fiscal and investment decisions should be based on a "sustainable transport hierarchy" to promote modal shift towards active travel, rail and other forms of public and shared transport.
- Uncertainties remain in relation to changes in political priorities or the political environment, but a cohesive, widely supported plan and clear direction of travel, backed up by delivery, will help reduce that uncertainty.

## Question 1a

**How would you apply these objectives to rail in your region or to your area of expertise within the transport sector? Do you have evidence you can share with us of how you have applied similar objectives in relation to rail, and do you consider the objectives to have missed any key areas?**

The Strategic Plan should prioritise the 5 overarching objectives and make recommendations as to which options and trade-offs are preferred.

### **Improving the customer experience**

Focussing on improving the customer experience, providing the connectivity that passengers and communities need, and thereby encouraging modal shift and growing both patronage and revenue, is not only the most cost-effective means in the short-term, but also the most environmentally beneficial in terms of reducing transport carbon emissions. It creates the opportunity to take a long-term strategic view as to what future capital investment may be required to increase capacity, improve connectivity and accelerate balanced economic growth, to reflect emerging post-pandemic travel patterns.

### **Maximising the benefit derived from the use of existing assets**

Improving the customer experience means maximising the use of existing assets in the short-to medium-term to deliver the most punctual and reliable service possible while also meeting evolving customer demand. There is a real risk that blunt cost reduction – reducing services to reduce costs – becomes a substitute for greater productivity and cost efficiency as a means of delivering financial sustainability. This would undermine rail’s attractiveness and sustainability as a mode of transport at a time when emerging transport technologies, such as electric cars, could further undermine a business model that needs time to recover.

Moving freight from road to rail will be a key enabler in meeting a number of the strategic objectives and should therefore have greater emphasis in the Strategic Plan.

Private sector operators have consistently demonstrated their strengths and ability to innovate in the past in growing patronage and revenue,<sup>1</sup> reducing waste, making best use of existing assets and driving modal shift. As RDG and private sector operators have consistently argued, with the right levers and incentives in PSCs private sector operators can do so again, contributing to the whole industry’s bottom line by increasing revenue and not just cutting costs, as well as bringing investment of their own into the industry. If they are empowered within their contracts to innovate and change the services they provide, they are better able to meet, or even exceed, those needs and expectations and encourage more people to choose rail.<sup>2</sup>

Private sector train operators would be able to deliver these benefits more cost-effectively within a set of balanced, reciprocal and collaborative arrangements, with accountabilities and responsibilities clearly defined, with other operators, GBR and the infrastructure managers.

Wider government investment and policy decisions, including those on taxation, need to support modal shift towards more sustainable modes such as rail.

## Question 1b

**How is it possible to make progress against a number of the objectives simultaneously? Do any of the objectives have larger barriers associated with them than others, or do any objectives pose possible barriers to others? Where would you make the trade-offs?**

The strategic objectives have a number of interdependencies, and there are also areas where they are mutually supporting. The right actions and incentives for private operators can therefore underpin progress against several objectives in the next 5-10 years.

<sup>1</sup> Periodic Rail Industry Market Report P10

<sup>2</sup> William Shapps, Plan for Rail, page 7, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/994603/gbr-williams-shapps-plan-for-rail.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/994603/gbr-williams-shapps-plan-for-rail.pdf)

Most obviously, investing in the customer experience, and going beyond simply meeting customers' needs to exceeding them, will encourage more people to choose rail. Modal shift will, in turn, drive revenue growth that improves financial sustainability, supports economic growth, levelling up and connectivity, and helps reduce carbon emissions and other environmental impacts.

### Shorter-term measures (5-10 years)

Beginning immediately, but over the first two timescales covered by the Strategic Plan, the priorities should therefore be:

- Developing and implementing a sustained strategic programme to reduce waste and improve productivity, alongside efforts to drive revenue, not simply cutting costs by reducing services;
- Focussing on driving revenue growth and modal shift by significantly improving the customer experience through investment in systems, data and people, with investment in physical infrastructure focussing on projects already committed in the Integrated Rail Plan and Rail Network Enhancement Pipeline<sup>3</sup> (RNEP) plus schemes which will also deliver customer experience benefits;<sup>4</sup>
- Building understanding of future capital investment priorities in the context of post-pandemic travel patterns; and using any renewal expenditure to improve the railway by progressively migrating to better technology such as digital signalling and Electronic Train Control Systems (ETCS);
- Ensuring transport policy, fiscal and investment decisions are based on a “sustainable transport hierarchy” to promote modal shift towards active travel, rail and other forms of public and shared transport;
- Embedding the new industry structure and contracting arrangements to support the delivery of the Strategic Plan;
- Maximising the use of existing assets, facilities and capabilities to deliver a high-performing and cost-efficient railway that balances the needs of all customers;
- Simplifying ticketing to ensure customers always get the best deal available in an easy-to-use format;
- Putting in place the foundations that enable rail to make meaningful progress towards the net zero 2050 carbon emission target, focusing enhancements on the achievement of net zero transport; as well as making best use of existing rolling stock assets including by improving their carbon and air quality performance, for example through hybrid conversions and sustainable, low carbon fuels; and
- Maintaining and, if possible, expanding investment in research, development and innovation – which can support all the objectives – and making R, D, & I central to industry structures, processes and incentives.

### Question 1c

**What long-term trends in wider society, the economy, and the environment will affect these five objectives over the next 5, 10, and 30 years? Please give evidence to support your response.**

Before the pandemic, rail already faced major challenges related to long-term social, economic and environmental trends. But it is also clear that rail is part of the solution to many of those challenges, such as the UK's need for growth and improved productivity, addressing climate change, population growth and urbanisation, people's growing adoption of technology and the constraints on public finances.

<sup>3</sup> DfT, Guidance: RNEP, 2018, <https://www.gov.uk/government/publications/rail-network-enhancements-pipeline>

<sup>4</sup> DfT, £360 million investment to transform rail ticketing across the country, 2021,

The full impact of the pandemic on these trends and challenges may take some time to be fully understood. This increases uncertainty and underlines the need for flexibility to be built into the Strategic Plan. However, it is clear that, alongside an increased urgency to address climate change, the pressure on the public finances is far more acute than it was even two years ago.

### Changes in travel patterns

Travel patterns are changing more significantly than they have in many decades. The previous industry financial model, which depended on a significant proportion of its income from commuter and business travel, will be hard to recreate, as it seems certain that white-collar workers will have more flexibility on where and how they work, once the impact of the pandemic has lessened.<sup>5</sup> But there are also opportunities to grow other travel markets. For example, demand for leisure travel recovered almost completely in the summer and autumn of 2021.<sup>6</sup>

To enhance the customer experience, to respond to developing trends, and to make short-term decisions during disruptions, it will be essential to make better use of data to develop meaningful insights.<sup>7</sup> Customers' expectations are likely to evolve rapidly and significantly as they experience what other sectors can deliver and expect rail to be properly integrated with other service and information providers.

There will also need to be flexibility for greater change in timetable design, with PSCs structured to encourage this, e.g. more variable cost elements, traincrew reform.

## Question 1d

### What are the key uncertainties you consider that the Strategic Plan must be resilient to in order to be effective over the next 5, 10 and 30 years?

As already outlined in this document, these are considered to be the UK's economic position, the ongoing impact of the pandemic or other significant public health events, an acceleration in the climate emergency, rail's financial affordability and changing customer needs and wants. Other major challenges for the industry relate to the skills and capabilities of our workforce.

#### An agile Strategic Plan to respond to challenges

The Strategic Plan itself is part of the answer. It can clarify the overall direction of travel and then use PSCs specifically and contracting more generally to harness the ability of the private sector to deliver.

The new model must be sufficiently nimble to respond to uncertainties. That means a plan that encourages the private sector to develop new and innovative means of delivery. This is especially crucial in the context of rapidly evolving customer needs. Private sector operators and RDG would argue that, given the potential for transformation over the full 30-year timescale, the private sector is better placed to respond than the public.

Uncertainty is also relevant in the context of whole industry finances. At this stage, it is difficult to be certain about long-term trends in passenger numbers across different rail markets. As noted above, passengers voted with their feet during the summer and autumn of 2021, with leisure journey numbers returning at a far faster pace than in other sectors, even before the return of overseas visitors. With infection rates falling, it is paramount to regain this momentum, investing in the customer experience and developing new and innovative products to attract passengers back and grow industry revenues.

The other aspect of financial sustainability is the need to reduce costs. Private sector operators and RDG's view has always been that the private sector is much more effective at this than the public sector. A sustained strategic programme to reduce waste and improve productivity, as well as the agility of the sector, should be developed as part of the Strategic Plan. With clear and unambiguous milestones, the delivery of that programme – in relation particularly to train operations – should be incentivised through PSCs.

<sup>5</sup><https://www.gov.uk/government/news/360-million-investment-to-transform-rail-ticketing-across-the-country>  
Williams Shapps, Plan for Rail, page 8

<sup>6</sup> ORR, Passenger rail usage 2021-22 quarter 2, <https://dataportal.orr.gov.uk/statistics/usage/passenger-rail-usage/>

<sup>7</sup> DfT/ Chris Heaton Harris, Smart ticketing investment for rail customers, 2019, <https://www.gov.uk/government/publications/smart-ticketing-investment-for-rail-customers>

The most significant uncertainties the Strategic Plan may face are likely to be related to changes in political priorities or the political environment. These could be new priorities from a new Government, or increased devolution within England, leading to local decision making by Sub National Transport Bodies (SNTBs). In part, this can be addressed through a cohesive and widely-supported plan with a clear direction of travel – something previously lacking – and, in part, through the visible progress towards its delivery by an effective partnership of public and private sectors.

### Question 1e

**Over the next 5, 10 and 30 years, which steps should the sector take to improve integration of rail with the wider transport system (including walking and cycling) in pursuit of these objectives?**

#### Modal shift and modal integration

Enabling modal shift is the biggest contribution rail can make in the short-term to the government’s strategic objectives, as it can support the delivery of those objectives without substantial additional investment. Across all timescales, the Strategic Plan should develop a clear strategy on modal shift out of cars, and planes where possible, (for individuals) and away from freight on road towards public transport and active travel. This will require integrated transport and planning policies from government.

Improving the integration of rail with the wider transport system will encourage modal shift and greater use of active travel. Industry involvement in local travel plans is vital to solve the travel problem of many customers of their first mile/last mile. Private sector operators and RDG would advocate such measures as more cycle routes to, and cycle storage and EV charging points at stations, collaboration with innovative Mobility as a Service (MaaS) businesses, through ticketing on buses, bus/rail timetable integration, and multimode journey plans (other than Google Maps).

Technological developments will pose both threats and opportunities for rail. The introduction of fully electric autonomous vehicles could provide consumers with a low cost and low carbon form of transport, posing a potentially direct and disruptive challenge to rail. The private sector should be encouraged through the right incentives to innovate and partner with technology and other transport providers to offer seamless and sustainable door-to-door journeys. These could use autonomous vehicles for the first and last mile of the journey but use rail to provide quick and direct access to town and city centres (which would also reduce road congestion).

# Question 2 – Meeting Customers' Needs

## Summary

- Customer expectations will continue to evolve, and the Strategic Plan needs to be agile and regularly adapted to meet future needs, enabling rail to be proactive and focus on exceeding customers' expectations. To grow revenue not just in the short-term, but over the life of the Strategic Plan, rail has to be more attractive to customers, by being easier to use and offering better value than today.
- An improved customer offer depends on seamless, multi-modal journeys, with stations that support and enhance that integrated offer, and the acceleration of accessibility improvements to provide a genuinely accessible railway including but also going beyond the traditional view of physical accessibility.
- Customers expect digital experiences to be more integrated and richer than ever before. Simplifying retail and ticketing will help provide a straightforward and seamless travel experience in which personalisation of offers, information, notifications and service drive convenience, value and trust. Joined-up thinking reflecting customers' whole use of rail – for work or for leisure, alone or with their families will enable the industry to provide a whole retail eco-system of products and services as part of an integrated online and offline experience.
- Gathering intelligence on how customers perceive their experiences through multiple sources is key to continuous and tangible improvement at a much faster pace than has been achieved previously, helping to determine the highest priorities and, when embedded into PSCs, improving accountability, as well as enhancing reputation and levels of trust and advocacy.
- With the right contractual flexibilities and freedoms in PSCs, private sector operators can use their in-depth knowledge of customer needs and markets to develop innovative products and services to attract customers, grow revenue and deliver accessible, multi-modal, end-to-end journeys. The private sector can enhance all aspects of the customer experience, understanding, reflecting and anticipating changing expectations by listening to customers and through accurate data and analysis, then adapting and responding quickly to develop new and innovative offers that meet those expectations.
- The short-term priority should therefore be to direct investment to meeting and exceeding customers' needs and expectations, determined through insight and data-led analysis by investing in systems, data and people, but setting the industry up to be agile and proactive as those needs and expectations change, with the choices of today adaptable for tomorrow. People will simply avoid rail – with all the consequences that will have for modal shift and the industry's financial sustainability – if their experience is of an industry that is far behind their experience in other parts of their lives.
- Rail freight, which brings benefits of £2.45 billion to the UK annually, provides many businesses with the best option to move their goods, and forecasts indicate very strong long-term growth in demand. Alongside an ambitious target, the rail freight sector needs other interventions and conditions to incentivise the private sector to invest and for freight to deliver even greater benefits for our economy, society and environment.

## Question 2a

### **Passenger: how will rail passenger expectations, including accessibility requirements, evolve over the coming 5, 10 and 30 years, what will be the driving causes of these changing expectations, and how can they be most effectively met by the rail sector?**

Our focus should not just be on meeting customers' expectations but exceeding them. We will need to be proactive and reimagine the customer experience and continue to do this as customers' expectations change with the times.<sup>8</sup> While it is possible to plan for the coming 5 to 10 years, further out becomes more challenging as customers' expectations will evolve based on the technology available, their experiences with other services and their own personal priorities. To ensure we can meet these expectations as they evolve, we will need to reduce our cost of change, increase our speed of change and ensure what we create in the coming 5-10 years is agile and future innovation can be built upon the foundations we create.

Punctuality is currently the biggest single influence on passenger satisfaction.<sup>9</sup> While a safe, punctual, reliable, regular, and affordable railway will continue to be vital to the customer experience<sup>10</sup> and should be central to the Strategic Plan, the pace of change across all customer expectations is likely to increase. It is expected for passengers to place a growing emphasis on a fully accessible network, personalisation, better modal integration, the environment and the affordability of rail, simple ticketing options, information and journey planning, which is reliable and provides all available options, and automated journey planning<sup>11</sup> which allows them to compare transport modes.<sup>12</sup>

Macro trends will be key to changing expectations, for example the overall economic picture, geo-political environment, demographic shifts in location, and a more environmentally conscious and ageing population, with potentially more disposable income. The railway will need to monitor and be responsive to these as well as more specific causes of changing expectations, such as customers experience with other modes of travel, other services and industries, as they are likely to drive those changes. Accessibility is built into requirements for public spaces, and it will become the expectation that all elements of the railway will be fully accessible. Customers' experience of purchases from other retailers, both online and offline will colour their expectations of how retailing on the railway works, this will need to be simple and seamless to meet expectations of what is offered by others.

Changes to how and when people work will mean that the railway will be expected to adapt its offering to meet customers' needs. Expectations will also change based on comparisons with other modes, including Electric Vehicles. Flexibility, comfort, value for money, environmental impact and speed will be factors which affect customer choice of mode.

Private sector operators can use their in-depth knowledge of customer needs and markets to develop innovative products, services and linkages to attract customers, grow revenue and deliver multi-modal, end-to-end journeys. With the right contractual flexibilities and freedoms in PSCs, private sector operators can use their in-depth knowledge of their customers and markets to respond to changing customer needs in an agile way and constantly reimagine the customer offer. They can do so by developing innovative products and services to attract customers, grow revenue and deliver accessible, multi-modal, end-to-end journeys.

<sup>8</sup> Deloitte/ RDG, Assessing the Value of Rail Freight, 2021, <https://www.raildeliverygroup.com/about-us/publications/12839-2021-04-assessing-the-value-of-rail-freight/file.html>

<sup>9</sup> Transport Focus, National Passenger Survey, 2020: <https://www.transportfocus.org.uk/publication/national-rail-passenger-survey-nrps-spring-2020-main-report/>

<sup>10</sup> Transport Focus, What do rail passengers most want, 2021, <https://www.transportfocus.org.uk/news/transport-user-voice-august-2020-what-do-rail-passengers-most-want/>

<sup>11</sup> Ibid

<sup>12</sup> PWC, Experience is everything: Get it right, <https://www.pwc.com/us/en/services/consulting/library/consumer-intelligence-series/future-of-customer-experience.html>

## Question 2b

**Passenger: in your experience, how can we most effectively monitor and assess customer satisfaction? What is a stretching yet realistic ambition for this objective and what measures can we most effectively use to consider success over the coming 5, 10 and 30 years? What evidence can you share to support your view?**

### Customer Insight

Incentives and targets should focus on addressing customer feedback and insights and perceptions of rail amongst irregular and non-users so we can improve poor perceptions and encourage more people to travel by rail. For example, detailed information gathered by Wavelength, harnessing local knowledge from operators and Community Rail Partnerships (CRPs) will ensure customers' voices are heard and help to prioritise required improvements. The input of regional authorities, SNTBs, and schemes which cross physical and corporate boundaries, for example ticketing and subscription or more recently Covid responses,<sup>13</sup> will ensure the offer matches the customer need rather than industry convenience.

The successor to the Wavelength survey will provide data that will drive tangible customer experience improvements, and a predictive analytics capability will be created which enables the demand, revenue and operational impacts of customer experience improvements to be understood. Wavelength data should be fully embedded within operator contractual mechanisms, driving continuous improvement and thereby encouraging more people to travel by rail.

There are also a wide range of operational rail datasets and management systems, such as KPIS and SQR, to help understand the changing customer experience and to provide checks on delivery, and output metrics. The aim should be to analyse these in real time or to use them predictively to inform pricing or service adjustments. Train loadings data can inform levels of overcrowding; retail data can inform the popularity of different ticket types; and other data sources can improve our understanding of customer behaviour and attitudes towards travel more generally. Piecing this evidence together is essential to derive holistic insights and implement improvements that customers need and want.

Operators already conduct targeted market research, studies and pilots to gather insights to develop action plans and ensure delivery is focussed on priorities to create consistency. These can and do drive improvement and ensure Operator teams understand their local markets/ customers as part of their Customer Strategies.

Targeting "quality" customer experiences also implies a discipline to understand the whole costs and benefits of achieving those targets. Therefore, affordability business cases need to be framed within the wider impacts, e.g. how does the initiative impact revenue positively, and how does achieving environmental sustainability affect modal shift from more polluting modes, such as private internal combustion engine cars.

The agreed customer satisfaction monitoring regime must be successfully integrated into PSCs, with operators incentivised to drive customer experience improvements. However, operators can only be measured on the things over which they have some control. For example, if operators have no control over the timetable or fares and there is an overcrowding issue at a particular time of the day, it is only GBR that can address this. It would therefore be counterproductive to penalise an operator for this.

<sup>13</sup> Transport Focus, User Voice June, 2021, <https://www.transportfocus.org.uk/news/transport-user-voice-june-2021-public-transport-a-cleaner-future/>

Over subsequent years the approach to Insight should become far more responsive to feedback. The development of a single customer view<sup>14</sup> will enable us to 'close the loop' with affected customers more readily (and report back to them the actions) and generate initiatives that are tailored to the individual. Data improvements should also enable us to associate the feedback received with the service delivered and therefore help us better understand links between perception and experience.

There is strong cross-industry support for improved network-level customer experience data through Wavelength and a heightened focus on initiatives that will improve the experience and consistency of travelling by rail. There is a strong strategic case for Wavelength, addressing customers' core concerns will enhance reputation and levels of trust and advocacy, while the Wavelength data can be used to ensure that customer experience improvements are distributed fairly across market segments and customer groups.

The current approach to analysing and improving customer experience within the rail industry is not effective. While National Rail Passenger Survey (NRPS) measures satisfaction twice a year it focuses mainly on operational aspects, and we have seen previously that around 75% of the rail industry's trust and reputation are driven by softer measures.<sup>15</sup> We need customer insight, which is designed to not only monitor these but generate actionable insight and prioritisation. Across other industries a relentless focus on customer experience has been shown to boost revenue. The granularity of data within Wavelength will enable better forecasting of how improvements to the customer experience will generate revenue, which is critical to support customer experience business cases.

The commercial case for using improved measurement to drive an improved customer experience is compelling. Across all industries, those who lead the way in terms of customer experience have been shown to enjoy twice the rate of growth of those who fall behind, have 80% stronger share performance over an 8-year period and 15% lower costs on average.<sup>16</sup> One particular application of end-to-end customer experience and expectation measurement (similar to the Wavelength programme) has generated double-digit revenue percentage growth in a highly mature and very large multinational organisation.<sup>17</sup> Wavelength is also expected to deliver demand and revenue uplifts and cost reductions by removing existing research duplication across the industry.

## Question 2c

**Freight: what evidence can you provide regarding the advantage(s) of transporting goods by rail and what evidence can you share for how that could develop in the next 5, 10 and 30 years? What do you consider to be the most effective role for rail freight in the existing supply chains served and those that it doesn't? How could this change over that period? In answering, please explain and take account of likely developments in technology and in the wider economy.**

Transporting goods by rail has a wide range of advantages. Recent Deloitte analysis, commissioned by RDG and published in 2021, shows that the rail freight sector brings benefits of £2.45 billion to the UK annually as of 2018/19.<sup>18</sup> Of this, £1.65 billion is made up of user benefits, comprising time savings, cost savings, and improved reliability. Rail freight connects businesses and industries across Great Britain and analysis shows that 90% of the benefits it delivers support communities outside of London and the South East.

<sup>14</sup> Build a successful business case for Single Customer View, <https://www.experian.co.uk/assets/data-quality/single-customer-view-business-case.pdf>

<sup>15</sup> Transport Focus, Rail passenger trust, <https://www.transportfocus.org.uk/publication/williams-rail-review-trust-in-train-operators-an-exploration-of-issues-influencing-passenger-trust-in-rail/>

<sup>16</sup> Forrester, 2016

<sup>17</sup> Commercially confidential research

<sup>18</sup> Deloitte/ RDG, Assessing the Value of Rail Freight, 2021, <https://www.raildeliverygroup.com/about-us/publications/12839-2021-04-assessing-the-value-of-rail-freight/file.html>

The remaining £800 million of these benefits are externalities, made up of environmental and social benefits. Using rail produces fewer emissions, reduces the amount of congestion and delay on the road network and tends to be safer than other modes. Emissions from rail are 76% lower than those from road, and rail reduces the social cost of greenhouse gas emissions by 86% and improves air quality costs by 16% per avoided lorry km. Rail freight is also estimated to impose 82% less noise nuisance than lorry traffic. Increasingly, businesses are turning to rail as a more environmentally friendly means of moving goods.

It is important to understand that the significant benefits of moving freight by rail largely fall outside of the railway balance-sheet – i.e., to businesses up and down the country through productivity gains and to wider society through the environmental gains, reduced congestion, and improved safety. These significant ‘off-railway’ benefits should be considered in any appraisal of infrastructure schemes.

The reduced congestion brought about by using rail freight is particularly beneficial on the Strategic Road Network, and in areas close to major economic activity (e.g., ports, distribution hubs etc.). This helps to support a more resilient supply chain. Given each freight train can carry the equivalent of up to 76 Heavy Goods Vehicles (HGVs), rail can keep moving during HGV driver shortages, as demonstrated in recent months.

Rail is more effective than road at delivering materials into urban centres, at a reliable pace, as rail is not subject to the same congestion variability as road. Transporting goods by rail imposes 25% less infrastructure wear than the road equivalent.

Rail freight has recovered much more strongly from the COVID-19 pandemic than passenger rail. Industry forecasts (set out by MDS Transmodal) indicate that very strong long-term growth in demand for rail freight services can be expected between now and 2043/44.<sup>19</sup> This forecast growth suggests an ambitious rail freight growth target should be set, that is aligned with future funding cycles.

These forecasts are likely to understate the potential for rail freight to grow as they were produced prior to the legal commitment for UK greenhouse gas emissions to reach net zero by 2050 and do not consider the impact that this could have on supply chains. Furthermore, structural challenges on the road haulage side will increase the attractiveness of rail, with businesses looking at options to diversify their logistics chains. Consequently, and to better inform the planning process, Network Rail have commissioned these MDS Transmodal forecasts to be refreshed.

Although realising this growth does not necessitate major infrastructure investment in the short to medium term, it will require additional capacity on the network and/or more efficient use of existing capacity. Challenges with congestion on the network have historically been one of the principal blockers for freight growth. However, changes in how passengers use the railway provides an opportunity to review this. As passengers change the way they use train services, the services themselves need to change and that provides an opportunity to allocate more capacity to support freight growth. The ‘Freightstitution’ concept has been developed by Network Rail to unlock this greater priority, but a framework needs to be developed to outline how it would be applied in practice.

Continued development of the freight capacity schemes in the RNEP will ensure that the railway is capable of supporting growth and even greater modal shift over the medium to long-term. Continuing development of these schemes over the short-term, with a view to deliver them in the medium-term, would ensure that the railway is positioned to support economic growth and deliver further environmental gains. This will include the key schemes on the cross-country route between the Port of Felixstowe and the Midlands and the North, including the upgrade of the junction at Ely, which was specifically referenced in the Williams-Shapps Plan for Rail. It is understood that this may come up against fiscal challenges, but any evaluation will recognise the significant off-railway balance sheet benefits that are generated by moving freight by rail.

<sup>19</sup> MDS Transmodal, Rail freight forecasts: Scenarios for 2033/34 & 2043/44, 2019.

The government's legal commitment to a target of net zero greenhouse gas emissions across the country by 2050 (by 2045 in Scotland) will also help support the further reduction of emissions generated by rail. Tactical investments and infill electrification can still deliver significant benefits. Electrifying just 500 route miles in key locations could allow 70% of freight journeys to be electrically hauled.<sup>20</sup> Alternative fuels are already being trialled by rail freight operators, giving operators a better alternative to diesel. Given the fully privatised nature of the rail freight sector, third party and private investments are already commonplace and help power innovation and development. If the target is to be met, then further modal shift from road to rail will be required.

The private sector interest in rail as a more environmentally friendly mode of transport will also increase as businesses work to decarbonise their operations.

RDG's latest research demonstrated that if rail emissions decreased by 90% (in line with Network Rail's current Traction Decarbonisation Network Strategy (TDNS), freight grows in line Network Rail's latest forecasts, and government carbon prices increase, rail freight could save over double the level of emissions compared to today.<sup>21</sup>

Improving rail connectivity and capacity, and in particular the development of freight terminals in optimal locations, will help convince potential customers that rail freight can be a viable part of their supply chains. Expanding the Freight Facilities Grant would help to spur further development at terminals. Improved timetabling that allows freight trains to run as efficiently as possible is also needed if it is to be a viable, attractive alternative to road. Expanding freight capacity on trunk routes will allow more goods to move from road to rail.

Rail is currently most competitive against road over longer distances, usually travelling from one hub to another. The nuances will depend on the type of commodity and the route being taken but it is demonstrated well in the existing intermodal and construction sectors.

Many industries rely on rail freight as part of their supply chains. The construction sector uses rail to move materials for housebuilding and to support infrastructure projects in and out of urban hubs. Car manufacturers use rail to carry finished vehicles from plants to ports for export. Even household and commercial waste is transported by rail to be processed and recycled. Rail freight helps to support energy generation and the maintenance and investment in the railway itself, ensuring passenger and freight trains can move safely and efficiently around the network.

Despite this important role rail freight's modal share currently sits at around 10-15%. There is a significant opportunity in future for rail freight to play both a greater role in existing markets such as intermodal and international freight, and in emerging markets like high-speed logistics.

The current benefits of rail freight are clear. These benefits, and the need to achieve government ambitions and targets are justification for why rail freight growth needs to be accommodated on the railway. Future business cases for investment and enhancement must take these factors in consideration. The Strategic Plan needs to enable a regular review of capacity allocation of freight vs passenger services, to enable the most optimal mixed-use railway.

The recently completed Freight Strategy, which is intended to inform the freight element of the Strategic Plan, sets out in more detail the long-term strategy for rail freight in Great Britain.<sup>22</sup>

Rail freight has already proven its agility as it responded to market changes such as the transition away from coal and the turbulence caused by the COVID-19 pandemic. Expanding and diversifying the amount of freight carried on rail in future requires a range of enablers.

To make rail a viable alternative to road the economics need to make sense. The current Mode Shift Revenue Support (MSRS) grant goes some way to helping businesses opt for rail. MSRS already supports over 900,000<sup>23</sup> containers to move by rail each year, where there is a financial needs gap between road and rail. It offers a tremendously high value for money. Increasing the budget for MSRS will help drive further modal shift from road to rail by helping to bridge the financial needs gap between the modes.

<sup>20</sup> RIA, Why Rail Electrification, 2021 [https://www.riagb.org.uk/RIA/Newsroom/Why\\_Rail\\_Electrification\\_Report.aspx](https://www.riagb.org.uk/RIA/Newsroom/Why_Rail_Electrification_Report.aspx)

<sup>21</sup> Deloitte/ RDG, Assessing the Value of Rail Freight, 2021.

<sup>22</sup> Network Rail, Freight Strategy, 2021, <https://www.networkrail.co.uk/industry-and-commercial/rail-freight/>

<sup>23</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1009448/decarbonising-transport-a-better-greener-britain.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1009448/decarbonising-transport-a-better-greener-britain.pdf)

However, more steps need to be taken if this shift is to increase. For smaller businesses, or those who do not currently use rail, the costs associated with filling a whole train load may be too high. Devising a system which encourages multi-customer operations will help new customers to use rail where it might otherwise have been economically unviable.

### Question 2d

**What is a stretching yet realistic ambition for this objective and what measures can we most effectively use to consider success over the coming 5, 10 and 30 years? What are the interventions over that period which will be the maximum value for money, and what evidence can you share to support your claim?**

A stretching but realistic ambition for this objective is that customers prefer rail over other modes and do not use it only of necessity. This ambition complements the other objectives of the Strategic Plan. Modal shift and the ensuing revenue growth provide the clearest possible measurement and, with the right incentives in place, the private sector can drive this faster than the public sector can do alone. Achieving this requires us to determine customers' highest priority issues, through carefully calibrated data such as Wavelength and remedying those areas, by ensuring there are contractual mechanisms in PSCs to incentivise and reward improvements in customer experience.

All our interventions are aimed at improving the financial position of the industry; the interventions proposed below fall into two categories, firstly interventions to ensure that customers return to the railway in the short-term and we continue to grow our customer share and secondly interventions which create flexibility in our systems and infrastructure so we can rapidly and cost effectively meet the changing needs of customers and the industry beyond the 10-year horizon.

#### Value for money

Value for money is very important to customers, whether in absolute terms or in relation to their own personal incomes.<sup>24</sup> Better information is needed to inform customers of the options available and the true costs of those. The current complex fares and ticketing system does not meet customer expectations of simple, flexible and affordable fares that are inclusive of multi-modal journeys<sup>25</sup> and does not facilitate the comparison with the true costs of other modes, including carbon emissions. To help customers compare the cost of rail with that of other modes, we should ensure the full costs of other modes, most commonly car use, are provided to customers during journey planning.

Easier Fares for All<sup>26</sup> called for value for the customer, with people asking for fares that make 'rational sense' and for greater transparency over what they pay for and what they get. A 2017 report found that value for money was the top priority for improvement among rail passengers.<sup>27</sup> Changes to the existing fares structure as well as options such as subscription services and bundled retailing could offer customers choice while creating efficiencies and additional revenue streams for the industry.

<sup>24</sup> DfT, Public attitudes towards train services, 2018, <https://www.gov.uk/government/statistics/public-attitudes-towards-train-services-2018>

<sup>25</sup> RDG, Easier Fares for All, 2019

<sup>26</sup> RDG, Easier fares for all, 2019

<sup>27</sup> Transport Focus, Rail passengers' priorities for improvement, <https://www.transportfocus.org.uk/publication/rail-passengers-priorities-for-improvement/>

## Railway user needs

Research undertaken by Imperial College London Consultancy (ICL)<sup>28</sup> for RDG indicates that, at least in the short term, commuters are most likely not to return to traveling by train due to opportunities to work from home. This is supported by additional data from Transport Focus which suggests that 49% of people expect to work from home more often in the future.<sup>29</sup> Commuters will likely look for greater flexibility and offers tailored to their needs than was previously afforded with traditional season tickets.<sup>30</sup> As travel patterns change,<sup>31</sup> with a higher proportion of leisure customers,<sup>32</sup> needs and expectations will change. This is why rail needs to think differently about the customer experience, for example by developing multi-purpose stations where customers can work, shop, eat or drink<sup>33</sup> in a sustainable environment<sup>34</sup>, which has the potential to increase ancillary revenue.

Comfort and accessibility will be increasingly important factors in a passenger's experience. They will expect more onboard services such as internet and USB connectivity, and facilities at stations for retail, food and drink.<sup>35</sup> Particularly where rail is competing with other modes, there will need to be an improved customer offer including better modal integration. This requires close cooperation with other modes and providers, so the end-to-end journey is seamless.

Stations matter both to travelling customers and as engines of positive socio-economic change.<sup>36</sup> However, investment in stations varies across the network. Some stations and routes have seen substantial investment in renewable energy, improvements to on-site services (like waiting rooms, information, seating and security) and reformed staff terms and conditions. Meanwhile, others have remained largely unchanged, leading to disparities in standards and customer experience.

New station design must enable stations to be catalysts for creating healthy and sustainable communities: 'passenger hubs'<sup>37</sup> and 'living stations'.<sup>38</sup> A greater station offering must consider the environmental impact of extended services such as improved retail, community space, collection and well-being services. Addressing the sustainability performance of our stations will not only make us more accountable for our carbon emissions but contribute to an improved customer experience that will encourage modal shift to rail, particularly in the green restart.<sup>39</sup> The HS2 Interchange Station is the first in the world to achieve BREEAM outstanding for its environmental credentials, and is predicted to provide world-class customer-experience, making the station a destination in its own right.<sup>40</sup> In the long-term all stations should be designed with these principles in mind, so that the customer remains at the heart of rail journeys. Further information on station sustainability is provided in our response to Question 6a.

<sup>28</sup> Scenario Planning for the Rail Industry after Covid-19, Transport Strategy Centre Imperial Consultants (ICON), 2021 – commissioned by RDG.

<sup>29</sup> High Speed Rail Group/ RDG, Building Back Better, 2021, <https://www.rail-leaders.com/wp-content/uploads/Building-back-better-the-green-case-for-rail-investment-after-the-pandemic.pdf>

<sup>30</sup> RDG, Easier Fares for All, 2019

<sup>31</sup> Scenario Planning for the Rail Industry after Covid-19, Transport Strategy Centre Imperial Consultants (ICON), 2021 – commissioned by RDG.

<sup>32</sup> RDG/ WPI Economics, The Value of Rail to Green Economic Recovery from Covid, 2021, <http://wpieconomics.com/case-study/the-value-of-rail-to-the-green-economic-recovery-from-covid/>

<sup>33</sup> Community Rail Network, Community Rail and Sustainable Development, 2021, <https://communityrail.org.uk/resources-ideas/reports-resources-tools/sustainability/>

<sup>34</sup> RDG, Sustainable Stations Guide, 2021, <https://media.raildeliverygroup.com/resources/rdg-sustainable-stations-guide>

<sup>35</sup> Network Rail, Putting Passengers First: Improving our Stations, 2019, <http://jcpii.co.uk/jcpii-news/network-rail-putting-passengers-first/>

<sup>36</sup> RDG, Stations: a catalyst for local economic growth, 2021

<sup>37</sup> Network Rail, Think Station Summary Report, 2020, <https://communityrail.org.uk/think-station-july20/>

<sup>38</sup> ARUP, Tomorrows Living Station, 2019, <https://www.arup.com/perspectives/publications/promotional-materials/section/tomorrows-living-station>

<sup>39</sup> RDG, Sustainable Stations Guide, 2021

<sup>40</sup> ARUP, HS2 Interchange Station, 2021, <https://www.arup.com/projects/hs2-interchange-station>

## Accessible network

A fully accessible rail service is an expectation today and demographic changes<sup>41</sup> will require the acceleration of accessibility improvements across the whole network to ensure level boarding and step free access is available at all stations. Passengers with accessibility needs travelling independently will expect a seamless experience at stations. In the short-term this will be provided by the reliable presence of friendly, knowledgeable station staff and the Passenger Assist system but in the medium- to long-term it will be secured by innovative technologies and equipment, improved station infrastructure and new, more adaptable rolling stock.

Beyond physical accessibility we must ensure that information and retailing is accessible to all.<sup>42</sup> We must remove physical barriers to travelling by train and ensure that groups such as the unbanked<sup>43</sup> or those without a digital device can still use the railway.

## Retailing revolution

The white paper calls for a 'revolution in retail': central to this will be taking a customer-centred, service approach including by providing a consistent, centralised, simple customer experience in retailing.

The allocation in the Autumn 2021 Spending Review of £360 million<sup>44</sup> to modernise retail and ticketing systems can help accelerate the move to digital ticketing. The retirement of Magstripe tickets, enabled by PAYG and Barcode tickets will reduce delivery costs and bring benefits for customers and the industry through the data generated on customers travel habits. PAYG will remove the cost barriers which season tickets created for many to use the railway. Account-based ticketing will allow us to form a better picture of both individual customers and society-wide travel needs. This will allow for interventions such as more efficient timetables which better meet customer needs and maximise capacity on the railway. During disruption, digital ticketing will enable better customer outcomes and faster industry recovery. Digital ticketing will also support fraud reduction and ongoing monitoring and intervention will benefit both the industry and customers by recovering lost revenue. Customers are likely to expect an integration of online and offline experiences,<sup>45</sup> for example being able to add a coffee purchase to a ticket purchase and collect this at a chosen time.

It is vital that over the medium- to long-term rail travel is simplified. However, progress can be made in the next 5 years, particularly in simplifying retail and ticketing. Moving away from magstripe ticketing to digital solutions will drive down industry costs, contribute to environmental sustainability, and provide a seamless travel experience for customers while also generating important data on customer preferences to inform future offers and decision making.

New retail systems are going to be key enablers for making innovative new retailing solutions available in the future. This will mean the rail industry can operate like airlines and offer personalised promotions through dynamic pricing that will incentivise customers to make journeys on otherwise lightly loaded trains. Rail fares will be able to be integrated with other transport modes to support end to end MaaS journeys. Biometric solutions are already being trialled and implemented to make services more convenient and simpler for customers when they travel (e.g. border control checks at Eurostar)<sup>46</sup> and buy their groceries.<sup>47</sup> A feasibility study into biometrics was completed for RDG in January 2021 that has shown this is a key strategic area for the rail industry to take forward to ensure rail retailing stays current in the future.

<sup>41</sup> ONS, UK population pyramid interactive, <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/articles/ukpopulationpyramidinteractive/2020-01-08>

<sup>42</sup> TPS, Written language barrier to transport, <https://tps.org.uk/public/downloads/RwEVB/2020%20ANNA%20NEWY%20TPSBURSARYCOMPETITIONFINAL.pdf>

<sup>43</sup> London Travelwatch, TfL, <https://www.londontravelwatch.org.uk/news/london-travelwatch-says-that-tfl-need-to-go-back-to-the-drawing-board-on-its-plans-to-make-stations-cashless/>

<sup>44</sup> Williams Shapps, Plan for rail

<sup>45</sup> Accenture, Life reimagined: mapping the motivations that matter for today's consumers, [https://www.accenture.com/gb-en/insights/strategy/reimagined-consumer-expectations?c=acn\\_glb\\_lifereimaginedgoogle\\_12251054&n=psg%20s\\_0621&qclid=CjwKCAiA5t-OBhByEiwAhR-hm4U97FdhMwByvnlm4uadUVfCWyhw9AUWBpLUzS68dJRf1ELl4tqiRho%20ClfIQAvDBwE](https://www.accenture.com/gb-en/insights/strategy/reimagined-consumer-expectations?c=acn_glb_lifereimaginedgoogle_12251054&n=psg%20s_0621&qclid=CjwKCAiA5t-OBhByEiwAhR-hm4U97FdhMwByvnlm4uadUVfCWyhw9AUWBpLUzS68dJRf1ELl4tqiRho%20ClfIQAvDBwE)

<sup>46</sup> Biometric Update, Contactless biometric international travel: Eurostar trial, Idemia ID2Travel ecosystem

<sup>47</sup> Ealing Broadway, Amazon Fresh, <https://www.ealingbroadwayshopping.co.uk/eatdrinkshop/amazon-fresh?show-on-map=Amazon%20Fresh>

## Customer service

The white paper emphasises our people's role as being key to achieving high quality customer service. With changes to retailing, our people will be more readily available to assist customers, with the right tools at the right time.<sup>48 49</sup>

Moving staff out of ticket offices creates opportunities for our frontline people to provide an improved service to passengers. Upskilling our frontline people to deal with a multitude of customer enquiries has been successful under the One Team<sup>50</sup> initiative, in which customers benefit from a consistent high-quality service, and staff are more engaged and empowered with the right information and tools.

## Information and data

Improvements to information through the Smarter Information, Smarter Journeys Programme will improve the experience for both our people and customers.<sup>51</sup> This programme aims to improve customer-facing information provision and resolve the challenges created by legacy systems to maximise the quality and speed of information available. This will allow for increased personalisation of information provision to meet each individual's needs and open up the potential for digital partnerships, potentially increasing the integration of the online and offline experience and generating additional revenue streams.

Personalisation should allow the customers to tailor the service to their own needs, with relevant and insightful options which drive value and grow rail usage, examples would be drawing insight from partner organisations which would enrich a customer's rail journey or experience at their destination.

Centralising data will not only allow for improvements in customer experience but efficiencies in how we run services. While there is scope to do this across the industry, one example is in train loading, centralising and standardising this has the potential to inform timetable planning, revenue forecasting and staff rostering as well as on the day operational decision making, including during disruption, while also offering customers the option to choose a train service which best meets their needs.

## Multimodal integration

Better connections with other modes will be vital in attracting more passengers to rail. Stations should support the integration of different modes such as shared bike use, trip sharing schemes and sustainable 'first and last mile' connections. Interventions and recommendations of how to successfully do this are detailed in RDG's Sustainable Stations Guide<sup>52</sup> and the Community Rail Network Connected Stations Toolkit.<sup>53</sup> Modal integration will give customers greater flexibility and choice about how to travel when rail may only fulfil part of their journey and should be integrated in travel planning tools.

By 2030 sales of new petrol and diesel cars will end.<sup>54</sup> A move to electric vehicles means customers will increasingly expect car parking facilities at rail stations to have electric charging.<sup>55</sup> Initial limitations in electric car ranges may mean that for longer journeys, rail becomes more attractive for a period, and we should capitalise on this by building partnerships with car manufacturers. However, the introduction of autonomous, self-driving vehicles<sup>56</sup> and a move from car ownership to car sharing may mean that customers' expectations in flexibility and door to door journeys may not be readily met by rail. However, even here there will be opportunities for rail to partner with providers of these services to offer customers seamless, sustainable multi modal journeys.

<sup>48</sup> Williams, The user experience of the railway in Great Britain, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/955350/user-experience-railway-in-gb-evidence-paper-document.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/955350/user-experience-railway-in-gb-evidence-paper-document.pdf)

<sup>49</sup> House of Commons Transport Committee, The future of rail: Improving the rail passenger experience, <https://publications.parliament.uk/pa/cm201617/cmselect/cmtrans/64/64.pdf>

<sup>50</sup> Network Rail, Passenger service success continues for team Victoria, <https://www.networkrail.co.uk/stories/passenger-service-success-continues-for-team-victoria/>

<sup>51</sup> RDG, Smarter information smarter journeys, 2021, <https://www.raildeliverygroup.com/about-us/publications/12744-customer-information-programme/file.html>

<sup>52</sup> RDG, Sustainable Stations Guide, 2021

<sup>53</sup> Community Rail Network, Connected Stations Toolkit, 2021, <https://communityrail.org.uk/toolkit-offers-ideas-for-communities-to-boost-sustainable-travel/>

<sup>54</sup> DfT, Government takes historic step towards net-zero with end of sale of new petrol and diesel cars by 2030, <https://www.gov.uk/government/news/government-takes-historic-step-towards-net-zero-with-end-of-sale-of-new-petrol-and-diesel-cars-by-2030>

<sup>55</sup> Catapult, Electric vehicles: Future-proofing railway stations car parks, <https://cp.catapult.org.uk/news/what-is-the-future-for-public-ev-charging-points-at-railway-stations/>

<sup>56</sup> BCG, Will autonomous vehicles derail trains?, <https://www.bcg.com/publications/2016/transportation-travel-tourism-automotive-will-autonomous-vehicles-derail-trains>

## Private sector

Private sector operators can use their in-depth knowledge of customer needs and markets to develop innovative products, services and linkages to attract customers, grow revenue and deliver multi-modal, end-to-end journeys. For example, a rewards-based system could be introduced that incentivises modal shift and is on par with reward-schemes offered routinely by other industries such as hospitality. However, this would require the right contractual flexibilities and freedoms for operators in PSCs. Flexibility and benchmarking will be important to ensure the industry is making a conscious effort to inject innovation into the sector at the appropriate times.

### Flexibility

Decisions made in the coming 5 to 10 years will lay the groundwork for future pieces of work in the 30-year timeframe; decisions on rolling stock, platforms, legacy systems all have the potential to dramatically change the customer experience landscape as well as the financial viability of the industry. We need to ensure the decisions made in the short term enable us rather than hinder us in the longer term. Ensuring we have agile, secure, integrated systems, with a low cost and high speed of change will be key to our future success.

Decisions on future rolling stock procurement will be critical to ensuring we have a flexible, cost efficient and comfortable fleet which will not only reduce industry costs,<sup>57</sup> creating the potential for lower costs for customers, but also provide increased comfort and amenities. For example, low customer satisfaction rates for seat comfort should be addressed in future procurement with seat designs meeting the standards set out by the RSSB.<sup>58</sup> Additionally, improved boarding<sup>59</sup> and the flexibility of the interiors to ensure all users can be accommodated comfortably<sup>60</sup>, including those travelling with wheelchairs, pushchairs, luggage or bikes, should be key considerations.

Many rail journeys begin online, and customers expect digital experiences to be more integrated and richer than ever before. Taking a 'digital platform approach', which will build digital services and components that can be brought together to support more cost-effective propositions, means solutions will be in customer's hands much more quickly.

The approach to this should be security by design and privacy by default.<sup>61</sup> This will inspire customer trust and confidence in the services, in particular when it concerns their personal and financial data. Secure data and systems, created through design and effective operational management, also support industry and service resilience so that services are available and trustworthy, and security incidents can be effectively dealt with. The increase in cyber-attacks and industrial espionage<sup>62</sup> necessitates industry change, such as centralising the view on cyber risk and creating controlled environments which can be inspected and regulated, while maintaining the need for creativity and growth. Information Security should be a priority across the industry and should have clarity of ownership to make sure that there aren't vulnerabilities that can be exploited between organisations and services.

During any expansion of the network, it will be important to minimise disruption to services and communities, and to invite customer feedback in the consultation process during the decision and development stage of projects. This will ensure principles for design are centred on what customers really want, ensuring places, services and products meet the needs of the people who will use them.<sup>63</sup>

<sup>57</sup> DfT, Stock perspective 2018: DfT's aspirations for the rail sector, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/524445/rolling-stock-perspective.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/524445/rolling-stock-perspective.pdf)

<sup>58</sup> RSSB, Research provides new approach to seat comfort, <https://www.rssb.co.uk/en/what-we-do/insights-and-news/news/Research-provides-new-approach-to-seat-comfort>

<sup>59</sup> Campaign for level boarding, Level boarding case studies, <https://www.levelboarding.org.uk/case-studies/>

<sup>60</sup> Mecanoo, NS vision interior train of the future, <https://www.mecanoo.nl/Projects/project/229/NS-Vision-Interior-Train-of-the-Future>

<sup>61</sup> <https://www.iso.org/isoiec-27001-information-security.html>

<sup>62</sup> <https://www.ncsc.gov.uk/collection/ncsc-annual-review-2021>

<sup>63</sup> Network Rail, Think Station Summary Report, 2020

## Freight

In relation to freight, the white paper specifically highlights the dynamism of the sector in responding to changing customer trends and economic shocks. In recent years, significant markets such as coal have almost disappeared but have been replaced by healthy growth in construction and containerised goods.<sup>64</sup> In a highly competitive and price sensitive market, rail freight operators are heavily incentivised to continuously improve their offer to customers. Since privatisation, freight operating companies have invested over £3 billion to improve productivity, performance and safety. There are substantial further growth opportunities in both construction and intermodal traffic as well as the automotive and energy from waste markets. In addition, there are emerging markets such as high-speed logistics to which rail is well-suited.<sup>65</sup>

Ensuring that the future regulatory, contractual and legislative architecture supports continued private sector investment is crucial. The freight operators will remain private sector organisations contracting into the newly formed GBR. As the freight operators get many of their safeguards from those regulatory and contractual frameworks it is crucial that the reform process does not dilute these safeguards and ensures that the private sector still has a key role in the railway industry.

With growing demand for both domestic and cross-border rail freight services, particularly as businesses with sustainability commitments turn to rail as an environmentally friendly alternative to road haulage,<sup>66</sup> it is vital this demand is not suppressed by a lack of capacity on the rail network, or through an absence of private or public investment. The Strategic Plan should enable a regular review of capacity allocation of freight vs passenger services, to enable the most optimal mixed-use railway.

Changes in passenger demand provide an opportunity to consider how capacity on the network is used and support freight growth over the short to medium term. In the longer term the delivery of key infrastructure upgrades will support a stepchange in modal shift from road to rail – particularly unlocking capacity from the deep-sea ports to inland terminals around the country. This includes the key upgrade at Ely Junction, which was referenced in the white paper.

In the short-term, it will be important to maintain a stable access and charging framework and deliver on the white paper commitment to establish an ambitious freight growth target. Long-term GB-wide access and charging arrangements are important as they provide freight operators and third parties with the confidence to invest in new and improved facilities which improve rail connectivity, but also give potential customers certainty to transport their products by rail. Similarly, the growth target will induce cultural change across rail industry to go above and beyond for freight customers, supporting changes in approach to capacity allocation and investment decisions which can in turn increase freight volumes and services.

Likewise, strategically important freight infill schemes should be prioritised for electrification as this will improve utilisation of existing electric rolling stock across freight operators and will support investments in new electric and bi-mode locomotives. Initiatives on low-carbon fuels and new technologies should also be supported as steps towards widespread electrification of the rail network. This will not only make rail freight more environmentally friendly but also more cost effective, as it will create the opportunity to homogenise rolling stock fleets, and as a result encourage modal shift.

Looking further ahead, the TDNS has identified that significant electrification is necessary to decarbonise the rail freight sector, with a role for alternative traction sources where electrification is economically unviable (e.g. first/last mile). In the long-term, investment will also be required to increase the capacity and capability of the rail network so that demand from rail freight services can be accommodated.

<sup>64</sup> ORR, Freight moved by commodity – Table 1310, <https://dataportal.orr.gov.uk/statistics/usage/freight-rail-usage-and-performance/table-1310-freight-moved-by-commodity/>

<sup>65</sup> Network Rail freight forecast scenarios for 2033/34 & 2043/44

<sup>66</sup> ORR, Freight rail usage and performance, 2021, <https://dataportal.orr.gov.uk/statistics/usage/freight-rail-usage-and-performance/>

An ambitious rail freight growth target for England and Wales will be an important step in delivering and measuring modal shift. It will also demonstrate the commitment of government, railway and the private sector to freight carried by rail. While the target for England and Wales is still to be decided, it is clear there is scope for the sector to go beyond the annual growth it currently experiences. Through an increase in capacity and route capability for rail freight services, along with policies and incentives to promote freight, private sector operators support a target of trebling of freight volumes in the UK that should be achievable by 2050.

Increasing the MSRS budget would be a key intervention that would accelerate freight growth while delivering excellent value for money for taxpayers. DfT states that recent awards have resulted in the removal of lorry loads (volumes) of 1,239,710 with a reduction of CO2 emissions of 79,936 tonnes and a Benefit Cost Ratio are 7.24:1.<sup>67</sup> This is a tremendously high value for money. Increasing the budget for MSRS will help drive further modal shift from road to rail by helping to bridge the financial needs gap between the modes.

<sup>67</sup> <https://www.gov.uk/government/publications/department-for-transport-delivers-more-grant-funding-to-transport-freight-by-rail/mode-shift-revenue-support-and-waterborne-freight-grant-applications-and-background-information>

# Question 3 – Delivering Financial Sustainability



## Summary

- Delivering financial sustainability will be achieved through harnessing the expertise of the private sector to deliver greater productivity, cost efficiency and attracting customers back to rail. A focus on reducing duplication across the industry, making the best use of existing rolling stock, investing in people, innovation and technology and, importantly, improved collaboration with industry partners all have the potential to cut costs and deliver a better performing railway for our customers.
- Investing in our people, reforming our working practices and ensuring the railway is seen as an “employer of choice” will all be critical to the industry’s future growth and financial success. Costs can be reduced, and productivity increased through a collaborative approach that reduces duplication and facilitates joint team working. Increasing the diversity of our workforce will make better use of our nation’s talents and reflect the communities the railway serves. Working collaboratively with trade unions will be critical to ensuring that our people have the skills and capability to respond to changing customer needs.
- Each year, billions of pounds are invested in maintaining, renewing and enhancing the railway, so even small efficiency improvements can deliver significant savings. A more collaborative relationship with operators and suppliers would leverage their experience, capability and expertise in planning, delivering and financing schemes in the most cost-effective and optimal way. Providing the supply chain with improved visibility of future investment programmes will give suppliers the confidence to invest in people and technology to drive up productivity and reduce costs. Network Rail’s performance should be regularly benchmarked against infrastructure managers in other countries.
- The railway must become more innovative and make better use of technology to remain relevant, efficient and competitive. Government funding for research, development and innovation should be prioritised with innovation made central to industry structures and processes including by having the right incentives and freedoms in operator contracts. The Strategic Plan should support the ongoing roll out of digital signalling in recognition of its role in delivering a simpler, better railway.
- Whole-life, whole-system approaches combined with a joint industry profit and loss account will encourage greater collaboration between Network Rail and operators.

### Question 3a

#### Where are the most significant opportunities and barriers to delivering financial sustainability in the rail sector over 5, 10, and 30 years and how do we achieve/overcome them?

Attracting customers back to rail is crucial to achieving financial sustainability. Customer journeys declined to 248 million during the second quarter (Q2) of financial year 2021-22, down from 448 million journeys made in 2019-20 Q2,<sup>68</sup> demonstrating the size of the challenge. With public and private sectors working together a target should be set to achieve pre-pandemic revenue levels.

Modelling by researchers from Imperial College London Consultancy (ICL)<sup>69</sup> undertaken independently for RDG through Imperial College Consultants suggests that by 2025, commuting journeys will still be 1.6% below pre-pandemic levels and business travel, 0.1% lower. Leisure journeys, however, will be 13.3% higher than in 2019. Overall, the modelling suggests that total passenger journeys will be 4.7% higher in 2025 than before pandemic, however, all other things being equal, this is 6.6% lower than the amount of passenger journeys that may have been expected in 2025 (i.e. in the event of the pandemic having not occurred) based on the lower projected annual passenger growth rate of 1.8%.

RDG analysis based on industry revenue data (Table 1211: Passenger revenue by sector and RAI0301 National Railways: Passenger revenue) and passenger growth scenarios (from ICL) indicates that by 2025, the farebox revenue shortfall caused by the pandemic will cumulatively be around £20bn. This figure could be higher if the private sector is not given the right levers and incentives to attract customers to rail, particularly in the new markets that will underpin future rail revenue. The time to act is now, the future Strategic Plan should build on this approach and set an ambition for a market-led railway in the future that responds to changing customer needs and makes the best of the partnership between the public and private sectors.

Alongside this significant challenge is an opportunity to deliver a generational step change in the way the railway serves its customers. A continuous improvement process to address the financial gap between the cost of operating the railway and its income levels is highly recommended.

Train operators and their owning groups have a detailed knowledge of the passenger operating cost base, and their expertise should be harnessed to deliver greater productivity and cost efficiency. For example, efficiencies can be made within the supply of rolling stock. Over the next 10 years the focus should be on maximising the utilisation of existing rolling stock through investment, repurposing and reconfiguration. Rolling stock contract durations should be aligned to the overall long-term rolling stock deployment strategy to remove artificial risk points which would be priced for.

Operators could help to define how a rolling stock strategy should be implemented to get best value from the railway assets and suppliers. For instance, on the risk transfers to ROSCOs, the potential for introducing flexibility into ROSCO contracts, where the vehicles leased flex with demand, could be investigated. Quality requirements could be introduced to encourage ongoing rolling stock improvements under a long-term contract.

Equally, there is a real opportunity to reduce infrastructure costs.

Regular comparisons should be made between Network Rail and rail infrastructure managers in other countries to benchmark performance, clarify areas where improvements are needed and identify international best practice. Network Rail should also seek to improve its financial performance through rolling out approaches that have been used successfully on specific routes. This could help to reduce the significant differences in cost that have been highlighted by ORR across Network Rail routes.<sup>70</sup>

Better collaboration between Operators and Network Rail (and GBR when it takes on responsibility for infrastructure) is another source of potential efficiencies. The regionalised structure of GBR and the ownership of a 'Joint Profit & Loss' view will help drive this but consideration must also be given to freight and open access operators as well as the supply chain to deliver a whole system perspective.

<sup>68</sup> ORR, Passenger rail usage 2021-22 quarter 2, <https://dataportal.orr.gov.uk/statistics/usage/passenger-rail-usage/>

<sup>69</sup> Scenario Planning for the Rail Industry after Covid-19, Transport Strategy Centre Imperial Consultants (ICON), 2021 – commissioned by RDG.

<sup>70</sup> <https://www.orr.gov.uk/sites/default/files/2021-07/cost-benchmarking-of-network-rail-annual-report-year-2-of-cp6.pdf>

Benefits over the next 5 years can be realised by operators working closely with Network Rail colleagues to optimise work plans and operations, minimising the impact of disruptions on passengers and ultimately on revenue.

Providing greater certainty on upcoming enhancement and maintenance programmes will give operators and the wider rail supply chain the confidence to invest in jobs, skills, and equipment in the UK, in turn reducing unit costs. The timely publication of a clear pipeline of opportunities, including PSCs,<sup>71</sup> the RNEP as well as, a rolling plan of network enhancements is highly recommended.

Equally, freight operators have demonstrated their ability to increase the efficacy of their operations with volumes of freight per train increasing by over 89% between 2003/04 and 2013/14.<sup>72</sup> More recently during the pandemic, freight operators have worked closely with Network Rail to run longer, heavier, and more direct services where capacity has allowed. Running such services is not just commercially beneficial to freight customers and operators, it also delivers environmental benefits, with Network Rail estimating that lengthened train services between some of the UK's major ports and inland terminals save six million road miles and around 12,600 tonnes of CO<sub>2</sub>e per year.<sup>73</sup>

A significant opportunity of private sector involvement in rail is to provide sustained investment across the system over the next 30 years, this will be particularly beneficial in years 10-30 of the plan when focus hopefully shifts to investing in the rail sector to respond to growing patronage.

### Investing in our people

The Strategic Plan is an important opportunity for the industry to reform its working practices and relationship with its workforce. A clear vision is needed, identifying the leadership capabilities required to deliver the goals and objectives of the plan, including better deployment of innovation and ideas from other sectors, such as collaborative working.

The industry needs to attract the right talent at all levels and compete effectively with other industries for scarce skills. The aim should be to make the railway the 'employer of choice' and one of the country's top 100 employers. The industry needs to develop long-term goals on how it wishes to engage and reward its people at all levels so that everyone can be aligned with the strategic goals and objectives of the Strategic Plan.

In the short-term the industry can reduce costs and increase productivity by creating a collaborative environment where duplicated effort and resources are removed, and shared activity can be delivered through joint team working and other forms of collaboration.

Operators have already initiated successful programmes, such as building routes to professional registration, social mobility and pre-employment support and future skills programmes such as the Routes into Rail programme<sup>74</sup>, the Train Driver Academy<sup>75</sup> to improve social mobility, accessibility and diversity or the Strategic Transport Apprenticeship Taskforce (STAT)<sup>76</sup>, to ensure the rail sector responds to changing demographics, remains an employer of choice and has a diverse workforce reflective of the communities the railway serves.

The cross-industry People Strategy Board is facilitating several schemes, such as establishing training needs and delivery methods to improve the passenger experience as well as understanding the barriers to a more diverse and engaged workforce. This includes exploring the inclusion of stretching measures in contracts to promote and increase the recruitment and retention of a more diverse workforce. This links to the emerging Equality, Diversity and Inclusion (EDI) strategy framework, as well as the relevant commitments and principles in the white paper and the Enabling Framework Agreement.<sup>77</sup>

The railway supports the creation of high value, high skilled jobs in a variety of technical areas, such as alternative fuels or digital engineering, which could be highly attractive to future generations. As an example, a recent RDG report estimated that a programme to decarbonise the railway would support around 6,000 jobs with an economic benefit of £2.2 billion.<sup>78</sup> See section 4a for more details.

<sup>71</sup> DfT, Guidance: Passenger Service Contracts, 2021, <https://www.gov.uk/guidance/passenger-service-contracts>

<sup>72</sup> Network Rail, Building back better, <https://www.networkrail.co.uk/news/building-back-better-longer-trains-are-delivering-for-freight-customers/>

<sup>73</sup> Ibid

<sup>74</sup> <https://routesintorail.org/>

<sup>75</sup> <http://thetraindriveracademy.com/>

<sup>76</sup> DfT, Collection: Strategic Transport Apprenticeship Taskforce, <https://www.gov.uk/government/collections/strategic-transport-apprenticeship-taskforce>

<sup>77</sup> <https://www.raildeliverygroup.com/media-centre-docman/12813-2021-06-efa-publication/file.html>

<sup>78</sup> RDG, Catalysing a Green Recovery report, p13, 2021, <https://www.raildeliverygroup.com/our-views/our-blog/2021/469776842-2021-10-21.html>

### Supporting a vibrant and productive rail supply chain.

The supply chain is critical to the success of the railway through its role in maintaining, operating, renewing and enhancing rail assets and infrastructure. Each year, billions of pounds are invested in the railway, so even small improvements in cost efficiency can deliver significant savings. For example, the Railway Industry Association's (RIA) electrification cost challenge report<sup>79</sup> shows how future electrification schemes could be delivered at 33-50% lower cost. Recommendations include providing a steady, rolling programme of electrification to provide confidence to the supply chain which will help to reduce unit costs and support investment in people, process and plant. In addition, greater flexibility in procurement approaches should allow alternative designs where these deliver the required outcomes.

Since 2014, the Rail Supply Group (RSG) has brought suppliers, government and clients together to strengthen the capability and competitiveness of the UK rail supply chain. RSG was instrumental in working with government on the Rail Sector Deal<sup>80</sup> which sets out a new approach to the rail industry and the government working in partnership to transform the rail sector – by taking actions to increase the use of digital technology, boost productivity, improve the service received by those who use our railways and build the skills of the UK workforce.

The development of the Strategic Plan offers an opportunity to develop a more collaborative relationship between funders/specifiers and the supply chain building on the above initiatives. A relationship that leverages the experience, capability and expertise of operators and suppliers in planning, delivering and financing schemes in the most cost-effective and optimal way. And a relationship that provides the supply chain with better visibility of future investment programmes so that they have the confidence to invest in people and technology to drive up productivity and reduce costs.

### Harnessing technology and innovation

Any industry must innovate and make the best use of technology to remain relevant, efficient and competitive. Rail has not always been the most innovative sector or one that quickly adopts new technologies, although passenger and freight operators already have links with research councils and universities. But with the challenges facing the railway around reducing costs, growing revenue and attracting passengers, the need for innovation and harnessing available technology is greater than ever.

RDG's Executive Technical Leadership Group (ETLG), a committee of senior rail technical leaders, sponsors the Rail Technical Strategy (RTS), which was published by RSSB in October 2020.<sup>81</sup> The RTS describes how technology can support a future railway that meets customer needs and delivers significant social, economic and environmental benefits. It focuses on five key priority areas that align well with the aims of the Strategic Plan:

- making rail easy to use;
- lowering emissions;
- optimising train operations;
- improving reliability and ease of maintenance; and
- using data to drive efficiency and technical progress.

Work on the RTS has defined long-term visions for each of the priorities which are being adapted into a 2050 vision to align with the Strategic Plan's timescales. Short-term 'stepping stones' (with an approximate 5-year horizon) have also been defined for each of the priorities. The Strategic Plan should explicitly support the RTS, since progress on the RTS would deliver progress against the Strategic Plan's own objectives.

<sup>79</sup> RIA, Electrification cost challenge report, [https://www.riagb.org.uk/RIA/Newsroom/Stories/Electrification\\_Cost\\_Challenge\\_Report.aspx](https://www.riagb.org.uk/RIA/Newsroom/Stories/Electrification_Cost_Challenge_Report.aspx)

<sup>80</sup> BEIS/ DfT, Rail sector deal, <https://www.gov.uk/government/publications/rail-sector-deal/rail-sector-deal>

<sup>81</sup> RSSB, Rail technical strategy, <https://www.rssb.co.uk/en/research-and-innovation/rail-technical-strategy>

ETLG has also considered the barriers preventing the railway from exploiting research, development and innovation (R, D & I).<sup>82</sup> Its key conclusions, which should be reflected in the Strategic Plan as shorter-term ambitions, are

1. **Maintain at least the current levels of R, D & I funding** – the industry has made good use of the funding it has had (including Network Rail’s CP6 R&D fund) and has learned lessons which will enable us to do better still. But there needs to be greater flexibility in how such funding can be used rather than restricting it to just parts of the system, e.g. CP6 funding for Network Rail is for infrastructure only. Even in the short term, when industry finances are challenging, investment in R, D & I should be increased or at least protected, because it has been proven to deliver significant benefits. Indeed, according to Network Rail, the forecast benefits of the CP6 fund are £1.9 billion NPV and a BCR of 3.0 (over 20 years).
2. **Make innovation central to industry structures, processes and incentives** – for example, by ensuring that the right incentives and freedoms are included in PSCs. Similarly, ensure that procurement processes focus on outcomes to provide suppliers with the opportunity to provide innovative, more cost-effective solutions.
3. **Innovation should be driven by operational needs** – the best innovations are the ones that get used and solve real problems for end-users. So greater effort should be focussed on joining up industry problem owners with solution providers.

### Harnessing technology: digital signalling

The roll out of digital signalling through the European Rail Traffic Management System (ERTMS) offers an opportunity to reduce long term industry costs and improve safety, reliability, punctuality and capacity in a cost-effective manner, aligned to the timely renewal of life expired assets. The in-cab signalling European Train Control System (ETCS) reduces infrastructure complexity, ultimately removing the need for lineside signals and accompanying infrastructure.

By allowing a reduction of headways between trains, ETCS can increase capacity on rail networks as more trains can run on the same track. The system therefore makes better use of existing assets and supports quicker recovery from disruption. It provides improved safety through automatic train protection and will be able to be installed at lower cost than traditional signalling renewals.

By making both the passenger and freight rail sectors more competitive, ERTMS helps to level the playing field with road transport and ultimately provides significant environmental gains. Being a digital system, the scope for development and evolution in the future is obtainable, with potential to expand the supply chain and drive innovation.

The Strategic Plan should support the ongoing roll out of ERTMS in recognition of its role in delivering a simpler, better railway. In line with the Long-Term Deployment Plan,<sup>83</sup> there should be an explicit reference to using renewals expenditure to migrate progressively to digital signalling rather than renewing conventional lineside signalling systems, which face a significant bow wave of renewal activity and expenditure in the next 10 years. The Strategic Plan should seek opportunities to overcome the barrier of complexity of the industry, in particular those preventing the financing of investments such as ETCS.

### Question 3b

#### How can we most effectively monitor and assess this?

Monitoring actual passenger journeys, and the associated revenue, should underpin better management information on the real costs of operating the railway. Achieving this whole system view of the cost base will inform decision makers as to what should be prioritised in the first 5 years of the Strategic Plan, this would support policy choices over the subsequent Strategic Plan timeframe.

Increasing revenue is a key point of the drive to improving financial sustainability, alongside necessary changes to the cost base and the redeployment of resources to better meet customer needs. Management information and a wider understanding of the cost base will be critical in delivering savings, as well as avoiding decisions that have a perverse impact on a future growth strategy.

<sup>82</sup> RDG, Accelerating Innovation: Exec TLG Advice on RD&I, 2022

<sup>83</sup> Network Rail, Digital railway long term deployment plan, <https://www.networkrail.co.uk/running-the-railway/railway-upgrade-plan/digital-railway/digital-railway-strategy/digital-railway-long-term-deployment-plan/>

The industry must improve how it approaches whole-life, whole-system cost and the joint industry P&L. A good example is the Double-Rate Variable Sander<sup>84</sup> - a new design of train mounted sander to improve adhesion in slippery rail conditions - where investment responsibilities and benefit realisation horizons do not align, despite a favourable whole system business case resulting in stalled implementation.

There is a disconnect between operations, maintenance and renewal (OPEX) and infrastructure investment (CAPEX) budgeting that is hampering the implementation of joint P&L initiatives, aimed at improving the overall financial position of the railway. This could successfully be addressed in the next 5 years as an 'early win' although it is important that full visibility of how capex schemes are designed and approved to ensure proper financial control.

A further opportunity to align OMR and other industry budgets is to synchronise the 5-year OMR budget with the annual budgets/contract term price and changes for operators and other industry bodies. A longer time horizon provides more investment certainty and delivers greater benefits

Working collaboratively with trade unions will be critical to ensuring that all our people have the skills and capability to respond to changing customer needs. The impact of change on workforce reform could be monitored by reviewing the number of days lost due to industrial action. If the change is managed well this disruption should be minimal.

### Question 3c

#### **What is a stretching yet realistic ambition for this objective and what measures can we most effectively use to consider success over the coming 5, 10 and 30 years?**

Before COVID-19, revenue from fares was just over £10 billion each year. Since March 2020, those revenues have fallen by more than 80% to £1.8 billion (2020-21),<sup>85</sup> though the annual cost of operating the railway has remained broadly similar at over £14 billion.

Over the first 5 years of the Strategic Plan, RDG would strongly welcome innovative interventions, such as discounts on ticket prices and other fare initiatives to encourage passengers back to rail. With the right partnership between the public and private sector, by year 5 of the Strategic Plan the industry's operational deficit could be reduced by £2 billion p.a.

Private sector operators also endorse the need for a rail freight growth target set out in the white paper and rail freight strategy as discussed in more detail under 2d. Private sector operators support a trebling of freight volumes in the UK that should be achievable by 2050.

Before the pandemic the railway was at capacity at key locations during the working week. As we collectively build back better the rail sector must deliver a product that makes better use of its assets and better distributes that customer demand. One way to achieve this is through robust planning, and a greater understanding of customer demand, both of which rely on collaboration between strategic planning teams from across the railway system, working to an agreed demand trajectory for freight and passenger services, and a collective understanding of the capabilities of the network.

<sup>84</sup> RSSB, Double variable rate sanders, <https://www.rssb.co.uk/en/what-we-do/key-industry-topics/adhesion/double-variable-rate-sanders> and <https://rssb.videomarketingplatform.co/secret/63998405/e222cc92c88cd5eda6406e4d72b4d8f7>

<sup>85</sup> ORR, Rail industry finance (UK) 2021, <https://dataportal.orr.gov.uk/statistics/finance/rail-industry-finance/>

### Question 3d

#### **What are the interventions over that period which will be the maximum value for money?**

An early focus on private sector led modernisation and investment to reduce delivery costs and improve the customer experience while making better use of data is recommended. Reforms through National Rail Contracts (NRCs) can deliver real benefits, as can an improved joint industry Profit & Loss account that encourages the collaboration of Network Rail and operators. This must be done carefully so as not to reduce services or deter customers which may ultimately reduce revenues.

All contracts for passenger services should encourage private-sector led competition and be outcome-based, with scope for innovations encouraged and revenue growth incentivised.

Private sector operators and RDG would like to see whole industry aligned incentives included within PSCs alongside delivery targets for infrastructure delivery, planning and the delivery of whole system railway programmes. The reinstatement of the RNEP will create a means to identify, develop and deliver schemes involving local stakeholders, provide certainty for suppliers, and coordinate with whole life rolling stock strategy.

As revenues stabilise, there should be a consideration of a return to sharing revenue risk for commercial operations with the private sector.

With demand returning post pandemic there will be a need for continuous improvement and further capital spending to expand the network and add resilience from 2032 onwards. The Strategic Plan should consider how the launch of HS2 could reinvigorate rail and improve overall connectivity.

# Question 4 – Contributing to Long-Term Economic Growth

## Summary

- Building on significant investment from government and the private sector over the past 30 years, the Strategic Plan provides a generational opportunity to set out how the railways can continue to contribute to Britain’s economic prosperity.
- Key to driving economic growth will be harnessing the private sector to drive innovation and delivery through long-term PSCs and across the rail supply chain. Getting the contracts right, with the appropriate balance of risk and reward will enable operators to make the fullest possible contribution to delivering the objectives set out in the Strategic Plan.
- Rail connects workers to jobs, businesses to markets, as well as friends and families. Rail can continue to contribute to economic growth by attracting customers back to the railway following the pandemic, as well as supporting objectives related to net zero and levelling up the economy. Pre-pandemic rail contributed £133 billion to the economy of every part of Britain and, with the right levers, can do so again.
- Rail freight also makes a significant contribution to UK PLC by delivering £2.45 billion in economic and social benefits annually, with 90% of these benefits occurring outside of London and the South East.<sup>86</sup> Looking forward, there is significant scope to grow rail freight volumes in the UK over the next 30 years.
- There are further opportunities over the next 30 years to unlock additional capabilities and capacity in the railway network to support new economic opportunities. This could include new routes, enabling new services or establishing new freight flows. Over the next 30 years priorities such as further house building and new economic activity in a post-Brexit economy can be enabled by rail if there is sufficient collaboration with the planning community.
- Local economic improvement can be delivered through redeveloping stations as place makers, as well as providing new employment opportunities. Station investment can bring economic and property-related benefits such as increases in commercial and retail activity, commercial developments, employment, and property values to the communities around these key transport points as well as wider benefits such as new residential and educational developments and boosts for tourism.
- Decisions on investment should be made locally with strong partnerships developed between GBR, public bodies, and local agencies, as local decision makers know their constituents, their needs and desires best.
- The timely and regular publication of a clear pipeline of opportunities, which include PSCs,<sup>88</sup> the Rail Network Enhancement Pipeline<sup>87</sup> as well as a rolling programme of network enhancements is recommended. This will encourage the supply chain to invest here in the UK providing high value, high skill jobs across the country.
- To maximise the impact and exploit the full agglomeration benefits of future investment, both freight and train operators require a stable operating environment. This will provide confidence in business planning and make the case to shareholders and funders that the UK rail sector is a stable marketplace in which to invest.

<sup>86</sup> RDG, The Role and Value of Rail Freight (2021),

<sup>87</sup> DfT, Guidance: Passenger Service Contracts, 2021, <https://www.gov.uk/guidance/passenger-service-contracts>

<sup>88</sup> DfT, Guidance: RNEP, 2018, <https://www.gov.uk/government/publications/rail-network-enhancements-pipeline>

## Question 4a

**As Britain recovers from the effects of the COVID-19 pandemic, what evidence do you have for how rail can contribute to wider economic growth over the next 5, 10, and 30 years? What is a stretching yet realistic ambition for this objective and what measures can we most effectively use to consider success over the coming 5, 10 and 30 years? What type of interventions over that period will provide maximum value for money from rail’s economic contribution, and what evidence can you share to support your views?”**

RDG has worked with Imperial College London consultants<sup>89</sup> to investigate likely near-term customer trends. There is some evidence of limited shift to car during the pandemic, with the proportion of households with access to a car increasing by around 3%, the largest increase for many years.<sup>90</sup>

Future business travel forecasts provide some insight of how quickly business travel will return. For example, forecasts from Deloitte<sup>91</sup> and McKinsey<sup>92</sup> suggest it may not recover to pre-pandemic levels for some years, with some forecasts predicting around 80% recovery by 2023.

Prior to the Omicron variant, leisure travel was returning to almost pre-pandemic levels. The level of uncertainty in this market segment is now lower than in 2020, while a continued upward trajectory post pandemic seems likely. There is a slight risk that some of the growth seen in 2021 might have been due to “rebound” from 2020, and economic factors could still affect some elements of the leisure market.

Travel by rail, whether for leisure or work, makes a significant contribution to the national economy, as outlined in RDG’s More than a journey - The railway’s value to a fair, clean recovery for communities across Britain.<sup>93</sup> In Great Britain total spending associated with rail travel was around £133 billion per year pre-pandemic (not including rail fares) as the average passenger spends as much as £94 per journey on other activities. Rail travel supports, and will be critical to, the future economic recovery of a number of other sectors. Prior to the pandemic every year rail users boosted the economy by spending: £42 billion on food and drink, £34 billion on shopping, £27 billion on accommodation, £15 billion on entertainment and culture, and £15 billion on other travel.

Rail will be key to the economic recovery in every part of Great Britain – rural communities, leisure destinations, and towns, as well as in our cities. Total pre-pandemic spending by rail passengers in different regions includes: £9 billion in the North West £6.4 billion in the West Midlands and £5.3 billion in Yorkshire and Humberside.

With the right levers, policies and incentives, rail can again play this important role.

Investment in rail supports high value, high skilled jobs across the country delivering significant economic benefits. As an example, a recent RDG report estimated that a programme to decarbonise the railway would support around 6,000 jobs with an economic benefit of £2.2 billion.<sup>94</sup> Providing timely and regular publications of opportunities which include PSCs, the Rail Network Enhancement Pipeline<sup>95</sup> as well as a rolling programme of network enhancements will give private sector operators and the supply chain confidence to invest in jobs, assets and technology here in the UK.

Within the first five years of the Strategic Plan, there should be a better collective understanding of what the next 10-30 years will look like. Therefore, the initial focus should be on improving customer experience over the first 5-10 years of the Strategic Plan timeframe and subsequently invest in larger scale infrastructure interventions once demand patterns become clearer.

<sup>89</sup> Previously shared with GBRTT

<sup>90</sup> Transport strategy Centre, Imperial College London (2021) Scenario Planning for the Rail Industry after Covid-19

<sup>91</sup> Deloitte (2020), What next for the high street? <https://www.deloitte.com/uk/en/pages/consumer-business/articles/what-next-for-the-high-street.html>

<sup>92</sup> Mc Kinsey & Company (2021), The comeback of corporate travel: How should companies be planning?, <https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/the-comeback-of-corporate-travel-how-should-companies-be-planning>

<sup>93</sup> RDG, More than a journey, <https://www.raildeliverygroup.com/about-us/publications/12841-more-than-a-journey/file.html>

<sup>94</sup> RDG, Catalysing a Green Recovery report, p13, 2021, <https://www.raildeliverygroup.com/about-us/publications/12853-2021-10-catalysing-a-green-recovery/file.html>

<sup>95</sup> DfT, Guidance: RNEP, 2018, <https://www.gov.uk/government/publications/rail-network-enhancements-pipeline>

Within 5 years operators and RDG recommend that all Passenger Service Contracts let should be aligned with the strategic outcomes set in the Strategic Plan. The obligations on PSC holders should be reviewed in line with updates to the Strategic Plan.

Rail freight already makes a significant contribution to UK PLC by delivering £2.45 billion in economic and social benefits annually, with 90% of these benefits occurring outside of London and the South East.<sup>96</sup> Looking forward, there is significant scope to grow rail freight volumes in the UK over the next 30 years.<sup>97</sup>

The white paper has committed to establishing a rail freight growth target which will enable the sector to significantly expand on its economic and environmental contribution. An ambitious growth target, which is broken down into interim targets aligned with GBR's five-year funding cycles, can be transformative for the sector. It will create a focus across the railway on delivering for rail freight and will inform decisions on investment in infrastructure and capacity allocation on the rail network. Through an increase in capacity and route capability for rail freight services, along with policies and incentives to promote freight, operators and RDG support a trebling of freight volumes in the UK that should be achievable by 2050.

### Question 4b

**In the context of enabling development and regeneration opportunities both in the immediate vicinity of stations and within the surrounding area, how can rail best facilitate improvements to places and local growth, through improved connectivity and unlocking commercial activity, housing, and employment over the next 5, 10 and 30 years?**

Stations act as place-makers, both in terms of the initial impression customers gain as they enter the town or the city, and as engines of positive socio-economic change. More than 85% of the population live within five kilometres of a station.<sup>98</sup> Targeted investment in stations can spur regeneration in local economies and communities and catalyse wider regeneration. In RDG's recent research conducted with Steer, the inter-related economic and social benefits of station investment was quantified using several case studies.<sup>99</sup> This showed how station investment can bring economic and property-related benefits such as increases in commercial and retail activity, commercial developments, employment, and property values to the communities around these key transport points.

Moreover, wider benefits include new residential and educational developments, and potential boosts to tourism. As an example, investment to transform Nottingham station created an increase in property developments within a mile radius of the station and a 3.7% annual increase in employment when compared to other similar urban areas.<sup>100</sup> GBR could play an important integration role between local housing and rail transport plans, with GBRTT setting the foundations.

As the process of post-pandemic recovery gets underway, more people are likely to move out of cities to suburban and rural towns. For example, in March 2021 a third of Londoners planning to move wanted to leave the city.<sup>101</sup> This creates opportunities for rail to work closely with local communities and businesses to support ambitions around regeneration, increasing housing and improving rail connectivity between towns and across regions.

In the short-term (5 years), the rail industry must remove both the perception that the sector is challenging to work with and the current constraints that deter private investment in the sector. GBR must be open to collaboration and leverage the knowledge, capabilities and finance of the private sector. It must also work with all stakeholders, including local businesses, community rail partners, devolved government, local authorities, other transport providers and third parties who know their towns and their respective needs.

<sup>96</sup> RDG, The Role and Value of Rail Freight (2021)

<sup>97</sup> Network Rail, Rail freight forecasts: Scenarios for 2033/34 and 2043/44, 2019

<sup>98</sup> RDG, Station Investment: A catalyst for local economic growth, 2021 <https://www.raildeliverygroup.com/about-us/publications/12842-2021-09-station-investment/file.html>

<sup>99</sup> *ibid*

<sup>100</sup> *ibid*

<sup>101</sup> Major of London, Survey: Londoners want to move house but still stay in the capital, 2021, <https://www.london.gov.uk/about-us/london-assembly/london-assembly-publications/survey-londoners-want-move-house-still-stay-capital>

Decisions on investment should be made locally with strong partnerships developed between GBR, public bodies, and local agencies, as local decision makers know their constituents, their needs and desires best. Private sector operators and RDG believe the full economic opportunities available would not be achieved if Westminster was to decide on all local priorities. Greater local accountability will be important to deliver the best outcomes for development and regeneration. Research conducted by RDG shows that the more involved local authorities and businesses are in stations, the more successful the redevelopment is.<sup>102</sup>

Local priorities in areas away from the South East will also not necessarily attract the same economic benefits as those in the South East. The Treasury's Green Book is already placing greater emphasis on strategic integration of projects, but GBRTT may wish to work with the Treasury to ensure such factors as modal shift and agglomeration benefits of strategic regional schemes are fully captured.

There are several steps which must be in each potential regeneration project to ensure maximum success. Firstly, open consultations must be initiated with local communities to establish the priorities for development and understand the needs and wants of local communities. Once this is established, there needs to be buy-in from all parties, a common vision and a strong collaborative working process. Clear communication with the community and customers about possible disruption is essential to successful projects.

The rail industry should continue to advocate the success of previous redevelopment and regeneration schemes to promote the benefits of joint investment in community orientated redevelopments. This will encourage future private sector investment by highlighting the attractiveness of the sector for investment. The recent agreement to reopen the Northumberland Line is a prime example of how private sector funding can be harnessed in an innovative way to bring new connectivity and benefits to customers and the wider economy.

The Strategic Plan could also support a 'green reset', encouraging modal shift to the railway. Investment in stations, including the development of more sustainable stations, will support the financial sustainability of the railways, improve customer experience, and drive down costs, freeing up investment to support other redevelopment opportunities such as improved commercial space and infrastructure to enable better modal integration.<sup>103</sup>

In the longer-term, network infrastructure projects, to level up (see Q5) and improve connectivity, will be completed, such as the Integrated Rail Plan.<sup>104</sup> This will create further opportunities to build new stations on new lines. New stations must adopt human-centred design to ensure they meet the needs of the people who will use them and that the social, economic and environmental potential for railway infrastructure is achieved.<sup>105</sup>

<sup>102</sup> RDG, Station Investment: A catalyst for local economic growth, 2021

<sup>103</sup> RDG, Sustainable Stations Guide

<sup>104</sup> DfT, Integrated Rail Plan for the North and Midlands, <https://www.gov.uk/government/publications/integrated-rail-plan-for-the-north-and-the-midlands>

<sup>105</sup> Network Rail, Think Station Summary Report

### Question 4c

**What innovative and modernising ideas do you have which would benefit the railway while supporting the strategic objectives? Please give evidence and make reference to how they would maintain or enhance the railway's safety record.**

The initial focus of rail sector investment over the next 30 years should be on the core product that maximises delivery of customer benefits. By prioritising a customer focussed strategy, rail will be in a strong position to attract new customers, encourage model shift and support the UK's net zero ambitions.

In the short-term, the focus should be on the successful delivery of the already announced and funded programmes such as HS2 and electrification, as well as ETCS, with a fuller list of new proposals being created in the medium term. All programmes that are being committed to within the timeframe of the Strategic Plan must be fully funded. This will give confidence to the sector and certainty for the supply chain.

To create the right conditions for investment from the private sector and secure government funding where appropriate, the initial 5 years of the Strategic Plan should establish the frameworks that unlock the opportunities. This will support capital programmes that will be needed in the latter years of the Strategic Plan. To achieve this the case to invest in rail must continue to be made to funders, but the rail sector also has a key role in making sure that any money it receives is invested appropriately to maximise agglomeration benefits for the economy, society, and the taxpayer.

Train operators would encourage the greater use of benchmarking across the different elements of the rail supply chain, in particular the delivery of infrastructure. This will help to keep costs down through identification of improvement areas, as well as highlighting areas of best practice.

The benefits and needs for innovation and research are highlighted in section 3a.

# Question 5 – Levelling Up and Connectivity

# 5

## Summary

- Private sector operators already play an active role across local communities and economies and, to support the Government’s levelling up objectives, PSCs should give operators the levers to focus on delivery and to engage with local leaders, managing adjustment of their service proposition where necessary.
- GBR and its regional divisions need to take responsibility for developing a cohesive, joined up whole-system long-term strategy for rail (one nation approach), empowering operators to act on behalf of their local customers and communities while enabling them to work closely with the GBR infrastructure and route teams. This joined up industry model will support the Government policy of a stronger Union and regional connections.
- Where there is tension between the need to reduce costs and achieve other strategic objectives, the contribution to long-term economic growth in regions of the country with the greatest need should be given significant weighting, more so than traditional business cases allow for today.
- Rail can provide the connectivity that boosts living standards and productivity by increasing the reliability, frequency and availability of services for passengers and freight, encouraging and facilitating modal shift to rail, and decarbonising the railway.
- Key to this is not only modernisation of fares, ticketing, and retail, but the development of PSCs that allow rail operators to flex their offer to customers in line with changing customer expectations, while engaging directly with local leaders and communities and incentivising passengers to choose rail for cross-border and regional journeys, boosting revenue as well as strengthening connectivity.
- Strategic objectives for stations should be linked to customer outcomes in PSCs, enabling operators to leverage their local knowledge and understanding of their customers and communities.
- The Levelling Up White Paper (not published at the time of writing) will need to be fully informed of the contribution rail can make to the Government’s objectives in this area.

## Question 5a

**What evidence can you provide for how the rail sector contributes to the four levelling up outcomes\* and to improving connectivity in across Great Britain, including through cross-border services? How does this change depending on the type of place where the sector operates (including in cities, towns and rural areas), and what are the most cost-effective ways at the sector’s disposal to improve that further during the next 5, 10, and 30 years?**

\*The four Levelling Up outcomes detailed in the call for evidence are: Empowering local leaders and communities; Boosting living standards by growing the private sector and improving productivity and connectivity; Spreading opportunity and improving public services; and restoring local pride.

### **Empowering local leaders and communities**

As noted in the white paper, poor outcomes often result when decisions are taken too far from the customer. GBR will have five regional divisions who will need to work in partnership with operators and local leaders to respond to local transport needs.

A big part of empowering local leaders will involve developing PSCs in a way that establishes a strong collaborative and trusted partnership between GBR as an informed client, making key strategic system-wide decisions, and PSC holders, who are given the levers to focus on delivery and engage with local leaders. This is key to enabling a ‘can do’ culture, with operators looking outwards to customers and local leaders and not inwards to GBR.

There will be difficult trade-offs to manage between local leaders and GBR. Local Leaders should rightly be able to engage in debate about what is important for local people, for example to determine what any potential trade-offs should be.

The tension between reducing costs and achieving the other strategic objectives is particularly relevant in the context of levelling up, where the traditional business case for rail investment may not be as strong, but still deliver significant social benefits including by supporting local jobs, connecting communities or tackling social exclusion. Ensuring these wider benefits are appropriately reflected – and monetised where possible – in business cases would strengthen the case for investment outside London and the South East. GBR can forge close links with the Treasury to enable informed decisions as outlined in section 4b.

### **Boosting living standards by growing the private sector and improving productivity and connectivity**

As noted in RDG’s submission to the Union Connectivity Review, the rail industry is in a unique position to grow connectivity across nations, regions and communities, to boost living standards and productivity by increasing the reliability, frequency and availability of services for passengers and freight; encouraging and facilitating modal shift to rail; and decarbonising the railway.

Pre-pandemic, most rail transport arteries between the UK nations were at capacity – as evidenced by Network Rail’s capacity studies which, in the case of the West Coast Mainline, noted that capacity was significantly impacting performance and causing a reduction in timetable resilience.<sup>106</sup> In addition, infrastructure is not uniform across Britain’s railways (e.g. electrification, signalling or loading gauges), limiting the ability to run passenger or freight trains across the network, and limiting connectivity in some areas. Network Rail Regions have identified projects, which can harness the cost and time benefits of uniform running of passenger and freight trains, through their analysis and planning processes including Continuous Modular Strategic Planning.

Rail freight also has a key role to play in levelling up. The vast majority of economic and social benefits derived from rail freight manifest outside of London and the South East. However, as freight operators run on a national scale it is important that GBR regions do not compromise rail freight services by creating additional interfaces – and in turn greater administrative burdens. To avoid this, the white paper states that there will be a new national freight co-ordination team within GBR that will act as a single point of contact for freight operators and customers.

The new GBR national freight co-ordination team must engage effectively with GBR’s regional divisions so that each region feels accountable for the delivery of the national rail freight growth target – and ultimately manage the balance between local and national interests.

### **Spreading opportunity and improving public services**

Infrastructure projects are inherently costly and take time to deliver. In the short-term, and given current financial constraints, it is likely to be more cost effective and less disruptive to make better use of existing network capacity by spreading passenger demand through innovative pricing and new ways of ticketing. KPMG research has shown that across the network, this could incentivise over 300 million journeys on services with capacity for growth over a ten-year period, in addition to the 1.7 billion journeys which took place on the network pre-pandemic.<sup>107</sup> RDG has been calling for comprehensive reform since the publication of its Easier Fares For All report<sup>108</sup> in February 2019.

<sup>106</sup> ORR, West Coast Main Line Capacity Assessment 2020: System Operator, February 2020, <https://www.orr.gov.uk/media/17481>

<sup>107</sup> KPMG, Towards a Future Fares Strategy: Report to Rail Delivery Group, [https://www.raildeliverygroup.com/files/Publications/2018-05\\_towards\\_a\\_future\\_fares\\_strategy.pdf](https://www.raildeliverygroup.com/files/Publications/2018-05_towards_a_future_fares_strategy.pdf)

<sup>108</sup> RDG, Easier fares for all, 2019

Moving to a dynamic, single-leg pricing arrangement would enable clearer, simpler and more transparent ticketing. Changes such as the removal of peak/off-peak ticketing would spread passenger demand more evenly throughout the day and RDG's research suggests that this would attract more people to the railway. These proposals would also enable pricing structures to encourage higher levels of cross-border and regional rail use.

### Restoring local pride

The white paper noted that GBR will own stations and set the associated long-term strategic objectives for example around decarbonisation, accessibility, and multi-modal travel. The delivery of these strategic objectives, in many instances, should be carried out by the operator and reflected in PSCs, allowing them to leverage their local knowledge and understanding of the customers and communities they serve.

Operators can and have formed partnerships with local tourism bodies to promote destinations to potential visitors, helping to bring much needed funds to those areas and giving a boost to local economies.

When it comes to repairing and renewing facilities at stations, local operators could be incentivised through their contracts to deliver improvements more efficiently, cost-effectively and quickly, either themselves or through third parties. Today there are too many stations with split responsibilities (between Network Rail and operators) and there needs to be far greater accountability with one single delivery agent. This already occurs on a number of rail contracts, such as TfL Rail, where the operator has sole responsibility for delivery.

### Question 5b

**How could the rail industry, over the next 5, 10, and 30 years, become more responsive to, and more accountable to, local communities and passengers? Please give evidence and examples in your response.**

As noted in previous sections, empowering operators to act on behalf of their local customers and communities while enabling them to work closely with Network Rail route teams. Through greater operational and commercial freedom, operators can use their insight into their customers, to deliver the outcomes that their local communities want.

In parallel, GBR and its regional divisions would take responsibility for developing a cohesive whole-system long-term strategy for rail. Through GBR's approach in joining up railway strategy – a one nation approach – there could be a much-improved national effort in joining up industry endeavours and supporting the Government policy of a stronger Union and regional connections.

### Question 5c

**What is a stretching yet realistic ambition for this objective and what measures can we most effectively use to consider success over the coming 5, 10 and 30 years? What are the interventions over that period which will be the maximum value for money, and what evidence can you share to support your views?**

At the time of writing, defining and understanding stretch targets is challenging without the publication of the Levelling Up white paper, and the likely measures for success it will contain as well as how local leaders will be empowered, over decisions like ticketing and fares.

Nonetheless, over the next 5-10 years, regardless of the powers to be devolved to local leaders, fares reform is essential to enable better use of capacity, attract more customers and respond to local needs.

# Question 6 – Delivering Environmental Sustainability

## Summary

- The Strategic Plan provides an opportunity to set an ambitious vision for rail as the backbone of a sustainable, resilient, zero-carbon transport network that connects communities and supports economic development across the country, embedding that vision into the whole industry’s leadership, culture and behaviours.
- Rail remains a sustainable, low carbon mode of passenger and freight transport which delivers substantial environmental advantages over other modes in terms of its carbon performance and has the potential to reduce road congestion and cut wider transport emissions through modal shift.
- Its greatest contribution to the government’s net zero ambitions will be achieved by policy, fiscal and investment decisions encouraging travellers and freight off the roads, out of the skies, and onto rail. Decisions, including those on the modernisation of fares, ticketing and retail, should be based on a ‘sustainable transport hierarchy’<sup>109</sup> reflecting the environmental, social and economic benefits of rail and other modes and promoting modal shift towards active travel, rail and other forms of public and shared transport in preference to the private car, travel by air or road freight.
- The railway must not only increase its resilience to climate change, but it must also improve its environmental performance to maintain its green credentials. In the short-term, activity should focus on ‘no regrets’ electrification schemes along with improvements to the environmental performance of existing rolling stock. In the medium to longer term, a rolling programme of electrification should be implemented as this remains the most cost-effective approach for decarbonising much of the network as well as supporting green jobs across the country.
- There are wider opportunities to improve rail’s wider environmental sustainability whether through station design, intelligent procurement, mobility as a service or renewable energy generation. Private sector operators have a wealth of experience and capability in these areas that can be unlocked through the right contractual incentives and freedoms in order to improve rail’s environmental performance, grow demand for rail, respond agilely to changing travel patterns and deliver integrated, low carbon door-to-door transport solutions.

<sup>109</sup> Scotland’s National Transport Strategy (page 42) commits to embedding a sustainable travel hierarchy by promoting walking, wheeling, cycling, public transport and shared transport options in preference to single occupancy private car use: <https://www.transport.gov.scot/media/47052/national-transport-strategy.pdf>

## Question 6a

### What is a stretching yet realistic ambition for this objective and what measures can we most effectively use to consider success over the coming 5, 10 and 30 years?

#### Traction decarbonisation

Rail is already a low carbon transport mode accounting for 10% of all passenger kilometres but just 1.4% of the UK's domestic transport emissions.<sup>110</sup> On average, taking the train cuts carbon emissions by two thirds compared to travelling by car, with a single passenger train removing up to 500 cars off our roads. Consequently, rail's strong environmental performance is helping to reduce UK carbon emissions by up to 7.7 million tonnes every year.

Rail freight is an essential part of tackling the climate emergency, removing 7 million lorries from our roads each year. Recent Deloitte research showed that using rail instead of road reduces carbon emissions by 1.4 million tonnes of CO<sub>2</sub> every year.<sup>111</sup> With these impressive credentials, rail is uniquely positioned to help the UK meet its net zero carbon targets while building a strong, sustainable economy.

Nevertheless, further action is required for rail to decarbonise fully and play its part in helping the UK reach its 2050 net zero target and support the delivery of DfT's Transport Decarbonisation Plan and Rail Environmental Policy Statement. Decarbonisation is also critical to ensuring the future success of the railway amid increasing environmental concerns from our passengers and freight customers.

The work of the Rail Industry Decarbonisation Taskforce demonstrated that – subject to sufficient funding being available – it is feasible to decarbonise rail from a traction perspective by 2050 as well as removing all diesel-only trains from the network by 2040. The TDNS analysis also concluded that there was a positive overall business case for decarbonising the railway.

Despite the current financial challenges facing the railway, this level of ambition should remain as a minimum. Without further action to decarbonise, the railway will start to lose its strong environmental credentials given improvements taking place in other modes, for example the rapid growth in the electric vehicle market and the development of electric planes. This in turn will reduce rail's attractiveness as a mode, leading to a loss of revenue and market share. Recent LNER research<sup>112</sup> indicated that more than a quarter (27%) of customers say the pandemic and its side effects have motivated them to adopt more environmentally friendly travel behaviours, showing that people do want a green transport option.

Operators recognise, however, that current financial constraints may limit the number of conventional electrification schemes being approved in the shorter term. As a result, private sector operators and RDG support Network Rail's current work to identify shorter term, lower cost opportunities to deliver carbon reductions including by encouraging modal shift to rail.

However, additional action will still be needed to decarbonise the railway to support the delivery of the government's net zero targets as well as improving air quality by moving away from diesel traction. Despite current financial challenges, the railway will only be able to decarbonise if more of the network is electrified: other technologies and approaches simply do not deliver the required performance and capabilities. Consequently, the ambition should remain to develop a cost-effective and prioritised rolling programme of electrification recognising the wider environmental and operational benefits a switch to electric trains provides e.g. reduced operating costs, lower noise, improved reliability, less track damage.

Private sector operators and RDG propose that traction decarbonisation activities should be guided by the following principles:

<sup>110</sup> ORR, Rail emissions, <https://dataportal.orr.gov.uk/media/1993/rail-emissions-2020-21.pdf>

<sup>111</sup> Deloitte/ Rail Delivery Group, The role and value of rail freight

<sup>112</sup> LNER, Brits to shun overseas trips and air travel in bid to become more sustainable, <https://www.lner.co.uk/news/brits-to-shun-overseas-trips-and-air-travel-in-bid-to-become-more-sustainable/>

- Develop and maintain a trajectory towards full rail traction decarbonisation by 2050 supported by a realistic, prioritised and affordable plan with interim decarbonisation targets which should be reported against on a regular basis;
- In the shorter term, target available funding on ‘no regrets’ electrification schemes – including discontinuous schemes<sup>113</sup> where appropriate - that unlock significant increases in electrified passenger and/or freight traffic;
- In the medium term, develop and deliver a cost-effective and prioritised rolling programme of electrification; and
- Develop an over-arching decarbonisation delivery plan that:
  - Aligns decarbonisation ambitions with passenger service contract requirements and rolling stock plans;
  - Makes best use of existing rolling stock assets including by improving their carbon and air quality performance, for example through hybrid conversions and sustainable, low carbon fuels;
  - Lays out a clear and funded plan to procure new technologies for traction (OHLE, battery and hydrogen) that enable a viable and cost-effective supply chain to be established and sustained;
  - Takes early opportunities focused on older diesel fleets to make progress;
  - Facilitates modal shift; and
  - Makes best use of the capabilities of the supply chain by allocating risk to those best able to manage it.

### Renewable electricity generation

Each year train operators use around 4 TWh of electricity for traction at a cost of approximately £350 million. This consumption is expected to increase over time as a greater proportion of the national rolling stock fleet runs fully or partially on electric power.

Traction electricity is drawn from the national grid and, even though the grid is gradually decarbonising, there remain significant carbon emissions associated with its production. Consequently, it must be a vital part of any rail decarbonisation plan for its traction electricity to come increasingly from new, zero carbon sources. This approach will also reduce pressure on the national grid as more of the economy electrifies to support the delivery of net zero including through the mass market roll out of electric vehicles. RDG has developed a strategy with the ambition of 100% of traction energy being procured from new and additional renewable sources by the mid-2030s. Key to its success will be the use of Power Purchase Agreements (PPAs) whereby a third party invests in new renewable electricity generation capability – such as wind or solar farms within the UK or Europe – in return for a long-term industry commitment to purchase electricity at an agreed price. There will also be opportunities to increase local generation of renewable electricity on, or close to, rail property. RDG is working with Network Rail’s finance and sustainability leads to ensure industry alignment and collaboration on the strategy.

This strategy and its level of ambition should be reflected in the Strategic Plan. It will also facilitate the installation of more renewable generation capacity in the UK than would otherwise be the case. RDG has estimated that, between 2024 and 2050, the rail industry could be the catalyst for approximately £1 billion of investment in increasing the UK’s capacity to generate green energy.<sup>114</sup> In addition, this approach will reduce the industry’s exposure to energy price volatility – which has historically been high and more recently extremely high – and may also provide significant industry cost savings compared with purchasing electricity at standard market rates.

<sup>113</sup> Discontinuous electrification means having gaps in electrification along a route in order to reduce cost and complexity. For example, instead of rebuilding bridges or tunnels to accommodate overhead lines at significant cost, trains may have onboard energy storage to power through such gaps.

<sup>114</sup> RDG, Catalysing a Green Recovery report, p13, 2021, <https://www.raildeliverygroup.com/about-us/publications/12853-2021-10-catalysing-a-green-recovery/file.html>

## Station sustainability and non-traction decarbonisation

Stations that are designed, constructed and operated sustainably are not only better for the environment but can be cheaper from a whole life cost perspective and more attractive to customers. A well designed and operated station can act as a beacon for sustainable development, supporting and spurring wider change on sustainability, increasing awareness of rail's green credentials and supporting modal shift.

Therefore, environmental policy at stations should be bold including around carbon reduction. This is because most of the technology (and other resources, including an existing network of community engagement and volunteers) required to create sustainable stations already exists. The focus should instead be to increase the uptake of sustainability initiatives. Commitments to create sustainable stations – including by enhancing existing buildings and adopting environmental best practice<sup>115</sup> – should be mandated within future management contracts. These should reflect the varied challenges, opportunities and costs of improving the station estate, for example with older stations potentially requiring significant investment to make them more energy efficient and sustainable.

In the shorter term, operators would welcome the development of a sustainable benchmarking system for stations. This would allow stations to access a scoring process or accreditation scheme in which they can competitively address sustainability performance. A sustainability assessment tool for stations should go further than current building assessments such as BREEAM by reflecting the diversity of existing stations (Victorian, listed, small, large etc) and include rating criteria that reflects differences in station infrastructure, layout, funding opportunities and footfall. Such a tool would also help to contextualise industry performance by assigning KPIs based on station characteristics, ensuring achievable and best practice outcomes for new and existing small, medium and large stations.

There is an opportunity to include ambitious station sustainability measures in future operator contracts to improve energy efficiency, reduce emissions, increase biodiversity and improve air quality. This approach will enable estates and facilities teams to apply the Sustainable Stations Guide and go beyond a simple focus on maintaining and repairing.

### Wider carbon reductions

Beyond rail's operational carbon there are substantial emissions associated with the maintenance, construction and procurement of new assets e.g.: the carbon embedded in the steel and concrete used for new or renewed rail infrastructure. Rail suppliers should be encouraged and incentivised to develop innovative ways of reducing these carbon impacts. This can include more efficient design processes that reduce the amount of material required (which can also reduce cost) as well as making use of lower carbon materials. There may be opportunities for focussed innovation activity to provide the rail industry with more sustainable, low carbon materials and building techniques drawing on experience from other sectors.

## Question 6b

**What are the interventions over that period which will be the maximum value for money, and what evidence can you share to support your views?**

### Embedding environmental sustainability

The emerging Sustainable Rail Strategy (SRS) being developed through RSSB in collaboration with the wider industry will provide a comprehensive framework for improving the railway's sustainability performance covering decarbonisation, air quality, social sustainability, climate adaptation and wider environmental impacts. However, the SRS cannot succeed unless it is fully embedded throughout the Strategic Plan and reflected in wider government policy and investment decisions. Even more importantly, sustainability must be seen as core to the future success of the railway through industry leadership, culture and behaviours. Senior leaders in the industry should all have responsibilities for improving sustainability against which they should be held accountable.

<sup>115</sup> RDG, Sustainable stations guide

## Encouraging modal shift

Rail's greatest contribution to transport decarbonisation will be through modal shift. However, historically, UK transport policy has tended to consider modes in isolation rather than considering how they can best interact as a system to provide the most sustainable and efficient transport outcome. RDG strongly advocates an integrated approach to transport planning, policy and investment based on a sustainable travel hierarchy<sup>116</sup> that promotes active travel and public transport in preference to private car use or air travel. PSCs should give operators the freedom to innovate, to develop stronger links with other modes to provide seamless end-to-end journeys.

This approach will also make better use of the rail network, drive up revenue, reduce public subsidy and hence make the sector more financially sustainable. Operators and RDG support the Government's ambitions in this area as set out in its Rail Environment Policy Statement: "We want to make rail the first option for suitable journeys in the UK and encourage commuters to cycle, walk or take public transport to and from rail stations, making their journey environmentally sustainable from door to door".<sup>117</sup>

Although rail will not always be suitable for every journey, by improving connectivity with other low carbon modes – buses, cycling, walking, and emerging modes like e-scooters and autonomous vehicles – rail can provide customers with accessible, seamless and healthier door-to-door journeys and so reduce reliance on the private car (which will also reduce road congestion and improve local air quality).

Delivering fares reform, providing simpler ticketing arrangements and offering better information about the environmental benefits of rail travel will encourage more people to use the train.

Stations also have an important role as transport interchanges supporting local communities. Station infrastructure and timetabling should be integrated with other travel modes, particularly those with low or zero carbon emissions such as walking, cycling and bus, to facilitate modal shift and minimise the customer's carbon footprint through their end-to-end journey. Private operators have significant experience in working collaboratively with local authorities and other transport providers to provide joined-up and customer-focussed transport services.

Stronger links should be made between rail and planning bodies to ensure that housing, retail and business developments are designed from the outset around sustainable transport rather than building in reliance on the private car.

Our response to question 2c considers in more detail the opportunities for growing the rail freight sector which would also support the decarbonisation agenda.

## Electrification

The TDNS provides a blueprint for decarbonising the railway along with supporting analysis demonstrating a positive overall business case. This analysis took account of the carbon benefits of a comprehensive decarbonisation programme but also the cost and operational benefits from running a predominantly electrified rail network such as improved reliability, lower track damage and reduced operating and maintenance costs. The wider economic benefits of a comprehensive rail decarbonisation programme are substantial resulting from investment in electrification and the manufacture of electric, hydrogen and battery powered trains. As discussed in 4a, recent RDG research<sup>118</sup> concluded that such a programme could support an average of 6,000 jobs per year between 2024 and 2050 with an economic value of over £2 billion as well as delivering air quality benefits also valued at more than £2 billion. So overall, the business case for further rail electrification remains strong and aligns with government ambitions to create green jobs to support the transition to a high-skill, low carbon economy.

The rail supply chain would welcome early visibility of proposed electrification schemes to give suppliers the confidence to invest in jobs, skills and equipment here in the UK to reduce electrification unit costs. Given current affordability challenges, further consideration should be given to measures to unlock third party investment in electrification infrastructure. Similarly, commitments on future electrification projects will give freight operating companies the confidence to make long-term investments in electric and bi-/tri-mode locomotives as their diesel fleets reach the end of their asset lifespans.

<sup>116</sup> Scotland's National Transport Strategy (page 42) commits to embedding a sustainable travel hierarchy by promoting walking, wheeling, cycling, public transport and shared transport options in preference to single occupancy private car use: <https://www.transport.gov.scot/media/47052/national-transport-strategy.pdf>

<sup>117</sup> DfT, Environmental sustainability on the railways: stating our priorities, <https://www.gov.uk/government/publications/environmental-sustainability-on-the-railway-stating-our-priorities>

<sup>118</sup> RDG, Catalysing a Green Recovery report

## Rolling stock

If further rail electrification is likely to be limited or delayed, then greater focus will be required on making better use of existing rolling stock through modification and introducing alternative low carbon fuels and traction technologies to maintain progress towards full rail decarbonisation and make best use of existing electrification infrastructure. Having a clear industry plan will make best use of existing rolling stock including through improvements in carbon performance. It would also avoid abortive investment and enable operators, rolling stock companies (ROSCOs) and the supply chain to deliver the required changes in a cost-effective and timely manner.

There would be opportunities to make early progress on rolling stock decarbonisation through:

- Replacement of life expired DMUs with battery or hydrogen multiple units alongside investment in recharging or refuelling infrastructure;
- Reworking of existing mid-life DMUs into hybrid designs;
- The use of alternative, sustainable low carbon fuels that can replace conventional diesel; and
- Cascades of existing DMUs to open up space for orders of new electric or bi-mode (not diesel) rolling stock.

These measures would also offer opportunities to reduce the air quality and noise impacts of rolling stock. As a practical example, Chiltern Railways recently tested Britain's first hybrid battery-diesel train. The class 168 train was fitted with a Rolls Royce MTU hybrid drive which will cut noise emissions in stations and deliver zero emissions when operating under battery power. Chiltern are developing a business case for changing all diesel trains to hybrid technology.

## System improvements

Changing how train services are planned and delivered can secure carbon savings at relatively low cost. For example, timetables that take account of differing rolling stock energy consumption characteristics can reduce carbon emissions as well as fuel costs. Connected Driver Advisory Systems (C-DAS) enable drivers to follow the most energy efficient speed profile needed to achieve their schedules. An effective C-DAS integrated into a traffic management system should also maximise capacity, reduce cost and improve safety as drivers will encounter fewer red signals.

## Question 6c

### **How can rail best invest in climate resilience, supported by smarter forecasting, planning and technology, over the next 5, 10, and 30 years and what evidence do you have to support your view?**

The emerging Sustainable Rail Strategy provides a sensible framework for embedding adaptation measures to enhance the railway's resilience to climate change. It proposes the development of an agreed level of service across the industry for adverse and extreme weather conditions that can be delivered safely and reliably. This should then be recognised in all relevant industry contracts, so that all organisations are working towards the same goals. RDG supports this and encourages a whole system approach so that passenger and freight operators are involved in the decision-making process.

RDG's Key Train Requirements document<sup>119</sup> contains best practice advice to assist rolling stock procurers, specifiers, manufacturers and system suppliers. It recommends that rolling stock should be designed to operate reliably under predicted environmental conditions taking account of future extremes of heat, rainfall and cold and more frequent instances of extreme weather. RDG recommends that all future rolling stock procurements take account of this advice on a consistent basis.

Greater use could also be made of train-borne systems to monitor the infrastructure – track, overhead electrification, lineside vegetation etc. – and provide early warning of any emerging issues to enable preventative maintenance or enhancements to take place.

As critical parts of the rail infrastructure, consideration should be given to ensuring stations – particularly larger stations or those at key interchanges – are able to operate safely and reliably acclimate changes and as we experience more extreme weather events. Initial risk assessments should be undertaken followed by appropriate investment plans to improve their resilience.

<sup>119</sup> RDG, Key Train Requirements Version 6, <https://www.raildeliverygroup.com/our-services/cop-guidance.html>

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