

September 2024

The Future of Rail



Executive summary

With the 200-year anniversary of the UK's modern railway taking place in 2025, a new Labour government has committed to overhauling this critical infrastructure, and a 'move fast and fix things' approach by Transport Secretary, Louise Haigh, the sector is at an inflection point and poised for change.

Railway 200 is a significant milestone. It's a moment to celebrate two centuries of rail as an enduring national institution, bringing the country together and delivering economic and social transformation since the opening of the Stockton & Darlington Railway in 1825.

But as we celebrate the sector's heritage, we are confronted with the challenges we face today and for the future.

Through *The Future of Rail*, we pause to reflect on the systemic fragmentation and challenges that are holding back the railways. From disjointed cross-departmental policy reform, to a decrease in private sector investment, to outdated legacy systems, the barriers to modernisation are well understood, and the impact on the customer experience is evident.

With a Labour government that has put railway reform back to the top of the legislative agenda, and a milestone anniversary on our doorstep, we have an opportunity to revitalise public trust in the railways and implement reform to drive economic growth and deliver social benefit for the UK.

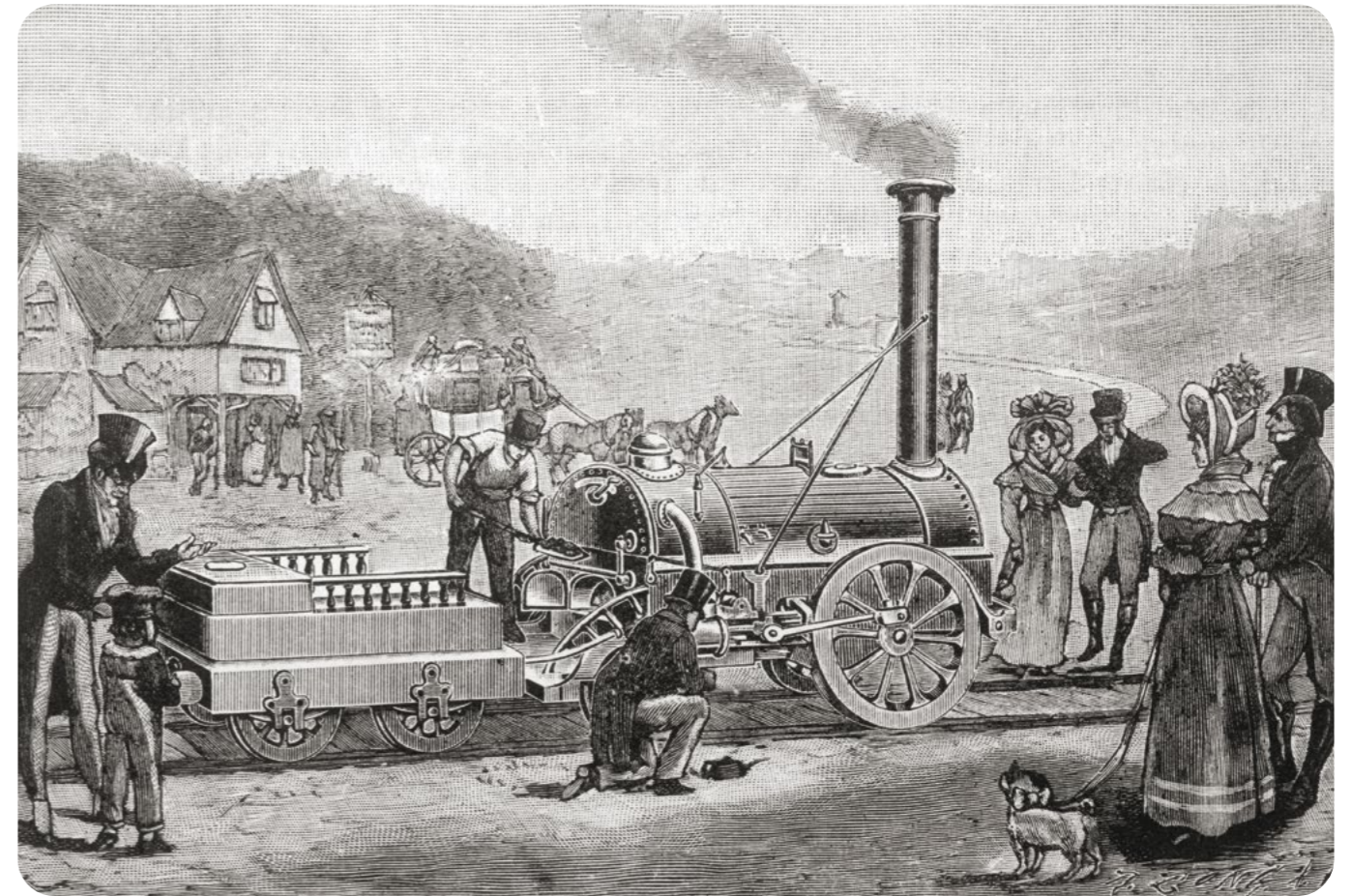


Illustration of first train from Stockton to Darlington on 27 September 1825

200 years of rail



What's next?

Railway 200 will celebrate the past, present and future of the modern railway. As we look back on the way the modern railway has shaped and improved Britain, we must also consider how the sector can continue to stay relevant and successful amid different challenges. There's a lot to look forward to as we stand on the precipice of a once in a generation reform package, which promises to drive forward a digitally driven, joined up and modern railway for the customer.

Introduction

In truth, this reform is long overdue. General dissatisfaction with the cost of travel and quality of service has driven customers to other, less sustainable modes of transport.

Only 17% of people think that rail is good value for money and 22% of people believe that rail can be relied on.^{1,2}

This year, the National Audit Office (NAO) summarised the previous government's attempts at rail reform and the general state of rail services by saying:

“The rail sector's performance for passengers and the taxpayer is not good enough and has not been for some time.”³

Today, 5% of train services are cancelled with responsibility split across operators and Network Rail, and over 13% of running rail services are severely behind schedule.⁴

Crew-related cancellations are rising also, caused primarily by breakdowns in industrial relations. Rail freight growth isn't accelerating at the pace needed to achieve the target of a 75% increase by 2050.^{5,6} Services are irregularly engaged with regions, with, up to now, no consistent means of enabling regional mayors and combined authorities to integrate buses, trams and other key systems, nor to deliver aligned ticketing and fare solutions. There is significant work required to ensure the rail sector is adopting a data-driven strategy that will be required to integrate and benefit from new technologies.⁷

And there is a £600m gap in planned savings to March 2025, due to delayed reform.⁸

This is just a taste of the challenges the sector faces today.

It's increasingly clear among the public, media and the government that rail has lost its appeal to customers and is no longer economically competitive with other modes of transport like cars or short-haul flights. If further fragmentation and poor quality of service persists, the rail sector risks becoming viewed as a cost to be managed, rather than the national asset that it is.

The time is right (and overdue) for reform. Railway 200 and the election of a new government with a commitment to bring together track and train under Great British Railways (GBR) presents the opportunity for a renewed, joined-up approach. The recent creation of Shadow Great British Railways is a positive step to this goal.

In order to reverse diminishing public trust and to be able to deliver life-changing opportunities for generations to come, it's essential that Labour's plans for a railway overhaul serve as a catalyst for change and find a collective route forward for customers, industry and government.



About Worldline

Worldline is one of the world's largest payments companies. Operating in over 50 countries, it works across all aspects of payments and digital services, and in 2023 processed over €480bn in payment transactions.

Worldline has a proud heritage in the UK's rail industry that spans decades, including delivering services formerly as part of British Rail Business Systems. As a key supplier to the sector, we provide trusted payments, data services and business systems to train & freight operators, Network Rail, Rail Delivery Group and the Rail Safety and Standards Board.

We're passionate about this sector and want to see it reach its full potential. Our core belief is that rail sits at the heart of an integrated transport system that can deliver long-lasting transformational benefits to society and act as a driver of growth. It all starts with delivering a consistent, efficient and positive experience for the customer.

Our aim, through this paper, is to set out steps to ensure that rail is positioned to achieve this. Through our recommendations, we make the case for why rail must view itself differently, and suggest targeted policy recommendations to make this happen.

The sector cannot afford another failure, and making this work will require change that breaks the cycle we've been stuck in.

Remaking the public case for rail

Clarity on a shared vision for success

To make a success of reform and reinvention, the entire rail sector – public and private – needs a shared understanding of what we’re collectively trying to build and achieve.

Before getting into the detailed delivery of services, operations and infrastructure by GBR, including investment and private sector partnerships, the rail sector requires a clear, confident and committed direction on the intended outcomes.

For example, Network Rail states that its purpose and role is:

To get people and goods where they need to be and to support our country’s economic prosperity” by “running a safe, reliable and efficient railway, serving customers and communities.⁹

In two sentences, Network Rail neatly sums up its role, and shows that it’s not responsible for directly delivering services themselves, nor for pricing them.

A new GBR with combined responsibility for train, track, services and business operations will need a clear mission statement that defines where its mandate begins and ends and ensures there’s a consistent logic through which government and its management can make decisions.

A GBR mission statement could aim to:

Spearhead the delivery of a nationalised railway system, sitting at the heart of a truly integrated transport network, fully focused on delivering customer service and operational excellence for passenger and freight customers alike.

Setting this direction will be particularly important when the questions don’t have easy, straightforward answers. For example:

- Who’s ultimately responsible for selling the customer a ticket? If a third-party retailer sells the ticket, who’s responsible for, and accountable to, the customer?
- How are fares set, and to what extent are they subsidised? How do we understand the aims and value of subsidy?
- With greater regional devolution in place that enables elected mayors to co-design services, what are the key shared qualities that the new GBR will ensure every service has? Are the core technologies in place to enable successful integration with regional metro services?
- What does data reveal about the journeys customers are actually making?



A lack of clarity on difficult, fundamental high-level design has undermined previous visions for reform, and decisions inevitably leave us with winners and losers.

As the NAO found, recent attempts to reform the rail sector failed because of incompatible views on the sector’s future across government and industry. The vision set out in the ‘Williams Rail Review’ wasn’t interpreted in the same way across government, so the subsequent governance and delivery of projects was delayed and subject to change. Different departments prioritised their individual strategic objectives, without a clear core purpose driving forward decision making.

Consequently, when the programme of rail reform faltered, it struggled to achieve buy-in from the private sector.

Labour’s vision for rail, as set out in ‘Getting Britain Moving’ and its manifesto, is highly ambitious and far-reaching.

It has the potential to create a national rail system that empowers policymakers to create real benefit for taxpayers, and to achieve greater integration of transport at national, regional and local level, by positioning rail at the centre of a multi-modal transport network.

Rail should be seen as an economic, environmental and societal asset, and one that can drive more sustainable behaviours, for example shifting air travel to rail travel where possible.¹⁰ With effective measurement of how rail delivers on this promise in place, we can shift away from perceptions of rail as a liability and towards the view of it as an enabler of economic growth and a contributor to regional mobility and greater connectivity between our cities.

Before all this can happen, however, Labour will need to ensure that all relevant government departments are entirely committed to the vision.



Key recommendations

1 Back reform with a new cross-departmental agreement for cooperation for rail.

From day one, Transport Secretary Louise Haigh MP, has outlined Labour's plans to overhaul the transport network, setting out five strategic priorities for the department, starting with the first goal of:

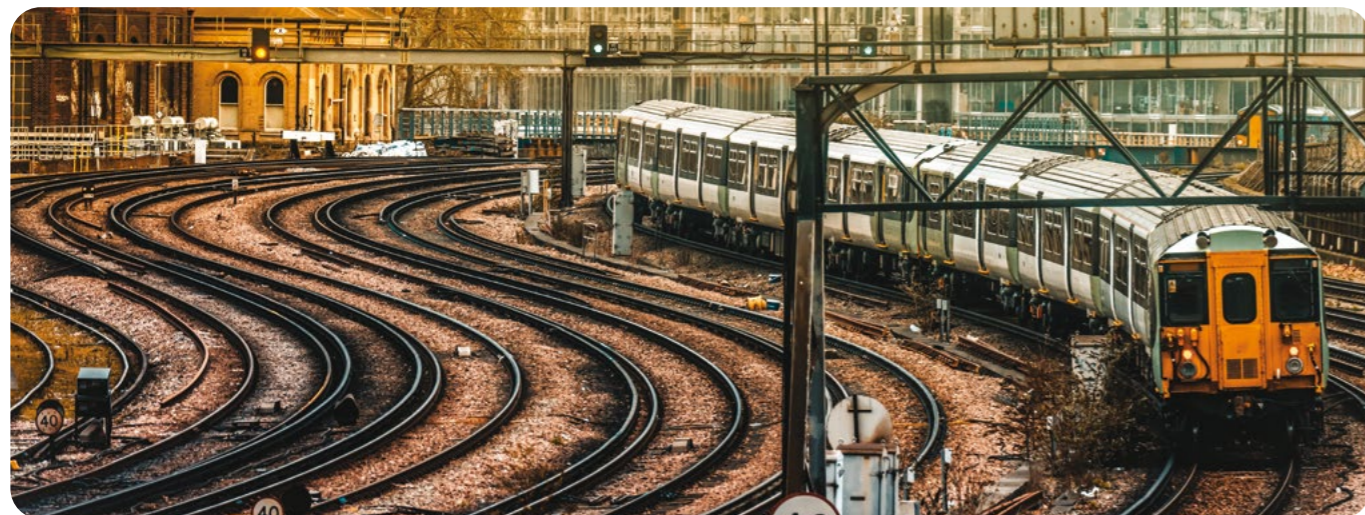
“Improving performance on the railways and driving forward rail reform.”¹¹

However, Department for Transport (DfT) cannot achieve success alone. To do this in a way that prevents dysfunction from day one, agreement is needed between departments setting out commitments and responsibilities, enabling a clearer path for reform.

The NAO's recent findings on the rail transformation programme cited ongoing cross-departmental disagreements between the DfT and HM Treasury (HMT), noting that governance arrangements were too “complex and ineffective” to achieve transformational reform.¹²

Labour has outlined its plans for GBR to be a ‘directing’ mind responsible for railway infrastructure and services. Whilst this will provide much needed clarity, more structure is needed to ensure its leadership can work effectively with HMT, DfT, DBT and other government bodies. This agreement should reflect successful examples developed in sectors where mutual understanding and commitment is needed (like rail), and core principles need to be defined and adhered to over time. Like the Concordat on Statistics, which sets out a multi-party agreement for cooperation across different levels of government to ensure there's always a strong foundation to rely on.¹³

With a new framework for cooperation across departments and in partnership with regional mayors and local authorities, government can successfully deliver on its vision for rail.



2 Renew and refresh rail's outdated policymaking process.

With a clear understanding and commitment to what must be achieved by rail reform, it's important that government reviews the underpinning processes that are used to develop and assess business cases in rail.

The guidance for the rail sector is rooted in the current economic model of the sector, in which Owing Groups/Train Operating Companies (TOCs) franchise and deliver rail services with the reasonable expectation of profit. When developing a business case, and assessing value for money, this is a factor that needs to be carefully balanced alongside other important determinants.

As TOCs are generally responsible for driving and overseeing passenger numbers, key parts of the guidance used to forecast the impacts of investment and decision-making on demand, including service quality, fares and external factors currently sit with TOCs and representative bodies, rather than with DfT. Other strategies and plans for services are often held at the individual TOC & Owing Groups/Freight Operating Company (FOC) level, or assume a separation of track, train, operators and services that will no longer be valid.

If track, train, services, operations and the responsibility for narrowing the gap between revenue and expenditure and delivering public value are all united under GBR, responsibilities and ownership will fundamentally change. Under these conditions, ownership and approaches to how projects are assessed and understood will need to change too.

Although all guidance and approaches will need to remain consistent with HMT's Green Book, and ensure there's a robust method of understanding the cost-benefit ratio of public spending, GBR will ensure the design and operation of the rail sector will be significantly different and will need to align with an overarching system approach.

In updating the guidance for a less fragmented sector, with different accountability, there is an imperative to reconsider:

- **The business justification:** the relationship of a system procurement and change with the planned outcome and vision for the new GBR.
- **The business reassurance:** with efficient and robust processes to identify and verify the right approaches, providers and expectations.
- **The business prioritisation:** including the need to ensure for example, new rolling stock is being effectively managed by the right operational approaches and technologies.
- **The business collaboration:** with a more unified GBR product, do projects ensure consistency in quality, and avoid undermining the brand with failure due to poor systems and practices?
- **The business process changes:** with less fragmentation, how do projects enable better economies of scale and enable the most effective resolution of problems across the network?



3 Develop a long-term vision for public-private partnership in the rail sector.

Private investment has always had an essential role to play in developing the railways. Historically, this investment has largely been focused on UK rolling stock, with an estimated investment of more than £20bn since 1995.¹⁴

In 2022/23, two-thirds of private investment in the rail industry was spent on rolling stock, however there are significant opportunities for government to unlock private sector investment for other aspects of rail infrastructure, from data signalling to the integration of innovative digital infrastructure.¹⁵

If the government is going to deliver a modern transport network, it must develop a long-term plan to unlock and restore private investment.

The problem is, the rail sector currently struggles to engage the private sector in a way that delivers the

best possible outcomes for both taxpayers and for businesses. This has led to severely constrained private investment into rail. There must be a recognition of the potential for private investment, from rolling stock as well as other sectors, to support the rail industry.

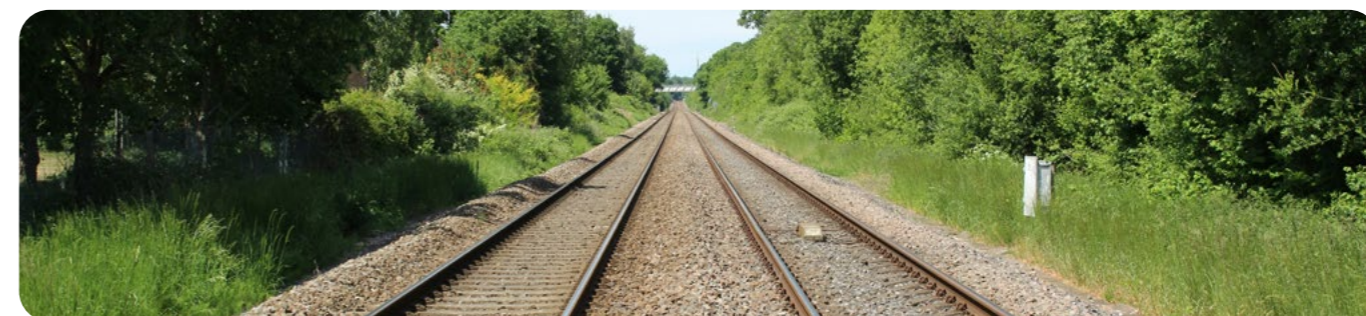
On average, the three years since the pandemic have seen **£336m less private investment per annum in rail.**¹⁶

If that trend continues into the next parliament, the sector will be missing nearly **£1.7bn**. That investment, or lack of, ultimately has negative impacts on the scope and quality of rail services that can be delivered for customers.

As both the Railway Industry Association (RIA) and the National Skills Academy for Rail (NSAR) have reported from detailed studies on this trend, there are many factors currently constraining private sector investment into rail.¹⁷

- **A lack of a long-term vision** for the sector means uncertainty for businesses, which then delay decision-making, or seek more manageable opportunities elsewhere. According to the NAO, internal disagreement within government has burned through private sector goodwill, deterring participation, and ultimately increasing the cost of capital.
- **Inconsistent, delayed or cancelled decision-making processes**, and flawed procurement practices. Difficult conditions for doing good work means that bidding, contracting and delivery costs often significantly shift from their initial scope and budget, and don't enable the private sector to focus on delivering the best product and outcomes for the best value.
- **A lack of alignment and understanding** between the public sector and private sector – RIA picks out fundamental disagreements on where IP rights for projects are held, meaning that new projects often simply fail to motivate the best private sector partners to come forward.

Labour's 'Getting Britain Moving' vision identifies that poor optimisation of freight services means the UK's rail freight is underproductive and less attractive. The improvements needed to remedy these issues, including better construction and maintenance works, digital signalling and operations and improved, data-led timetabling simply won't be achieved without new partnerships between the public and private sectors to attract private finance streams into the railways. Labour's manifesto states that progress in the freight sector will remain largely driven in partnership with the private sector, so it's particularly important to ensure investors have confidence.



Modernising control rooms to deliver cost savings

The private sector has a role to play in helping GBR/ government optimise its railway operations and modernise its systems. One clear system-wide update that is needed is the modernisation of railway control rooms to ensure there is integration across the existing Network Rail & TOC operations that will provide efficiencies.

These business critical data hubs, where processes combine with systems to deliver and enable an efficient and safe railway are essential for determining the railway sector's customer experience and financial outcomes at any given moment. The control rooms hold the key to communicating any changes to the timetable plan and critically, they define and implement the solutions when service disruptions happen. They can dramatically improve the financial outcomes for "on the day" performance and ultimately the perception of rail as a brand – something that is crucial to attracting new customers.

They have the potential to act as a significant contributor to the 'single source of truth' and the ability to harness the power of emerging computational technologies, like AI and machine learning. However, because of the fragmentation and siloing across the rail sector, different services are at different stages of modernisation.

Both passenger and freight operators are today still using systems that were created within a nationalised rail environment and are often nearly thirty years old. It is highly likely that rail customers have missed out on improved performance delivered by modern systems that fully support key processes with accurate, timely and secure data. Introducing modern systems that equip train control staff with efficient and accurate decision support tools, informed by all critical data sources, could improve these outcomes, with better decisions, better lessons learned, and a more holistic view of incidents across the network.

Worldline estimates that the failure to modernise operational control across train planning and resource allocation and the unnecessary costs of uncoordinated multiple procurements has cost the taxpayer between £50m and £100m. This number will only continue to climb given that many regions and operators have given no consideration to system and process modernisation, let alone begun procurements.

Efforts to modernise and integrate outdated control room systems, and the failure to realise the potential system-wide benefits, are an example of where the new government must take action to align policymaking processes with its plan for reform, building in space for the public-private partnerships to accelerate change.

4 Creating a Change Plan for Rail to modernise the network.

Following on from the creation of the cross-departmental agreement for rail, the renewed business case and assessment process, and the plan for the private sector, there must be a Change Plan for Rail to improve rail's fundamental products, and to ensure the right change processes are in place to ultimately deliver better services for customers.

The Change Plan for Rail should identify the products and services that the new sector needs to create – automatic Delay Repay, better ticketing reservations, services responsive to regional integrated transport plans – and ensure that investment is being targeted and prioritised to deliver and enable it.

This should target both the technologies, but also the business processes and skills that go alongside the technology, and enable the product to thrive in the real world.

As we've outlined in our previous Customer First Railway paper, the rail network currently isn't designed with the customer in mind.

The only viable way to return the rail sector to long-term prosperity is to ensure that all its services are planned, managed, delivered and sold in a way that builds and retains customers in the long-term. This is going to be particularly important with a unified GBR, where 'brand equity' is going to influence whether people actively choose rail over the other modes of transport available to them.

Following significant investment into the East Coast Main Line, modernised and digitised rail signalling technologies are now being trialled with real-world train services. The trials and eventual wider rollout of these technologies will increase capacity on the line, enable improved safety, and the reliability of services. There's excitement in the industry for the improvement that it will showcase.

But replicating that success isn't simply a case of flicking a switch and reverting the system from private operation to public ownership. The fundamental operational systems that rail relies on are all too often seriously outdated, and inconsistently integrated due to fragmentation, which then impacts on the product the network delivers to its customers.

Worldline has previously proposed improvements to key systems, like TRUST (which collects all train movements, to understand how trains are actually progressing compared to their schedule, detecting delays), TOPS (which manages and understands rail freight vehicles and locomotives) and TSIA (which supports online enquiries about rail services). Investment in those systems would upgrade them for an era where interoperability and compatibility with modern data science is key.

Failure to invest in and upgrade these systems across the network will lead to a situation where policymakers are held back by a lack of a single source of integrated information about train, track, operations and customers.

The legacy systems that hold rail back were designed and produced in an earlier era, with significantly different computer science, engineering and IT skills compared to today's apprenticeship and degree courses.

According to the National Skills Academy for Rail (NSAR), 30% of the rail sector's existing workforce is eligible for retirement in the next five years, and less than 4% is aged 25 or younger. This means that within a generation, the core skills needed to manage these legacy systems on which the railways run, will be lost. This will inevitably increase the costs associated with maintaining technologies that don't always deliver the best outcomes for the customer.¹⁸ This also creates challenges for cybersecurity. The upsetting strategic vulnerability of critical NHS systems and its impact puts the need for modern services into focus.

Additionally, the ability of staff in operational roles to deal with incidents and delays is influenced by the technologies and design of the sector as it is today.

The new government should take this as a 'clean sheet' moment. Identifying the product it wants to sell to customers – simplified tickets, responsive timetables, better customer services with automatic delay repay, integration with other transport modes and regional metro services – whilst reviewing and targeting reform, improvement and investment in the specific systems needed to make it possible.

If we can get this final part right, we can ensure that rail's customers see a real change in the services they use, directly resulting from a high-level plan for reform.



Systems in need: ORCATS and LENNON

As a priority, the Change Plan for Rail must look to update the Operational Research Computerised Allocation of Tickets to Services (ORCATS) and the Latest Earnings Networked Nationally Overnight (LENNON).

These centralised systems are used to determine and allocate revenues, ticketing and seat reservations across the network. They are both legacy systems, based on outdated and ageing technologies. ORCATS is only calibrated twice a year meaning it can't respond to real time changes in demand. These factors act as a constraint on digital sales, smart cards and split ticketing, and mean the rail sector cannot readily adapt services to better match real-time data.

Worldline recommends moving to a cloud-based data system, which would unlock significant benefits for the sector. The benefits of this approach have already been evidenced by Worldline's work with Integrale Control: a digital platform created by Worldline to provide real-time command, control and communication information for UK train operators. By switching from on-premise infrastructure to a Google Cloud platform, Integrale Control can help train operators meet increases in demand by processing higher volumes of data at faster speeds, while reducing costs, improving performance, and bolstering security. It acts as a single source of truth to make faster decisions on the country's rail network and prevent unnecessary passenger delays.

By using modernised technology and real-time data, the implementation of demand-led timetabling will enable services to run for customers when they need them, while also identifying white space for open access, freight services or engineering works. This real-time data also provides up-to-date revenue positions across operators, creating a railway that responds quicker to changing customer demands and allows industry to respond more quickly to these changes in behaviour.

Better use of data science can open the door to dynamic pricing as well, creating an opportunity to balance price with convenience based on actual demand.

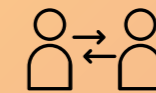
The benefits also extend to enabling the network to model localised scenarios within the national framework, optimising local transport routes and the use of rolling stock. By having access to data across the network we can also provide more consistent and better pricing for pay as you go journeys across multiple modes of transport, creating a truly integrated system.

By leveraging the latest technology and improvements in data science, we can deliver real change, fixing issues with supply and demand, creating a better use of publicly owned assets, improving the customer experience, driving up revenue, increasing efficiency and ultimately creating a shift to greater use of our railways.



Three quick wins

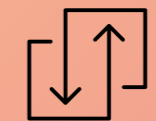
Our vision in practice



A newly established and fully **aligned agreement between key departments** in support of reform, with a clear commitment to deliver policy at pace. With joined up thinking between DfT, HMT, DBT and GBR to finally be established, with responsibility for steering the whole sector through a period of significant change.



With GBR established, **the roles and responsibilities of industry** are to be well defined, with long-term planning, outside of normal political cycles, helping to instil investor confidence in UK rail.



The **Change Plan for Rail** should help to identify consistent, clear requirements and expectations for control room technologies and processes across the whole network. Procurement should match investment in skills, and in the medium-term, investment should be allocated to help the sector utilise modern data analytics, machine learning and AI technologies to improve problem-solving and performance.

Conclusion

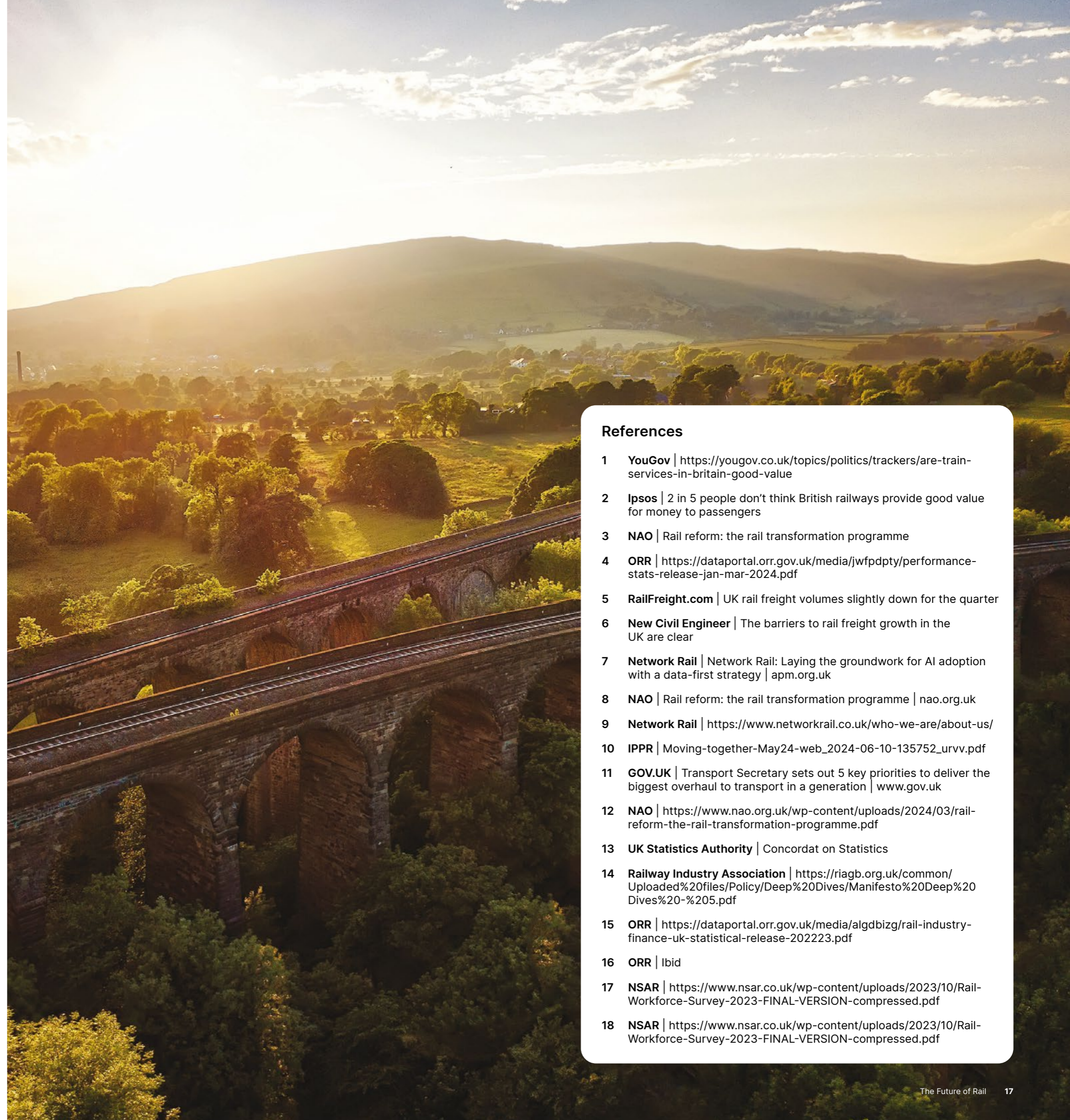
As we approach this major industry milestone celebration with Railway 200, we reflect on everything rail has offered us over the past two centuries – driving growth and productivity as well as delivering transformational benefits to society as a result.

But with stagnation in reform, ongoing systemic fragmentation and increasing customer dissatisfaction, we must address the challenges we face moving forward.

With revitalised political ambition to push forward rail reform, we have an opportunity to restore public trust in the railways and create a modern transport network with rail at the centre. It is crucial that lessons learned from previous efforts for reform and investment in operational infrastructure are taken forward. Getting this right requires a clear view about the product for delivery and the high-level design of the sector to make it possible, starting from high-level vision and processes, through to private sector investment and preparing the sector for business change.

At Worldline, we recognise the life changing opportunities the railways represent, connecting people to a world of culture and opportunity, their next career milestone, or a celebration with their loved ones. We are committed to finding a collective route forward to ensure the future of rail is set up for success.

We hope this paper sparks a shared vision of how we can embark on this journey together.



References

- 1 **YouGov** | <https://yougov.co.uk/topics/politics/trackers/are-train-services-in-britain-good-value>
- 2 **Ipsos** | 2 in 5 people don't think British railways provide good value for money to passengers
- 3 **NAO** | Rail reform: the rail transformation programme
- 4 **ORR** | <https://dataportal.orr.gov.uk/media/jwfpdpty/performance-stats-release-jan-mar-2024.pdf>
- 5 **RailFreight.com** | UK rail freight volumes slightly down for the quarter
- 6 **New Civil Engineer** | The barriers to rail freight growth in the UK are clear
- 7 **Network Rail** | Network Rail: Laying the groundwork for AI adoption with a data-first strategy | apm.org.uk
- 8 **NAO** | Rail reform: the rail transformation programme | nao.org.uk
- 9 **Network Rail** | <https://www.networkrail.co.uk/who-we-are/about-us/>
- 10 **IPPR** | Moving-together-May24-web_2024-06-10-135752_urvv.pdf
- 11 **GOV.UK** | Transport Secretary sets out 5 key priorities to deliver the biggest overhaul to transport in a generation | www.gov.uk
- 12 **NAO** | <https://www.nao.org.uk/wp-content/uploads/2024/03/rail-reform-the-rail-transformation-programme.pdf>
- 13 **UK Statistics Authority** | Concordat on Statistics
- 14 **Railway Industry Association** | <https://riagb.org.uk/common/Uploaded%20files/Policy/Deep%20Dives/Manifesto%20Deep%20Dives%20-%20205.pdf>
- 15 **ORR** | <https://dataportal.orr.gov.uk/media/algdbizg/rail-industry-finance-uk-statistical-release-202223.pdf>
- 16 **ORR** | Ibid
- 17 **NSAR** | <https://www.nsar.co.uk/wp-content/uploads/2023/10/Rail-Workforce-Survey-2023-FINAL-VERSION-compressed.pdf>
- 18 **NSAR** | <https://www.nsar.co.uk/wp-content/uploads/2023/10/Rail-Workforce-Survey-2023-FINAL-VERSION-compressed.pdf>

About Worldline

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Corporate purpose

Worldline's corporate purpose ("raison d'être") is to design and operate leading digital payment and transactional solutions that enable sustainable economic growth and reinforce trust and security in our societies. Worldline makes them environmentally friendly, widely accessible, and supports social transformation.



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