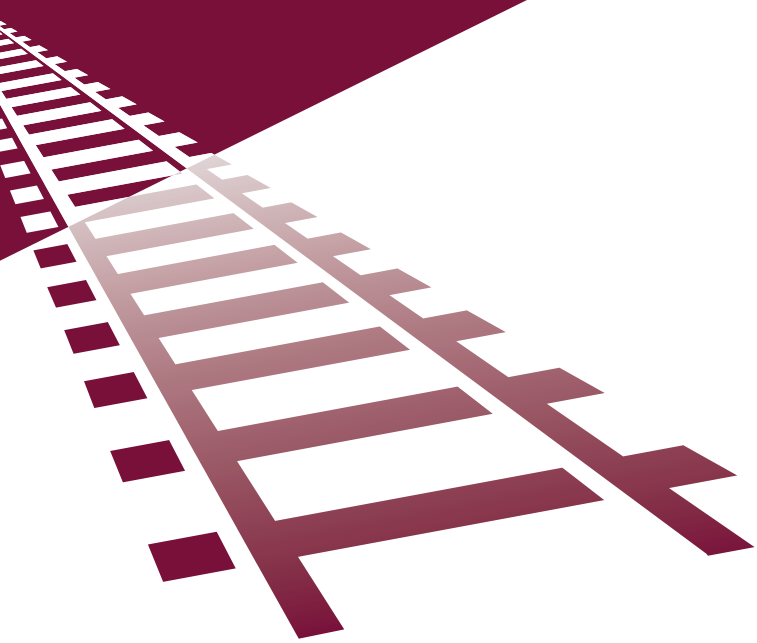
THE
SHAW
REPORT

The future shape and financing of Network Rail

The scope

November 2015



The Summer Budget on 8 July 2015 set out that the government had asked Nicola Shaw to advise the government on how it should approach the longer term future shape and financing of Network Rail.

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Department for Transport
Great Minster House
33 Horseferry Road
London SW1P 4DR
Telephone 0300 330 3000
General enquiries https://forms.dft.gov.uk
Website www.gov.uk/dft

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Introduction

Great Britain has Europe's fastest growing and safest railway, and one of its most financially successful. Part of the country's collective psyche, the railway is important for economic and social development, requires substantial public investment, carries us around – daily for some, on occasion for others – has significant impacts on our built environment and landscape, and is, mostly, photogenic. These things, together with the colourful characters who have worked on, designed, managed and regulated the system, mean that rail is regularly featured in the British media and discussed around kitchen tables, on social media, and in Parliament.

So in July, when I was asked to carry out this work – to provide recommendations about the future structure and financing of Network Rail – I knew that I was being asked to do so in an arena of political and public prominence. I cannot pretend that this prominence won't impact my thinking – it must – but so must the other host of experiences that I have had both using and working around the railway in Britain and elsewhere. I hope that as you read this document you will remember that you too come to this with a range of different experiences and that there are others reading who equally have their own experiences to draw on – let's call these our various lenses – financial, operational, managerial, political, personal, engineering, and so on. My team and I are seeking to find a way, by looking through these various lenses, to recommend something which can deliver what Britain needs from the railway now and for the future. Please try to do the same as you read this document.

You'll note already that although I have been asked to report on Network Rail, I am setting this in the context of the railway as a whole – that's because the industry has complex interactions between

Nicola Shaw

different elements. Over 35,000 people work for Network Rail, with tens of thousands more working across its supply chain and for the train operators who use the rail infrastructure. Between these different businesses there are contracts, regulations, codes, committees and licences which govern interactions. These interactions mean that changes to Network Rail may have implications elsewhere and on which I will seek to report as well – otherwise the job would only be partly done.

I am grateful to all those who have already given me their thoughts and views and who have taken time to think through the options for the future. From those conversations, despite the wide range of perspectives, there appears to be genuine consensus that:

- the way we do long term planning for rail could be improved – in a variety of ways;
- the processes we have in a number of areas are frustrating and time consuming and could be considerably slicker and more effective; and
- there is a concern that, even if the rail industry is extremely efficient, the funds required for investment in rail infrastructure won't be available in future because of the changes to Network Rail's finances now that its debt is part of the government balance sheet.

However, there isn't, yet, consensus about how these shared concerns could be dealt with. I look forward to more conversations on these points and others.

I am aware of the uncertainty that this work creates. I am particularly grateful therefore to the Network Rail staff – without them, and their commitment and continued delivery every day, the outcomes of this work would of course be irrelevant.

There are lots of other people to thank. Publicly, the specifics of those thanks will be in my report, which will be published in early 2016. In the meantime, a general thank you to everyone who has contributed so far.

This document – the 'scoping document' – sets out some of the complexities of the issues – drawing on our analysis of the areas which require development. It takes the following form:

Chapter 1: Sets the context with historical background to rail organisational development.

Chapter 2: Describes the terms of reference and the approach we are taking.

Chapter 3: Describes Network Rail's functions, how it is organised to deliver those functions, how it is funded, and how it is held to account.

Chapter 4: Covers the three perspectives we are using to assess the structure of Network Rail: customer, devolution and growth.

Chapter 5: Sets out more details of the funding and financing issues.

Chapter 6: Presents an overview of the risks and the implementation issues.

Chapter 7: Asks you to contribute to the conversation and presents various ways for you to do so. In particular, please sign up for one of the discussion sessions between now and the 18th of December and submit your formal written responses before Christmas.

At the end of this work, I would like to be able to propose changes to Network Rail's structure and financing which will, among other things, help Britain: to develop economically and socially – building connections between towns and cities whilst ensuring our landscape and built environment are enhanced; to meet the growing number of rail customers' needs better – with passengers perceiving that they are getting good service and freight moving smoothly from its origin to destination; and to showcase a safe, cost-efficient and innovative railway delivered in collaboration with highly skilled staff.

So please do contribute – let us know, from your lenses, if we have missed things, and whether there are other aspects we should consider – only with everyone's best brains on this will we find the right way forward for the next steps in the journey of the rail industry.

Nicola Shaw
November 2015

01 The railway in Great Britain

The value of the railway

1.1 In 1825, as the Industrial Revolution gathered pace, the Stockton and Darlington Railway was opened to help move coal from the collieries of Bishop Auckland in County Durham to the Teesside port at Stockton. Thus was born the world's first public steam railway, demonstrating from the very start an intrinsic link between rail transport, economic growth and technological innovation which has continued to hold to this day.

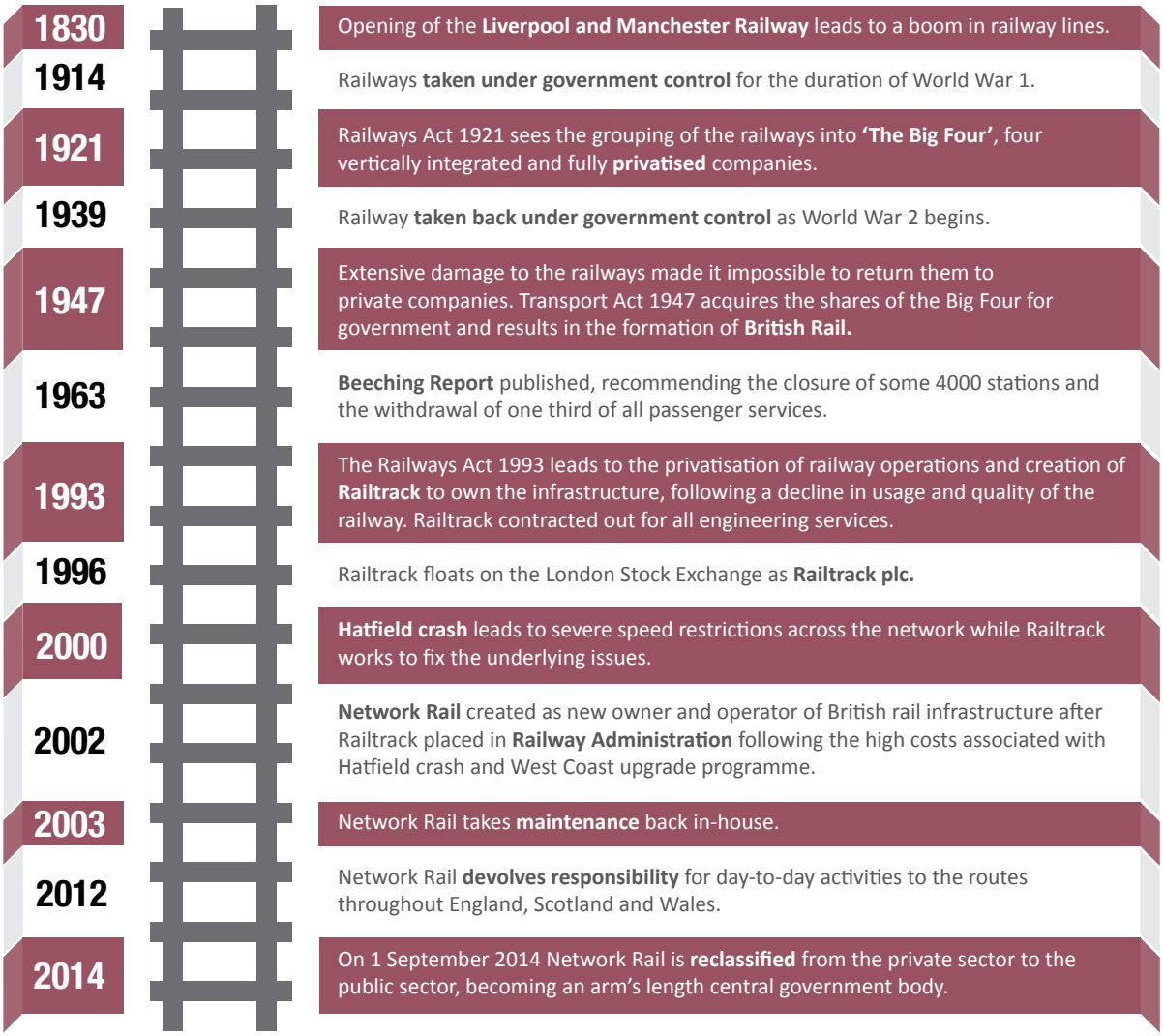
1.2 In the nearly 200 years since then, successive governments – in the UK and around the world – have recognised the strategic economic importance of rail networks. Transport is essential for connecting people to jobs and delivering products to markets, as well underpinning supply chains, logistics networks and international trade. The connectivity, condition and capacity of a country's transport network are therefore critical for productivity. Rail – perhaps more than any other mode of transport – has the potential to transport large volumes of people and goods quickly, safely, and reliably. In 21st century Britain the railway is arguably more important for the economy than it has ever been – and the significance of its contribution is set only to rise as the industry prepares for passenger demand to more than double over the next thirty years, with freight demand expected to go up by 140%.

1.3 But the value of rail to the UK goes beyond the purely economic. The railway connects communities, making it possible for people to travel from one end of the country to the other, or from one town to the next. Thus the railway provides a vital social service, particularly for communities which do not have access to other transport links. Indeed, it is no exaggeration to say that the railway acts as an important force in national social integration. It is this role of the railway as a part of the fabric of national life that helps to explain the strong positive feelings it evokes: not only in the general public, but also in the many thousands of people who work in the rail industry, amongst the activists (and representatives) who ensure that the railway remains a live topic of local political relevance across the country, and in the legions of enthusiasts for whom trains are so much more than a means of travel.

A brief history of the British railway

1.4 Figure 1 depicts some of the key milestones in the history of the modern railway in Britain. It must be noted that this history has been marked by extended periods of uncertainty and difficulty. For all the benefits of an efficient rail system, creating, maintaining and growing such a network remains a highly capital-intensive business. Throughout its history, the railway has experienced cyclical periods of feast and famine, as both private and public sectors have struggled to make the immediate economics (and politics) of long-term investment in this element of national infrastructure add up.

Figure 1: A brief history of rail in the UK



1.5 The railway had reached a particular ebb by the late 1980s. British Rail – the nationalised, integrated institution which had been responsible for delivering virtually all British rail travel since the end of the Second World War – had been in a period of overall decline for 20 years and more following the publication of the Beeching Report in the 1960s. Throughout this period, and into the early 1990s, the policy assumption remained one of continued long-term decline in rail travel as more and more people were expected to move out of towns and cities into suburbs and satellite settlements, and car travel was expected to take over.

Privatisation – from Railtrack to Network Rail

1.6 After nearly 50 years of nationalised rail, the Railways Act 1993 changed the structure of the industry dramatically by bringing about privatisation. Railtrack, the newly created owner of track, signalling systems and other infrastructure, was to buy in all of its engineering requirements, as well as inspection, monitoring and safety functions. In 1996, Railtrack floated on the Stock Exchange as Railtrack plc, with 100% of its shares sold to private investors.

1.7 On the operating side of rail, passenger services were split into 25 separate franchises, which were competitively tendered to Train Operating Companies (TOCs). The 11,000 vehicles owned by British Rail were transferred to three separate Rolling Stock Owning Companies (ROSCOs), which then let trains to the TOCs on a commercial basis. British Rail's freight businesses were also divided and sold.

1.8 This would be the structure of the industry until the Hatfield crash in 2000. The aftermath of the crash saw severe speed restrictions put in place across the network while Railtrack plc worked to understand the condition of its assets and perform maintenance where required. This, in conjunction with fines from the regulator and the spiralling costs of the West Coast Route Modernisation project, saw Railtrack plc placed into Railway Administration in 2001.

1.9 Network Rail was created as a not-for-dividend company that acquired Railtrack plc's assets in 2002. Since then, the rail system has continued to operate without major structural change until the reclassification of Network Rail to the public sector in 2014. This is discussed in more detail later in this chapter. There have, however, been a number of incremental changes that have had an effect on the internal industry relationships. These include changes to franchise maps, the commercial operation of services independent of DfT involvement, varied franchise risk, reward and incentive mechanisms, the movement of responsibility for rail planning from the Strategic Rail Authority (SRA) to Network Rail, the transfer of franchising from the SRA to the Department for Transport (DfT) in 2005 following the abolition of the SRA, and the creation of the Rail Executive within DfT in 2014.

The success of rail in the 21st century

1.10 Despite the assumption at the time of privatisation that rail would continue to decline, 20 years on, railways remain a crucial and growing part of the Britain's transport network, with over 4.3 million journeys made by rail each day.[1] Far from declining, since the mid-1990s, the rate of growth in rail passenger demand has far exceeded that of any other mode of transport: over the last 10 years, rail passenger journeys in Great Britain have increased by 57%.[2]

1.11 Alongside that period of sustained growth, safety on Britain's mainline railways – which is clearly of paramount importance to any rail infrastructure provider – also improved steadily. In its 'Health and Safety report for 2014-15', published in July 2015, the ORR confirmed that key investment in regulated safety enhancements has helped drive continuous improvement in risk management across the industry and has led to Great Britain's mainline network now being regarded as the safest railway in Europe[3]

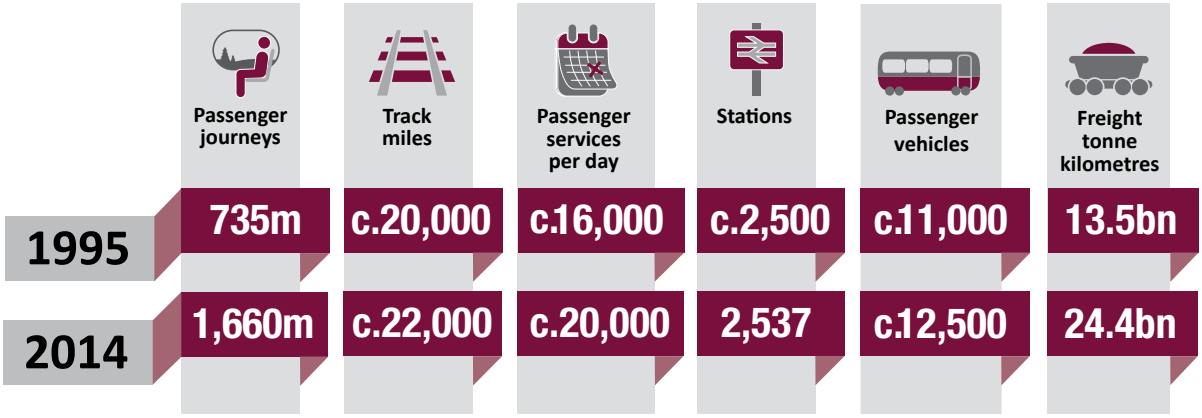
[1] Office of Rail and Road (June 2015): Passenger Rail Usage 2014-15, Quarter 4, Statistical Release http://orr.gov.uk/__data/assets/pdf_file/0005/18095/passenger-rail-usage-2014-15-q4.pdf

[2] Office of Rail and Road (June 2015): Passenger Rail Usage 2014-15, Quarter 4, Statistical Release http://orr.gov.uk/__data/assets/pdf_file/0005/18095/passenger-rail-usage-2014-15-q4.pdf

[3] Office of Rail and Road (July 2015): Health and Safety Report 2014-15 http://orr.gov.uk/__data/assets/pdf_file/0007/18556/health-safety-report-2015.pdf

1.12 In addition, in a 2013 study, the European Commission placed the UK's railway as the most improved in Europe since the 1990s, based on 14 factors including growth of modal shift, passenger satisfaction, kilometres per line and safety. This success is not just limited to passenger growth, but also extends to rail freight, which today transports over 100 billion tonnes of freight per year.

Figure 2: Great Britain's railway today – some key facts and indicators [4]



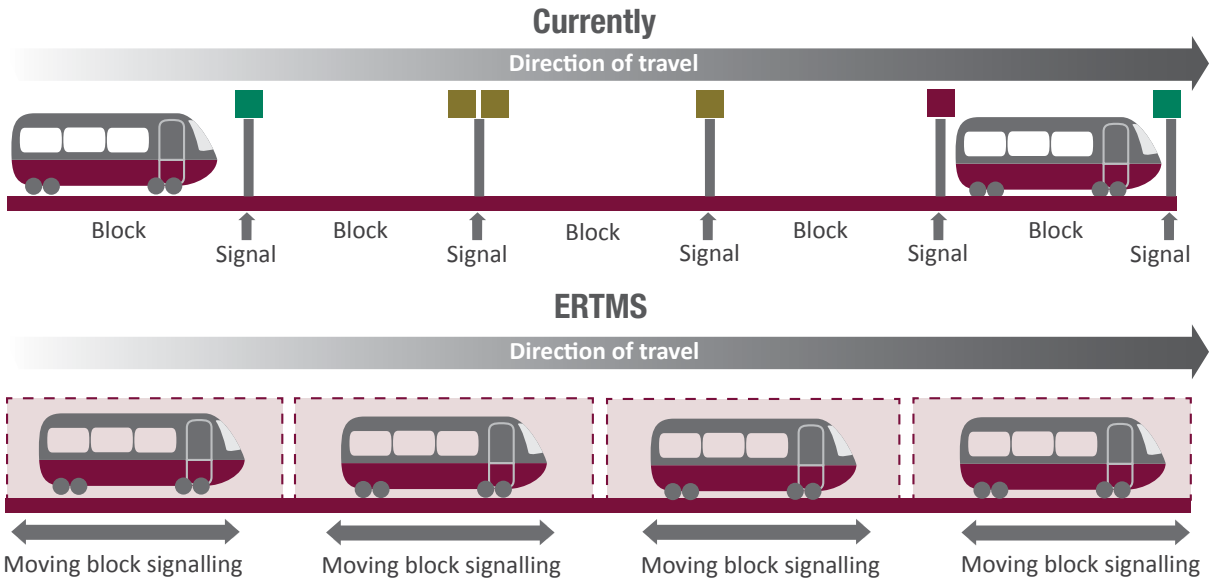
Opportunities and challenges for the future

1.13 While the recent history of rail travel in Britain has been one of growth and expansion, there is no room for complacency if it is to continue to be a success story. The great opportunity for rail is perhaps also its greatest challenge. As noted above, the recent step-change in rail travel has taken place without a corresponding expansion in infrastructure. Put simply, more freight and passengers than ever are travelling on roughly the same size of network as 20 years ago. As a result the network is highly congested, which brings its own challenges in relation to passenger comfort and service punctuality. Given that the outlook for the industry is one of continued rapid growth in demand, Britain's railway faces a significant challenge if it is to cater for that growth successfully.

1.14 Technology and innovation will play a particularly important role in the ability of rail to meet this challenge. The roll-out of the Digital Railway programme, for example, has the potential to significantly aid in catering for this growth by increasing capacity in the network. The European Railway Traffic Management System (ERTMS) in particular, will introduce a new approach to signalling, which will allow far more trains to be safely run over the same length of track and require significant additional ongoing cooperation between train operator and infrastructure provider.

[4] Passenger journeys:
(1995 figure) – Department for Transport (October 2013): Rail passenger numbers and crowding statistics 2012, Statistical Release – https://www.gov.uk/government/uploads/system/uploads/attachment_data file/252516/rail-passengers-crowding-2012-revised.pdf
(2014 figure) – Office of Rail and Road (October 2015): Passenger Rail Usage 2015-16, Quarter 1, Statistical Release – ORR: Passenger Rail Usage 2015-16 - http://orr.gov.uk/__data/assets/pdf_file/0009/19377/passenger-rail-usage-2015-16-q1.pdf
Track miles:
(1995 figure) – Railtrack (May 1996): Share Offer Prospectus
(2014 figure) – Network Rail provided figure
Services per day:
(1995 figure) – UKTI (April 2014): The Rail Industry, A Showcase of Excellence https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/303255/UKTI_Rail_Brochure.pdf
(2014 figure) – UKTI (April 2014): The Rail Industry, A Showcase of Excellence https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/303255/UKTI_Rail_Brochure.pdf

Figure 3: The capacity benefits of moving block signalling



1.15 Furthermore, the planned development of new high-speed rail networks – of which High Speed 2 (HS2) is the best known and most advanced – also has the potential to make a significant difference to capacity on some of the most heavily-utilised routes in the country.

[4] Stations:
(1995 figure) – Railtrack (May 1996): Share Offer Prospectus
(2014 figure) – Network Rail provided figure
Vehicles:
(1995 figure) – (2002) British Rail 1974-97: From Integration to Privatisation; Terry Gourvish, p420
(2014 figure) – Network Rail (February 2013): Long Term Passenger Rolling Stock Strategy for the Rail Industry http://www.networkrail.co.uk/WorkArea/DownloadAsset.aspx?id=30064784865
Freight tonne:
(1995 figure) – Rail Delivery Group (2015): Freight Britain, Continuity and certainty for rail freight http://www.raildeliverygroup.com/files/Publications/2015-02_freight_britain.pdf
(2014 figure) – Rail Delivery Group (2015): Freight Britain, Continuity and certainty for rail freight http://www.raildeliverygroup.com/files/Publications/2015-02_freight_britain.pdf

Figure 4 – The new HS2 network

1.16 In addition new facilities and services are required to meet passenger expectations and needs, such as ease of access and universal Wi-Fi.

1.17 But, as with growth, technology poses challenges for the railway as well as creating opportunities. Installation of new technological solutions in railway infrastructure is an expensive and time-consuming business. As discussed in Box 1.1 in the context of HS2, integration with existing technologies is essential. Implementation projects can overrun. In extreme cases, this can have the unintended result of significantly reducing capacity.

1.18 Furthermore, in the longer term, technological innovation is likely to lead to new modes of transport which will successfully compete with rail. Twenty years ago, the concept of a 'driverless car' still existed largely in the realms of science fiction. Today, there are many advanced pilots for implementation of this technology. And twenty years from now, driverless cars may provide a new paradigm for mass passenger travel, if rail has not successfully met the growth challenge with technological solutions of its own.

Box 1.1: High speed – the future shape of British rail

The arrival of HS2 in the mid 2020s will have significant implications for the structure of the national network. HS2 will offer new services for British rail passengers, both on the new high-speed network and the existing infrastructure owned and operated by Network Rail. This will release capacity on the existing network, creating opportunities for more services to be provided to meet growing demand in commuter markets. Although long-term plans for the operation of the high speed network are yet to be decided, the current intention is that Network Rail will be responsible for the timetabling of this expansion of services on the classic network in its role as infrastructure manager.

The current planning assumption within the DfT is that HS2 Ltd will cease functioning as a delivery agent after phase 1 opens in 2026, and transition to the role of infrastructure manager for the high speed network thereafter. This would be the third major national rail infrastructure provider alongside Network Rail and High Speed 1.

Delivering HS2 will raise many interface challenges for Network Rail and the operators (TOCs and FOCs) operating on the existing network. These challenges have already begun to materialise in the form of capacity planning and routes into Euston on the West Coast Mainline, and will only be magnified once the construction of phase 1 begins. During construction the interface points will primarily be at Euston station and Old Oak Common and with existing operators (TOCs and FOCs) and Network Rail as infrastructure manager.

The construction of phase 2 and the 'Y' network to Manchester and Leeds will see the construction impacts continue at Euston where additional platforms will be built and the interface issues with existing operators and infrastructure will be replicated further north.

The role of the government

1.19 The fact that the growth of the railway in recent years – as detailed above – is measured in terms of passenger and freight metrics suggests that the primary customers of the railway are passengers, be they commuter, business or leisure passengers, and the companies that need to transport freight around Britain.

1.20 But the provision of rail transport services is more complicated than this. The railway is a vehicle for economic growth and social mobility, which also enables a number of other government policies to be realised, for example new housing development or CO_2 reduction. In Great Britain, the government plays a number of different roles in the railway, including:

- as owner and funder of Network Rail;
- as a direct customer for new rail infrastructure delivery; and
- as an indirect customer, via franchised train operating companies (TOCs), for most passenger rail services.

1.21 Nor are we alone; it is common practice internationally – and certainly the case in all EU countries – for government to be involved in one or more of these ways.

1.22 This close involvement of governments in rail delivery arises from the combination of two factors. First, there is a broad public interest in the existence of a national rail network, and second, there is the fact that this public interest cannot be wholly met through the operation of a competitive market.

1.23 Allowing the market to dictate the services provided by the railway would result in a focus on the 'profitable' elements and a stopping of those deemed 'non-profitable', and might mean fares increasing on some congested routes into major cities at peak times. The public service nature of significant elements of the railway means that government intervenes to ensure these non-profitable elements are delivered in order to secure its wider aims for the railway.

1.24 Furthermore, the monopolistic nature of the rail industry means that the normal competitive incentives to deliver services to consumers at a reasonable price do not exist, and so rail customers' (passengers and freight) interests must also be protected through government intervention and regulation – by extension, Network Rail and operators are also protected by these mechanisms. Also the costs and uncertainties involved in providing capacity increases (both through infrastructure and rolling stock) mean that invariably government needs to be involved in delivering for customers.

1.25 This is a classic example of the 'public good' externality or market failure. The fundamental costs of delivering a national service are too large for competition in the market to bear, while the potential gains accrue across the wider economy. The government's role in rail is therefore to support the creation of these public goods and wider economic benefits, which the market on its own could not (or would not) realise. These benefits could include (but are not limited to):

- journeys on non-commercial routes and services;
- regulated fares;
- reduced congestion on the roads;
- transporting labour to work; and
- providing links between businesses.

Box 1.2: Government's priorities for the railway

In 2012, the government published its rail command paper 'Reforming our Railways: Putting the Customer First'. This document highlighted the importance of the railway network to the prosperity and wellbeing of the country and set out the government's vision for the future of the railway. Central to this vision were improved services for users and making the railway more affordable and efficient.

This remains the most current high-level statement of the government's vision for rail. Government's current strategic objectives for rail, to be delivered in partnership with the industry, are: tackling capacity constraints; improving journey times and options for travel; increasing standards in customer service, train performance, station facilities and accessibility; improving efficiency, spreading demand and reducing costs; improving safety and environmental outcomes; and building workforce skills and promoting industry capability.

In 2014, the Department for Transport launched Rail Executive with a stated mission to lead a world-class railway that creates opportunity for people and business. The aims of Rail Executive are: keep cities moving, grow markets and support economic development; connect communities and improve social inclusion; ensure passengers benefit from a safe, high-performing and affordable railway; create the conditions for a successful, international competitive rail sector; and improve international access and grow freight markets.

Network Rail's recent history

Reclassification

1.26 On 1 September 2014 the Office of National Statistics (ONS) reclassified Network Rail to the public sector, as an arm's length central government body. As a result, Network Rail's borrowing and debt now add to measures of public sector borrowing and debt.

1.27 Network Rail's reclassification to the public sector was triggered by an update in the statistical guidance contained in the 2010 European System of Accounts (ESA10). ESA10 was implemented across Europe in September 2014 and led to a number of changes to public sector finance data, of which Network Rail's reclassification was one element.

1.28 ESA10 included new guidance on establishing government control of non-profit institutions. On the basis of this new guidance, the ONS judged that the degree of the government's risk exposure to Network Rail established control by government. The ESA10 guidance includes several tests, two of which had not been previously applied to Network Rail: the degree of government financing; and the degree of government risk exposure. The second indicator was determined to be 'highly relevant' because Network Rail's debt is guaranteed by the Department for Transport, the government has a statutory obligation to protect the interests of rail customers, and there is no other shareholder to bear the risk. Additional indicators, which the ONS determined did not establish control at the at the time include: government appointment of officers, provisions of enabling instruments (e.g. right to revoke staff and approve budget) and the degree of government control over contractual arrangements.

1.29 Prior to reclassification on 1 September 2014, the DfT and Network Rail agreed two key documents aimed at "preserving Network Rail's ability to continue managing its business with appropriate commercial freedom within effective regulatory and control frameworks appropriate for a company in the public sector":

- a **framework agreement**, setting out the expected interactions between Network Rail and the DfT in terms of financial management and corporate governance (including board appointments, remuneration policy, etc.); and
- a **facility agreement**, which provided Network Rail with access to a £30.3 billion loan (later adjusted to £30.175 billion) from the DfT to cover its borrowing over the period between 2014 and 2019 (known as Control Period 5).

Box 1.3: The impact of Network Rail's reclassification

As noted, since being reclassified to the public sector, the government and Network Rail have worked to develop a framework that combines the freedom for Network Rail to operate as an arm's length commercial entity, while ensuring an appropriate degree of public oversight. However, project delivery and performance issues since reclassification have exposed some of the tensions inherent in Network Rail's new relationship with the government. For example:

- borrowing limits have reduced Network Rail's financial flexibility and altered its buffer against financial risk (see Chapter 5);
- Network Rail has faced greater scrutiny on financial and operational performance, increased reporting requirements and greater scrutiny on pay;
- Network Rail has had to adjust to complex and multifaceted relationships with different government departments and with Parliament; and
- there has been greater focus on non-core commercial activities and assets for potential monetisation.

There are diverse views on these changes and their potential impact. On the one hand, they could take management focus away from the company's core activity, and could affect issues such as recruitment and talent retention. On the other, closer government and parliamentary scrutiny reflects the fact that Network Rail's activities, like those of other public sector organisations, affect the public sector finances and have implications for the government's control of overall public sector expenditure.

1.30 A number of governance and financing changes have already taken place since reclassification, including the introduction of direct government lending and the appointment of a Special Director. Network Rail's future classification will depend on how any recent and future changes affect both the factors which led to its recent reclassification to the public sector, and other indicators of government control. Furthermore, the interpretation of statistical guidance can evolve, particularly for innovative structures.

Problems in Control Period 5

1.31 The railway industry is planned in cycles of five years known as control periods (distinct from franchise periods which have different end dates for each franchise operator). In preparation for each control period the regulator – the Office of Rail and Road (ORR) – conducts a periodic review, taking inputs from the DfT and Network Rail, and consulting the industry on a variety of issues before publishing its final determination. This final determination sets the targets and parameters that the rail industry must operate within over the following five years.

1.32 In their response to the ORR's draft determination for Control Period 5 (CP5, the current period from April 2014 – March 2019), Network Rail raised concerns about the challenging assumptions on renewals costs, the scale and pace of change, and the flexibility of the enhancement framework. For example, the enhancement plans for CP5 included the electrification of 850 miles of track, more than 14 times the 60 miles electrified since 1997. Many of these enhancements were at a very early stage in the development process, hence their costing was very preliminary. The Enhancement Cost Adjustment Mechanism (ECAM) was created to allow further assessments during the control period. Network Rail accepted the ORR's final determination, despite acknowledging that it did not expect to meet the performance targets that had been set for the early years of CP5.

1.33 Costing the electrification projects, which represent £3 billion of enhancements in the current control period, proved to have been particularly challenging for a variety of reasons, including defining the scope of what the government wanted from the project. In addition, reclassification to the public sector has made it much more difficult for Network Rail to alter its spending plans in response to higher costs, as it now has more limited capacity to fund these through additional borrowing.

1.34 In June 2015, ORR reported in its Network Rail Monitor[5] that in 2014-15 Network Rail was behind on its enhancements programme (having missed 30 out of the 84 planned milestones over the financial year), had delivered less renewals work than planned and had overspent its budget by around £230 million in the second half of 2014-15. In August 2015, the ORR also found Network Rail in breach of its Network Licence for its failure to deliver performance targets.

Government's response

1.35 On 25 June 2015, the Secretary of State expressed concerns about Network Rail's ability to deliver the investment programme, and told Parliament that the Trans-Pennine and Midland Mainline electrification projects would be paused. Electrification of the Great Western Mainline would remain a top priority. As well as appointing Richard Brown to the Board of Network Rail, the Secretary of State also announced a pair of investigations:

- Sir Peter Hendy – who was named as the new Chairman of Network Rail – is to report by autumn 2015 with a plan to get the rail investment programme back onto a sustainable footing; and
- Dame Colette Bowe is looking at lessons learned from the planning process undertaken for CP5, to make recommendations for better investment planning in future, also reporting in the autumn.

[5] ORR (12 June 2015): Network Rail Monitor Quarters 3-4 of year 1 of CP5, 12 October 2014 to 31 March 2015 http://orr.gov.uk/data/assets/pdffile/0004/18157/network-rail-monitor-2014-15-93-4.pdf

1.36 In July, at the Summer Budget, the government announced a third line of inquiry with the establishment of the Shaw Report to consider the future structure and financing of Network Rail.

1.37 The Summer Budget also announced three further actions to improve incentives and drive improvements in Network Rail and the wider rail industry. These were:

- to change the flow of public money so that more is channelled through the TOCs;
- calling for Network Rail to further devolve responsibility to routes; and
- the government's intention to establish a dedicated body to focus on pursuing opportunities to realise value from public land and property assets in the rail network to both maximise the benefit to local communities and reduce the burden of public debt.

1.38 On 1 October 2015, Network Rail announced that, following advice from Sir Peter Hendy, the Secretary of State for Transport had asked Network Rail to unpause the Trans-Pennine and Midland Mainline electrification projects. The projects will be completed four years later than originally planned. Sir Peter Hendy said the temporary pause had given Network Rail the space to develop a better plan.

Box 1.4 A highly dynamic policy context

The government's specific responses to the recent difficulties experienced by Network Rail have created a significant agenda of change for the industry to adapt to. However, it is worth also noting that this agenda is playing out in what was already a highly dynamic commercial, policy and regulatory context for the British rail industry:

- the next periodic review (PR18) process for Control Period 6 is in its early stages;
- three franchise competitions are currently under way – for Northern, East Anglia and TransPennine Express, with eight more due to be let by 2020;
- the ORR is carrying out two important consultations – into the regulation of Network Rail in Control Period 6, and into a specification of a system operator for the rail network;
- the Competition and Markets Authority is carrying out a policy study into increased on-rail competition;
- general changes in policy in relation to devolution for example:
  - increased powers to Scotland and Wales;
  - the Northern Transport Strategy to better connect the North and create a single economic region, including the development of a 'TransNorth' rail system; and
  - the creation of new controls over local business rates giving local councils new funds to support developments;
- the creation of a new independent National Infrastructure Commission (NIC) to provide analysis of the UK's long-term infrastructure needs, with a brief that includes high speed rail links between the cities of the North, and public transport infrastructure in London (as announced by the Chancellor of the Exchequer in October 2015); and
- in Europe, the so-called 'fourth railway package' which seeks to promote the creation of a single European rail area is nearing the final stages of its negotiation.

Box 1.4: Continued

This last point is important as a reminder that Britain's railway is not alone in undergoing major structural changes, nor indeed, in experiencing problems in the delivering major infrastructure investment.

The comparisons drawn by the McNulty Report in 2011 between the costs of British rail and those of other European countries (particularly France, the Netherlands, Sweden and Switzerland) concluded that the railway in Britain should target a 30% reduction in the level of industry unit costs by the end of CP5 compared with 2008-09. Four years on from McNulty, the UK rail industry has achieved some of these efficiencies, against a backdrop of sustained and significant growth. Europe has not enjoyed the same levels of growth and, as illustrated below, have recently faced their own challenges in terms of their models of infrastructure and service delivery.

Sweden: Since the decision on vertical separation in 1988, the railway in Sweden has become one of the most vertically separated and open railway markets in Europe, with open access only arrangements for freight and inter-regional services, alongside both open access and competitive tender procurement for regional and inter-regional services. However, recent years have seen a growing number of delays and service interruptions, caused by problems with infrastructure performance, and there are reports of growing tension between open-access and procured operators. In May 2013, a committee was appointed to review the regulatory reforms and the organisation of the Swedish railway sector, which will report in December 2015.

The Netherlands: In January 2013, the Fyra high-speed service between Amsterdam and Brussels, which only fully opened in December 2012, was cancelled due to concerns about reliability and safety after continuous technical difficulties suspended the service. According to a parliamentary inquiry the involved parties, including the Dutch government and Netherlands Railways, had put a number of interests ahead of those of the passengers, resulting in a failure to deliver the promised high-speed services at reasonable prices. According to the inquiry, the cost to the state of the cancellation was around €1 billion in unfulfilled obligations from the high-speed concession.

France: In October 2012, following a report by the École Polytechnique Fédéral de Lausanne on the state of the French railway network, the French Minister of Transport initiated a modernisation plan of the railway system. The resulting proposal to restructure the rail sector gained legislative approval in summer 2014. The reform was intended to create an integrated industrial public group to restore the economic equilibrium of the rail sector and put railway finances on a more sustainable footing, as well as preparing for the introduction of competition.

The reform established SNCF Réseau as part of SNCF Group on 1 January 2015 as the infrastructure manager with responsibility for maintaining, modernising and selling access to its network. Its ambition is to build a more effective, more innovative and even safer railway network. It currently has 1,500 modernisation projects planned, with a budget of €4.9bn.

02 The Shaw Report

Terms of reference

2.1 As discussed in the previous chapter, the government has established three investigations into the recent issues experienced at Network Rail. These can be thought of as covering the past, present and future of Network Rail:

- Dame Collette Bowe, non-executive director at the Department for Transport, is considering the past, and in particular what lessons can be learned from the periodic review process for Control Period 5 (CP5);
- Sir Peter Hendy, Chairman of Network Rail, is looking at the present, and how to deliver as much of the current enhancement programme as possible; and
- As announced at the Summer Budget, Nicola Shaw, Chief Executive of High Speed 1, is conducting a report into the future of Network Rail.

2.2 The terms of reference of the Shaw Report are:

- to develop recommendations for the longer-term future shape and financing of Network Rail;
- the work is to be presented jointly to the Secretary of State for Transport and the Chancellor of the Exchequer; and
- it will divide into a scoping study and a detailed report with implementation proposals – the former to be completed in autumn 2015, and the latter by the time of the Budget in spring 2016.

2.3 As the Summer Budget made clear, Nicola Shaw will work closely with Sir Peter Hendy in carrying out this work.

2.4 In implementing this mandate, the Report Team is focusing on four key components of the terms of reference, which are briefly discussed below.

The 'longer-term' future

2.5 In framing analysis to inform its recommendations, the Report Team will focus on the ten-year period from 2019-29. The start date of 2019 is based on two factors:

- first, because 2019 is the first year of the next control period, and given the work already underway, the Report Team considers it would be appropriate for its recommendations to apply after the conclusion of CP5; and
- second, on the basis that any recommended options are likely to require some time to implement, the Report Team considers that, until the extent of any required change (and process to implement it) is clearer, 2019 is a useful starting assumption in terms of allowing sufficient lead-time for the government and Network Rail to have planned, prepared and embedded any options to be taken forward.

2.6 The proposed end date of 2029 is more open. Looking forward, and as discussed in the previous chapter, the opening of High Speed Two (HS2) in 2026 will be a key milestone for the rail network, and having a stable structure for infrastructure provision will be a very important factor in enabling HS2 to be delivered successfully. Any changes implemented as a result of this report must remain in place long enough to support HS2 delivery. The Report Team therefore considers that the year 2029 provides a reasonable minimum lifespan for its recommendations, assuming that the 2026 date for HS2 implementation remains fixed.

'Shape'

2.7 This refers to the main structural elements of Network Rail as an organisation, including, but not limited to:

- the scope of the activities and functions that Network Rail is responsible for carrying out;
- the internal organisation of Network Rail, both functionally and geographically, especially the interfaces that operate between different units within the organisational structure;
- the links between organisational units of Network Rail and other key parts of the wider rail system, including train operating companies (TOCs), central and local government, the Office of Rail and Road (ORR), and key suppliers;
- the incentive structures that operate within and across these multilateral and frequently overlapping relationships; and
- the corporate structure of Network Rail, including any subsidiary or joint venture companies carrying out potentially 'non-core' activities within the umbrella of the Network Rail Group (see Annex B).

2.8 Network Rail is a large and diverse organisation sitting within a structurally complex industrial, regulatory, and policy landscape. In order to provide a clear and consistent focus that helps to make sense of this complexity, particularly in terms of the whole industry impact, the Report Team will consider the structure question through three distinct lenses or perspectives:

- the **customer perspective** will consider who Network Rail's direct (and potentially indirect) customers are, and how effectively the current organisational structure works to deliver for those customers;
- the **devolution perspective** will consider the question of the geographical organisation of Network Rail's operations, and whether this enables effective delivery of railway infrastructure, especially given the continuing move to deeper and more widespread political devolution; and
- the **growth perspective** will ask whether Network Rail's structure works to enable effective planning and delivery of enhancements to rail infrastructure, particularly with a view to meeting growth projections and increasing capacity.

'Financing'

2.9 As described in Chapter 3, Network Rail's revenue comes primarily from taxpayers (in the form of direct grants or indirect subsides paid by government) and fare-payers. The Report Team assumes that Network Rail will continue to be primarily funded in this way in the future. The question for the Report Team to consider therefore relates to how Network Rail raises the finance needed to pay for long-term investments in new rail infrastructure.

2.10 Questions of efficient financing are intrinsically linked to organisational structure. To deal with this relationship, the Report Team's starting point is that finance should follow structure. In other words, the Report Team's approach will be to develop an appropriate organisational structure, and then design a financing model (or models) that fits that structure. It may, of course, be necessary to revisit structural matters in order to deal with significant financial inefficiencies in order to optimise both variables, so the approach is more likely to be iterative than purely linear.

2.11 The Report Team recognises that this chain of analysis could be traced even further back. For example, the ideal structure for Network Rail will depend on the overall strategy for the rail industry, which will in turn depend on policy priorities for transport, regional development, and the economy as a whole. In general, while touching on these matters, the Report Team's approach will be to take these as largely given.

'Network Rail'

2.12 While the term 'Network Rail' appears straightforward and unambiguous, it is worth considering what this means for the scope of the Report. Given the complexity of the railway system in which Network Rail sits, it is likely that recommendations concerning infrastructure provision will need to touch on a number of other aspects of the system. While the Report Team is mindful of the need to avoid scope-creep, it may nevertheless offer recommendations in relation to other parts of the system where it considers that they are necessary for the meaningful implementation of change.

Defining the problem

Early stakeholder engagement

2.13 Since July, the Report Team has contacted (and been contacted by) a wide range of stakeholders interested in contributing to its work.

2.14 These stakeholders represent a broad cross-section of industry partners and associates – including, but not limited to: train and freight operating companies; owning groups; passenger groups; trade unions; industry boards and bodies; train manufacturers; politicians; local government officials; contractors and engineering companies; and commercial, legal and financial advisors.

2.15 This early engagement has been carried out in listening mode as a way to develop an understanding of the breadth of interest and views, and to start to ascertain both the problem under consideration and possible options for reform. This has been completed as a precursor to formal and ongoing engagement through this document, and the conversations that will follow it. This has been a valuable first step in shaping some of the thinking set out herein.

Emerging consensus on the 'problem statement'

2.16 Among the many views already offered, there are a number of aspects of the current system for rail infrastructure and service delivery which have consistently been highlighted as causes for concern:

- long-term planning processes are not working effectively in a number of ways – this relates not only to Network Rail's role, but also the interfaces it operates in the planning process with other key players, including in government;

- Network Rail and the industry's internal management and operational processes can be frustrating to navigate and time consuming – often, it can feel (to insiders and outsiders alike) that process is imposed for process' sake; and
- there is a real concern that the reclassification of Network Rail will negatively impact on the continued availability of the funds which have been invested in rail infrastructure over the last 15 years or so.

2.17 There are other areas which have been cited by some as problems but about which there is not yet a clear consensus. Among other things, these include:

- how best to use technology and innovation as a means of meeting growing demand;
- the effectiveness of economic regulation of Network Rail, given public ownership;
- the feasibility of operator involvement in system operation;
- the extent to which it is culture or structure which needs to change (separately to the issue of culture as an enabler of structural change);
- the degree to which only a single national network provider (as opposed to route-led or outsourced initiatives) can protect the network-wide functions of the railway;
- the involvement in industry leadership bodies of supplier groups and trade unions; and
- the benefits and feasibility of introducing private sector capital into rail infrastructure provision.

2.18 The Report Team recognises organisational culture is a key enabler of change. Culture is often very deeply rooted, particularly in large organisations, or in those with a long history (either directly, or through a series of antecedents as is the case with Network Rail). Culture change can be challenging and, if approached in the wrong way, counter-productive. Equally, the Report Team recognises that changes to the structure of an organisation can have an impact, over time, on its culture.

2.19 One related issue to consider is the impact that an organisation's culture has on its ability to recruit and retain the people it needs to perform. Clearly, remuneration is also an important consideration when thinking about these issues – there has been a suggestion (as yet not borne out with hard evidence) that Network Rail loses some of its best people, particularly at the leadership and senior management level, because it cannot compete on pay. There is also a concern that this may be a growing problem now that it is subject to public sector recruitment processes and pay constraints. But motivating people to want to work for an organisation goes beyond purely financial considerations, particularly in an industry like the railway that evokes such loyalty among its employees. Culture is also important, and the sense of belonging to a high-performing organisation doing work that matters can be a very strong motivating and binding factor for staff.

2.20 The Report Team will work closely with Sir Peter Hendy and Mark Carne, the Chief Executive of Network Rail, to consider how best to enable and facilitate positive culture change.

Methodology

2.21 The first challenge for the Report Team is to properly investigate (or define) the problem, before diagnosing the root cause of those issues. To do so it will be helpful to consider them in terms of broader themes. While in many instances not perfectly indivisible, they can then be characterised as follows:

- first, problems that arise specifically from the structural make-up of Network Rail itself, including internal discipline and processes, breadth of responsibilities, inward-focus and cultural issues;
- second, those caused by Network Rail's place in a 'whole system' railway, including the interfaces and relationships within it, its supply chain, and the incentives and accountabilities underpinning those dynamics; and
- third, and more generically, those due to the inherent nature of the railway that are more broadly – and universally – applicable, including the role of government (domestic and international), questions of railway economics and their finances, and monopoly and competition impacts.

Approach

2.22 Further to the investigative and diagnostic stages referenced above, the Report Team will adopt a straightforward methodology in carrying out its work, proceeding across a number of sequential stages:

- **analysis**: for each issue identified, understanding how and why they arise, and developing possible options for addressing them;
- **evaluation**: developing an appropriate set of criteria for evaluating options (including a priority ranking to take account of particularly important considerations) and applying these to the identified options;
- **recommendation**: based on the analysis and evaluation stages, developing a package of options to fix the problems identified; and
- **implementation**: providing a high-level roadmap for the government and Network Rail to follow in delivering the recommended options.

2.23 In implementing this methodology, the Report Team will adopt as open an approach to its work as possible. In particular, the Report Team will be:

- **inclusive**: actively seeking to draw on the perspectives of everyone working in, with, or around the railway to develop a clear picture of the rail system and Network Rail's role in it;
- **impartial**: approaching the issue without any preconceived notions of what the problems in the rail system are, or which organisations are responsible for those problems;
- **evidence-based, judgement-led**: seeking out and using the qualitative and quantitative evidence needed to support an objective understanding of what is happening in practice (including, where relevant, from other countries or sectors), while recognising that there may also need to be an element of judgement in reaching meaningful conclusions; and
- **pragmatic**: aiming to build consensus around a practical and achievable solution – while it may not be possible to please all stakeholders across all dimensions of the issue, the Report Team aspires to create a solution which all major stakeholders can sign up to and support.

Assumptions

2.24 There are two fundamental assumptions that the Report Team will be applying in carrying out its work.

2.25 The Report Team recognises that there are **legal constraints**, but is assuming that, if necessary, the government will enact the primary and/or secondary legislation needed to give effect to any recommendations it chooses to implement. Therefore, the Report Team will not take a lack of current legal basis as a prima facie reason to exclude an option from being considered or recommended.

2.26 A major exception to this assumption will, of course, arise in those cases where current or future European Union (EU) directives might prevent the UK from acting to legislate in a particular manner. This is particularly relevant given the ongoing development by EU institutions of the fourth railway package to further liberalise European rail travel and promote the development of a competitive single European Rail Area.

2.27 As set out in the previous chapter, there is a reasonable and universal expectation that **travel by rail will continue to grow for the foreseeable future**. This is certainly an assumption that the Report Team will apply in the course of its work, not least in applying the growth perspective when considering possible future structural arrangements.

2.28 This assumption is relevant not only in pure terms of thinking about infrastructure provision, but also because it potentially raises questions about how capacity increases should be planned under a new structure – for example, whether infrastructure and train operations planning need to be done differently.

03 Network Rail's structure

Why structure matters

3.1 Network Rail is a large organisation sitting within a complex industrial landscape which includes UK, European and devolved government bodies; regulators; infrastructure providers; train operators (TOCs); freight operating companies (FOCs); manufacturers; suppliers; trade unions; owning groups; trade and industry associations; safety bodies; passengers and passenger bodies; freight consumers and customers. The Office of Rail and Road (ORR) overview of the British rail industry, presented in Annex C provides a good illustration of this complexity.

3.2 Furthermore, Network Rail is itself inevitably – given the geographical and functional breadth of its operations – a complicated organisation, with many different moving parts needing to work in harmony for it to deliver effectively.

3.3 Given these considerations, it is obvious that the success (or otherwise) of Network Rail depends on its ability to manage these various interactions and relationships effectively, both internally and across the wider rail industry. This is why the question of the structure of Network Rail is so important.

3.4 There are, of course, many different ways such a question could be answered. For the purposes of this study, the Report Team considers the structure of Network Rail to be made up of the following characteristics of the organisation:

- the things that it does – these define the boundaries of the organisation, and determine the points of interaction with the rest of the railway system;
- the way (or ways) that it organises itself – these define the internal structure of the organisation and determine the extent to which it is able to operate effectively, including in its interactions with the rest of the system; and
- to whom it is accountable – this defines who Network Rail is answerable to, and determines the mechanisms by which it is incentivised to perform, well or otherwise.

3.5 This chapter will consider each of the questions in turn in order to provide an illustration of the current structure of Network Rail. Chapter 4 will then consider – through the three perspectives of the customer, devolution and growth – whether this structure is enabling Network Rail to operate effectively.

What does Network Rail do?

3.6 Network Rail is a not-for-dividend company limited by guarantee, responsible for providing the rail infrastructure and related services needed for the British railway to function. With a few exceptions (see Box 3.1), Network Rail is the monopoly owner and manager of the infrastructure for Britain's railway – as Network Rail's own website puts it: "[we] run, maintain and develop Britain's rail tracks, signalling, bridges, tunnels, level crossings and many key stations."

Box 3.1: Who owns today's railway infrastructure?

Network Rail is the owner and operator of the majority of the railway infrastructure in Great Britain – primarily the tracks, signalling systems and bridges, viaducts and tunnels.

There are other rail infrastructure providers in addition to Network Rail including:

- **Transport for London** which is the largest rail infrastructure provider in the UK after Network Rail, and owns and operates the transport system in Greater London;
- **Heathrow Airport Ltd** owns the rail infrastructure from Heathrow Airport to where it joins the national rail network at Stockley;
- **Manchester Metrolink** tram and light rail infrastructure is owned by Transport for Greater Manchester;
- **Nexus Tyne and Wear Metro** light rail infrastructure is owned by Nexus;
- **Strathclyde Partnership for Transport** owns and operates the Subway in Glasgow; and
- **High Speed 1 Ltd** was awarded the concession to operate the 109 kilometre high-speed rail line from London to the Channel Tunnel.

There are also some other smaller, more specialist rail infrastructure providers in the UK. These include light rail, tramways, and minor and heritage railways.

3.7 It should be noted that Network Rail's operations cover Great Britain only. Rail services in Northern Ireland are delivered by a vertically integrated public entity, Northern Ireland Rail. Interestingly, trains in Northern Ireland run on a different gauge to the rest of the UK in order to ensure interoperability with the Republic of Ireland.

3.8 The ORR expands upon this generic definition by breaking Network Rail's functions down into four core activities - to operate, maintain, renew and enhance the network. These functions are often collectively referred to as 'OMRE'.

- The **operation** of the network involves delivering the day-to-day movement of trains around the network; this includes the signalling and control systems, performance of the trains and the network, data collection, customer services, station management and management of possessions for engineering access to the network;
- Network Rail's **maintenance** function involves planning and delivering routine maintenance to keep the network running;

- **renewals** refers to the replacement of existing life-expired assets with new ones, typically on a like-for-like basis; and
- finally, **enhancements** refers to the process by which upgrades to the network are delivered over and above the existing network condition.

3.9 While the OMRE framework provides a neat overview of what Network Rail does, the reality is more complicated. 'Operations' in particular, is a functional heading that includes a number of activities that stretch the definition of what it is to run a railway. Such activities, many of which were inherited by the infrastructure operator after privatisation (sometimes simply because there was nowhere more obvious to put them), include:

- negotiating and agreeing track access agreements to ensure service continuity;
- innovation;
- owning and operating light maintenance depots for rolling stock;
- planning and timetabling of rail services;
- planning of changes to the infrastructure as well as to the timetable;
- developing the digital railway concept;
- property ownership and exploitation;
- providing environmental protection;
- provision of comments and support to the Department for Transport (DfT) franchising processes;
- provision of various industry IT systems;
- security;
- setting network standards and safety review processes for train acceptance and new technology;
- providing operation and maintenance services in other businesses (such as HS1);
- commercial businesses (such as Network Rail Consulting); and
- station management at major stations.

3.10 It is an open question whether these activities (and other ones which might also potentially be described as 'non-core') should be the role of the infrastructure operator, or whether they might better be performed elsewhere to allow Network Rail to focus on its core functions.

3.11 Network Rail outsources many of the activities relating to OMRE (with the exception of maintenance), most notably engineering work involved with renewing and enhancing the railway. Therefore, supply chain management is a particularly important function for Network Rail's ability to manage and plan current and future rail infrastructure effectively.

3.12 The 'system operation' function within Network Rail is currently being reviewed by ORR. Across the rail network the system operation functions are those that support the efficient delivery of the network and help realise the benefits of its use, including to the wider economy and society. In the short term this relates to the day-to-day operation of the network and managing disruptions, in the medium term this involves to capacity identification and allocation, while in the long term it is focused on enhancements. ORR, through its review, is looking to determine whether it has correctly defined the functions of a system operator, and whether the core system operator function should be separate from the other functions of the infrastructure manager.

3.13 Network Rail also has some functions which are inherent in corporate life, such as the accounting and HR functions. It also chooses to provide these service functions centrally to all parts of the OMRE business.

3.14 Of course, central to all these activities is the fundamental issue of safety – maintaining and improving the safety of passengers, workforce and the general public is critical to Network Rail and the wider rail industry. The Report Team recognises the importance of retaining an appropriate safety focus, no matter what structure is ultimately recommended for future rail infrastructure delivery.

Question 1: What are your views on the scope of Network Rail's functions?

Question 2: Have we failed to mention any specific and important factors?

How is Network Rail organised?

3.15 Network Rail currently operates within an organisational structure that the company's leadership frequently refers to as a matrix. This combines devolution to geographical operating units known as 'routes' with centralised delivery of key support functions. Figure 5 below shows the eight geographical routes to which Network Rail devolves responsibility.

Figure 5: Network Rail's route structure

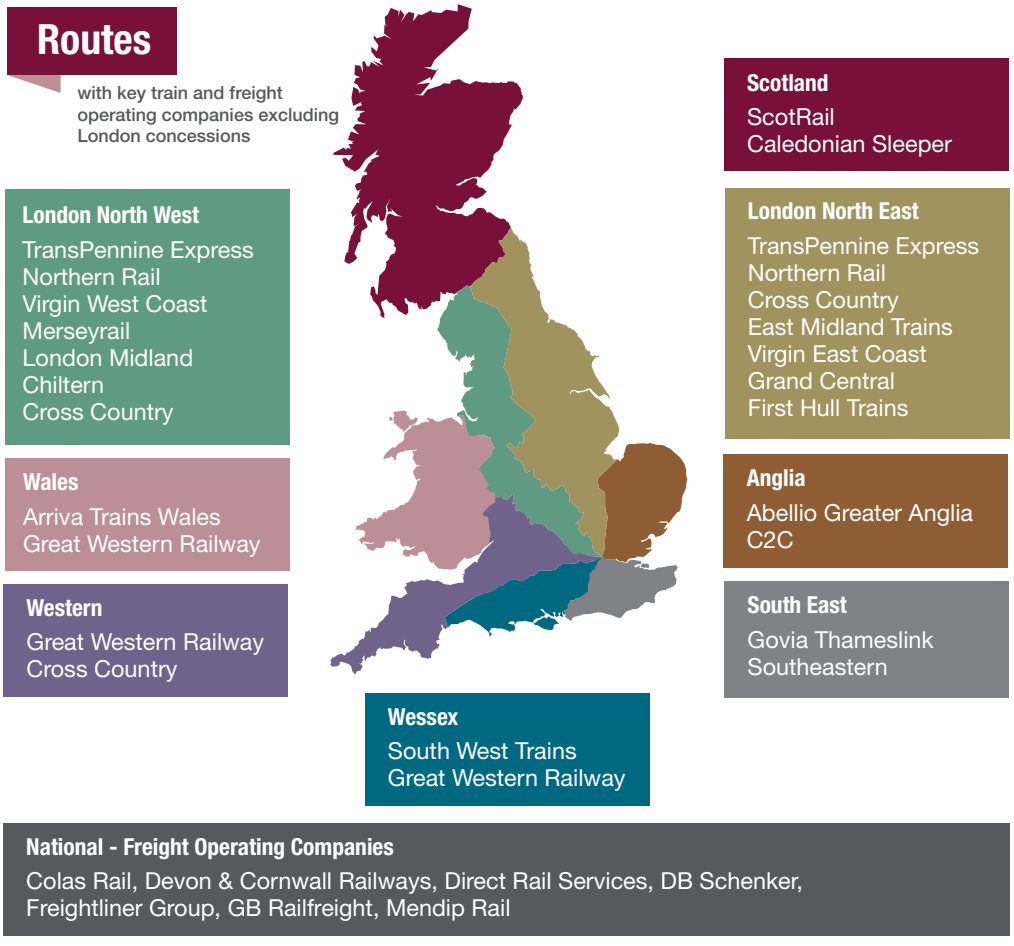
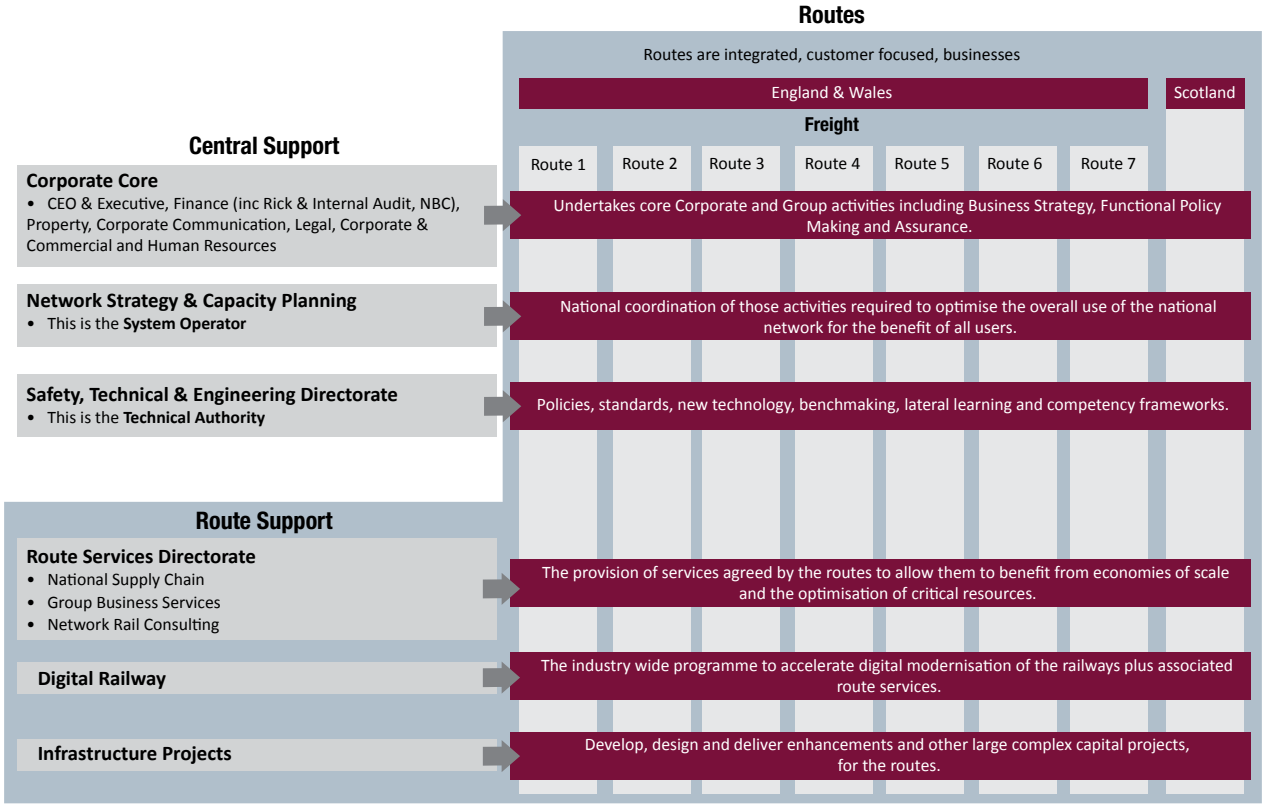


Figure 6: Operating model



3.16 When Mark Carne started as Chief Executive of the company in 2014, he led the development of the 'Devolution Handbook' to define the key accountabilities between the centre and the routes and to clarify the interfaces between different functions, using the 'matrix' model. Figure 7 below summarises the results of this work, indicating that the routes are accountable for aspects of a number of functions including train operations, asset management, and maintenance as well as aspects of enhancements and renewals. It is worth noting, however, that at this level of analysis the routes are not solely accountable for any function, but share accountability with the centre – where the centre is generally responsible for overall strategy, professional standards and conducting performance benchmarking.

3.17 Devolution within Network Rail remains a key priority for the company's current leadership. Network Rail's stated ambition remains that of reducing the role of the centre and devolving greater responsibility to the route-level. In the Summer Budget 2015 the government asked Network Rail to continue with this process of decentralisation.

3.18 To support this, Network Rail have begun implementing plans for a new route-based operating model, see Figure 6, to build on the existing matrix organisation. The operating model provides routes with more scope in choosing what services they need from the centre – where they can benefit from greater economies of scale – and what services are best provided at a route level or by the wider market. Network Rail is implementing this change with the belief that it will realise cost savings by encouraging routes to pool resources.

3.19 The operating model will see the creation of a new Route Services Directorate which will provide the central services chosen by the routes. Routes will also have greater input into the services provided by the Investment Projects Directorate (which delivers major enhancements and renewals) and the Digital Railway Directorate (which delivers the modernisation of the railway). These plans do not propose greater autonomy for individual routes to decide what specific services they would like delivered centrally, but instead require collective agreement from all the routes about what services should be delivered centrally.

3.20 The new operating model also involves a clarification of the remaining roles at the Corporate Centre which will now be focused on Network Strategy and Capacity Planning (the System Operator), the Safety, Technical and Engineering Directorate (the Technical Authority), and Corporate Services (including finance, legal and HR).

3.21 Network Rail will make the organisational changes to reflect this new operating model by April 2016 and carry out a Route Services Review to determine what services should be delivered by the Route Services Directorate and what could be devolved to the routes. As a result, this new model is likely to impact the current balance of accountabilities between the centre and the routes listed in Figure 7, page 31.

Figure 7: Devolved and centralised accountabilities in Network Rail

April 2014 – does not reflect new operating model released in November 2015

Function	Centralised accountabilities	Route accountabilities
Long-term planning	Lead on the strategic and long-term planning process, investment appraisal and managing interfaces with outside bodies including political bodies.	
Capacity planning	Lead role as 'system operator', allocating capacity for trains and resolving conflicts at national level.	
Safety, health & environment	Setting overall strategy and framework, maintaining professional standards and performance benchmarking.	Embedding safety, health and environmental excellence and managing safety management system in areas of control.
Engineering & asset management	Set overall direction and strategy for asset management and engineering. Performance benchmarking, sharing best practice and continuous improvement.	Act as owner of assets within Route through developing and delivering Route Asset Management Plans. Quality and completeness of asset data to enable monitoring.
Maintenance	Lead on strategies to improve maintenance productivity and efficiency. Develop and deliver national maintenance including on Signalling Works and Overhead Line Equipment. Performance benchmarking, sharing best practice and continuous improvement.	Plan and deliver inspections and maintenance of infrastructure assets in Route – in line with corporate strategies.
Enhancement & renewals	Deliver the Network Rail capital project portfolio including national level enhancements and those falling within a route that are classified as a 'national project'.	Acting as the client for larger scale enhancements delivered centrally. Plan and deliver smaller renewals and enhancements within area of control.
Risk management & assurance	Develop risk management processes. Lead on health, safety, environment and other audits to provide independent assurance.	Effective execution of Risk Management processes. Manage operations in line with safety management system and all legal and regulatory obligations.
Train operations	Set the overall direction for train performance and govern delivery for national improvement programmes. Manage external relationships for freight, cross country, open access and charter.	Managing operating timetable and managed station on route. Manage commercial relationships with customers on route (TOCs) and suppliers as well as other external stakeholders for route matters. Managing costs and delivering revenue to targets.
Technology	Lead on research and innovation.	
Corporate services	Provide central business services to routes and other functions for finance, procurement, commercial, HR, IT and property.	

Definition of accountability: The party ultimately accountable for the correct and thorough completion for the deliverable or task, and the one to whom the responsible is accountable.

Box 3.2: A history of devolution in Britain's rail infrastructure

Prior to its demise, Railtrack had adopted a significant degree of devolution of responsibility to regional 'Zones'. After Railtrack failed, there was a drive towards centralisation within Network Rail to introduce more disciplined and consistent processes and gain better knowledge of the asset condition, which led to bringing maintenance back in-house. In addition, in order to meet TOCs' requests for more of an operational focus and a clear interface with them, Route Directors were created who only focussed on these questions. This structure had significant benefits including achieving efficiency savings through standardisation and economies of scale and more of a customer focus from the Route Director. However, it also led to the perception in the industry of a command and control culture within Network Rail and these Route Director roles were seen as lacking in internal power and therefore not sufficiently able to respond to operators' needs.

It was widely held within Network Rail that further improvements, including better collaboration with customers and increased performance, could only be achieved through devolution. This view was shared by the McNulty Report that was published in 2011, and in the same year Network Rail put forward plans for greater devolution and decentralisation of responsibilities from the central functions in the organisation to its eight geographical routes, each led by a Route Managing Director.

How is Network Rail funded?

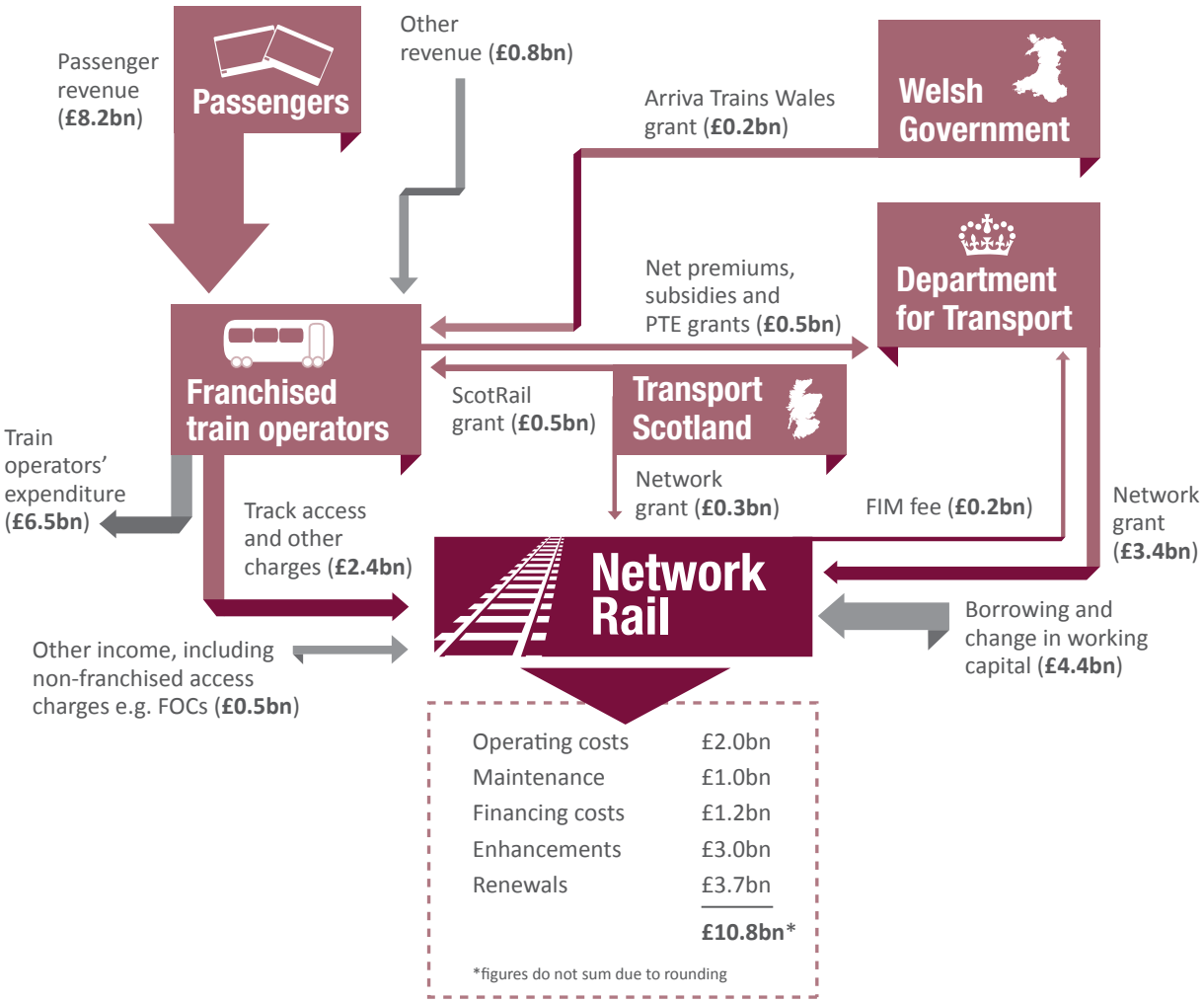
3.22 The ORR determines Network Rail's revenue requirement for each control period through the periodic review process (discussed in Chapter 4). In doing so, it follows the 'building block' approach common to other regulated businesses, which assesses Network Rail's revenue requirement as the sum of expenditure it needs to undertake to fund its activities, namely:

- operating expenditure;
- maintenance expenditure;
- an allowance for amortisation, to fund renewals;
- an allowed return on the Regulatory Asset Base (the RAB – as further discussed in Chapter 5); and
- less 'single till income', for example income from retail activities (c. £0.5 billion).

3.23 This revenue requirement covers Network Rail's operating and maintenance expenditure, and most of its renewals expenditure. Network Rail funds the remainder of its expenditure, largely enhancement projects, through borrowing.

3.24 The revenue requirement is funded by a mix of direct government grant (Network Grant), and track access charges paid by train operators. Figure 8 illustrates the current state of funding flows into Network Rail and around the rest of the rail sector as of 2013-14.

Figure 8: Annual funding flows to Network Rail (and the rail industry) [6, 7]



3.25 At Summer Budget 2015, the government announced that it will "change the way it channels public money through the rail industry, directing it through the train operating companies, so that Network Rail focuses firmly on the needs of train operators, and, through them, passengers".

3.26 The government is yet to publish more information on the details of this change. The Report Team expects that, in practice, the DfT will reduce or abolish the Network Grant paid to Network Rail, Network Rail will increase the amount of money it charges franchised train operators, and the government will redirect the money it spent on the Network Grant to train operators to compensate them for the additional track access charges. The government's overall subsidy to the rail industry, and Network Rail's income, will not change as a direct result of these reforms. It will be a decision for government as to whether train operators are held harmless from any subsequent changes in these track access charges at future periodic reviews.

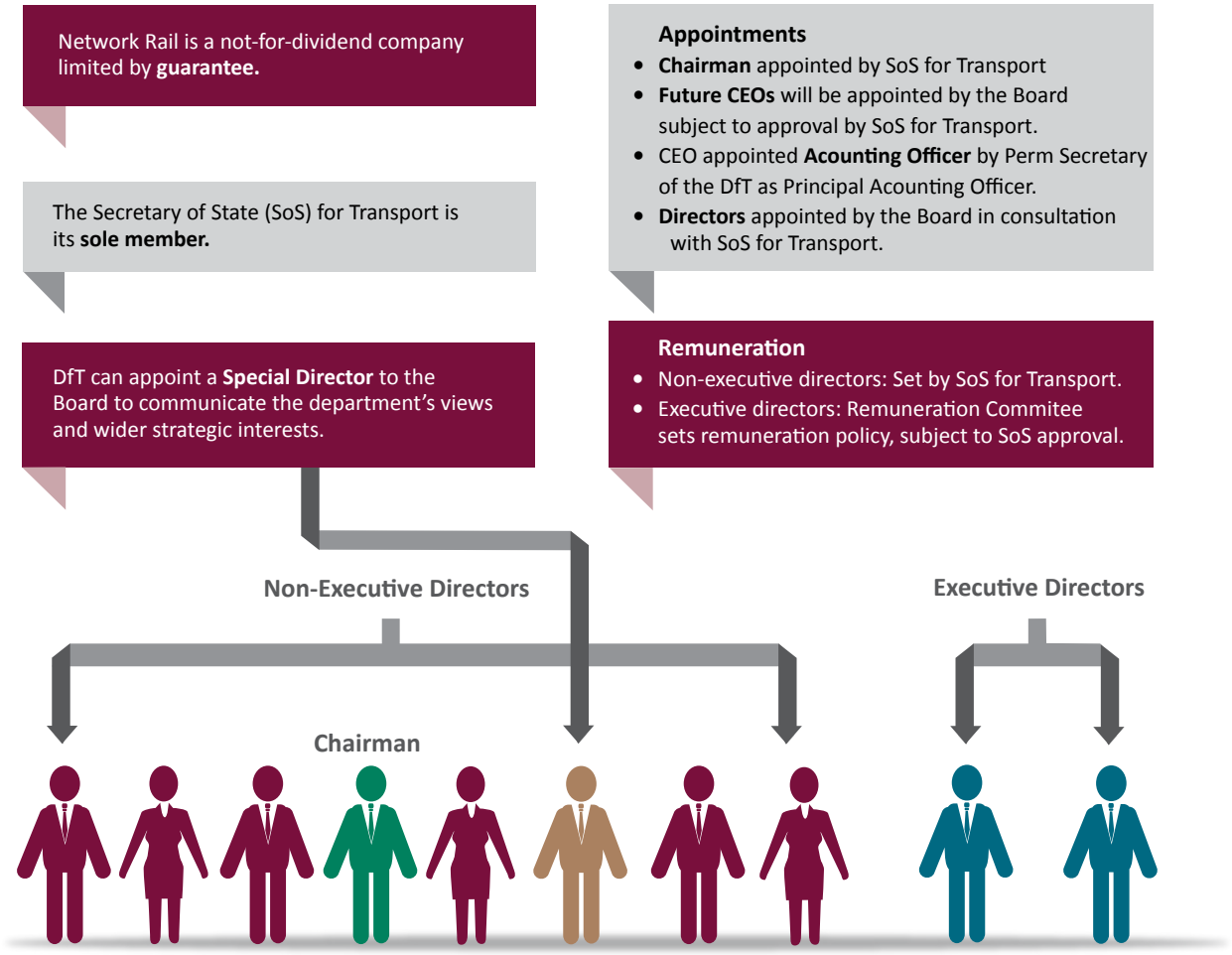
[6] a) Office of Rail and Road (February 2015): GB rail industry financial information 2013-14 http://orr.gov.uk/__data/assets/pdf_file/0016/17008/sources-of-income-2013-14.pdf
b) For the Financial Indemnity Mechanism (FIM), Department for Transport (June 2014): DfT Annual Report and Accounts 2013-14 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/324026/dft-annual-report-2014-print.pdf

[7] Figures may not sum due to rounding. Capital expenditure (renewals and enhancements) are indicated on a cash basis, reflecting the upfront costs to renew and enhance the railway, the benefits of which will however be spread over many years in the future.

To whom is Network Rail accountable?

3.27 The framework agreement between Network Rail and the DfT (established following reclassification in 2014 to set out the basis of their new relationship) states that it aims to preserve "Network Rail's ability to continue to manage its business with enough commercial freedom within effective regulatory and control frameworks appropriate for a company in the public sector."[8] The framework agreement also sets out the terms of financial management and corporate governance. Figure 9 illustrates the main elements of the current governance arrangements.

Figure 9: Network Rail's current governance



[8] Department for Transport (September 2014): Network Rail Framework Agreement https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/349439/framework-agreement.pdf

3.28 In June 2015, the Secretary of State exercised his right to appoint a Special Director, asking Richard Brown to take this position, appointing Sir Peter Hendy as Chairman at the same time. The Network Rail Board is accountable to:

- the ORR for its health and safety performance, as well as for the efficient delivery of the outputs agreed for each five-year control period;
- Parliament (and taxpayers) for its stewardship of the public funding it receives – this includes following the principles, rules, guidance and advice set out by government in managing public money[9];
- the government, for its leadership and the long-term success of Network Rail, and for its funding through the framework and loan agreements between the DfT and Network Rail;
- its other funders, for its stewardship of their funding; and
- its customers (both direct and indirect) for its performance.

How these accountability relationships work in practice

3.29 Under the powers of The Railways Act 1993 (The Act), Network Rail requires a licence to operate, issued by the ORR. The ORR regulates both Network Rail's stewardship of the rail infrastructure, and their health and safety performance.[10]

3.30 Within and between control periods, the ORR monitors Network Rail's performance on a continuous basis through regular reports from Network Rail. The ORR publishes a number of statistics and publications over the year reporting on Network Rail's performance. The ORR also investigates any complaints, and monitors Network Rail's underspend, unit costs, delivery of key regulatory and public interest obligations, and its compliance with its network licence.[11]

3.31 The Department for Transport retains ongoing oversight of Network Rail's activities, as set out above. In particular, the Department:

- works with the ORR to monitor the delivery of relevant projects to ensure delivery to time and budget and network reliability performance;
- monitors Network Rail's overall performance through its sponsorship function and review of Network Rail's performance scorecard;
- exercises oversight of Network Rail's strategy and performance, pay arrangements and major financial transactions on behalf of its Permanent Secretary, the Principal Accounting Officer for Network Rail;
- monitors the Board's management of Network Rail's performance;
- engages with Network Rail in setting the annual updated Business Plan and Annual Plan; and
- receives annual accounts, monthly public expenditure returns, and monthly and daily cash-flow forecasts from Network Rail, under its financial reporting obligations set out in the framework agreement.[12]

9 HM Treasury (July 2013): Managing public money https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/454191/Managing_Public_Money_AA_v2_-jan15.pdf

10 Network Rail (accessed November 2015): How we are regulated (web page) http://www.networkrail.co.uk/aspx/717.aspx

11 Office of Rail and Road (accessed October 2015): Monitoring Network Rail performance (web page) http://orr.gov.uk/what-and-how-we-regulate/regulation-of-network-rail/monitoring-performance

12 Department for Transport (September 2014): Network Rail Framework Agreement https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/349439/framework-agreement.pdf

3.32 Network Rail also receives ongoing oversight from other organisations, including:

- Transport Focus, the independent transport user watchdog, which tracks passenger satisfaction twice yearly through the National Rail Passenger Survey;
- the Rail Delivery Group, a cross-industry leadership group on which it sits, which takes an active role at a senior cross-industry level through working groups such as the Planning Oversight Group; and
- the Rail Safety and Standards Board, which sets safety and technical standards.

3.33 This is a complex set of accountability relationships for an organisation to manage. In order to better understand how this works in practice, Figure 10 sets out the division of responsibilities amongst the key players in the rail industry. This focuses on the production of the ORR's final determination – which determines the income Network Rail receives from government and the outputs they must achieve during each five-year control period – and the delivery of the final determination by Network Rail (the table assumes some familiarity with the periodic review process led by the ORR – details on this can be found in Chapter 4). Network Rail's Board chooses whether to accept the Final Determination.[13] If objections are made, the ORR can refer to the Competition and Markets Authority, which will review the evidence and make changes to the final determination. We have focussed on control period planning – with the key output being the ORR's final determination – and delivery of the final determination as the central set-piece process through which plans for the network are currently developed and implemented.

Question 3: What are your views on these accountability arrangements and their effectiveness?

[13] The legislation relating to access charges review is set out in Railways Act 1993, Schedule 4A http://www.legislation.gov.uk/ukpga/1993/43/schedule/4A

Figure 10: RACI analysis for the periodic review process and its delivery

	ORR's final determination	Delivery of final determination
Network Rail (Board)	**Consulted –** The Board responds to the ORR's Draft Determination for each control period. It then chooses whether to accept the ORR's Final Determination.	**Accountable** – To the Secretary of State for Transport for performance; to the ORR for delivering outputs in accordance with its licence and delivery of Final Determination; to Parliament and its other funders for stewardship of the money it receives; and to its customers.
Network Rail (Organisation)	**Consulted** – Develops Strategic Business Plan, including planning of programmes and individual projects. **Consulted** – feeds in to the Rail Delivery Group's Initial Industry Plan.	**Responsible** – Carries out planning and delivery of all operations, maintenance, renewals and enhancements against the ORR's Final Determination. **Accountable** – To Network Rail's Board.
Central Government (England and Wales) (Department for Transport)	**Responsible –** Develops High Level Output Specification (HLOS) and Statement of Funds Available (SoFA). They do not approve the ORR's Final Determination.	**Consulted** – Monitors Network Rail's delivery and performance alongside the ORR; engages with Network Rail in setting the annual updated Business Plan. **Accountable** – To Parliament as the shareholder of Network Rail.
The Scottish Government (Transport Scotland)	**Responsible –** Develops High Level Output Specification (HLOS) and Statement of Funds Available (SoFA). They do not approve the ORR's Final Determination.	**Consulted –** Monitors Network Rail's delivery and performance alongside the ORR; engages with Network Rail in setting the annual updated Business Plan.
Parliament	**Informed**	**Informed**
ORR	**Accountable** – to Parliament for producing Final Determination, which forms a binding regulatory settlement on Network Rail's outputs and funding over the Control Period and Network Rail's contracts with its operators. **Responsible** – Produces Final Determination based on Initial Industry Plan, HLOS, SoFA, NR's Strategic Business Plan and ORR analysis.	**Responsible –** for holding Network Rail to account for delivery against licence obligations. **Accountable –** to Parliament for efficacy of holding Network Rail to account.
Rail Delivery Group (including Network Rail, TOCs and FOCs)	**Responsible –** Planning Oversight Group, part of Rail Delivery Group, develops Initial Industry Plan.	**Consulted** – Continues to produce work to inform running of railways services; continued engagement with Group members.
Responsible	Those who do the work to achieve the task.	
Accountable	The party ultimately accountable for the correct and thorough completion for the deliverable or task, and the one to whom the responsible is accountable. The accountable signs off work the responsible provides. Also known as the Approver.	
Consulted	Those whose opinions are sought, and with whom there is two-way communication.	
Informed	Those who are kept up to date on progress, often only on completion of the task or deliverable, and with whom there is just one-way communication.	

04 Does Network Rail's structure work?

Introduction

4.1 This chapter sets out a framework for considering whether Network Rail's shape and structure enables the company to operate Britain's rail infrastructure as effectively as possible. The framework is centred on the three perspectives set out in Chapter 2 – customer, devolution and growth – which are intended to focus discussions and provide alternative ways of looking at the relative strengths and weaknesses of different structural options. Each of the three perspectives are explored in more detail below:

- **Customer**: who are Network Rail's customers and what do they want or expect from their relationship? How does this relate to actual outputs? What influence do different customers have over Network Rail's performance?
- **Devolution**: how does the current geographical organisation of Network Rail support delivery of infrastructure and could or should this be developed further? How is Network Rail affected by the current political devolution agenda?
- **Growth**: is Network Rail in a position to anticipate and respond appropriately to growth across the rail industry? How does the railway contribute to wider growth priorities?

Customer

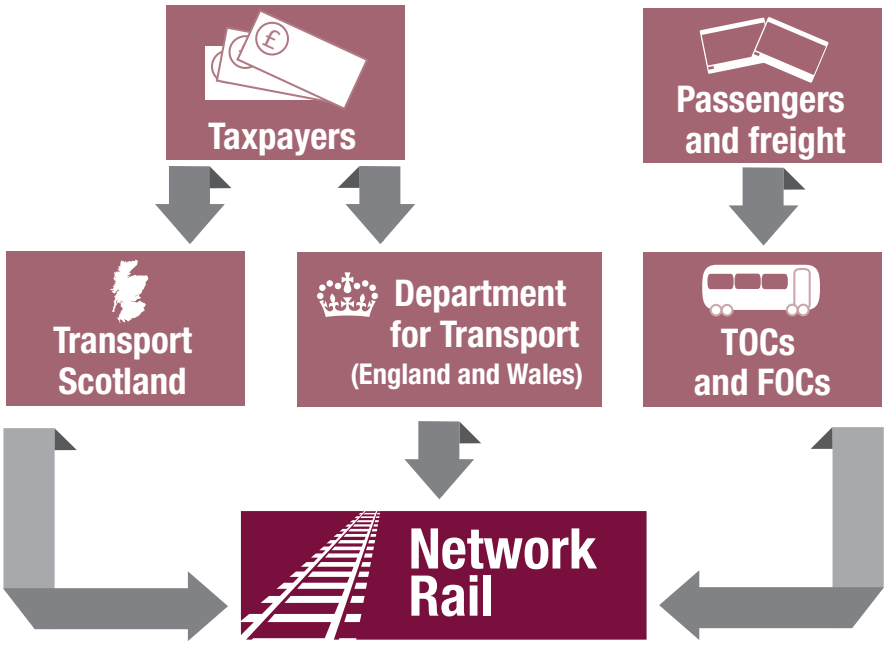
Who are Network Rail's customers?

4.2 A clear definition of a customer can help cut through some of the complexity surrounding Network Rail's customer base. Put very simply, a customer is someone who pays a business to provide a product or service, and following this definition through leads to the conclusion that Network Rail's main customers are train operating companies (TOCs), freight operating companies (FOCs) and the government (predominantly the Department for Transport and Transport Scotland). This is set out in Figure 11.

4.3 Of course there are others who pay Network Rail for services – for example rent for retail units, fees for consultancy – but these relationships are generally simpler and more self-contained than the wholesale exchange of funding and services taking place between Network Rail, the government, TOCs and FOCs.

4.4 Network Rail also interacts with a wide range of local, regional and national bodies, such as local authorities, who are not direct customers but who are representative of local populations and businesses. This interaction straddles all of Network Rail's functions, including strategic planning, and is explored in more detail in the devolution section below.

Figure 11: Network Rail's customers



4.5 It is clear that the interests of passengers, freight customers and taxpayers are vitally important, and the success of the rail industry ultimately relies on meeting the needs and expectations of these end users. However, providing the relationships between Network Rail, the DfT, Transport Scotland, TOCs and FOCs are functioning as they should, customer pressure from those ultimately using and funding the railway should be passed through to inform Network Rail's decision-making processes. It is therefore helpful to consider the front-line relationships between Network Rail, the government, TOCs and FOCs foremost, as further improvements to Network Rail's relationship with their indirect customers will flow from these.

Customer expectations

4.6 The government (both the DfT and Transport Scotland) pays Network Rail to deliver on the objectives and projects set out in the High Level Output Specification (HLOS) in an efficient and timely manner which demonstrates value for money for the taxpayer. Meanwhile, TOCs and FOCs pay track access charges, and in exchange expect Network Rail to provide them with access to railway infrastructure of an agreed quality so they can run services. TOCs are focused on meeting the terms of their franchise agreements to serve passengers, while FOCs require access to meet freight customers' changing and diverse commercial needs.

4.7 Given that the government specifies both the HLOS outputs and the terms of the franchise agreements with TOCs, the government's expectations of Network Rail ought to be aligned with those of the train operators exercising day-to-day customer pressure. If customer incentives and expectations are aligned in this way, it should be possible for Network Rail to simultaneously deliver the government's HLOS priorities and allow TOCs and FOCs to deliver on passenger and freight customers' reasonable requirements.

4.8 Network Rail is a monopoly provider, so the train operators cannot take their custom elsewhere nor can they withhold payment if the expected quality or access are not delivered. Similarly, the DfT and Transport Scotland are atypical customers; their commercial relationships with Network Rail are complicated by the government's role as de facto shareholder, as well as political considerations.

4.9 In the absence of this traditional customer pressure, the Office of Rail and Road (ORR), as the independent regulator, is tasked with policing these frontline customer relationships to ensure that all Network Rail's customers are receiving the service for which they have paid. In the event that a dispute cannot be resolved between an operator and Network Rail, the operator must appeal to the ORR which is able, if it deems it appropriate, to intervene on their behalf to enforce delivery. Anecdotal evidence suggests that Network Rail is currently incentivised to treat the ORR as their main customer, instead of those funding its activities. Given the ORR's many measures and power to levy financial penalties against the company if it fails to meet expected performance measures, it is easy to see how the ORR may have assumed the customer position by proxy.

4.10 It is worth noting operators themselves form a diverse customer base, and that their needs and expectations may not be homogeneous and may change over time. These differences could be dependent on a number of factors, including whether the operator carries passengers or freight; the length of a franchise and whether an operator is near the beginning or end of their contract; and an operator's relative exposure to revenue risk.

4.11 For Network Rail, therefore, there may be competing expectations between different operators – although the way it is required to handle these is prescribed in law, industry codes and its network license. The company also has to balance the need for efficient delivery of projects for enhancements or renewal with maintaining the quality of operational delivery for customers. The resolution of these conflicts is complicated by being handled in a very public arena and with detailed political engagement across a wide geography.

Accountabilities and incentives

4.12 The complexity of the customer relationships set out above means that the incentives within the railway are precariously balanced and it is not always clear who is accountable for what. The government, TOCs and FOCs are likely to have multiple touch points with Network Rail's different functions, and these are often handled on a project by project basis. As such, the incentives underpinning customer behaviours, which should provide for effective customer pressure on Network Rail to deliver against those customers' expectations, are subject to fragmentation and misalignment.

4.13 Network Rail's main incentives to deliver are financial and reputational. In simple terms, the financial incentives are delivered through:

- operational performance regimes with operators – if Network Rail's day to day performance is below expectations, there is a mechanism in place to directly compensate operators;
- fines issued by the ORR for failure to meet obligations – although given that Network Rail is now in public ownership, this is essentially a fine on the taxpayer; and
- penalty for overspending – the ORR's Final Determination only allows for efficient delivery, so any costs arising from inefficiencies must be covered by the taxpayer.

4.14 Again in simple terms, the reputational incentives arise from:

- public reporting to the ORR and by the ORR;
- enforcement orders from the ORR for significant failures – where Network Rail is required to remedy those failures in order to retain its network licence (although as a monopoly the threat to remove the company's network licence is limited by Network Rail's position as a monopoly state-owned provider);
- reporting to the government, Auditor General and Public Accounts Committee;
- press interest; and
- ultimately, the Board and Chairman may remove the CEO, and the Secretary of State may remove the Chairman.

4.15 The ORR will shortly launch a consultation on the fees and charging regime for Network Rail from 2019, and this will review the incentive framework, as is the case ahead of each periodic review. Specifically reviewing the incentive structure is not within the purview of this report, but when considering possible structural changes it is essential for the Report Team to consider the impact on incentives and the strength and direction of customer pressure. The report may therefore make tangential recommendations to ensure that the incentive regime supports the implementation and the viability of any structural changes.

Question 4: Have we correctly identified and defined Network Rail's customers?

Question 5: How effectively are customer needs and expectations met by Network Rail at present?

Question 6: Should direct customer pressure on Network Rail be strengthened? If so, how might this be achieved?

Question 7: Are there more positive incentives for delivery which would be useful? Are any of these incentives more effective than others?

Devolution

4.16 Devolution in relation to Network Rail can be looked at from two different but inter-related perspectives:

- **external to Network Rail** – how the shifting agenda of political devolution could affect the geography of Network Rail and its functions; and
- **internal to Network Rail** – how the devolution of responsibilities and accountabilities within Network Rail's organisational structure is working in practice.

Political devolution

4.17 The current political landscape is shifting rapidly as the government is committed to rebalancing the economy through the further devolution of political power across the United Kingdom – including to Scotland, Wales and regions and cities across England who put forward bids through devolution deals (see Figure 12). This has the potential to further alter the needs, influence and geographies of Network Rail's stakeholders and partners, as well as the dynamics of the relationships.

4.18 Network Rail is geographically organised on the basis of eight top level operational routes which, with the exception of Scotland and Wales, all radiate from central London stations. Each route is then generally split into different areas which are organised to reflect operational railway. In terms of political and administrative structures, some routes straddle many traditional regional boundaries. For example, Transport for London spans all 6 routes in England while Transport for North covers parts of the London North West and London North East routes.

4.19 Therefore, aside from operational routes, alternative approaches of disaggregating the network could be considered, including on the basis of political and economic geographies or service type – for example intercity, regional or commuter services. Different approaches may be more suitable for certain functions, better serve different markets and may favour certain types of customers or stakeholders. Some may make management of the relationships easier, others more complex. The Report Team would like to establish whether there is a case for changing the existing route based structure and the advantages and disadvantages of doing so.

Figure 12: Political devolution

Scotland

There is already significant devolution of powers for the rail network in **Scotland**. The Scottish Government sets out its strategic priorities for the rail network in Scotland through their own High Level Output Statement (HLOS) which specifies the outputs that Network Rail will deliver over the next control period. It is also responsible for funding these proposals and the statement is separately regulated by the ORR. In terms of franchising, the Scottish Government is responsible for the ScotRail and Caledonian Sleeper franchises. Legislation is being taken forward to allow public sector operators to bid for rail franchises that are funded and specified by Scottish ministers.

Wales

Wales currently has the responsibility for funding and specifying rail services, as part of the Arriva Trains Wales (ATW) franchise, that are entirely within Wales as well as cross-border services. This is currently through a joint parties agreement and the government last year agreed to devolve franchising formally via secondary legislation to Wales which will enable Welsh ministers to lead on the next Wales and Borders franchise. While Wales at present does not have its own HLOS, it works with DfT in the long-term planning processes that precede the England and Wales HLOS.

London

In **London**, the Mayor sets the city's transport strategy which is implemented by Transport for London. The London Overground network is fully devolved and other London suburban services that were part of the Greater Anglia franchise were devolved in May. There is a desire from the Mayor for increased responsibility for more services falling within the geographical boundaries of Greater London.

England

Throughout **England**, cities and regions are being offered more powers through devolution deals in return for agreeing to be run by directly elected mayors. Deals have been struck with Manchester, Sheffield, the North East, Cornwall and the Tees Valley and include a consolidated transport budget that will give the areas more control over how funding is spent. There are plans to allow local authorities to fully retain business rates raised locally and areas that adopt metropolitan mayors will have the flexibility to Increase business rates (up to 2%) to support the development of infrastructure projects – as long as they win the support of the local business community.

In partnership with political leaders in **the North**, the government has set up a body called Transport for the North (TfN) to formalise cooperation on transport issues in the region. The government and TfN published a Northern Transport Strategy in March 2015 and the organisation will be put on a statutory basis with duties to set out transport policies and investment priorities for the North – supported with around £30m of funding for the next 3 years. Passenger Transport Executives in the North are also co-signatories (with DfT) for the Northern and TransPennine Express franchises. The plan is to eventually fully devolve the franchise to a consortium called Rail North that represents local transport authorities in the wider region.

A similar agenda is taking shape in **the Midlands** and the government has a plan to create a 'Midlands Engine' in the region. The Midlands Connect partnership has been set up jointly with central government and is tasked with developing a Midlands wide transport strategy. It is also envisioned that the organisation West Midlands Rail (WMR) – which is a consortium of local authorities as well as the West Midlands PTE (Centro) – may take a greater role in the specification, procurement and management of the London Midland franchise.

Internal Network Rail devolution

4.20 Chapter 3 outlines the history of devolution with Network Rail and the current accountabilities between the centre and the routes. Network Rail considers that the benefits of devolution and decentralisation to the route level include:

- encouraging closer partnership working between Route Managing Directors and customers in the rail industry and the wider region;
- encouraging greater efficiency and innovation using local knowledge to improve services and drive down costs; and
- enabling comparative benchmarking and fostering competition between routes.

4.21 These potential benefits have to be carefully balanced with trade-offs. The rail network is a highly interconnected system and there are some functions – including the system operator function described in paragraph 3.11 – that will need to be coordinated at the network level and could not easily be disaggregated. Devolution also has the potential to fragment and complicate coordination by creating new and additional interfaces and could lead to a loss of economies of scale for certain functions.

4.22 In some places, Network Rail devolution gave rise to alliances: formal agreements between Network Rail and train operating companies to align incentives and objectives and work more closely together. Alliances have taken different forms: Box 4.1 provides a case study from 2012 in which this approach has worked well in Scotland for delivery of a specific objective (although requiring trade-offs in other areas). Another approach was adopted in the Wessex alliance between Network Rail and South West Trains in 2012, with the core objective of improving performance on the route. A single leadership team was created to align organisational structures and put mechanisms in place for greater financial risk and gain sharing. The deep alliance was in place for three years and led to closer partnership working between the organisations, with benefits including recent improvements in the Public Performance Measure and cost savings through better delivery of some track renewals. However the alliance came to an end earlier than had been expected – as a result of different incentives, financial risks outweighing opportunities and the different organisational structures and cultures.

4.23 Network Rail is now in another deep alliance in Scotland, working with Abellio ScotRail. Some of the lessons from the Wessex experience have been built into this new arrangement. Network Rail, operators and the DfT are giving further thought to future alliances and how incentives can be aligned therein.

Box 4.1: Case study: Paisley Canal Line electrification

Following devolution within Network Rail, in the early part of the decade the Network Rail Scotland Route and First ScotRail (the former franchisee in Scotland) formed an alliance to formalise the relationship between the companies.

The alliance was put to the test in delivering the Paisley Canal Line electrification. Early estimates had put the project costs at between £20 to £28m, which was considered too expensive for the project to be viable. However, there remained a strong rationale for electrifying the line as the improved acceleration of electric trains would help reduce the delays on a line where only 16% of trains were on time. It would also bring benefits for First ScotRail as electric rolling stock is cheaper to run and maintain than diesel.

The alliance between Network Rail and ScotRail (alongside the contractor on the project) created a shared focus on reducing costs. In particular, cooperation between the two organisations' engineers rationalised the scope of the project by developing an approach to reduce the number of works required on structures along the route. This was done by challenging existing practice and setting a lower specification for the height of overhead wires on the line which required less reconstruction works (such as track lowering) at stations and bridges along the line.

This did, however, require trade-offs. This approach restricted the ability of freight trains (which are larger) to operate on the line without the power switched off. ScotRail also waived its right to Schedule 4 compensation payments in the event of disruption during the project thereby sharing greater financial risk with Network Rail.

The relationship also led to an enhanced focus on efficient delivery. ScotRail extended possession time to allow engineers greater mid-week access which greatly reduced the construction timetable while Network Rail shortened its own design approval process. Working with Transport Scotland, ScotRail also allowed train passes to be accepted on the Glasgow First Bus network to provide a better transport alternative than the usual rail replacement bus services.

As a result of this close working the electrification scheme was delivered earlier than planned and cost £12m.

4.24 Devolution to the route level remains a key priority for Network Rail, and in a speech to the rail industry earlier this year Mark Carne highlighted the importance of changing the underlying culture of Network Rail to make it higher performing and strengthening relationships with customers and suppliers. [14]

4.25 These priorities are consistent with addressing some of the mixed views that have emerged towards the effectiveness of devolution so far. Many of these views indicate that while Network Rail made the organisational changes necessary to implement devolution, this may not have been supported by the right processes and capabilities to fully realise the benefits. The recent changes set out in Chapter 3 are Network Rail's next steps to address these concerns. Some of the specific barriers identified include:

- the wider culture of the organisation, which may be too centralised and in practice may not have given enough autonomy and empowerment to route managers;

[14] Network Rail (2015): George Bradshaw Address 2015, Lifting the bonnet on Network Rail https://www.networkrail.co.uk/George-Bradshaw-Address-2015-Lifting-the-bonnet-on-Network-Rail.pdf

- the challenge of management bandwidth and the capability at route level to cope with the demands of further devolution;
- clarity of the responsibilities between the centre and the routes; and
- clarity, consistency and proactivity of the communication and engagement between the different functions of Network Rail and local political bodies.

Question 8: Is there a case for changing the route structure and what are the advantages and disadvantages of different approaches to disaggregating the network, for example on the basis of:

- physical, political or economic geographies?
- service type, e.g. commuter services, inter-city services and regional services?

Question 9: Does the current balance of responsibilities between the routes and the centre seem at the right level? Are there any further responsibilities that should be devolved or centralised?

Question 10: Can you point to any specific economies of scale that should be protected at national rather than route level?

Question 11: What processes and capabilities need to be in place (at both the centre and route level) to support Network Rail's current devolved structure?

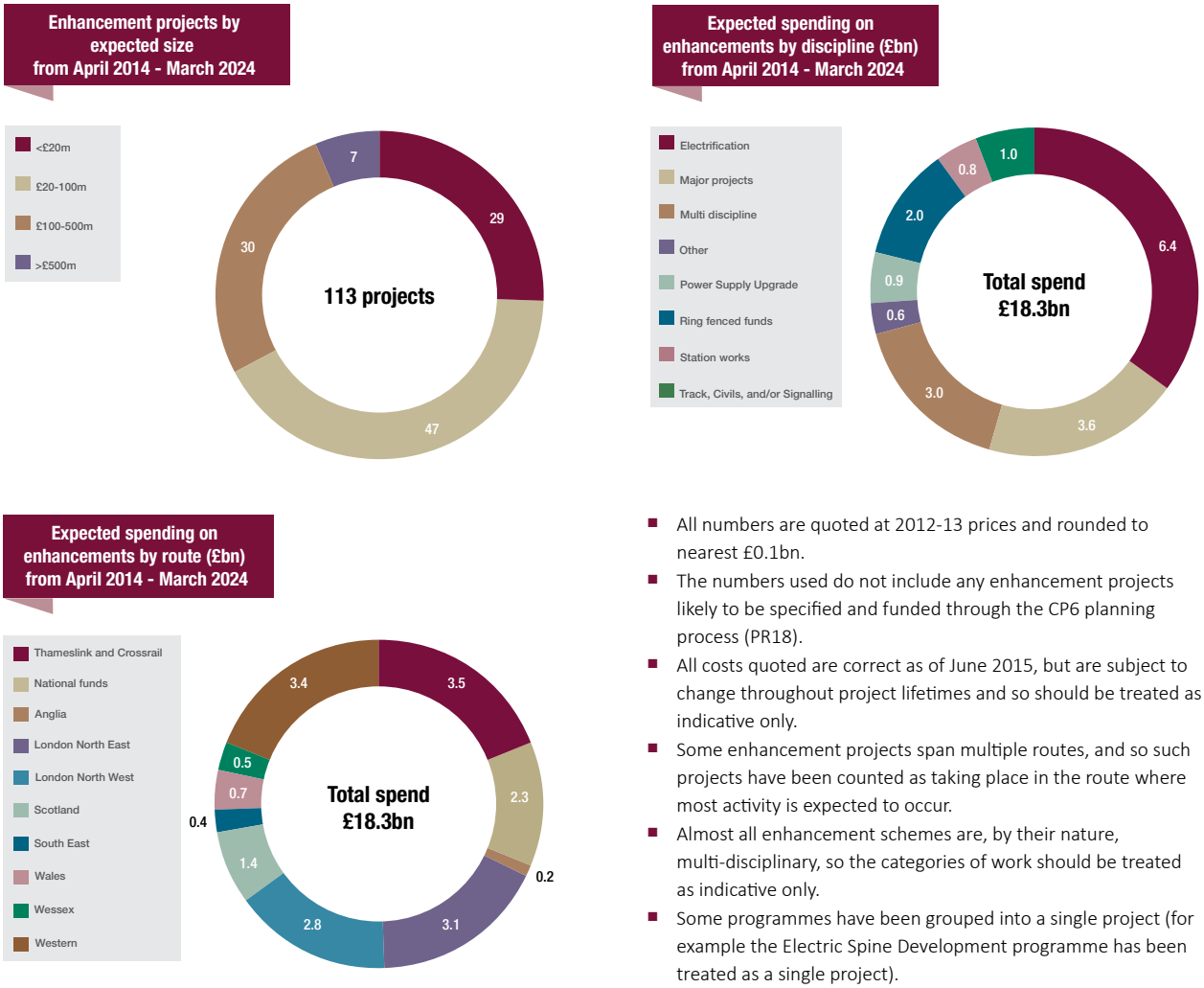
Question 12: Drawing on your previous experiences where relevant, what would be the potential impact on your organisation of further structural change within Network Rail?

Growth

4.26 The economic benefits of a functioning rail network are set out earlier in this document. In order to continue to deliver these benefits robust processes must be in place to identify, plan and then deliver enhancement projects to increase capacity, reduce journey times, and improve connectivity between towns and cities across the UK.

4.27 Since taking over responsibility for rail infrastructure in 2002, Network Rail has delivered a large number of projects to increase capacity and reduce journey times in an attempt to keep up with growing passenger numbers. The industry's ability to cope with continued growth is therefore reliant on the suitability and flexibility of the long term enhancements planning process.

Figure 13: Current planned enhancements [15]



- All numbers are quoted at 2012-13 prices and rounded to nearest £0.1bn.
- The numbers used do not include any enhancement projects likely to be specified and funded through the CP6 planning process (PR18).
- All costs quoted are correct as of June 2015, but are subject to change throughout project lifetimes and so should be treated as indicative only.
- Some enhancement projects span multiple routes, and so such projects have been counted as taking place in the route where most activity is expected to occur.
- Almost all enhancement schemes are, by their nature, multi-disciplinary, so the categories of work should be treated as indicative only.
- Some programmes have been grouped into a single project (for example the Electric Spine Development programme has been treated as a single project).

4.28 Figure 13 provides an illustrative breakdown of current planned enhancements, and demonstrates the variety and geographical spread of enhancements Network Rail are presently expecting to deliver over the next 10 years (excluding any projects likely to be specified and funded in the Periodic Review 2018). The charts are presented here not for the purpose of providing a detailed quantitative breakdown, but to illustrate a few high-level conclusions:

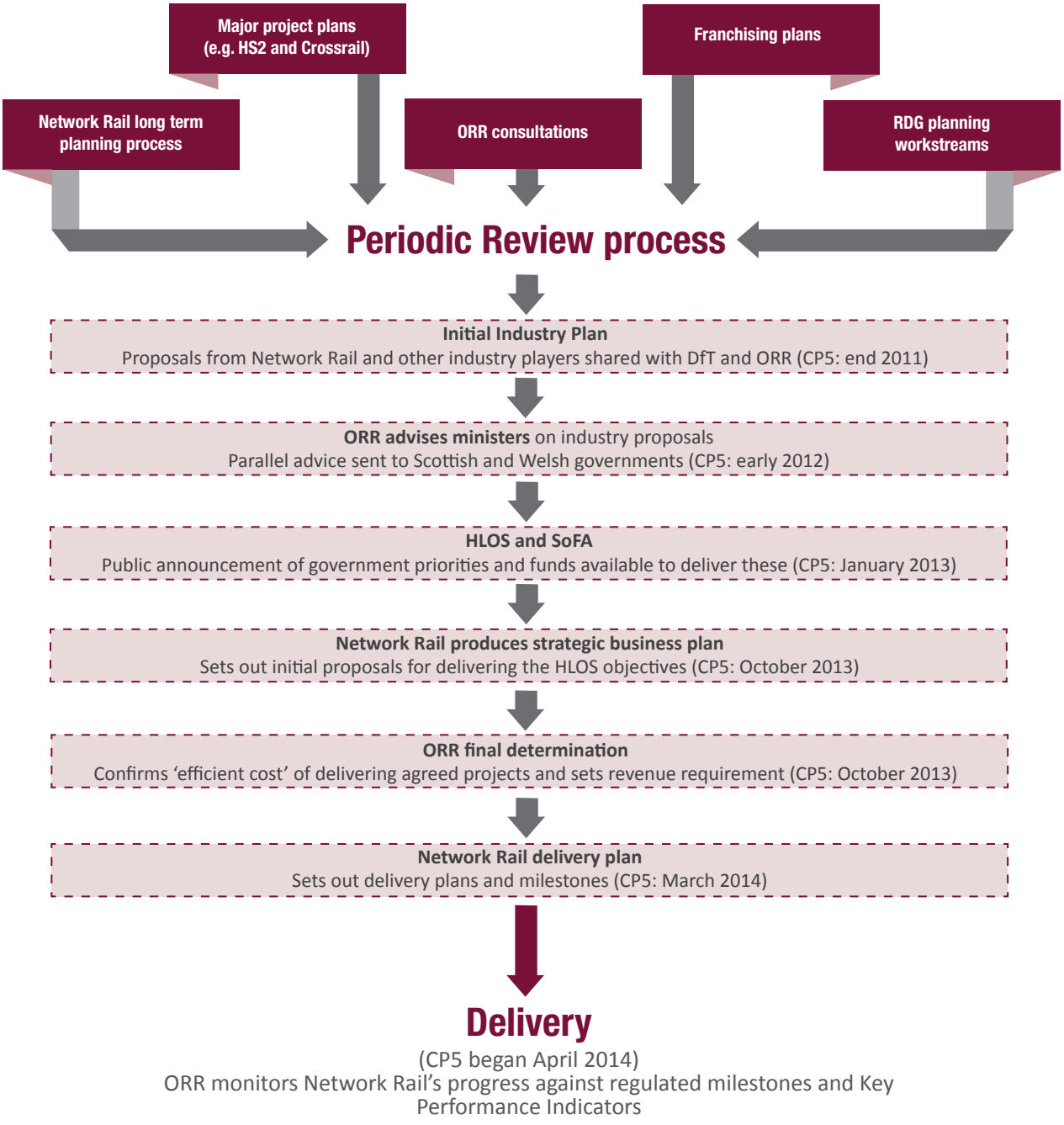
- there are a large number of enhancement projects currently in train – 113, totalling £18.3 billion;
- there are, however, only seven very large developments (of half a billion pounds or more) – over two thirds of Network Rail's planned enhancements (by number) are forecast to cost under £100 million; and
- a large proportion (around a third) of the £18.3 billion investment in enhancements is being spent on electrification projects.

15 Network Rail management information

The current planning process

4.29 Currently the planning process for enhancements is focused on the five yearly periodic review cycle – and the same procedure is used for determining all operations, maintenance, renewals and enhancements requirements over the coming control period, irrespective of size. This process is set out in Figure 14.

Figure 14: The periodic review process



4.30 The Planning Oversight Group, which sits within the cross-industry Rail Delivery Group (RDG), develops the Initial Industry Plan, setting out "the industry's view of how the railway could develop during [the next control period] and beyond to deliver a better value for money and affordable railway that can support and stimulate sustainable economic growth."[16] The initial industry plan contains a proposed list of rail investments and cost estimates, and draws together outputs from Network Rail's Long Term Planning Process (LTPP), long term RDG planning work streams and other sources.

4.31 The High Level Output Specification (HLOS) sets out the government's strategic priorities for rail over the coming control period, and the funding available for delivering these. It also includes specific ring-fenced funds for named outputs, for example improving safety at level crossings or providing easier access to stations for older or disabled passengers. The HLOS for Control Period 5 was published alongside an 'illustrative option' for delivering on those objectives, setting out specific schemes which Network Rail could deliver. The document is clear that the illustrative option is not a specification, and that the department expected the ORR and the industry to improve upon the options to find more efficient and effective ways of achieving the same outcomes at lower cost.

4.32 Network Rail's strategic business plan – sometimes referred to as the 'Industry Plan' – is Network Rail's main submission to the periodic review process. The plan sets out how Network Rail proposes to deliver the outputs sought in the HLOS, their cost and how it will deliver them as safely, sustainably and efficiently as possible.

4.33 ORR's final determination then sets the outputs to be delivered and the efficient price for delivering them, while the control period delivery plan describes the outputs Network Rail will deliver in the coming control period (against which they will be regulated) within the funding available, in a sustainable way. This document is updated every quarter to reflect changes to scope, outputs, and milestones.

4.34 During the control period, Network Rail will work with its suppliers to plan its work on an ongoing basis. Various matters arise during this process, including procurement and contractual negotiations, planning staff and equipment availability, and access to the infrastructure on which Network Rail is working. Recent challenges in this process have included shortages of appropriately skilled staff, lack of equipment availability, and changes to project allocations to suppliers within a framework agreement.

4.35 Of course there are other ways for Network Rail to plan, develop and implement projects outside this five-yearly cycle – these are explained in Box 4.3. Anecdotal evidence suggests that the more flexible, bespoke approach taken to agreeing high profile enhancement projects such as Thameslink or Crossrail between the DfT and Network Rail has been effective, with these projects currently running more or less to time and to budget.

4.36 The Department for Transport, Network Rail and the ORR are currently considering the treatment of large scale enhancements within the planning process and whether they should be specified and funded separately in the future.

[16] Network Rail (September 2011): Initial Industry Plan England and Wales, Proposals for Control Period 5 and beyond http://www.networkrail.co.uk/WorkArea/DownloadAsset.aspx?id=30064778713

Box 4.3: Other ways of planning enhancements

Alongside the periodic review process, schemes can also be proposed and developed by those who use the network, or who may benefit from further enhancements. There are three groups who generally propose such changes:

- the government;
- franchised operators; and
- third- parties e.g. open access operators, freight operating companies or local authorities.

Schemes developed outside of the periodic review process will range in size and scale, from Thameslink – proposed and developed by government – to simple improvements to line speed.

For any proposed schemes or enhancements, the promoter must provide Network Rail with a business case demonstrating the benefits and setting out how the schemes will be funded. The design work and/or ground work does not have to be undertaken by Network Rail – they need only provide approval.

Schemes proposed through this process can be funded in a number of ways; either the project is funded via the Regulatory Asset Base (more detail in Chapter 5), or else the individual scheme promoter(s) pay. As these schemes will increase Network Rail's overall asset value, the company will usually buy back the assets once the scheme is operational. Following reclassification, cash funding is now the preferred method of payment for these kind of schemes.

Some franchises have also been let on the basis that the TOC will carry out work to the route(s) they operate in order to meet the overall performance targets set by the DfT, or as a contractual agreement to extend the franchise period. For example, Chiltern was let as a ten year franchise with review periods to extend the franchise (up to 20 years in total) providing the necessary infrastructure was delivered.

Schemes developed outside of the periodic review process are common place for TOCs, Transport for London, local authorities and rolling stock companies to develop smaller or more geographically based projects, compared to the more strategic projects set out in the HLOS.

Problems with planning

4.37 It is clear from recent issues with CP5 in particular that the process is far from perfect, and the government has already put in place steps to improve the planning process for CP6 and beyond. Specifically, some of the most common issues with the enhancements planning process arising from the Report Team's stakeholder engagement relate to:

- role definition;
- political involvement;
- Network Rail's ability to work with the supply chain;
- capacity and technical ability within different organisations; and
- the balance of risk and reward.

4.38 A number of Network Rail's existing customers and suppliers have voiced some more specific concerns about the company's approach to planning and delivering enhancements. They find the planning processes overly cumbersome for smaller-scale projects, and are, unsurprisingly, unwilling to be drawn into contractual arrangements based on evolving cost arrangements. This uncertainty undermines their own margins and expenditure plans, and may mean that their business case is eroded or negated if costs increase too far, or the expected benefits fail to materialise. In addition, Network Rail has a reputation for being an unresponsive contractor unwilling to make alterations to projects even on an emerging cost basis. Such uncertainty has a knock-on effect on suppliers' staffing, training, plant and resource decisions, which filters through the supply chain and sometimes has wider industry implications.

4.39 The Bowe Review, to be published later this year, will identify the lessons to be learned from the planning process undertaken for CP5, and recommend changes to process and practice by the DfT, the ORR and Network Rail that could lead to improved outcomes for future control periods. The Shaw Report Team will therefore look to build on the conclusions of the Bowe review and the work referred to in paragraph 4.36 wherever appropriate, testing whether and how the recommendations might be applied in the longer term and in the context of further changes to Network Rail, the wider industry and the government framework.

4.40 The Report Team will also need to consider the remit of the newly created National Infrastructure Commission and the role that body will play in the rail enhancements planning process going forward.

Question 13: What are the strengths and weaknesses of Network Rail's current approach to planning enhancements?

Question 14: What are the strengths and weaknesses of Network Rail's current approach to delivering enhancements?

Question 15: How well do the current delivery and planning processes work for projects of different sizes?

Question 16: Are there any useful models or precedents from other sectors or countries for long term infrastructure planning and delivery processes that we should consider, including in relation to management of and engagement with suppliers during the planning process?

Developing options

4.41 Many different management teams have sought to make a success of Network Rail, and Railtrack before that, since 1996. The ORR has had to take licence enforcement action against Network Rail and others on 43 occasions during that period, and there have been numerous internal reorganisations. This suggests that management changes alone are not sufficient to resolve the planning and process issues on which industry is agreed.

4.42 The Report Team will therefore develop and assess a range of structural options based on input from stakeholders and responses to this scoping document. These options will necessarily sit on a spectrum, ranging from wholesale structural reform to more modular changes which could be slotted together in a variety of formulations. Following the methodology set out in Chapter 2, the next step will be to develop an appropriate set of criteria against which the Report Team will evaluate all options generated. The criteria may need to be prioritised to ensure the appropriate weighting is given to any particularly important considerations.

4.43 The Report Team will also consider the interdependencies between different options and examine the extent to which the success of reform in one area is dependent on change elsewhere in Network Rail or in the wider industry. Some of Network Rail's existing difficulties stem from the piecemeal evolution of the company – and industry structure – over a number of years in response to a range of challenges. It is therefore essential to ensure that the recommendations from this report are designed to improve, rather than further complicate, the existing situation.

Question 17: What would be the most important structural features of any future infrastructure provider?

Question 18: Are there any other processes which we have not highlighted, either within Network Rail or the wider industry, which could be improved?

Question 19: Do you have any views on how the relationship between the periodic review process and other processes with which you are involved could be improved?

Question 20: What criteria should be used to assess structural options under consideration? How, if at all, should these criteria be prioritised?

05 Financing and funding of the company

5.1 This chapter sets out how Network Rail currently funds its activities, how that has changed since reclassification, and how it operates as a public sector body. The second part of this chapter provides some preliminary thoughts on the broad spectrum of funding and financing options that may be applicable, which, depending on the company structure that will finally be recommended, may range from full privatisation to full nationalisation (parent company level) and involve project-based financing solutions.

5.2 For the purpose of this discussion, the term 'funding' refers to financial input that is not repayable by the government to any third party (i.e. it refers to who ultimately pays), while 'financing' refers to capital that is being invested (e.g. to build part of the infrastructure) for a return and in the confident expectation that it will eventually be repaid.

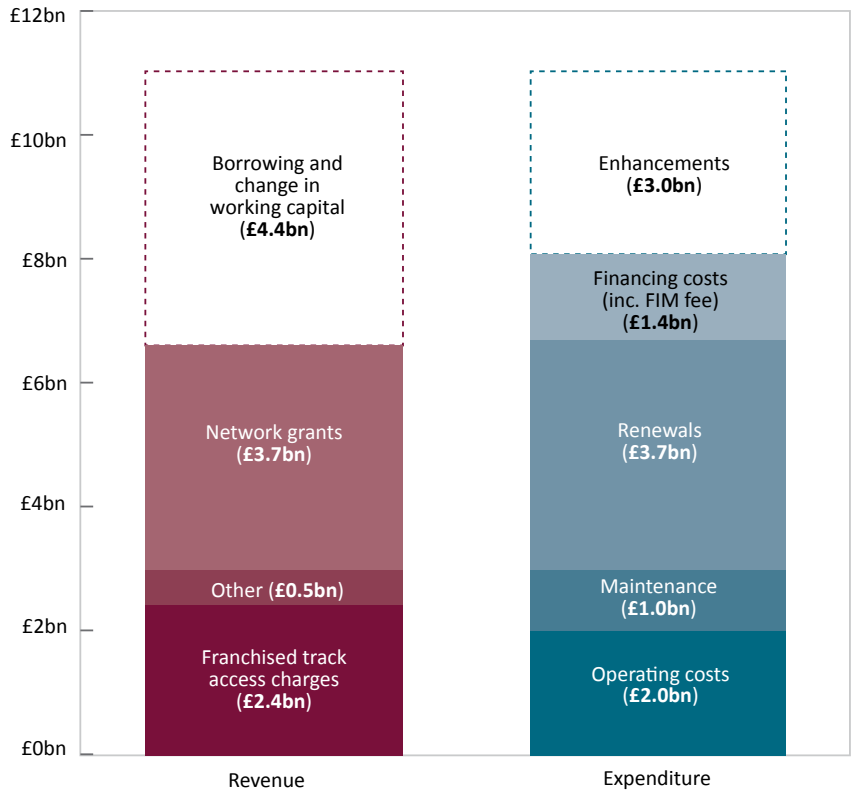
Network Rail's existing funding structure

5.3 Chapter 3 introduced the building block approach to determining Network Rail's revenue requirement. This revenue requirement is then largely met through a mixture of government grant and track access charges paid by train operators. Because the burden of track access charges falls on either the government, or passengers through fares, Network Rail is ultimately funded by taxpayers and by fare-payers. In 2013-14, Network Rail's income of £6.6 billion was split as set out in Figure 15.

5.4 Since 2010-11, the share of Network Rail's funding from government, including its subsidies to train operators, has fallen from 69% to 57%.[17]

[17] Office of Rail and Road (February 2015): GB rail industry financial information 2013-14 http://orr.gov.uk/__data/assets/pdf_file/0005/16997/gb-rail-industry-financials-2013-14.pdf

Figure 15: Network Rail's revenue and expenditure in 2013-14 [18, 19]



The government's role

5.5 The government's direct grants to Network Rail (and indirect payments through subsidies to passenger rail services) fund a proportion of Network Rail's operating, maintenance, and renewals Office of Road and Rail (ORR) expenditure. Before the Office of National Statistics (ONS) reclassified Network Rail to the public sector, this was the sum of the government's contribution, and the government had no role in the upfront funding of enhancement projects.

5.6 Prior to its reclassification, Network Rail could borrow from the market, so long as it kept within its regulatory settlement, with investors gaining 'comfort' from the government guarantee. The ORR would add efficient spending, financed through borrowing, to Network Rail's Regulatory Asset Base (RAB). This did not affect the public sector finances beyond the interest costs included in Network Rail's revenue requirement through the return on the RAB. Since Network Rail's reclassification, all of Network Rail's expenditure has added to public sector expenditure, and all of its net borrowing has added to public sector net borrowing. Regardless of the fact that the government is now lending directly to Network Rail (under the terms of the £30 billion facility agreement), reclassification means that the government's exposure to Network Rail's expenditure and its risks has increased. While the government always had a role in funding Network Rail, the whole of the company's finances now directly affect the government's fiscal objectives.

[18] Office of Rail and Road (February 2015): GB rail industry financial information 2013-14 http://orr.gov.uk/__data/assets/pdf_file/0005/16997/gb-rail-industry-financials-2013-14.pdf

[19] Network grants include grants from both the DfT and Transport Scotland. "Other" includes non-franchised track access charges, including from freight operators. Capital expenditure (renewals and enhancements) are indicated on a cash basis. Figures do not balance due to rounding. FIM fee stands for the fee related to the Financial Indemnity Mechanism.

The Regulatory Asset Base

5.7 The ORR's determination of Network Rail's revenue requirement includes a return on the RAB. Expressed in pounds, the RAB is a regulatory concept representing Network Rail's asset base, without necessarily having a close link to actual asset values. It increases in size as a result of Network Rail's enhancement expenditure and as such it allows Network Rail to spread the cost of long-lived assets over time. It provides a mechanism for financing enhancements by:

- **providing a guaranteed return on investment in the railways**; as the ORR allows Network Rail to make a fixed return against the RAB; and
- **establishing a risk buffer against the delivery of certain outputs**: the ORR has provided this risk buffer in different ways in the past, including through the level of the return on the RAB, through allowing Network Rail to issue additional debt, and through adding efficient or unmanageable overspends to the RAB.

5.8 While not the explicit purpose of the RAB, this mechanism also meant that the government could authorise enhancement projects, and then pay for only the financing cost through the return on the RAB (sometimes referred to as the 'credit card'). However, Network Rail's reclassification to the public sector now means that the full cost of capital projects appears in the public sector finances.

5.9 The concept of the RAB and an allowed return on the RAB is used in other regulated sectors, in and outside the UK, albeit with some differences. In the case of Network Rail, the allowed return is calculated by the ORR with reference to its efficient financing costs, reflecting the fact that Network Rail does not pay dividends.

The RAB and debt in Control Period 5 (CP5)

5.10 Reflecting the level of enhancements expenditure, the ORR forecast in their final determination in 2013 that the RAB would increase from £49.5 billion to £70 billion and that debt would reach £49.6 billion in the same period, up from £31.7 billion.[20]

5.11 Before Network Rail's reclassification, the ORR had planned to allow Network Rail to manage financial risk through the RAB and associated mechanisms, in order to focus on delivery of outputs. These mechanisms would have allowed Network Rail to alter the amount it borrowed and spent, and included:[21]

- a 'balance sheet buffer': the difference between the level of debt the ORR expected in their final determination, and a limit of 75% on the debt/RAB ratio. Figure 16 illustrates the path of the RAB, net debt, and the planned balance sheet buffer over CP5, which was expected to be around £3.5 billion at the end of the period, assuming the RAB level would have stayed as projected by the ORR but the debt increased to meet the 75% debt/RAB ratio;
- the possibility to re-open the level of efficient spending for 'material exceptional risks'; and

[20] Office of Rail and Road (October 2013): Periodic Review 2013: Final determination of Network Rail's outputs and funding for 2014-19 http://orr.gov.uk/__data/assets/pdf_file/0011/452/pr13-final-determination.pdf

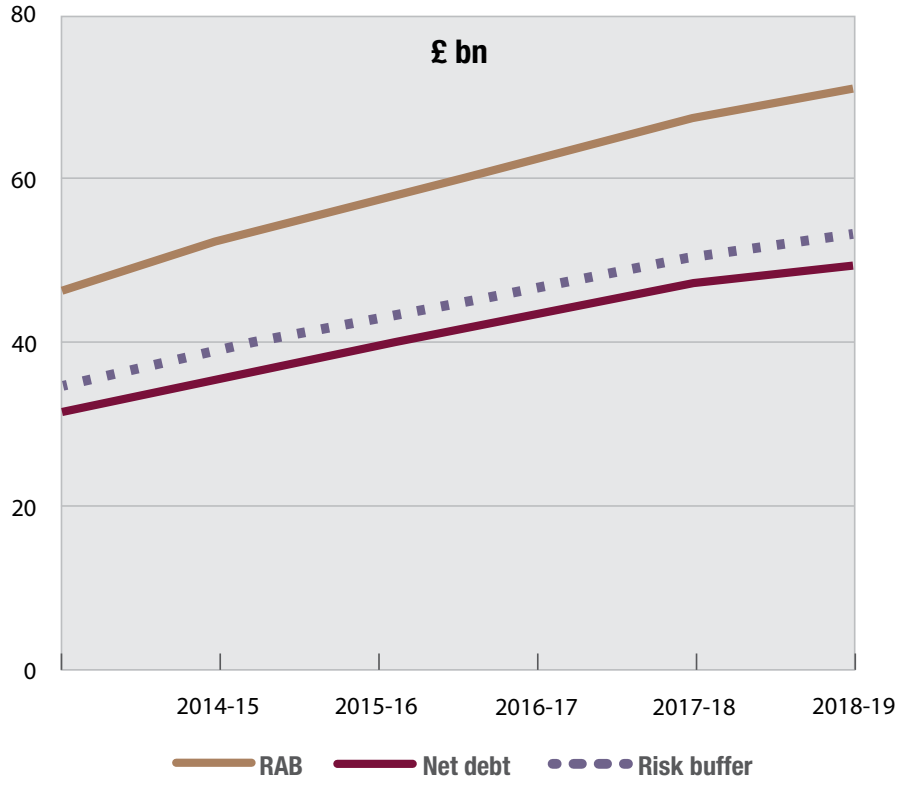
[21] Office of Rail and Road (October 2013): Periodic Review 2013: Final determination of Network Rail's outputs and funding for 2014-19 http://orr.gov.uk/__data/assets/pdf_file/0011/452/pr13-final-determination.pdf

- for enhancements in the early stages of planning, where costs are more uncertain, the ORR has introduced the 'Enhancements Cost Adjustment Mechanism' (ECAM). Under the ECAM, the ORR will adjust the efficient cost of an enhancement once it is further along the planning process. Under the original plan, the ORR could have also allowed Network Rail to alter the overall level of the RAB to reflect updated efficient costs.

5.12 Changes since reclassification have effectively replaced these mechanisms with a smaller, single risk buffer of £1.8 billion, as set in the terms of the £30 billion facility agreement between Network Rail and the government, after the refinancing of maturing debt is taken into account. [22]

5.13 This fixed limit means that Network Rail has moved from a framework that focused on outputs and project delivery through a set of flexible risk buffers and mechanisms, to a system that focuses on level of expenditure and borrowing with a fixed limit on borrowing and a more limited risk buffer.

Figure 16: ORR final determination forecast of Network Rail's RAB and net debt over CP5 [23]



[22] Parliament UK (July 2015): Network Rail: Written question – 5695 http://www.parliament.uk/business/publications/written-questions-answers-statements/written-question/Commons/2015-07-06/5694/

[23] Office of Rail and Road (October 2013): Periodic Review 2013: Final determination of Network Rail's outputs and funding for 2014-19 http://orr.gov.uk/__data/assets/pdf_file/0011/452/pr13-final-determination.pdf

Box 5.1: The size of the Regulatory Asset Base

There are mixed views on the size of Network Rail's RAB, and, given the relationship between the two, the size of Network Rail's debt. While there is no definitive view, the following points have commonly been raised:

- a large RAB (and debt) could raise sustainability questions, and, should Network Rail attempt to raise debt from private sources in the future, have an impact on its credit worthiness;
- the RAB may be greater than the sum of the parts of the company if the government sought private sector involvement;
- a large RAB (and debt) leads to a large return and therefore a large revenue requirement; and
- the size of the RAB (and debt) may not be a problem, but its continued growth through significant capital investment, may be.

On the other hand:

- the RAB (and debt) largely reflects prior and ongoing capital investment programmes; and
- the size of the RAB (and debt) only matters insofar as it affects the willingness of Network Rail's funders (the government) to bear the cost and associated risk and uncertainty.

The future of the RAB and enhancement funding

5.14 Following the reclassification of Network Rail to the public sector, the RAB's purpose has become less clear:

- the guaranteed return on investment accrues to the government, which also pays for it through the Network Grant/subsidies (the flow of money is circular);
- the government has replaced RAB-based risk buffers with a cap on borrowing. The RAB, and its processes, no longer provide a risk buffer; and
- the government now faces the whole cost of capital expenditure at the point it is spent.

5.15 The RAB still has potentially desirable features; for example:

- the RAB is a well-understood regulatory concept to provide a guaranteed and stable return to investors. This may be helpful if Network Rail sought to bring alternative investors on board in the future;
- the RAB and its processes focus Network Rail's attention on financial responsibility. For example, in its final determination, the ORR says that calculating the full cost of capital "encourage[s] Network Rail to invest efficiently, achieve the appropriate balance between maintenance and renewals, and ensure a level playing field (between Network Rail and potential competitors) for the delivery of enhancements";[24]

[24] Office of Rail and Road (October 2013): Periodic Review 2013: Final determination of Network Rail's outputs and funding for 2014-19 http://orr.gov.uk/__data/assets/pdf_file/0011/452/pr13-final-determination.pdf

- if operating in the absence of the loan facility cap, the RAB mechanisms provide greater focus (if not certainty) on Network Rail's outputs. By providing a buffer against expenditure risks, the RAB and its mechanisms can ensure that projects get delivered;
- it provides a mechanism to spread costs over time on Network Rail's financial statements (although not in the public sector finances); and
- it is the basis of Network Rail's asset valuation in its regulatory accounts.

5.16 On the other hand, should Network Rail remain within the public sector, there are challenges to the RAB system of financing enhancements:

- other methods could be more transparent and accountable. The RAB could make like-for-like trade-offs with other infrastructure projects difficult, and limit the ability of government to control its financial risks, particularly given that major infrastructure in the public sector is not generally RAB-funded; and
- if operating in the absence of the loan facility cap, the RAB mechanisms provide less focus over the level of expenditure. This is because the RAB and its mechanisms provide buffers against risk and the efficient level of spending on an output can change during a control period.

Question 21: Do you have any views on whether the RAB remains a relevant concept for the railway, and, if not, what should replace it?

Question 22: How should financial risk be managed in Britain's rail infrastructure in the future?

5.17 Regardless of the future of the RAB, there could be a case for changing the way that Network Rail funds enhancement projects in order to increase the efficiency of project delivery, increase its financial sustainability, or provide more certainty over either outputs or expenditure, as discussed in the next section.

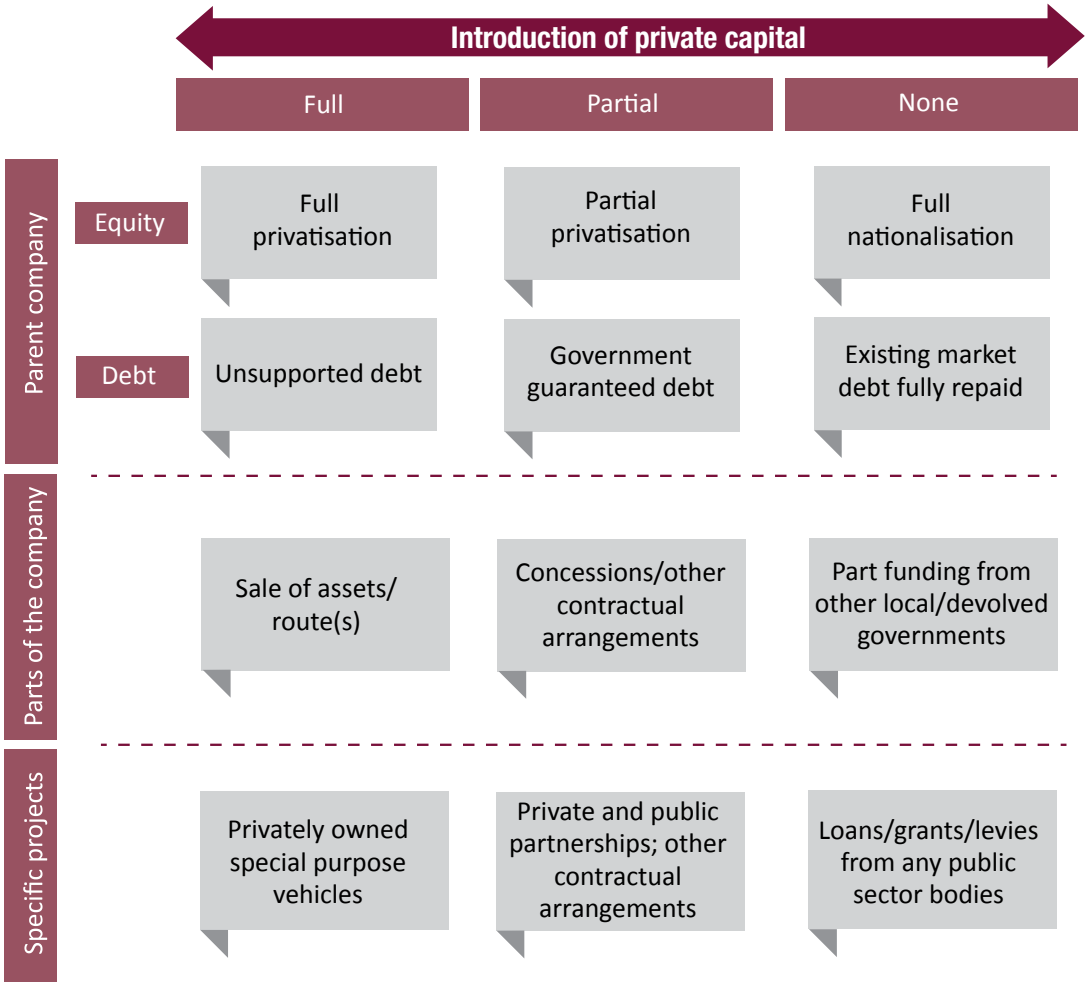
Alternative financing and funding options

5.18 Having explored the existing funding and financing mechanics, this section provides initial thoughts on alternative options and enabling factors. Different company structures are likely to require different financing and funding solutions at various levels of Network Rail's capital structure and/or for specific projects, to ensure sustainability and affordability. While government support is expected to remain an important component of the system, especially for enhancements of the network, the introduction of specific forms of private sector capital may facilitate risk transfer (albeit partial) away from government, as well as potentially reduce the upfront capital demand on the taxpayer. The Report Team will look at exploring and evaluating a broad range of options that – depending on the type of structures – may include public and private sector capital and a combination thereof, for the funding and financing of both OMR and enhancements/specific projects, as summarised in Figure 17.

5.19 Consistent with the Report Team's approach that finance should follow structure, the financing model (or models) recommended will be those which, in the Report Team's view, would best fit the proposed organisational structure. The Report Team has not been asked to consider, nor will it be recommending, financing options purely because they would reduce public sector borrowing or debt. Further to the ONS decision on Network Rail's reclassification to the public sector and the changes that ensued, the Report Team notes that:

- the rules on public sector classification are complex;
- certain financing solutions (e.g. sale and leaseback) may have diverse impacts on public sector borrowing and debt (i.e. reduce the latter but not the former, depending on the actual terms of the transaction); and
- the implementation of certain financing solutions in a public sector setting could also be difficult because of policies and rules regarding the management of public money.

Figure 17: Spectrum of potential funding and financing options



5.20 The solutions above are not intended to be read as mutually exclusive and several combinations may exist. For illustrative purposes, one scenario could be maintaining Network Rail as a public sector body, while separating out a route to be given in concession to private parties and financing specific infrastructure projects through a combination of private and public money. Looking at other sectors and/or countries, some examples of the alternative options include:

- **full or partial privatisation** at the parent company level by way of accessing the equity capital markets (e.g. National Grid, Royal Mail) or selling an equity stake to one/a consortium of investor(s);
- **debt capital markets issuance** at the parent company level, either in the form of unsupported debt (e.g. National Grid), or with an explicit government guarantee (as per the past Network Rail model and ÖBB in Austria), or as debt benefiting from public status of the company (e.g. Infrabel in Belgium);
- **monetisation of non-core assets**, e.g. property, depots, car parks, etc.;
- **sale or other contractual arrangements on a specific part of the infrastructure** e.g. concessions as per the High Speed 1 and Tours-Bordeaux high speed train line, where the concessionaire is given the right to operate certain assets for a given timeframe, providing a revenue stream against a capital receipt for the party granting the concession;
- **part funding from other local/devolved governments**, particularly for the funding of specific projects (e.g. the £3.5m Pye Corner station in Newport in which the UK government's New Station Fund provided £2.15m towards the cost, the Welsh Government funded the rest);
- **joint ventures and other types of private or private and public sector partnerships** to develop and build assets and then either operate them under concession for a number of years (e.g. GSM-R in France) or transfer them on to Network Rail. These partnerships may involve developers as well as financial parties and potentially the setup of special purpose vehicles (e.g. Thames Tideway Tunnel);
- **levies/other forms of arrangement, whereby businesses contribute to the cost of infrastructure** they benefit from (e.g. through business rates, where reforms announced recently would give some metropolitan areas a capped power to increase business rates to fund infrastructure, with the support of the local business community; and the Community Infrastructure Levy currently used by – among others – Transport for London to part fund Crossrail); and
- **other arrangements to raise finance against long term revenues** (fares) to pay for capital investment.

5.21 With regards to non-core assets, such as property, it is often suggested, and has been the case historically and in other places (e.g. Japan or Hong Kong), that property development should be used to fund all of the cost of enhancing the railway. In Britain this has not proven possible for a variety of reasons, including the cost and complexity of acquiring land, the challenge of balancing operational and commercial needs of the business, the lack of focus on property development given other business priorities and planning and heritage constraints. All of this means that property assets have never represented a significant source of funds for Network Rail. Over the last three financial years, property rental income averaged £246 million in 2014-15 prices, or around 4% of Network Rail's revenues, and proceeds from property disposals averaged £38 million over the same period.[25]

[25] Network Rail, Annual Report and Accounts 2011-12 to 2013-2014, www.networkrail.co.uk/annual_report_archive.aspx

5.22 In an environment of historically low interest rates and scarce growth opportunities, infrastructure investors seek 'gilt plus' investments, i.e. they seek exposure to businesses that operate in a stable and transparent regulatory environment, which underpins attractive and visible returns. The concept of return on the RAB is well understood and widely applied across privatised regulated sectors in and outside Britain, as a method to recognise predictable, income-oriented returns to investors.

5.23 Recent transactions (including the change in ownership of the three largest rolling stock operating companies in 2014 and 2015 and significant debt refinancing in the same space) speak to:

- the existence of significant pockets of demand for attractive infrastructure stories;
- the appetite for low cyclicality/defensive business risk; and
- the attractiveness of investment grade credit profiles.

5.24 In addition to this, the improvement in the economy has supported sectors with greater gearing to GDP growth (e.g. airports).

5.25 The scarcity of core infrastructure assets with no volume risk in mature geographies is leading investors to:

- consider a wider spectrum of opportunities, including investment in more bespoke transactions involving embedded infrastructure assets or non-core assets (e.g. the expected sale of a stake in Grandi Stazioni Retail in Italy);
- seek higher yields whilst accepting greater risks, be it through the exposure to alternative geographies, customer concentration or governance;
- be more creative in the type of opportunities they look at, focussing on the potential to cut costs, drive efficiency and maximise returns.

5.26 Against this market backdrop, Network Rail benefits from operating a critical British infrastructure, which enjoys strong demand growth coupled with political support for multi-billion pound capital investments. There is also scope for performance upside, through the delivery of efficiencies.

5.27 While these are desirable strengths, the sustainability and the affordability of the future funding and financing of Network Rail will depend on a number of enabling factors. While this is not a complete nor a prescriptive list, the following are likely to play an important role:

- comfort over the long term political support for the rail industry and, connected to that, the sustainability of 'gilt plus' returns and indemnities that the government may be willing to provide to industry players;
- robust cost estimate processes, particularly in relation to major infrastructure projects;
- greater granularity on both income and cost base (including by route and by asset type, e.g. property and stations);
- visibility on income stream over and above the government's support (e.g. by way of asset disposals receipts, rental income from retail assets, etc.);
- a tighter focus on core activities with fewer management distractions related to non-core assets;
- a potential restructuring of the capital structure in support of a robust credit profile;

- a better alignment of incentives in the industry; and
- stretching and yet realistic regulatory targets.

5.28 Beyond the more conventional group of equity and debt investors (including specialist infrastructure funds, pension and sovereign wealth funds, and private equity investors), other industry parties (operators, suppliers and manufacturers) may have a role to play, too, in supporting the future financing of Network Rail.

5.29 While many of the factors indicated above are likely to be valid also for industry players, a number of additional considerations may apply, depending on specific circumstances, e.g.:

- balance sheet capacity in support of asset acquisition and risk bearing;
- flexibility to apply innovative approaches and technology;
- ability to enter in joint ventures, or other forms of partnerships, with Network Rail and or other parties to ensure the most effective risk sharing and balance sheet treatment of assets;
- effective coordination and smooth project delivery (e.g. possession, appropriate contingency plans in place); and
- clarity and visibility on scope to assess risk and reward profile of projects.

5.30 The acquisition of certain assets (e.g. depots) and enhancements are likely to be the area of greatest interest for industry players.

5.31 As discussed in Chapter 4, Network Rail's enhancements vary from small to very large projects, both in terms of complexity and financing requirements, for which different financing solutions and sources may be applicable.

5.32 By way of example, small projects may be contestable, and handled by parties other than Network Rail.

5.33 On the other hand, developers and franchise operators may want to join forces to design, build and finance larger projects, including line electrification or regeneration of stations requiring infrastructure work on adjacent roads, or car park extensions. Once completed, they can transfer these assets to Network Rail under so called DBFT (design, build, finance, transfer) contracts.

5.34 In recognition of the social benefits of projects, and in order to spread the cost of projects over an asset's life, projects will probably continue to require some government funding. However, that funding could take alternative forms, such as grant funding through train operators, rather than adding to Network Rail's balance sheet. In those cases where a clearer commercial benefit can be demonstrated, other organisations (including train operators and property developers or local businesses) may be brought in to bear part of the cost themselves.

Question 23: Do you have any views on how Britain's railway infrastructure should be funded in the future, regardless of corporate structure?

Question 24: What positive case studies are there (e.g. international examples in the railway sector, other sectors internationally/in the UK), where more affordable and sustainable funding and financing structures have been implemented, with or without private sector capital input? And how do you think the lessons learnt could be applicable to Britain's railway infrastructure?

Question 25: What are your views on the enabling factors facilitating a sustainable and affordable capital structure for Britain's railway? What factors would be required specifically for private sector capital introduction?

Question 26: What are the types of investors that may be interested in investing in Network Rail, any of its functions, or in select parts of it? And for these types of investors, can you indicate:

- key attractions;
- risk appetite;
- required enabling factors.

Question 27: What characteristics do you think enhancement projects would need to have to attract private sector investment and to what extent and in what form would public sector support would be needed? What types of financing structure could be brought to bear?

Question 28: What incentive mechanics or control structures on Network Rail would facilitate third party involvement in the financing of enhancement projects?

06 Risks and implementation

A changing context

6.1 Network Rail has thousands of dedicated members of staff committed to the good of the railway, the economy and the country. It is part of the broader system of organisations that make up the railway network in Great Britain.

6.2 But, the external context in which Network Rail operates has changed and this report has been asked to think about the future scope and financing for Network Rail.

6.3 This does mean that some change may come. However these changes are being discussed in the context of growing demand for rail services and hence a need for more capacity, setting an industry-wide challenge for skills, deliverability and innovation.

6.4 The priority should be to deliver long-term benefits to the country as a whole, but it is vital that any proposals strike the right balance between the risk and benefit of any change, taking into account any short-term risks that change naturally brings.

Mitigating risk

6.5 Understanding that change may be necessary gives rise to a number of risks. The Report Team maintains a comprehensive list and is aware that there will be specific risks associated with various options as they emerge. However at this early stage there are a number of key concerns to highlight:

Key concerns:

- firstly, any recommendations relating to Network Rail have to work from a **whole systems perspective**, otherwise fixing an issue specific to Network Rail may import risk into the wider railway system. In a safety-critical industry this point is key;
- secondly, that there is need to **balance the short and long term risks and benefits**. Put simply, if the short-term risk is too prohibitive or if it outweighs the longer-term benefit, then it should not be pursued;
- thirdly, the **right remedy** must be applied to each problem. For example, an organisational re-structure would be unlikely to fix deep-seated cultural issues. Conversely, measures to improve Network Rail's outward-facing focus on its customers would be unlikely to address structural issues around spans of control and focus on core functions;
- fourthly, that **concern over the future creates uncertainty** and a possible feeling of lack of empowerment within Network Rail itself, leading to low morale, exodus of skills from the organisation and potentially a degraded organisational capability to deliver; and
- fifthly, finding the right **balance between efficiency and flexibility**. Agile, flexible organisations can easily change and adapt to new challenges. Organisations with fixed processes can optimise their activities and drive down cost.

Question 29: Do these feel like the right risks? Has anything been missed that it is vital to consider at this stage?

Implementation

6.6 The final recommendations must be effective in delivering a positive, system-wide, change. The future structure – and its financing – needs to work for both the railway's customers and its funders in order to bring benefit to the UK's economy as a whole.

6.7 Given the complexity of the existing system, there is unlikely to be a perfect solution. But this does not mean that there is not a better approach – and one that can be supported by interested parties across the industry.

6.8 The aim is to have any new solution in place – and effective – for the start of the next control period (Control Period 6 begins in 2019). However, effective implementation of any changes will be essential, noting that structural change can be achieved more quickly than cultural or attitudinal changes.

07 Next steps

7.1 The Report Team is considering all options at this stage and we look forward to hearing your views.

7.2 There are two ways that interested parties can fundamentally help shape the direction and thinking of the final report:

- firstly, through a **written response** to the questions asked throughout this document together with any other comments or suggestions; and
- secondly, through participating in a **discussion session** to inform the Report Team's thinking and to help the team to gather additional insight.

Written responses

7.3 The consultation period begins on **12 November 2015** and will run until **24 December 2015**. Please ensure that your response reaches us before the closing date. If you would like further copies of this document, it can be found on GOV.UK from the publications homepage (https://www.gov.uk/government/publications)

7.4 If you require an alternative format (such as Braille or audio CD), please contact the Report Team at the following email address: shaw.secretariat@shawreport.gsi.gov.uk

Sending responses

If possible, please respond online at http://bit.ly/ShawSurvey

If you cannot provide comments online, please contact the Report Team by email on shaw.secretariat@shawreport.gsi.gov.uk to discuss alternative methods of submitting a response.

If you do not have access to the internet, you can contact us at the following postal address:

The Shaw Report
Zone 6.03
Sanctuary Buildings
Great Smith Street
London
SW1P 3BT

7.5 When responding, please state whether you are responding as an individual or representing the views of an organisation. If responding on behalf of a larger organisation, please make it clear who the organisation represents and, where applicable, how the views of members were assembled.

7.6 If you know of others who would like to respond please direct them to GOV.UK for an electronic copy of the interim report.

Freedom of Information

7.7 Information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the Freedom of Information Act 2000 (FOIA) or the Environmental Information Regulations 2004.

7.8 If you want information that you provide to be treated as confidential, please be aware that, under the FOIA, there is a statutory Code of Practice with which public authorities must comply and which deals, amongst other things, with obligations of confidence.

7.9 In view of this it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information, we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Report Team.

7.10 Your personal data will be processed in accordance with the Data Protection Act and in the majority of circumstances this will mean that your personal data will not be disclosed to third parties.

Publication of responses

7.11 Our intention is to make responses public – please indicate if you have a strong objection to your response (including your name) being published.

Discussion sessions

7.12 The Report Team will be holding a small number of discussion sessions around the country to bring together different people and organisations with an interest in the future of Network Rail:

Schedule for discussion sessions

Birmingham	27 November 2015 (morning)
Cardiff	4 December 2015 (morning)
London	8 December 2015 (morning)
Reading	8 December 2015 (afternoon)
York	10 December 2015 (morning)
Glasgow	11 December 2015 (morning)
Manchester	18 December 2015 (morning)

Dates are subject to change. Please subscribe to our blog (http://bit.ly/ShawReportBlog) for updates.

7.13 These discussion sessions will give attendees the opportunity to:

- engage in conversation with other interested parties; and
- offer hypotheses or ideas for future structural or funding models.

7.14 To express interest in attending a session, please complete the form online at http://bit.ly/ShawSignUp by **Friday 20 November 2015**. Please let us know all of the dates that you would be able to attend. Once we know the level of interest we will invite a representative cross-section of interested parties to each session. The Report Team will respond to you as soon as possible after Monday 23 November 2015.

7.15 In the event that the sessions are oversubscribed, the Report Team will invite a cross-section of representative attendees from interested parties (including operating companies, Network Rail and its supply chain, the public sector, employee representation and so forth).

Final Report

The final report into the future shape and funding of Network Rail will be provided to the Secretary of State for Transport and Chancellor of the Exchequer in early 2016.

In the meantime, if you would like to keep up to date with the work of the Report Team, you can get in touch with us using the details below:

Contact details

Through our blog: **http://bit.ly/ShawReportBlog**

Via email: **shaw.secretariat@shawreport.gsi.gov.uk**

By post: **The Shaw Report**
Zone 6.03
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Annex A List of questions

Network Rail's structure

1. What are your views on the scope of Network Rail's functions?
2. Have we failed to mention any specific and important factors?
3. What are your views on these accountability arrangements and their effectiveness?
4. Have we correctly identified and defined Network Rail's customers?
5. How effectively are customer needs and expectations met by Network Rail at present?
6. Should direct customer pressure on Network Rail be strengthened? If so, how might this be achieved?
7. Are there more positive incentives for delivery which would be useful? Are any of these incentives more effective than others?
8. Is there a case for changing the route structure and what are the advantages and disadvantages of different approaches to disaggregating the network, for example on the basis of:
   - physical, political or economic geographies?
   - service type, e.g. commuter services, inter-city services and regional services?
9. Does the current balance of responsibilities between the routes and the centre seem at the right level? Are there any further responsibilities that should be devolved or centralised?
10. Can you point to any specific economies of scale that should be protected at national rather than route level?
11. What processes and capabilities need to be in place (at both the centre and route level) to support Network Rail's current devolved structure?
12. Drawing on your previous experiences where relevant, what would be the potential impact on your organisation of further structural change within Network Rail?
13. What are the strengths and weaknesses of Network Rail's current approach to planning enhancements?
14. What are the strengths and weaknesses of Network Rail's current approach to delivering enhancements?
15. How well do the current delivery and planning processes work for projects of different sizes?
16. Are there any useful models or precedents from other sectors or countries for long term infrastructure planning and delivery processes that we should consider, including in relation to management of and engagement with suppliers during the planning process?

17. What would be the most important structural features of any future infrastructure provider?

18. Are there any other processes which we have not highlighted, either within Network Rail or the wider industry, which could be improved?

19. Do you have any views on how the relationship between the periodic review process and other processes with which you are involved could be improved?

20. What criteria should be used to assess structural options under consideration? How, if at all, should these criteria be prioritised?

Financing and funding of the company

21. Do you have any views on whether the RAB remains a relevant concept in the Railway, and, if not, what should replace it?

22. How should financial risk be managed in Britain's rail infrastructure in the future?

23. Do you have any views on how Britain's railway infrastructure should be funded in the future, regardless of corporate structure?

24. What positive case studies are there (e.g. international examples in the railway sector, other sectors internationally/in the UK), where more affordable and sustainable funding and financing structures have been implemented, with or without private sector capital input? And how do you think the lessons learnt could be applicable to Britain's railway infrastructure?

25. What are your views on the enabling factors facilitating a sustainable and affordable capital structure for Britain's railway infrastructure? What factors would be required specifically for private sector capital introduction?

26. What are the types of investors that may be interested in investing in Network Rail, any of its functions, or in select parts of it? And for these types of investors, can you indicate:

- key attractions;
- risk appetite;
- required enabling factors.

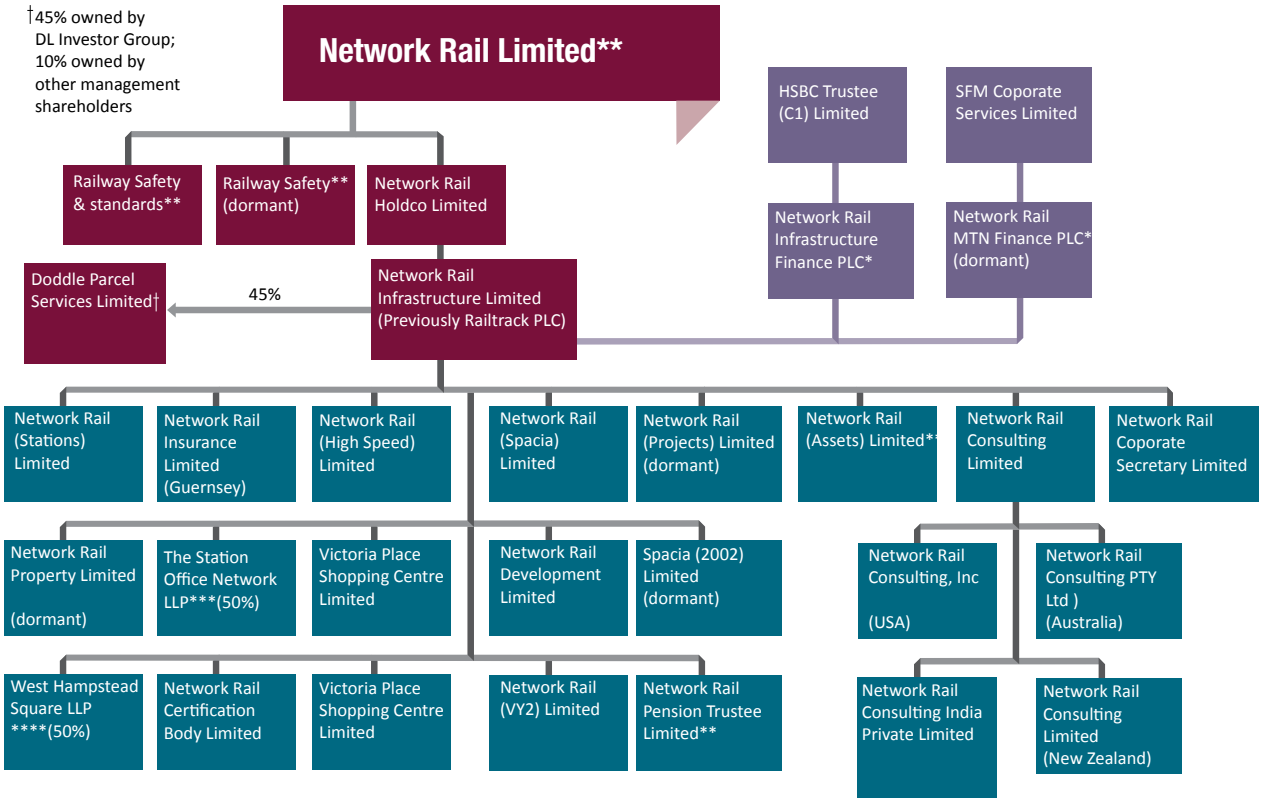
27. What characteristics do you think enhancement projects would need to have to attract private sector investment and to what extent and in what form would public sector support would be needed? What types of financing structure could be brought to bear?

28. What incentive mechanics or control structures on Network Rail would facilitate third party involvement in the financing of enhancement projects?

Risks and implementation

29. Do these feel like the right concerns? Has anything been missed that it is vital to consider at this stage?

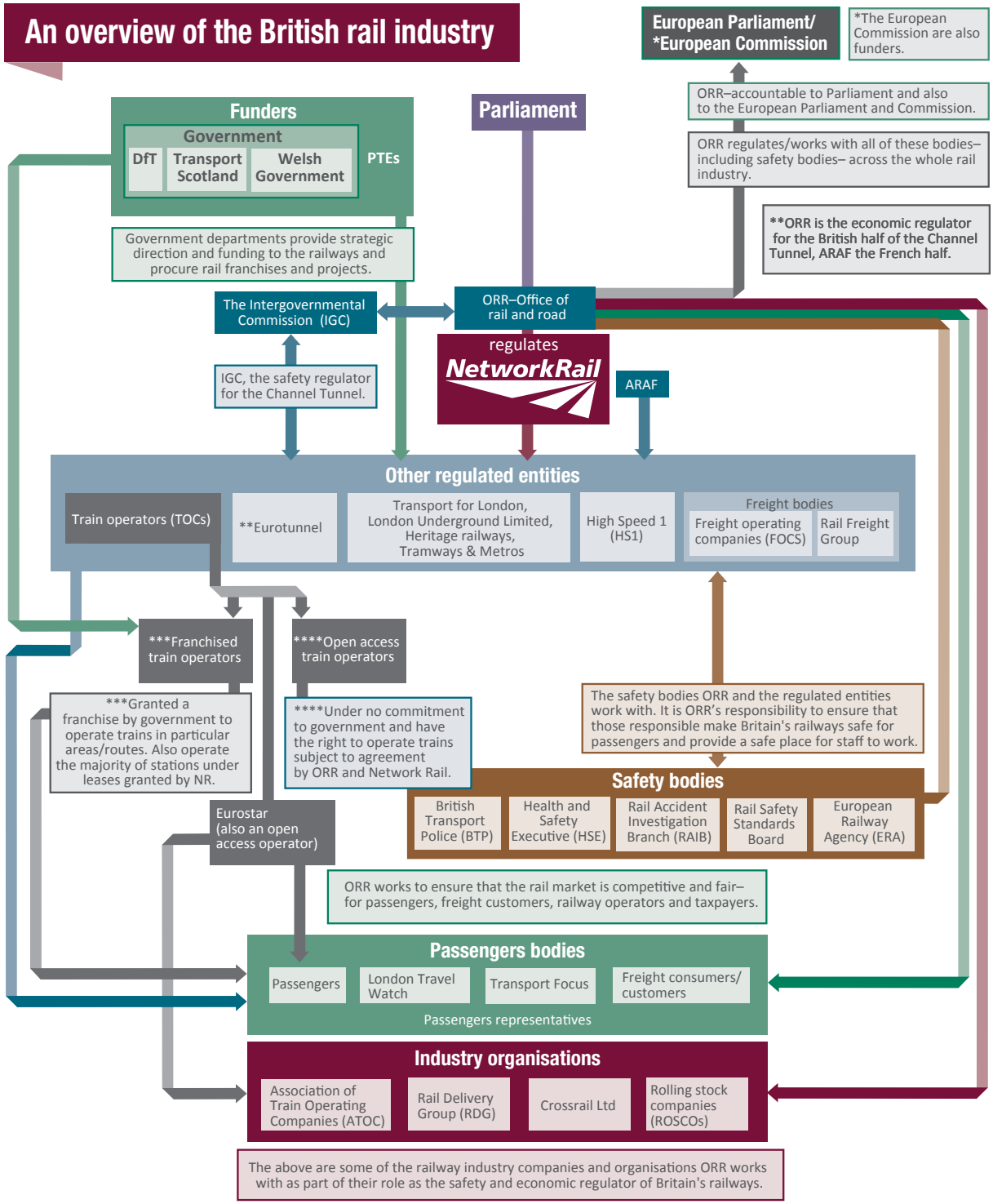
Annex B Network Rail's Group Structure



(*) Outside Network Rail Group structure but providing loan to Network Rail Infrastructure Limited
(**) Company limited by Guarantee
(***) Joint venture – Esselco Office Properties Limited (utimate parent (Esselco Properties LLP) is a Corporate Member alongside Network Rail Infrastructure Limited
(****) Joint venture – WHS Developments Limited is a Corporate Member alongside Network Rail Infrastructure Limited

Correct as at 04/09/2015

Annex C An overview of the British rail industry



This diagram from the ORR is intended to be a general rather than comprehensive overview of the rail industry for illustrative purposes only. Therefore, not every single element may be necessarily included.

The overview reflects the industry as of May 2015.

Parliament – the highest legislative authority in the UK. Responsible for checking the work of government and examining, debating and approving new laws.

Funders

Department for Transport (DfT) – provides strategic direction and funding to the railways and procures rail franchises and projects.

Transport Scotland (TS) – body with responsibilities for transport in Scotland.

Welsh Government – The body with responsibilities for transport in Wales.

Passenger Transport Executives (PTEs) – bodies with responsibilities for transport services in the city regions.

Safety body

British Transport Police (BTP) – national police service for the railways in Great Britain.

Health and Safety Executive (HSE) – the HSE provides advice to the government on health and safety matters.

Rail Accident Investigation Branch (RAIB) – carries out the investigation into rail accidents and incidents without apportioning blame or liability with a view to enabling lessons to be learned, improving safety on railways and preventing similar accidents and incidents.

Rail Safety and Standards Board (RSSB) – helps the mainline railway industry's work to achieve continuous improvement in health and safety performance.

Railway Industry Health and Safety Advisory Committee (RIHSAC) – provides advice to ORR on railway health and safety.

Regulated entities

Train operators (TOCs) – the companies that operate passenger train services, in most cases under franchises let by DfT or TS.

Freight Operating Companies (FOCS) – companies that provide rail freight services.

Network Rail (NR) the rail infrastructure owner and operator, which is regulated by ORR.

High Speed 1 (HS1) – has a 30-year concession to operate and manage the railway between St Pancras International and the Channel Tunnel, which is regulated by ORR.

Transport for London – established as the integrated body responsible for London's transport system.

London Underground (LUL) – is a public rapidtransit system serving a large part of Greater London andparts of the home counties of Buckinghamshire, Hertfordshire and Essex.

Heritage railways – railways kept to carry living history rail traffic in order to recreate or preserve railway scenes of the past.

Tramways.

Metros.

Freight bodies

FreightOperating Companies (FOC)– the companies that provide rail freight services

Rail Freight Group (RFG) – leading representative body for rail freight in the UK.

European railway organisations Railway organisations who work across Europe.

Regulatory bodies

Office of Rail and Road (ORR) – the independant saftey and economic regulator for the railway and works with government as part of this role.

ARAF – the French rail regulator.

Customers

Passengers

Passenger bodies

London Travel Watch – the independent, statutory watchdog for transport users in and around London.

Transport Focus – independent public body set up by the government to protect the interests of Britain's rail passengers.

Freight consumers/customers.

Industry organisations, railway companies and organisations who work across the industry

Rail Delivery Group – brings together the owners of Britain's passenger train operating companies, freight operators and Network Rail to provide leadership to Britain'srail industry.

The Intergovernmental Commission – the safety and economic regulator for the Channel Tunnel.

ATOC – working for passenger rail operators in serving customers and supporting a prosperous railway.

Crossrail Ltd – Europe's largest railway and infrastructure construction project.

Rolling stock companies (ROSCOs) – procure and own most of the actual passenger trains that run on the rails and lease them to TOCs.

European Parliament – is the directly elected parliamentary institution of the European Union (EU). Together with the Council of the EU and the European Commission, it exercises the legislative function of the EU.

European Commission – responsible for implementing decisions of the Ministers and European Parliament for opening of the rail transport market to competition, improving interoperability and safety of national networks, and funding some developments of rail transport infrastructure.

European Railway Agency – the body with responsibility for European railway transport issues.

Eurotunnel – manages and operates the Channel Tunnel between Britain and France.

Eurostar – a TOC, that operates a high-speedrailway service connecting London primarily with Paris and Brussels via HS1 and the Channel Tunnel.

Channel Tunnel – is a rail tunnel linking Folkestone, Kent, in the UK, with Coquelles, Pas–de–Calais, near Calais in northern France.

Notes

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