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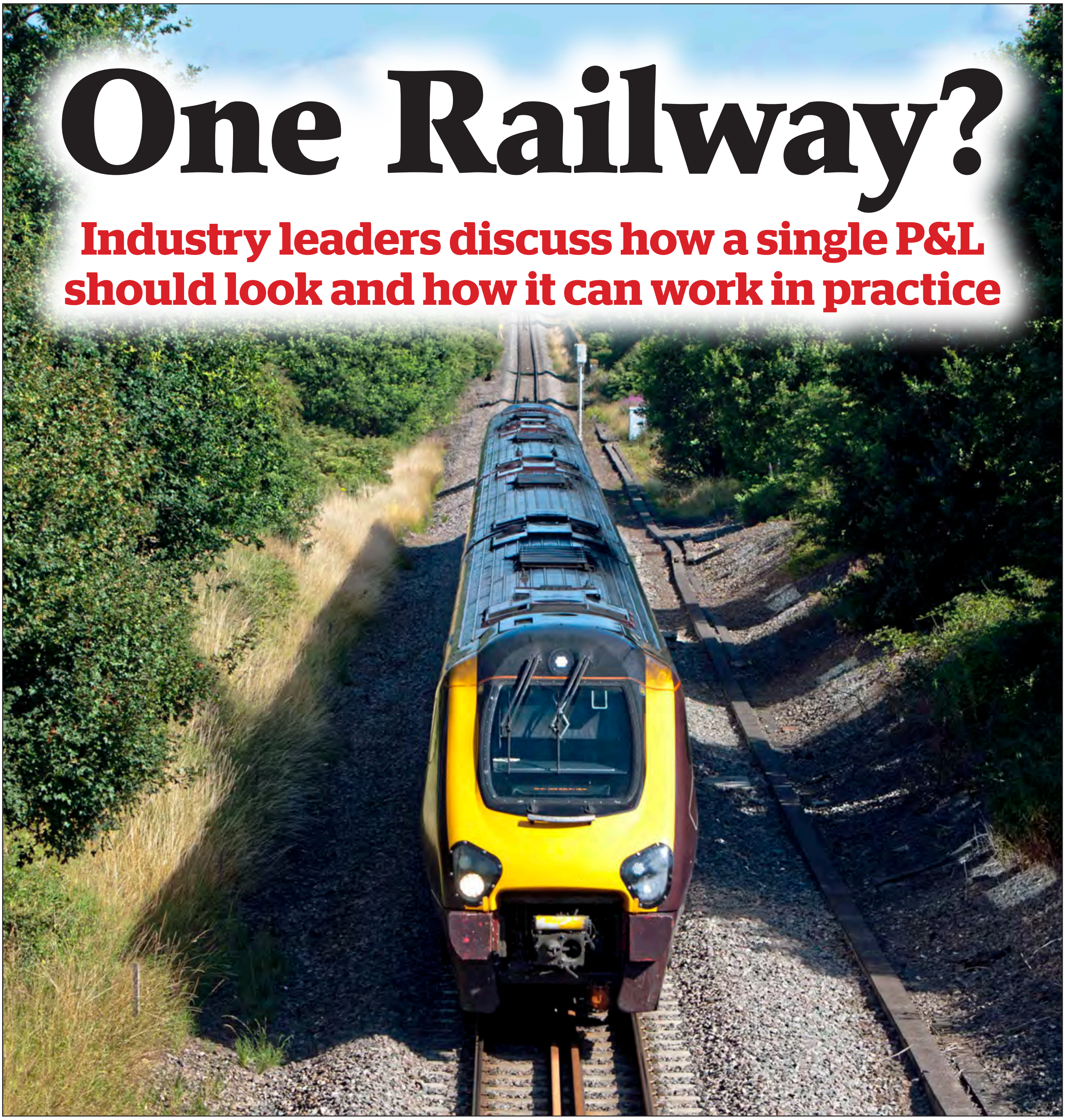

One Railway?

Industry leaders discuss how a single P&L should look and how it can work in practice

A Divided Kingdom?
Why the time has come for England to have a national transport strategy of its own.

Stopping the brain drain
Faced by an ageing workforce and competition from other sectors, can rail's skills gap be reversed?

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ANALYSIS, STRATEGY AND INSIGHT

Q3 Editorial Board Chairman introduces *RailReview*

Features

The important strategic issues

RailReview

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In July 2013, a CrossCountry Voyager navigates the single-line section between Coventry and Leamington Spa. ALAMY.

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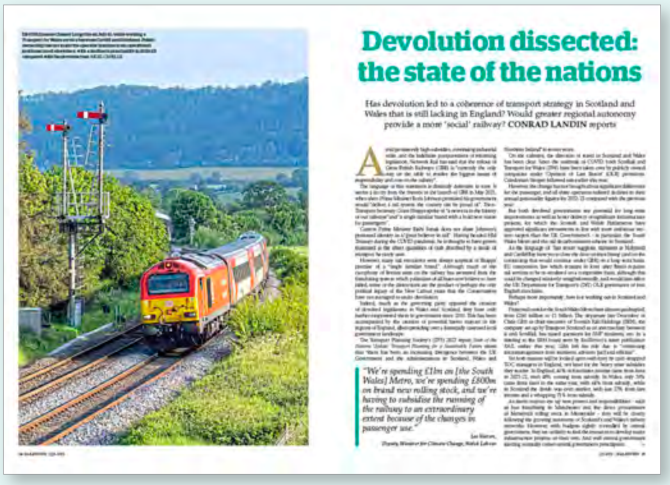
Difficult choices in finding CP7 funds

PHILIP HAIGH studies the Office of Rail and Road's response to Network Rail's Control Period 7 Strategic Business Plan, to determine how and where the money will be spent on the upkeep of Britain's railway


Devolution dissected: the state of the nations

Has devolution led to a coherence of transport strategy in Scotland and Wales that is still lacking in England? Would greater regional autonomy provide a more 'social' railway? CONRAD LANDIN reports


CP7: the good, the bad and the unknown

Network Rail's Control Period 7 highlights an 'incredibly challenging' time for the railways. PETER PLISNER looks at some of the proposals, particularly those associated with less-used parts of the network


Climate resilience in an era of budget cuts

With temperatures increasing, our weather becoming more extreme, and our railway's infrastructure ageing, NOEL DOLPHIN, Head of UK Projects at Furrer+Frey, considers how to tackle these huge challenges

Analysis and opinion
Regular Columns

Sir Michael Holden *RailReview* Editorial Board Chairman

Q3 A litany of woes... and with no end in sight

I wanted to write something positive and substantive for this edition about what's going on in today's railway world.

I wanted to try and reverse the tide of negativity which comes crashing across my many conversations with those hard at work in the industry, and which also infects my railway magazine reading, my Twitter feed (sorry, can't bring myself to call it X), and the national media.

But, just like Canute, I have discovered that it is impossible to hold the tide at bay.

Yes, there are good things going on around us all the time. The recent National Rail Awards ceremony at London's Grosvenor House Hotel showcased much that is best in our railway world today.

The strength of the entries for the innovation award alone showed that this was an exceptionally fine year for the calibre of entries.

It was also great to celebrate the outstanding success of the final integration of the Elizabeth line operation, as a culmination of more than ten years of Crossrail construction, testing and commissioning.

All in all, it was very good to be lifted out of the railway mire - even if it was only for a few hours (plus the many hours which preceded it doing the judging, of course!).

And there are plenty of good news stories still around us. Construction of the core section of Phase 1 of HS2 from Old Oak Common to Curzon Street is now at its peak. Transpennine Route Upgrade and electrification continues. The East West Rail project is moving fast from being a line on a map towards service implementation - at least as far east as Bletchley, while plans for the central section upgrade and eastern section construction are inching closer towards detailed design and development.

Both new and refurbished trains are appearing on the West Coast Main Line with Avanti. New stations recently opened at Portway Park & Ride and at Thanet Parkway. New trains for London Underground's Piccadilly Line are starting to appear off the production line, as are the next generation of trains for Docklands Light Railway.

Resignalling of the lines from London Victoria has successfully been completed, without any of the serious unplanned disruption which occurred the last time this was attempted in the 1980s.

Merseyrail's game-changing new Class 777s are finally entering squadron service after agreement was eventually reached over their method of operation, while new trains for Glasgow's 'Clockwork Orange' subway are expected in service hopefully before the end of the year. And a new rapid transit link has opened connecting Luton Airport Parkway station directly with Luton Airport.

Work continues on reopening of the Leven line in Scotland, the Northumberland line from Newcastle to Ashington, and the conversion of Cardiff's Valley Lines to light rail operation. And (whisper it quietly) even South Western Railway's new Arterio trains have been spotted out and about on the network, undertaking driver training at long last.

New open access services have been approved to start on the Great Western Main Line, to complement the Lumo service already introduced to compete with airlines on the key Edinburgh-London route.

And rail freight continues to impressively win new traffic in the teeth of retrenchment in intermodal services, with new locomotives and new wagons arriving - all bought entirely at the private sector's risk for use on the GB rail network.

This list could be much longer, of course. I've deliberately picked out a few of the major schemes in the news this year, but away from the headlines, many thousands of railway people are busy behind the scenes on a multitude of other projects designed to improve our railway - some big and some much smaller.

There is also no shortage of funding for Network Rail's continuing operation, maintenance and renewal of the network. While the financial settlement for Control Period 7 (the next five-year period starting in April 2024) might seem rather tight given the level of construction inflation experienced of late and the ageing of the core infrastructure assets, the fact that the Government remains willing to commit so much money to sustain the existing network can only be seen as positive news.

So, you might ask why I'm so depressed about the future of English rail, when we are surrounded by so much good news.

No one reading *RailReview* will be unaware of the morass that the GB rail industry has sunk into since the start of the pandemic in March 2020. And it is widely understood that the malaise started much earlier than that - perhaps as long ago as 2012 (the Virgin West Coast refranchising fiasco).

I have written about this timeline of events before, so will not repeat that history now. But the developments we have seen in the past 12 months or so make the ten preceding years look comparatively stable and functional.

I must start this assessment with the industrial relations climate, as this sets the tone for the wider industry's newsflow and zeitgeist.

We have now been in the most prolonged industrial dispute I can recall in my railway career (and I'm now in my 50th year of it), running as it has done since June 2022. Despite Network Rail managing to achieve settlement with its own workforce earlier this year, there is no sign at all of this happening with any of the English

> *"The dispute appears to have developed a life of its own, with both sides dug in so deep it is hard to see a way out for either side without catastrophic loss of face."*

Construction continues on a new station at Winslow in early May. The building of the East West Rail route between Bicester and Bletchley has been cited by Sir Michael Holden as a prime example of the positive headlines that rail continues to generate. KIM FULLBROOK.

franchised train operating companies. The dispute appears to have developed a life of its own, with both sides dug in so deep it is hard to see a way out for either side without catastrophic loss of face.

Certainly, comments made in the last couple of months by ASLEF General Secretary Mick Whelan suggest that the parties have never been further apart - and have not even talked to each other for six months.

While the RMT might be driven by its membership towards a need to compromise as autumn develops and Christmas looms, train drivers belonging to ASLEF can probably afford to be called out on strike once a fortnight or so for a prolonged period yet to come, taking us as far as the General Election and out the other side. The mood music among train drivers I have spoken to is as defiant as it is solid. They are not in the mood to compromise.

The longer the strikes continue, the bigger the stakes get. The dispute was originally called over last year's pay round, but of course there is now two years' worth of pay deal to be negotiated - and before the General Election arrives it will have become three!

While this does provide some scope for a new approach to be taken, it would involve the counterparty taking an interest in trying to resolve it. At the moment, there is no sign of this - Rishi Sunak's government has become openly hostile to rail since he assumed the premiership.

It is now clear that the decision to maintain close to a full train service through the pandemic lockdown periods was a mistake. Had skeleton services been provided during that period, with use made of the Government's furlough scheme, the direct losses showing on the face of the railway's accounts would have been substantially smaller (although a portion of the cost would then have been hidden within the overall costs of the furlough scheme itself).

Such a course of action would have incentivised appropriate behaviours by train companies and conditioned the ground for a phased start-up period as conditions eased. Just as the airlines experienced, it would not have been easy and there would have been bumps along the way, but it would have acted to reduce the sense of entitlement which continues to pervade the industry.

The determined approach demonstrated by the railway trade unions over a sustained period of time to preserve hard-won terms and conditions, despite the pressure to concede ground where appropriate in exchange for an affordable pay increase, has played neatly into the right-wing political agenda. While I understand why this has happened, it represents a tragedy of enormous proportions. I suspect that it will come to be seen by both parties in the dispute as having been massively mishandled right from the start, and throughout the whole time it has run.

Please don't take what I have said here as a rebuke for the trades unions. We all know where they stand, what they want, and what can usefully be traded, so we can work out what type of approach is more likely to have led to a mutually successful outcome. It is (in my opinion) incontrovertible that the management side has mishandled the dispute right from the beginning, and right up to the time of writing.

A major part of the problem here, of ➤

➤ course, is that the "management side" is not a single unified entity. Indeed, you could argue that those charged with leading this on the management side did so with both hands tied behind their backs. The hand of government was clear right from the start… and became more explicit once the dispute moved into its disruptive phase.

I think two major errors were made from the start. Firstly, the Rail Delivery Group allowed the TOC negotiations to be collected together into a national deal, rather than taken as a set of TOC-by-TOC negotiations.

Secondly, the timing was as bad as it gets. A quick deal early in 2022 would have avoided getting entangled with the Network Rail pay round, which was always going to end up as a stack-up with RMT over outstanding infrastructure staff modernisation proposals. It would also have enabled a settlement before nurses, doctors, teachers and others took centre stage, taking the Government's focus and preventing a standalone railway deal from being completed. A quick approach would also have enabled a deal to be struck before the rapid ramping up of inflation, which acted to move the goalposts.

It's not clear to me exactly who was in the lead at each stage of the decision-making, and how much was driven standalone by the RDG players and how much was pulled along by the Department for Transport, HM Treasury or the Prime Minister of the day. The end result has been catastrophic for the railway and its people.

Making a bad situation much worse, the Government's decision to up the ante by effectively lobbing in a hand grenade of wholesale ticket office closures is remarkable for the appalling way it has been handled.

I don't know who first suggested this approach to tackling the issue, but I sincerely hope it didn't emanate from either RDG or the Great British Railways Transition Team in the guise of retail reform.

The really sad thing is that the approach taken has managed to unify virtually every stakeholder group against it, when in principle there is little wrong with the objective of vastly reducing the number of people simply selling tickets through a glass screen.

It's the way that the challenge has been approached which is fundamentally bad. There are a series of critical enablers required to enable wholesale ticket office closures to proceed without overwhelming objections from all corners. But the Government has decided to proceed without doing any of them first.

The first key enabler is fares and ticketing reform itself, an initiative consistently blocked by the Treasury for many years. Make the whole process of buying the best ticket for any journey easier and more intuitive, and you remove most of the need for ticket clerks.

Then roll that easier, simpler ticketing and fares system into the way users interact with the fleet of ticket vending machines, so that it becomes always easy to identify and buy the correct ticket.

Add in a video chat function whereby a passenger can use any TVM to talk to a real ticket clerk in a back office (the Greater Anglia solution).

Simplify residual sales and refund processes so that they can be done online or by phone.

And provide appropriate support on stations using residual staffing for those with disabilities of various kinds.

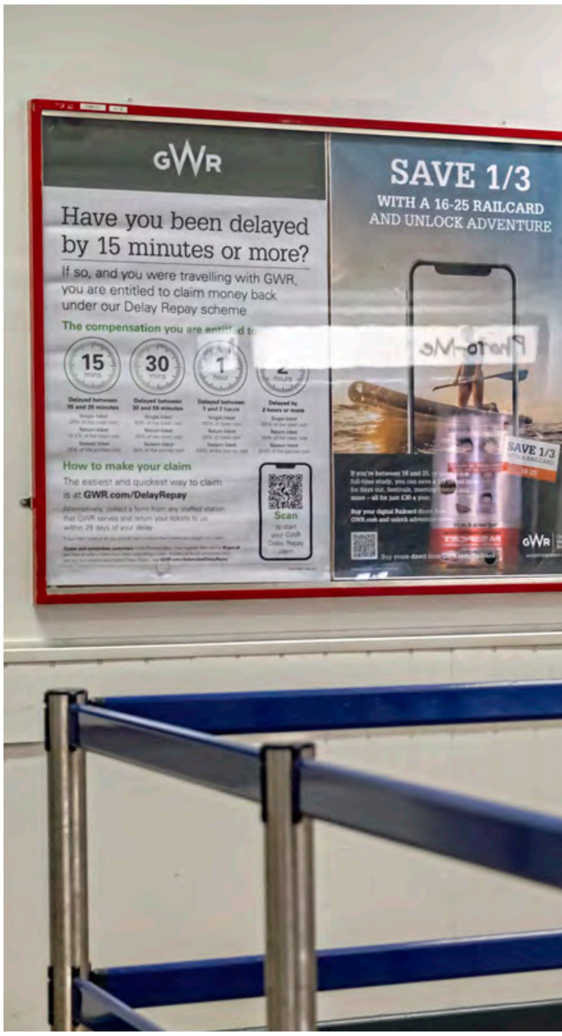
These five key steps would enable most medium-sized stations to operate without dedicated ticket offices and would release some space at stations to improve the overall passenger offer.

The largest stations are likely to continue to need some continuing sales staff on a scaled-down basis. And small stations where the member of staff works from the ticket office and carries out all other functions as well can continue as before, with no need to call it a closure programme.

Even better, if this strategy had been adopted as a three-year change programme, it would probably have passed more or less under the radar.

In the event, forcing the TOCs to come up with ill-considered and inconsistent proposals designed purely to save money has created such a furore and so many enemies that the whole proposal is surely dead in the water. So whatever savings there might have been won't materialise, and the cause of retailing modernisation has been put back by years.

We are now in a position where nobody directly involved seems to be willing to engage to try and find a way out of this mess.



The Government appears to be quite happy for the railway to continue to tear itself apart, as it seems to play into a new post-Boris agenda which is solidly anti-rail. After all, it has quite a few other pressing issues to tackle which are much higher up its priority list.

It suits that agenda to argue that the railway is incapable of modernising working practices, is too slow to adapt, and is simply too expensive. It goes without saying that it will need fixing eventually, so it would be better for the railway and its people to try and fix it now.

My prescription would be to disentangle the pay dispute from a single national dispute and revert it to a set of TOC-by-TOC negotiations within a financial framework set by government.

There is scope to agree some changes to terms and conditions in this way, in exchange for self-funding pay increases plus a formula to reflect two years' worth of pay deal.

This will differ between TOCs and might

"Forcing the TOCs to come up with ill-considered and inconsistent proposals designed purely to save money has created such a furore and so many enemies that the whole proposal is surely dead in the water."

The poor handling of proposals for the mass closure of ticket offices (like this one at Cheltenham Spa) has succeeded only in unifying "virtually every stakeholder against it". JACK BOSKETT.

be easier for some than others. It could take weeks for the simplest and many months for some others. It may not be possible to settle all of them within the available financial envelope. But by taking this approach, TOC leaders can identify the best levers appropriate for each of their businesses, and ought to be able to make better progress with the trades unions if it is handled away from the glare of the national stage.

As for the ticket office proposals, I think they will have to be withdrawn in their entirety and a fresh start made next year, but with a programme of key enablers first.

It is essential to make progress on resolving the industrial disputes without simply waiting for one or other side to collapse. Nothing can move on for the railways until normal service is resumed. And it is essential to draw a line under the ticket office fiasco.

Sadly, simply resolving the industrial disputes will not by itself resolve the outlook for rail in England, but it is an essential enabler for everything else.

The present UK government has a negative mindset towards the railway industry which is very clear for all of us to see. A much more rail-friendly approach is being taken in Scotland and Wales, where devolved governments have seen that improved social, economic and environmental value can be secured by developing their railways.

A similar approach is being driven where devolved regional administrations are in place for some transport matters (for example, Tyne & Wear Metro and Merseyrail), and in the conurbations where elected mayors and Combined Authorities are champing at the bit to be more rail-friendly.

We all need to appreciate that the current Prime Minister and Chancellor of the Exchequer are of one mind when it comes to railways. There is no affinity here for them, rather a simple determination to tackle the high labour cost base of the industry as well as reducing its net cost as fast as possible.

While we are at least now seeing the DfT asking TOCs for proposals which might drive revenue increase faster than costs, we are in the foothills of this experiment. The overwhelming mood music remains to reduce costs no matter what the impact on the customer experience and revenue. How else to explain the bizarre decision to force CrossCountry to remove its HSTs from service before enabling the transfer of Voyager units to replace them from Avanti West Coast?

The approach to HS2 is in line with this mindset - just cut the cost, never mind what it does to the business case. We could very well end up with an extraordinarily expensive shuttle railway between Old Oak Comon and Curzon Street, which would represent a waste of scarce investment funds on a colossal scale.

We can expect the English reopening programme to stall once the Northumberland line is completed. We can also expect the *Integrated Rail Plan* for the North to be scaled back significantly. I doubt we will see the East West Rail leg between Bedford and Cambridge opened in my lifetime.

As for the Rail Network Enhancements Pipeline, the extended silence from government since it was first updated in October 2019 tells its own clear story.

We are now seeing significant quantities of mid-life trains going off-lease, and in many cases being subsequently sent to the breaker's yard.

In a rational world there would be a rolling electrification programme in place which would enable an orderly cascade of assets to optimise whole life value. However, since it is the leasing companies which are taking the hit from this rather than the Government, there is a whiff of *schadenfreude* about it, given the long-standing animosity between the Department for Transport and the rolling stock companies.

More worryingly, it means that when there is an upturn, there will be a lengthy gap while new trains can be ordered, and it probably means that two or more of the five train factories now operating in England and Wales will have closed by then due to a lack of orders.

That's even more depressing when you recall that train manufacturers were encouraged to put their own risk capital into these, in order to win UK work!

This is a gloomy prognosis for railways in England, at least up until the General Election. What happens after that is anyone's guess.

Labour has committed to completing HS2 in full, but that is without having gained a full insight into the Treasury's financial position. It seems likely that the early years of any incoming Labour government are more likely to be focused on higher-priority areas such as housing, social care, education and defence. This means rail policy could continue to drift for quite some time to come.

Reader, I tried to write a positive story about rail in England. I really did try. ■

Lord Hendy of Richmond Hill speaks at Rail Live on June 21. The Network Rail Chairman remains as one of Great British Railways' most ardent supporters. JACK BOSKETT/*RAIL*.

One P&L: taking the railway into account

A single profit and loss account for the railway - for the first time in a generation. The transformative idea has the support of (almost) everyone. But with rail reform fast slipping down the political agenda, can change on that scale really happen?

In a special RailReview investigation, **PAUL CLIFTON** examines what 'One P&L' could look like. What does it actually mean? We speak to its architects, to train operators, and to the supply chain.

Then, we examine other changes that could be introduced to cut costs more quickly - changes that do NOT involve closing nearly all ticket offices.

We also take the long view. The last time the railway faced financial turmoil on this scale was in the early 1980s. What can be learned from the people who led the way from recession back to growth 40 years ago?

To open our extended analysis, the chairman of Great British Railways Transition Team, Lord Hendy of Richmond Hill, sets out his agenda.

One P&L: the ambition

Since COVID, HM Treasury has collected all fare revenue from the railway. Spending is allocated by the Department for Transport. Train operators are contracted to deliver a service specified by civil servants.

This means the only place where revenue and expenditure - profit and loss - land on the same desk is at 10 Downing Street… where the Prime Minister has other priorities.

With public finances under severe pressure, HM Treasury requires budgets to be trimmed. But it is not responsible for making the decisions about how cuts are implemented.

No commercial company could operate this way. It is, by common consent, an unworkable nonsense that serves the interests of no one.

A consequence is that money is not invested in projects that attract more passengers. The railway cannot spend to grow its way out of trouble, despite plentiful evidence of latent demand from both passengers and freight users.

Even the Secretary of State for Transport has acknowledged that train operating company managing directors struggle to either manage or direct. A small army of civil servants check their every move - civil servants who lack the experience and leadership skills of industry leaders.

> *"None of this is rocket science. It's an obvious thing to do. It leads to some sensible discussions about what you might do where the revenue is quite low and expenditure quite high, or where targeted investment might improve the revenue."*

Spearheading the call for change is the most influential person on the railway, and one of the few industry figures to whom politicians on all sides will listen: Peter, Lord Hendy, chair of both Network Rail and the Great British Railways Transition Team.

In an exclusive interview for *RailReview*, Lord Hendy explains why change is needed, how work to achieve it has been under way quietly for a year already, and why it is not yet a done deal.

"For the first time in 30 years, this brings together revenue and cost information. On a national basis, on a regional basis, and - hopefully - on a line of route basis," he says.

"It is absolutely incredible that nobody on the railways has been able to do this in all that time. You might have thought that the Department for Transport - letting franchises and controlling Network Rail, at least after 2015 when it was nationalised - might have been interested in some indication of profit and loss in different parts of the rail industry. But it didn't, in all that time.

"So, this is new. The Secretary of State talked about it back in February. He understands the value of knowing the cost and revenue of particular pieces of the railway, simply to give an idea of where you can generate revenue, or save money, or both.

"It's wholly positive. It ought to have been done before. If the railway only has four-fifths of the revenue it had before COVID, but it costs as much to run as before, why wouldn't you try to save money in a realistic way?

"None of this is rocket science. It's an obvious thing to do. It leads to some sensible discussions about what you might do where the revenue is quite low and expenditure quite high, or where targeted investment might improve the revenue."

Lord Hendy picks the Cumbrian Coast line as an example.

"As you might expect, the revenue is low because there are only a few short trains a day, and most of the journeys are local. The investment made on the line is hugely bigger than the revenue. ➤

➤ "I don't suggest you shouldn't spend that money. But if you looked at the numbers, you might start to consider the gap between the revenue coming in and the money heading out.

"In the past, the revenue risk on that route was down to the franchise owner. But it isn't any more - it's all public money. That makes change possible.

"No UK rail funder, UK Government, Scottish or Welsh Governments, will ever close a station. It is completely politically unpalatable.

"But if you look at the Cumbrian line, you might look at the costs and revenues together and then think quite carefully about the merits of knocking five minutes off the journey times, bearing in mind the likely revenue that it will, or won't, generate. At the moment, we take that sort of spending decision without understanding the overall effect.

"We've had 30 years of people sailing their own boats. They've not kept financial records in standardised ways, they've followed whatever their own company format might have been.

"But if we have One P&L, we need to get that into a standard format. We're doing a lot of work to get that."

What would a single profit and loss account for the railway look like? A national figure? A regional one? Would you have a separate account for (for example) the Marlow branch in the Thames Valley?

"I suspect you would break it down to the level of the Thames Valley branches. However you allocate the fares, you would of course make sure that you were not logging a bogus transaction of the fare from Marlow to Bourne End, when in fact almost all the passengers are going to Paddington - and a lot of them used to go First Class when they could."

"There are three things that will make a difference to the cost of the railway to taxpayers: reducing the cost through better productivity; getting more revenue by growing the market; and changing the structure of the railway to save money. They are still all good things to do. This is part of the reform of the railway."

British Rail maintained some secondary routes to a lower standard to save money. Is that what Lord Hendy is advocating? He skirts a direct answer.

"Anything you tell people about the whole cost - operations, maintenance, and renewal - ought to provoke a discussion about doing things differently. That's not a bad thing to do if your revenue is nowhere near the cost."

Lord Hendy acknowledges that the prospect of legislation

Great Western Railway 165103 calls at Warminster on August 23. For the last year, GBRTT has been studying farebox revenue on a station-by-station basis and apportioning costs to different operators. JOHN STRETTON.

to restructure the rail industry appears to be receding. With a General Election probably only a year away, there are more pressing concerns on the Prime Minister's agenda.

"The Treasury is short of money. We are miles away from where the Treasury thinks we should be, because we are structured the way we are. That looks likely still to be the case after the next election. These are really difficult political and financial circumstances. I acknowledge that makes our work more difficult.

"All the things we are doing are the right things to do, in circumstances where the Treasury is short of money. There are three things that will make a difference to the cost of the railway to taxpayers: reducing the cost through better productivity; getting more revenue by growing the market; and changing the structure of the railway to save money. They are still all good things to do. This is part of the reform of the railway.

"I don't care how we get to One P&L. But we have to get there. I hope you will conclude that it is starting to happen, in order to find more practical ways of either saving money or increasing revenue."

One P&L: What's going on?

"It isn't a single balance sheet for the railway. Or a single bank account," says John Gerrard, the lead finance director at Great British Railways Transition Team (GBRTT).

One P&L is his responsibility. This is his first ever interview on the subject.

"They don't often let accountants talk - and maybe people don't want to listen to us," he says.

"It is a means of bringing different financial information together that has been buried in different parts of the industry.

"The One P&L phrase was coined at the time of the White Paper to create a theme - a feeling. People attach their hopes and fears to it, and it becomes different things to different people.

"It means we can look across the system at the impact of cost and revenue. It is much better information for rail leaders who make decisions about costs and benefits, and the trade-offs between them.

"We haven't been able to look at rail as a system for, well, ages. We have to build a capability that has been lost altogether."

Gerrard has been working on this, behind the scenes, for a year - gathering and analysing financial information, and starting to build a future model on which the whole railway could come to rely.

"Which is fiendishly tricky," he confides. "It will consolidate and eliminate all the complex intra-industry trading arrangements. Schedule 4 and 8 track access - all those flows should disappear. But they don't, and that injects planning blight into the system.

"We are looking at farebox revenue data by station, apportioning different operator costs. Network Rail crosses 2,000 different route sections. It's an incredibly detailed piece of activity."

The situation is further complicated by the role of the private sector. Although revenues go straight to HM Treasury, the private train operators won't be keen to make public their commercial secrets, whether that is to potential rail rivals or to bus companies which might be able to spot specific local opportunities to attract some of their business.

Gerrard explains: "We are using publicly available information. We are very conscious that there are sensitive competition law issues in this space. We are not using commercially sensitive data."

The One P&L concept was publicly endorsed by Secretary of State Mark Harper in a speech last February. Everyone appeared in favour. But more than half a year later, the railway has nothing to show for it.

"These are not short-term fixes. We've been working on them for 12 months and we are now going into some trials to develop the thinking. We are rolling into trials over the next 12 months,' says Gerrard.

"A big part of this is cultural change. We have a generation of rail leaders who are expert at managing one side of the P&L. Everyone is acting rationally within their set of incentives. Now we need them to work across the system.

"For example, on the Great Western there are some local joint ventures between NR's Western Region and Transport for Wales on the Cambrian line, developing whole-industry business plans with the operators. The industry is starting to come together.

"Yes, it's an accounting conversation. But it is also about aligning the planning of the industry - whole-industry business plans."

Easier said than done, when no one on the railway gets their hands on the revenue, and when expenditure is tightly controlled. Tales abound of micro-management by DfT officials with limited industry experience. It leads to unimaginative following of instructions, not innovation.

"Legislation is what unlocks the real benefits of reform," Gerrard concedes.

"Until we get that, we are left with the system of misaligned incentives we have at the moment.

"But that doesn't mean we shouldn't be working on the interface costs. The thing most people underestimate is the cultural change side of this. Once people understand the impacts of their decisions on others, they can improve the whole rail environment." ➤

"Legislation is what unlocks the real benefits of reform. Until we get that, we are left with the system of misaligned incentives we have at the moment."

One P&L: The industry responds

Superficially, the industry response is straightforward. Nearly everyone thinks that a simple financial structure, in which cost and revenue come together, is an obvious thing to do.

And yet no industry leaders outside GBRTT can see much evidence for it happening.

What they see instead is a government intent on reducing costs rather than on growing revenue. They find it frustrating that a widespread agreement on the way forward is not leading to action. They perceive it as a lack of political leadership.

"I really think people underestimate how serious a moment this is for the industry," warns Andy Bagnall, chief executive of private sector lobby group Rail Partners.

"This is a profound crisis. If we carry on as we are, we will be in a downward spiral.

"If we have a General Election that produces a hung Parliament, as the polls suggest, we could have several years in limbo. We have to act now to avoid a possible hiatus.

"We support the concept of One P&L to take whole-system decisions. It was the lack of alignment between track and train incentives that gave rise to the whole Williams Review.

"We will keep pushing for legislation for an arm's length body to be the contracting authority. But if it doesn't come in the King's Speech this autumn, it certainly is not going to happen before an election. It is also unlikely to be a first-session priority for whoever wins that election, so we have to look for other ways to drive the industry forward in the absence of any legislation."

Jim Steer, director of Greengauge 21, says: "If you don't understand the cost and revenue of a business, you cannot manage it. It really is that simple.

"A fundamental management tool is missing. The Treasury is only concerned with the bottom line. There are other ways to manage performance.

"Senior managers in Network Rail tell me year after year that they are fed up with the misalignment of incentives.

"This started out as a chorus of approval of the Williams-Shapps notion. That seems to have changed. We now have Ministers saying they want to carry on with franchising. They don't use the word, but that's what it is.

"Talking about operators taking a level of revenue risk takes us back to where we were before Keith Williams was called in. It does not answer some big questions: do you want the train businesses to reflect a whole-industry cost? In which case, you're going to have to throw a whole load of Network Rail costs at them, not just a notional track charge. I'm not convinced they fully understand what they want to achieve."

Steer speaks out where train operators are increasingly afraid of biting the hand that feeds them. The Rail Delivery Group declined any involvement in this article, stating that this was not an appropriate subject for them.

"This is one of the great mysteries of the current railway age. We have a government that mapped out a reasonably clear view of how change would look. It had support. It appears to have been blocked at the highest level. Government interest in the railway seems to have waned."

Mark Hopwood, MD, Great Western Railway

"I've not yet met anybody who thinks the current structure is a good way to run the railway," says Mark Hopwood, one of the longest-serving and most widely respected managing directors of a train operator.

The Great Western Railway MD asks: "If everyone agrees with that, why have we still got it?

"Splitting costs and revenue the way we do is complete madness. That's not my term - it's what the Secretary of State said in February. It is a mystery to me why we are still doing it, when both the Secretary of State and the Minister of State have told us it's not a good idea.

"This is one of the great mysteries of the current railway age. We have a government that mapped out a reasonably clear view of how change would look. It had support. It appears to have been blocked at the highest level. Government interest in the railway seems to have waned.

"The Treasury now has the power to stop and start railway funding on an annual basis, which it hasn't had for decades. I worry that perhaps some people like that too much."

Rob Morris, joint chief executive of Siemens Mobility, cautions: "We need to watch carefully the 'new' GBR, to make sure it is not re-engineering what we had before, so that it looks only slightly different.

"It's now time for total, absolute reform to a really simple model in which everybody is aligned to the same goal.

"The train operators and the infrastructure operator have to be incentivised in the same way, as opposed to the ridiculous situation

Engineering work continues at Hull Paragon in April 2022 to put in new buffer stops and re-lay track into Platforms 4 and 5. Continued delays to passing the necessary legislation for GBR have left industry bodies asking what the 'plan B' is to remedy the industry's structural problems. IAN LYALL.

we have at the moment. Then they can invest - whether that is in skills, technology, time or money - and get a return from it.

"Within the One P&L mechanism, investors need to control the risk over which they have influence. The key is to rationalise risk.

"Say a line needs resignalling - one in which we could provide the funding and the technology, based on us getting our return on investment through a fee directly linked to the availability of train paths that our signalling provides. If we can give an excellent service over a period of time, we get our money.

"That's a totally different model to what exists now. Our risk is in the technology not working, customers suffering, and us being penalised for it. We would be incentivised to get it right.

"The Department for Transport knows things need to change. Treasury hasn't changed anything. The result is a sort of constipation.

"Investing in infrastructure unlocks a lot of economic potential. Other countries around the world that have invested in their infrastructure are doing better - whether that is transport, the internet, or whatever.

"My worry is that we will continue to stay a 20th century country in the 21st century."

The Railway Industry Association, which represents the supply chain, warns that the talk in government is all about cutting costs, with none about increasing revenue.

"If we are not getting the promised legislation, we need to know what Plan B is," says RIA Chief Executive Darren Caplan.

"What are GBRTT, Network Rail and the Department doing to give us a Plan B in the complete absence of a Plan A? What politician is going to do big stuff before the next election?

"It's now time for total, absolute reform to a really simple model in which everybody is aligned to the same goal."

Rob Morris, Joint Chief Executive, Siemens Mobility

"At the moment, the Conservative talk is all about cars, and the Labour talk is all about nationalisation. The nitty gritty of cost and revenue are not being discussed.

"And if we don't get legislation before the election, it could be two or three years down the line before we get a steer. The problems are not being solved."

RIA policy director Robert Cook joins in: "People seem to be shying away from the more precise questions that will drive the One P&L in practice.

"What timeline are we looking at? Train operators are looking at a 12- to 18-month timeline to get any payback on spending, so their view of beneficial whole-system improvement is totally different from an infrastructure supplier with a 20- to 30-year horizon.

"Some people are talking about cutting WiFi on trains to save a small amount of money, with no idea what harm that might do to passenger numbers in the medium term.

"There will still be separate books of accounts. It's not really One P&L at all, as it was back in the days of British Rail. You won't get such a strong linkage with a virtual P&L, with different teams merely sitting around the same table. We need a long-term strategy and a One P&L strategy to share an honest, transparent plan, and probably have the Office of Rail and Road keeping score in all this."

Caplan adds: "There is a story here about disrespect for the rail industry. It is billions of pounds. It is hundreds of thousands of jobs. It is the spine of the country's transport system. Yet it is being treated terribly by Government.

Neil Robertson, chief executive of NSAR (the National Skills Academy for Rail) notes: "It's a done deal. No one disagrees that this is a good thing. No one disagrees that GBR as a mechanism for it is also a good thing.

"If you have a One P&L arrangement, there are some duplicated roles that are not needed. And you don't need all the nonsense in delay attribution, because everyone is aligned.

"Now, here's where I get interested. We can work differently. If I take possession of a line two hours earlier, and hand it back two hours later, I double my productive work time but maybe inconvenience only a handful of passengers.

"I think we would see more creativity in the use of rolling stock, because it would be easier to balance greater track wear with additional services that benefit passengers - more like Lumo.

"I am excited about the opportunities for doing things differently. There are immediate savings, but also productivity opportunities - and they are the bigger prize."

Without this change, Robertson argues that perhaps two in three industry decisions have been the wrong decisions, because they have been made on rational but narrow grounds by Network Rail, or by the Department for Transport, or by individual operators.

"Network Rail regions have published business plans. Next time around, the train contracts should be let with one single business plan. On West Coast, you would factor in digital signalling to get the HS2 trains on the classic track up to Scotland - One P&L at national level.

"The contract takes into account the work that needs doing on the track, so instead of lots of compensation being paid for the trains not running while the work is done, you start with the knowledge that the upgrade will be taking place. No wooden dollars. No teams of people chasing those wooden dollars. Alignment with the practical realities of the infrastructure. Everyone incentivised the same way. ➤

➤ "It will benefit the supply chain, where short-termism is the enemy of productivity. Because the planning needed would put the infrastructure on a longer-term basis.

"It's a mindset. A cultural change process, not just an accounting method. Never underestimate how deeply railway people sit in their silos.

"This all leads to a further benefit - data. With One P&L you would have common data - from the trains, from the track, available to each other."

However, Robertson cautions: "We are miles away from this. DfT is doing a capability review exercise. We should assume people are a long way from being ready. It will need a sustained programme of incentives - ORR is brilliant on safety, but it does not have a strong track record on economic regulation of the railway. It will have to develop that capability.

"I think the outcome of all this will be more private sector money in the railway, not less. We will have longer-term thinking, and we will go to the private sector to do the digital upgrades."

There will be obstacles to that happening. Not surprisingly, lawyers are already spotting the potential pitfalls.

Here's Jason Chamberlain, partner at BCLP and a long-term industry figure who represents and writes contracts for rolling stock companies and infrastructure owners:

"I wonder whether it would just be a headline piece of paper that shows £X in and £Y out. I am unclear how a railway P&L can properly be compiled and, importantly, socialised for all to understand.

"It is going to be difficult to include commercially sensitive information. I wonder how useful that would actually be: how would the information be usefully disaggregated? How will it be used to deploy resources?

"It can't be wrong to have such information - my main concern is who would use it and for what purpose. It would then have to be used with caution, which seems self-defeating.

"It's hard to see what political friends the railway has in these dark days, and I wonder how the information would be used. Could it be used to make choices that are purely financial? If it is only a headline figure that masks the underlying causes of profit or loss on a given route or geographical area, it could be weaponised against the industry.

"Instinctively, I feel uneasy about applying this kind of business overlay and mindset to a socially necessary national asset, in the same way I do when this kind of thinking is applied to the NHS and other social services," he concludes.

"We know what our numbers are," says GWR's Mark Hopwood.

"But we don't want to reopen some of the arguments not made since British Rail days. You don't want to separate the costs of the Great Western Main Line from the costs of the Marlow Branch.

"The profits of the main line come from the inter-city trains and the Mendip stone trains. But we shouldn't be charging a share of the main line costs to the half-empty trains on the Marlow branch. If the Marlow branch trains were cut because they don't pay, you still have to face all the costs of the main line, just without the extra passengers delivered by the Marlow branch.

"There is a story here about disrespect for the rail industry. It is billions of pounds. It is hundreds of thousands of jobs. It is the spine of the country's transport system. Yet it is being treated terribly by Government."

Darren Caplan, Chief Executive, Railway Industry Association

43007 (with 43008 on the rear) leads CrossCountry's 1227 Plymouth-Edinburgh near Milford on September 4. How to incorporate commercially sensitive information from operators into a single industry P&L is likely to prove challenging to planners at the GBRTT. NIGEL CAPELLE.

"If we want a commercial railway, competing against Megabus and National Express coaches, we don't necessarily want them to know the value of each of our markets, helping them work out the business case for a new road route to match. But that's a decision for Government - all our finances are visible to DfT."

Jim Steer also picks up the issue of excluding commercially confidential information: "The incumbent won't want to display how much they make on each particular journey or route.

"How much should open access operators be told? We have this peculiar world in which they get a share of the incumbent's revenue, plus anything they can pocket themselves. We don't have whole-industry contracts that manage the revenue and risks of the passenger business."

With the current Government, Steer points out that any solution will have to incorporate the private sector operating passenger and freight services.

"We have to demonstrate to the doomsters at the Treasury that we can manage this properly. The politicians require giving some of this to the private sector. We have to find a way to do that. They won't take silly risks. They will not bring oodles of cash with them, because there are not oodles of cash to be made out of the railway.

"The Treasury is just saying: you can't have money because your passenger numbers are down. It's brutal but simple. It is not managing the system properly. In this context, franchising just seems a weird thing to do now. There are many ways you can contract bits of the railway to the private sector.

"It's not a sustainable system for the next government to have the dead hand of the Treasury dictating transport policy. We are either going to spend some money on capacity problems and electrification, or we are going to have to move passengers out of the way to get more freight on the network.

"We just haven't contemplated that. We need to do an awful lot more to support freight, because we are doing away with diesel and nobody has a 44-tonne electric lorry that will do a 300-mile round trip.

"It's not a sustainable system for the next government to have the dead hand of the Treasury dictating transport policy. We are either going to spend some money on capacity problems and electrification, or we are going to have to move passengers out of the way to get more freight on the network."

Jim Steer, Director, Greengauge 21

"We are not set up for this, and the Treasury would be very naive. It would just tell the railway to stop doing things, because doing things costs money. If we don't manage to tackle the profit-and-loss issue, change is going to happen really inefficiently."

RIA Technical Director David Clarke adds: "In all the work on P&L, what is the assumption about growth?

"The Government seems to be assuming there won't be any. That doesn't make sense - not with population growth, the move into cities, the cost of motoring, and many other reasons. The answer cannot be zero growth, but nobody in Government is telling us what the number should be."

RIA's Darren Caplan concludes: "We need to see what Conservatives and Labour put in their election manifestos. Because if there isn't political push behind One P&L, this is just intellectual conversation. We need to know by the turn of the year what the long-term plans will be. We have to be transparent."

Cutting Costs

One P&L is partly about cutting costs. So too is closing ticket offices. With HM Treasury demanding savings, what alternative ways are available to trim spending quickly, without necessarily harming the railway?

It is increasingly unlikely that legislation to reform the structure of the rail industry will happen this side of a General Election, because even if a straightforward Bill is laid before Parliament, it would take around a year to complete.

Let's assume, therefore, that legislation to create Great British Railways as the industry's guiding mind is (at least) a considerable distance away.

That leaves the railway with two options: wait for the cash-strapped Treasury to demand more savings to match the widely criticised ticket office closure plans; or come up with alternative ways to cut costs.

"Oh, we can beat that number. We can beat that number big time… absolutely," says Rufus Boyd, GBRTT's programme director for passenger and freight services.

"The case for ticket office closures is the case for a changing world. Why would you keep investing in something that is so obviously not the future? We need to invest in technological change.

"But here's the question: is the platform burning hot enough for the players to do what is necessary to make non-legislative change work? We've had that option since COVID. But it hasn't happened yet. Have things got hotter, or are we so comfortable in our crisis that we are not prepared to move?

"Senior players would say we need to be the masters of our own destiny. Set the bar low enough that change doesn't need a new law - and do it right away. The tide is going out on a legislative solution, so we will have to rely on our own.

"At the moment, the train operators are just being told to save money. They're given an amount. This is a decisive year in which we should take this on. Even without legislation it is doable."

"We get out of that by growing revenue," says Andy Bagnall of Rail Partners.

"We need a certain amount of commercial freedom to do that. It is missing at the moment. In the absence of legislation, this is essential. Even if the Government is not thinking about cost and revenue holistically, the industry needs to do so."

RIA Policy Director Robert Cook asserts: "Talking of quick wins and short-term savings is looking through the wrong end of the telescope. To get costs down, you need a long-term strategy.

"All we are doing at the moment is repairs. We are not moving forward. We need to be told what will be electrified and what won't, where will have digital signalling and where won't."

RIA Technical Director David Clarke adds: "The short-term opportunity is to work smarter.

"We are forced to work inefficiently by the current system. We send out track teams at night. We pay them for ten hours, and we give them four or five hours' work.

"There is no longer enough money in the system for that inefficiency. The trade-off must be longer possessions and a little inconvenience for the small number of passengers who may have to be put in taxis. The trade-off has to change.

"That also plays into the One P&L discussion. At Rail Live there were acres of big yellow machinery that suppliers are offering to improve efficiency. Without a strategy, we are not using best-of-breed."

"There is a lot of frustration at the cost base of the industry," agrees GWR MD Mark Hopwood.

"The last year and a bit has shown how difficult it is to deal with the terms and conditions of union members. Quite rightly, they would not accept anything like the P&O Ferries way of bringing in change. They are not going to co-operate. That ties in cost.

"I have never objected to a tough financial settlement for the railway. Obviously, I would like more money to invest. But the Government has to decide what product it wants to buy.

"On Great Western, we are a leisure-dominated business, carrying a lot of customers who are not familiar with the network. These people make discretionary journeys - they do not have to travel by train if they don't want to.

"We employ people who are not essential for the movement of our trains. But they are people who our customers expect to see.

"If you go on a cruise ship, there are many more staff than are needed to sail the ship safely out of Southampton. If you go to Disneyland Paris, there are more staff than you need to operate the rides. Because they are providing a good-quality customer experience, as well as operating the systems.

"This is one reason not to split the cost and revenue. If you ran a cruise ship or a theme park that way, you'd end up with products that would not be attractive to customers.

"If we are to fight our way out of the financial crisis, yes - we have to be prudent and manage our costs. But the best way out of the crisis is to grow the revenue. I think that if we had no strikes last year and spent more on marketing, the total revenue of the rail industry would be hundreds of millions of pounds better than it is today.

"I am confident that if we were allowed to do so, we could grow the revenue to deliver a large share of the savings that we are being told to achieve. But we are not being allowed to do that."

To get round the problem, Hopwood advocates a change endorsed by almost every other passenger railway leader we have spoken to

Northern 769458 calls at Deansgate on June 13 with a Southport-Manchester Oxford Road service. An evolution of National Rail Contracts to empower people at route level has been identified as a priority by train operators. GEORGE LONGDEN.

(although when asked to comment for this article the Rail Delivery Group, which represents them, declined to do so).

"There is a lot of frustration among TOC managing directors at the intrusive nature of DfT contracts. The intrusive behaviour is not just annoying, it is very expensive.

"I took this job 15 years ago. We had one and a half contract managers. We now have 14 people at the Department for Transport managing the contract. There is also a lot of DfT supervision of Network Rail. And we have a separate Rail Regulator. And the Rail Safety and Standards Board has several hundred people in an office block in London.

"These are quite large cost overheads that the industry is carrying, with jobs that are not actually delivering the railway, but checking on other people who are doing the work.

"My view is that if you don't trust someone, you shouldn't employ someone else to check their work. You should get rid of them and employ someone you do trust.

"If the Government doesn't trust me to run the train service, get rid of me and bring in someone else. Employing armies of people to check what other people do is not good value for money.

"We have to persuade the Government to stop managing how much I spend on marketing, or what the terms and conditions of my staff are.

"The Minister has said to me - and he's said it publicly - that he gets far too much stuff in his red boxes that should be managed elsewhere. I've had the same conversation with civil servants. And they are still sending everyday authorisations in the red boxes for the Minister to sign - even though the Minister has said publicly that he doesn't want that detail.

"We are stuck in a ridiculous cycle of the Minister getting stuff that he's told everyone he shouldn't be dealing with in the first place.

"Civil servants are designed to deal with policy. They are not designed to run a commercial operation like mine."

Rufus Boyd, at GBRTT, says: "There's a high concept of how we build the railway back. If you accept that whole-system thinking can be done without legislation, then we have to empower people at route level to make key decisions. I'm not sure TOCs are incentivised to do that at the moment, and they need to be."

Boyd gives his own daily commute to Waterloo as his case study.

"On South Western Railway, a number of peak trains have not been put back after COVID because demand has changed. What if we could avoid building that back?

"My 0705 off Southampton Airport Parkway no longer exists. Here we have an interaction with One P&L thinking: what are the costs and benefits of putting it back in? It was always delayed for five minutes at Hampton Court Junction, because it wasn't a good path.

"If you accept that whole-system thinking can be done without legislation, then we have to empower people at route level to make key decisions. I'm not sure TOCs are incentivised to do that at the moment, and they need to be."

Rufus Boyd, Programme Director for Passenger and Freight Services, Great British Railway Transition Team

"What about stretching driver resourcing? The train operator could say whether that demand could be spread over the three hours of the peak, or it could argue that the case for returning it is overwhelming. There may be more commuters from the new large Barton Farm development on the edge of Winchester.

"The TOC and Network Rail should straddle that decision at local level. The first train could run later. A train in the middle of the day could be removed. A switch and crossing could be fit for purpose at 40mph instead of 60mph.

"We want people to exhibit this sort of behaviour and be rewarded for it."

Rail Partners argues that the way out of decline is to reward train operators for attracting more passengers… changing the contracts.

"The priority is evolving the National Rail Contracts - they are hampering the ability to drive recovery," says Andy Bagnall.

"The only way that can happen is through a system that is not looking inwards, asking permission from the Department for Transport for the smallest things, but looking outwards to see changing customer needs, with an incentive to respond to that.

"Most NRCs have a 0.5% fixed fee, and up to a 1.5% fee across a range of scorecard metrics, of which only one out of four or five metrics relates to financial performance. And only one of two or three subcomponents within that one of four or five metrics - so perhaps one-tenth or one-fifteenth of 1% - is the incentive for growing revenue.

"That is not an effective incentive. You need a profit motive to drive the right behaviour, the hunger to chase every scrap of revenue by giving customers what they want, like any other commercial business would do.

"If revenue does not go up, that just puts further pressure on the Treasury to cut costs. That is a spiral of decline."

Infrastructure

"We have identified 30 rural lines in need of signalling asset renewal, in which we would invest," says Rob Morris, joint chief executive of Siemens Mobility.

"We could get the investment paid for through operational savings. I cannot understand why one wouldn't do that."

The arguments against short-termism and the absence of a rolling programme of regular investment have been discussed many times in this journal.

"It's about the way you treat a balance sheet, rather than any technical obstacle," Morris explains.

"Do we put third-party investments on the national balance sheet? The Treasury thinks we should, and therefore they become a liability. That's not the case in many other places. Changing that - an administrative process - could open up a lot of investment.

"All the thinking we need to do about electrification – discontinuous or otherwise: these things are not quick wins but are a must-have.

"We have so much technology that could totally transform the way we operate our railways. Not technology that is coming - we already have it. But we are unable to be bold enough to create a structure that enables it to be used. Instead, we come up with reasons why it can't be done."

RIA's David Clarke adds: "The Treasury has always believed it can borrow money more cheaply than the private sector. And it is not convinced that this idea represents risk transfer. Because if it all goes horribly wrong, it will end up back with the Treasury to fix anyway."

And RIA's Robert Cook says: "The state isn't looking kindly at public-private partnership. It isn't looking at long-term contracts with the private sector.

"There is a risk of managed decline. Cracking investment for revenue growth is the obvious answer to that. We have to keep being transparent about the long-term consequences of decisions that are, or are not, being taken now." ➤

Rolling Stock

"Rolling stock is the biggest and most obvious example of where we can help," says GBRTT Director Rufus Boyd.

"Clarity on traction decarbonisation and sending a clear signal to the supply market. We need to clarify responsibilities between the Department and ourselves, so that if you have an innovation, everyone knows who is buying."

GWR's Mark Hopwood, who operates one of the newest fleets in the country, says: "We have to think seriously about the model for buying and maintaining new trains. The cost of maintaining modern trains through manufacturers is much higher than it is doing the older trains ourselves.

"If you have a modern car, you increasingly have to go to the manufacturer for maintenance, because they control all the software. The days of fixing the car yourself with a spanner have gone.

"It is the same with trains. If you want the doors to open in a slightly different way, you have to modify the software, and you end up with a price that has a lot of noughts on the end. That's where they make their money.

"We need to think about how we procure these trains, and whether we can drive cost reduction in there. There is still competition at the point of purchase between Siemens and Hitachi, and Alstom and Stadler.

"And we've often bought the cheapest available at the time. If you buy a train that only works on c2c and then later you want it brought to the Great Western, you have to pay a lot of money to alter it.

"If we took a hit during procurement by ordering a train capable of working any commuter route into London without further modification, the manufacturer could choose to build that into the train, or accept that it would have to pay itself to change the software if it gets moved."

Rob Morris of Siemens agrees: "The best thing we can do is standardise as much as possible. That will simplify both capital and operational expenditure. In this country, we are really good at making every train different. Then we wonder why it costs a lot!

"There are savings out there that we can harvest. In my own sphere, remote condition monitoring is an obvious way to reduce time and cut costs - such as on our Class 185 trains, where we have retrofitted Railagent to improve reliability for TransPennine Express.

"This isn't my area, but airline-style demand-led pricing of tickets really reaped benefits for SNCF after COVID, especially on lesser-used lines. It is being trialled by LNER, but how do we get that across our railway?"

> *"The best thing we can do is standardise as much as possible. That will simplify both capital and operational expenditure. In this country, we are really good at making every train different. Then we wonder why it costs a lot!"*
>
> ***Rob Morris, Joint Chief Executive, Siemens Mobility***

ScotRail 43145 leads the 0837 Edinburgh-Inverness at Kingussie on April 21. Scotland's Railway already take a far more 'whole system' view than in England with a single MD for track and train operations. JAMIE SQUIBBS.

One P&L and Cutting Costs: A Scottish Perspective

Scotland's railway is further down the route of single financial accounting than England. Operator ScotRail already shares a single managing director with Network Rail north of the border. Transport Scotland sees the railway as a single system.

"Obviously we are still horribly fragmented," Scotland's Railway MD Alex Hynes tells *RailReview*.

"We have the infrastructure reporting to Westminster and the train operations reporting to Holyrood, which is… interesting.

"We have a contract between the Scottish Government and ScotRail, and a regulatory regime between the Regulator and Network Rail. We try to overcome the worst bits of fragmentation through the way we work, with an alliance between track and train, and I seek to oversee both."

Unlike in England, Hynes can look at the whole system (and is under instruction to do so), rather than focusing on the specific interests of the passenger service or maintenance of the tracks.

"What you won't hear in Scotland is anyone going round saying 'We have to cut costs'. You will hear people saying 'We have to reduce the net cost'. Which is not the same thing at all. One of the best ways to reduce the net costs of the railway is to increase the revenue as fast as you possibly can, so that's what we are doing, in Network Rail and in ScotRail. If more people travel, our net costs fall. Which is what our client wants.

"This separation of cost and revenue which is the dynamic south of the border is something we just don't have.

"We are free of industrial action at the moment, which is wonderful. And ever since the Network Rail/RMT dispute was resolved, we've been offering a good service, with performance in the 90s percentage.

"And we have been marketing the hell out of it. Our year-on-year

revenue growth is absolutely extraordinary. I can barely believe the figures - 35% up this year compared with the previous 12 months."

ScotRail is recovering from an especially low baseline. During COVID, it experienced the largest slump in passenger numbers of any train operator. Travel restrictions in Scotland were tighter, and they were in place for longer.

"It costs money to market your product, right? But you do it because you want more revenue. You spend £1 on marketing… get £3 in your farebox… happy days. It feels like the railway in Scotland is on a divergent path from England.

"Our strategy is working - you can see that our revenue is growing so fast. There are many forces that sometimes pull us apart, but if you look at our customer performance and our reliability, the evidence would suggest that the way we run our railway is better than in other places."

Hynes asserts that the gap between performance in Scotland and everywhere else has doubled in three years, which is surprising given that the dominant market in Scotland is short-distance commuting. Glasgow has the largest suburban rail network of any city outside London, and fares there are relatively low.

"If you look at the operators above us in the UK league table, we run more trains before breakfast than they run all day.

"We've demonstrated that if you create an environment where track and trains are incentivised to do the right thing, and if you market it well, then there is money to be made. That money reduces the net cost of the railway."

Hynes says that he still has to deliver efficiencies each year, cutting costs: "Like being on the treadmill at the gym, and now and again someone else leans on the go-faster button. That's just life - every year we have to do more for less. But we won't cut costs if it harms our revenue."

As an example, he points to Glasgow-Edinburgh inter-city services. Pre-COVID, there were four trains per hour, all day, six days a week. Demand fell away, and today there are 4tph in the peaks and 2tph off-peak. But in May, that went back to 4tph all day on Saturdays, adding cost to stimulate demand on a route where fares are "decent".

Hurdles remain. During the Network Rail dispute, ScotRail lost a lot of revenue. ScotRail is incentivised to recover the maximum compensation it can from the infrastructure operator. Network ➤

"It costs money to market your product, right? But you do it because you want more revenue. You spend £1 on marketing… get £3 in your farebox… happy days. It feels like the railway in Scotland is on a divergent path from England."

Alex Hynes, Managing Director, Scotland's Railway

➤ Rail is incentivised to keep that bill down. Data sharing therefore remains a problem.

"When you're working as a team, you don't want to provide information that can then be used against you in a different context to extract money. It's not as slick as it could be.

"My understanding is that GBRTT has had similar issues. When we have done a line of route P&L analysis in Scotland, we have found Network Rail maintenance costs difficult to disaggregate. That has to change."

Hynes continues: "Graham Eccles used to say that he didn't care about cost, he cared about profit. In my context, we don't care about cost, we care about net cost."

Could the business model be exported to England?

"Yes," he says without hesitation. "If I was running railways in England, the first thing I would do is reunite cost and revenue. Having done that, I would reunite track and train, even if it was only in a virtual way.

"It looks like we will have the existing legislative framework for a while now, doesn't it? Up here, we try to run our railway as if it is one business, even though it's not.

"Scotland has a national transport strategy. So does Wales. So does Northern Ireland. But England doesn't. The strategic context here is much clearer. We know we have a role in decarbonising - not just within our own operations, but by creating modal shift from cars and lorries. We are electrifying and reopening railways. And obviously we don't have any proposals to close ticket offices in Scotland. Changing opening hours, yes, but no closures."

In October, Scotland will trial one of the biggest shifts in fares and ticketing since privatisation. Peak fares will be abolished across the network for six months. The Scottish Government is putting up £15 million to cover an anticipated initial loss of revenue.

"This is about both the cost-of-living crisis and promotion of the railway. No one really knows what is going to happen - I've said to the team that any modelling we do will turn out to be wrong. Our peak business post-COVID is still down 40%, but leisure travel is up, and Saturday is now our busiest day. On a typical Saturday we take

"The strategic context here is much clearer. We know we have a role in decarbonising - not just within our own operations, but by creating modal shift from cars and lorries. We are electrifying and reopening railways. And obviously we don't have any proposals to close ticket offices in Scotland. Changing opening hours, yes, but no closures."

Alex Hynes, Managing Director, Scotland's Railway

£1m in fares. Last Saturday it was £1.3m.

"Sunday and Monday are our quietest days. One reason for Sunday is the train service is far less extensive.

We are working with ASLEF and the RMT because we want to put Sundays in the working week. If we can secure that, we will have the confidence to expand Sundays and then it might not be the quietest day of the week."

Observing as an outlier from Scotland, Hynes sums up the industry problem: "The conversation we've had for this article is really about creating an environment in which better decisions can be taken, isn't it?

"Andrew Haines wants Network Rail people to behave as if they owned the P&L for the industry, even though they don't. Thinking about train operator costs and revenues and factoring them into their decision-making. He also has to incentivise train operators to make choices that reduce Network Rail costs.

"That's one of the big failings of this industry structure: the separation of cost and revenue. It's about better decision-making."

Passengers and staff wait for a CrossCountry arrival at Bristol Parkway on March 19. The railway must get back to state where it is not reliant on rest-day working, argues Graham Eccles. JACK BOSKETT.

In this issue we have discussed how railways move to a single profit and loss account. We have also discussed ways to cut costs. Drawing those threads together, Paul Clifton takes hard-hitting advice and long-term perspective from one of the top executives of the privatised era…

"The railway today is in the worst state for 40 years," says Graham Eccles.

"In fact, it is very much like 1981-83. The country was in recession and the railway was not doing well. The growth of the 1970s had gone, and the railway was required to cut costs."

Eccles had a long career at the top of the rail industry. He led South Central at the time of privatisation, then transformed South West Trains. Later, he headed Stagecoach's large rail empire. Now 77, he retired two years ago.

"The big dispute in 1982 saw Driver Only Operation implemented against the unions' wishes. That was entirely directed by the Treasury and the Department for Transport. It was about reducing subsidy. Once that was in, the railway was allowed to rebuild from a lower and cheaper base.

"If I was still in a position of power, I would tackle this broadly the same way as the Government is doing now. I would play the long game. I don't believe that, by tinkering around with small schemes, the railway can be put on a sound financial basis.

"I would reduce the level of service. Two years of pain for customers, while you rebuild a boring, reliable railway where the trains always turn up and always run on time. The only way to run a railway is to make it predictable, because that is what customers want. Starting from that, you will eventually get profits from it.

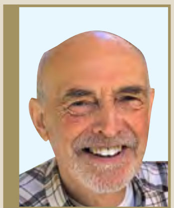
"It is obvious now that nobody looked at recruiting enough drivers during COVID. Part of a manager's role is to see how many people in key jobs are going to retire in the years ahead. And come hell or high water, you make sure you have a recruitment plan that trains key workers to cover those who leave.

"You must not be in a position of relying on rest-day working to cover the day-to-day service. Because the trade unions will use it as an industrial relations weapon.

"That has to change. We need the staff to look to the employer for leadership, guidance and protection, and only refer to the trade union as a last resort. I almost got to that point on South West Trains - almost, but not quite.

"That's the real difference between the railway and other sectors: the strength of the trade unions. It's no good trying to change that by kicking the **** out of the unions - that doesn't work. What you have to do is reach a position that you are such an excellent employer that the staff turn to you and not to the union.

"The allegiance between the employers, the workers and the unions has to be re-balanced. I am not advocating fire and rehire, I am advocating changes to contracts that meet the railway's needs.



"I would reduce the level of service. Two years of pain for customers, while you rebuild a boring, reliable railway where the trains always turn up and always run on time. The only way to run a railway is to make it predictable, because that is what customers want."

Graham Eccles

If someone doesn't want the new contract and conditions, let them leave and treat them very fairly."

Eccles imagines an immediate and sharp reduction in what the railway offers passengers.

Over a very uncomfortable two-year period, the service could be gradually improved as new drivers and other staff are trained, eventually reaching a level where it is "right-size" for the future.

If the economy is stable, he says, passengers will travel and the money that was made from them in the early part of this century would again be achievable.

"The only way to do that is to start from a much lower cost base. Make DOO the basic way to run the railway. Rationalise the way tickets are sold. Reduce the complexity of ticketing. Cut the cost of retailing."

Eccles spent the first half of his railway career in the public sector. Then he joined bus operator Brian Souter at Stagecoach, wholeheartedly embracing the pursuit of profit. He made (he freely admits) "more money than I ever dreamed possible".

"I believe the concession model is sub-optimal, because unless there is a profit motive for the operators of the concession, their hearts will not be in it. They will just do as they are told by the DfT. There has to be an incentive to do better. I don't believe that incentive is obvious with the model we have now. Nobody cares enough.

"Always remember that companies like Stagecoach are bottom-feeders - their only role is to make money for their shareholders. And they are very good at doing it - never come between a Stagecoach executive and a £1 coin!

"You need a system where trading increases profit, rather than pursuing lowest cost. To do that, you need a percentage scheme that means if income goes up, so does profit.

"It's not there at the moment. You have nobody responsible for a profit and loss account at the railway level. It only happens at the Treasury level, and that is far too high to exercise any control.

"Great British Railways needs to be thought through again. I would look for a vertically integrated profit and loss account, with the regional business units of Network Rail and train operators over matching areas."

After Stagecoach, Eccles spent 12 years chairing organisations in the health sector - first in the NHS, then at Virgin's healthcare business.

"The one thing I liked about the NHS was its governance structure. If I was setting up Great British Railways, I would want something similar: a lay chairman and lay non-executive directors.

"Yes, in the early days I would probably want Andrew Haines as chairman and somebody like Alex Hynes as chief executive. But something missing from today's railway is the impartial wisdom you get from high-calibre independent non-executive people who can argue with the decisions made by the executive.

"If my job as chief executive is to deliver the best profits I can, I want the best advice I can buy. I think the private sector is better at that, but there are people in the railway who have worked in both the public and private sector who know the right levers to pull."

Will Eccles' vision happen? There are plenty in the industry who would disagree with him about the role of the private sector.

"No - I can't see anybody having the guts to do it, either in Government or in the industry. I don't think many of the current lot will be in my camp."

The railway isn't very good at forcing change on that scale, hacking the passenger service back to a level that could be done without rest-day working?

"It did in 1982."

Which was 41 years ago…

"Exactly. And that is the last time the railways were in the state they are now. Nothing since then has been as bad as that." ■

Anthony Smith Opinion

Passenger consultations on ticket office closures

Before I joined Transport Focus in 1999, the final studio album by rock band Genesis - *Calling All Stations* - was released to mostly negative reviews from music critics who chastised its lack of direction.

Shortly before I leave Transport Focus later this year, 13 train companies across the country are carrying out passenger consultations to close ticket offices. The consultation was released to similarly strong reaction from many quarters.

While the proportion of ticket sales made at ticket office windows is declining, it is clear that many passengers still place great value on the guidance and reassurance that staff are able to offer when making a ticket selection. This is a symptom of a complicated and confusing fares and ticketing structure.

Consultation process

The consultation process is governed by a regulatory requirement under the Ticketing and Settlement Agreement (TSA). The TSA is a document that sets out the various arrangements between the operators relating to the carriage of passengers and the retailing of tickets.

Transport Focus has a formal role in assessing major changes to ticket office opening hours. If a train company wishes to make such a change, it must follow the process set out in the TSA.

Under clause 6-18 (1) of the TSA, changes to opening hours may be made under the major change procedure if:

- The change would represent an improvement on current arrangements in terms of quality of service and/or cost effectiveness.
- Members of the public would continue to enjoy widespread and easy access to the purchase of rail products, notwithstanding the change.

An operator wishing to make a major change must display details of the proposed change at affected stations and invite people to make representations to Transport Focus (or London TravelWatch for stations in the wider London area).

The TSA specifies a 21-day consultation period (the consultation period was extended from July 5 to September 1). We may object to a proposal on the grounds that the change does not meet one or both of the criteria above.

If we object, the train company can either withdraw their proposal or refer it to the Secretary of State for a decision. The Department for Transport has published guidance setting out the approach the Secretary of State would take in these circumstances.

We believe it is important that there is as much transparency as possible surrounding the process and Transport Focus's role within it.

To that end, we have published a note that sets out the broad criteria that we will use to assess the proposals received. Any proposal must set out how the following passenger expectations will be met in future:

- Passengers can easily buy the right ticket for the journey they want to make. This will include the product range available at the station, what support is available to advise/help with a purchase, and access for people who need to use cash or do not have a smartphone.
- Passengers requiring assistance to travel receive that assistance in a timely and reliable manner. This will include arrangements for providing booked assistance (using the Passenger Assist process), assistance provided on a 'turn-up-and-go' basis, the support available when buying a ticket, and the ease of requesting assistance.
- Passengers can get the information they require to plan and make a journey, including during periods of disruption. This will include the information channels available at the station and the support on hand to help passengers who need assistance.
- Passengers feel safe at a station. This will include perceptions of personal security and how train companies will provide reassurance for passengers wanting to travel.
- Passengers are not penalised if they cannot buy the ticket they require from the station. This will include arrangements for issuing Penalty Fares or prosecutions for fare evasion.
- Passengers can continue to use facilities at a station. This will include access to facilities such as waiting rooms, toilets, lifts, and car parking.

These are intended to give an outline of the broad areas that will be considered.

We will focus our assessment on the impact of the proposals on passengers and whether, in accordance with the terms of the TSA, they represent "an improvement on current arrangements in terms of quality of service".

It is important to acknowledge that the presence of staff at a station plays a key role in the railway meeting passengers' expectations in many of these areas. Therefore, station staffing will be a key consideration in our assessment.

We will also take into account any specific circumstances surrounding a station, as well as issues raised by members of the public during the public consultation stage.

When we have completed our analysis of the proposals and the comments received from members of the public, we will

> *"While the proportion of ticket sales made at ticket office windows is declining, it is clear that many passengers still place great value on the guidance and reassurance that staff are able to offer when making a ticket selection."*

A statue of the late poet, University of Hull librarian and local resident Philip Larkin overlooks newly installed ticket gates at Hull Paragon. Transport Focus is currently considering its response to the summer consultation on widespread ticket office closures throughout England. IAN LYALL.

publish our response.

This will include an overview of the number of representations we have received and the main issues raised in the consultation.

The fares conundrum

The Rail Delivery Group (RDG) welcomed the consultation "to modernise customer service across the rail network". Modernisation of the fares system is the reverse side of that aspiration.

Research by the RDG in association with Transport Focus found an overwhelming desire for fares reform (*Easier Fares For All*, 2019). The report showed a desire for new products that match the way that people want to travel today, rather than the mid-1990s when fares regulation was established.

To help devise proposals for reforming fares and ticketing, the RDG and Transport Focus worked with SYSTRA, the independent consultation expert, to conduct a major listening exercise which received nearly 20,000 responses.

The research showed that while passengers don't seek a simple, one-size-fits all fares approach, they do want fares that reflect their needs and which are simple to use. They told us they wanted:

■ **Value for money** - fares should make rational sense. People want greater transparency over what they pay for and what they get.

> *"It is clear that many passengers find the fares and ticketing system to be complicated and confusing."*

■ **Fair pricing** - reflecting a customer's desire not to have to find 'work arounds' or 'loopholes' to get the best price, and for a guarantee that they are not overcharged.

■ **Simplicity** - making buying simple while retaining customers' choice. Reform is not about taking choice away, it is about innovating to make it easy to find the right fare.

■ **Flexibility** - reflecting a customer's desire to see different needs accommodated. They want the ability to tailor fares and deals to what they need.

■ **Assurance** - reflecting the feedback that customers want clear, effective, transparent regulation to protect their rights.

Our research, *Britain's railway: what matters to passengers*, found that passengers' top two priorities for the railway (well ahead of the others) are the 'price of train tickets offers value for money' and 'reliability and punctuality'. It also found that fewer than half of passengers think the railway currently performs well on value for money.

There have been some developments since this report came out.

Single-leg pricing has been rolled out throughout LNER. Single-leg pricing is one of the keys to unlocking better-value travel for passengers. It is easy to understand and enables passengers to pay only for the level of flexibility they need. It allows passengers to mix and match ticket types, so that they do not need to buy a fully flexible Anytime return when they plan to return during the off-peak.

The DfT also recently announced the rollout of pay-as-you-go technology across the South East of England by the end of December 2023. Many people like the simplicity and ease offered by PAYG technology and the reassurance of price capping that comes with it.

These will help, but there is still a continuing need for wider reform of the fare structure. It is clear that many passengers find the fares and ticketing system to be complicated and confusing. Simplifying this and giving passengers confidence that they have the right ticket remains a key objective. ■

About the author

Anthony Smith is chief executive of Transport Focus. He has held the post at TF (and in its previous guise of Passenger Focus) since July 2005.

Members of Network Rail's 'Orange Army' carry out renewals at Crewe Basford Hall Junction on April 7. The ORR's draft determination proposes NR total spending for CP7 of £44.8 billion - an increase of £4bn-£5bn on CP6. STUART HOOD.

Difficult choices in finding CP7 funds

PHILIP HAIGH studies the Office of Rail and Road's response to Network Rail's Control Period 7 *Strategic Business Plan*, to determine how and where the money will be spent on the upkeep of Britain's railway

Picturing businesses as three-legged stools is an old visualisation tool, but one with an enduring appeal.

As Network Rail approaches its seventh financial control period (CP7, running from 2024-29), the railway sits atop legs of funding, performance, and network condition.

Should NR's funding not keep up with its needs, then network condition falls, followed by performance as NR applies operational controls such as speed restrictions to maintain safety.

Thus, equilibrium endures from safety's perspective. But safety is not the only factor. It might maintain its balance, but the whole stool now sits on three shorter legs. If this diminished stool sits below customer expectations, those customers will go elsewhere. Usage falls… income falls… and so funding falls.

The counter to forever shortening the stool's legs is to deliver the railway more efficiently - either by doing more with the same money or doing the same with less money. This at least maintains the funding leg, and at best extends it, increasing network condition and growing performance. Usage grows, and what was a death spiral becomes a growth circle.

Maintaining that cost-income balance to keep or improve that funding leg sits behind Network Rail initiatives such as modernising maintenance, its increased use of train-borne inspection, and its switch to digital signalling.

Thus, NR says in its CP7 *Strategic Business Plan*: "We are continuing to focus on becoming a more efficient organisation. We have also had to make some difficult choices and trade-offs about how we allocate our spending in CP7 to provide the most value.

"We have developed our plans with a principal focus on customer priorities of safety and train service performance and to support revenue recovery in CP7. This has involved prioritising our asset investment on areas which will provide the most value, to support key revenue-generating areas of the network while providing an appropriate level of service to areas where revenue is typically lower."

There's always a dance between Network Rail and its economic regulator, the Office of Rail and Road, when it comes to NR's business plans.

The track owner produces these plans as its major contribution to ORR's process of deciding what track access charges train and freight operators should pay. ORR revealed its interim conclusions in a draft determination of access charges in June 2023. Its final determination follows this autumn, for implementation from April 2024.

This process dates back to privatisation, when government floated Railtrack on the Stock Exchange to become a private company. By also creating ORR and giving it the duty of deciding how much Railtrack (NR today) could charge operators, government afforded operators some protection from excessive increases in charges.

At their simplest, those charges comprised a fixed sum, and then a charge for every train which depended on its mileage and composition in terms of stock. Government funding then flowed to Railtrack via the train operators, and was largely passed on through the fixed charge.

Today, it's different. The bulk of government subsidies go direct to Network Rail as a grant, either from the Department for Transport (£27.7 billion) or Transport Scotland (£2.4bn).

This leaves ORR to calculate track access charges by considering what NR must efficiently spend to provide the network that DfT and TS want (as defined by their High Level Output Specifications, HLOS) and subtracting the funders' grants (as given in their Statement of Funds Available, SoFA), leaving the balance to come from charges once ORR has considered any other income available to NR - for example, from property rents.

This makes Network Rail far more dependent on its government grant than access charges from operators, which leaves ORR's process - properly called a Periodic Review - much more about what NR is spending than it is about access charges, which account for roughly one-third of NR's income.

This NR spending falls into four areas: operations, maintenance, support, and renewals (OMSR). For CP7, this comes to £44.8bn. This figure doesn't include £4.5bn for traction electricity, which operators pay to NR to pay suppliers (in other words, this charge simply passes through NR). Spending for enhancements comes separately according to DfT or TS requirements, and is no longer part of Periodic Reviews.

The overall CP7 OMSR spending figure for England and Wales is £40.0bn, around 5% higher than for CP6 (2019-24). For Scotland ➤

> *"We have developed our plans with a principal focus on customer priorities of safety and train service performance and to support revenue recovery in CP7. This has involved prioritising our asset investment on areas which will provide the most value, to support key revenue-generating areas of the network while providing an appropriate level of service to areas where revenue is typically lower."*
>
> ***Network Rail's CP7 Strategic Business Plan***

Network Rail spending in Control Period 7

	England and Wales	Scotland	Total
Operations	3.8	0.4	4.2
Support	4.7	0.5	5.2
Maintenance	10.1	1.1	11.2
Renewals	17.8	2.1	19.9
Industry costs	5.7	0.6	6.3
Risk provision	2.0	0.4	2.4
Traction electricity income	4.1	0.4	4.5
Total	**40.0**	**4.8**	**44.8**

Notes: £bn in 2023-24 prices. Totals don't match income table due to rounding.

Source: ORR.

Network Rail income in Control Period 7

	England and Wales	Scotland	Total
Fixed track access charges	5.3	1.9	7.2
Variable charges	3.1	0.3	3.4
Schedule 4 and 8	-2.3	-0.08	-2.4
Schedule 4 supplement	2.3	0.08	2.4
Network grant	27.7	2.4	30.1
Other income	4.0	0.2	4.2
Total	**40.1**	**4.8**	**44.9**

Notes: £bn in 2023-24 prices. Totals don't match spending table due to rounding.

Source: ORR.

➤ it is £4.8bn, around 4% higher than in CP6. Included within these totals are industry costs such as the funding for British Transport Police and ORR, as well as risk provision.

Behind these overall increases lie several differences. In broad terms, NR is cutting renewals spending (its largest single category) and compensating for this with higher spending on maintenance and operations.

But broad terms hide important differences across different categories of spending and across NR's different regions. Signalling renewals spending falls across every NR region except North West and Central, for example, driven by the need of the north end of the West Coast Main Line. Track renewals fall significantly everywhere except NW&C, and again it's WCML(N) that's the reason for the exception.

Maintenance

Safety pressures in Control Period 6 led to Network Rail changing its approach to maintenance. It has increased drainage inspections following 2020's fatal derailment at Carmont, and has moved to eliminate maintenance and inspection activity using lookout protection while trains run following a fatal accident near Port Talbot in 2019.

NR is shifting from maintenance based on time to maintenance based on condition (noting that time-based maintenance is based on typical degradation rates to provide a proxy for condition).

It has embarked on a programme to modernise maintenance, which ironically has created an 11% backlog in tasks largely as a result of industrial action prompted by union fears about the programme.

Nevertheless, NR continues with its programme, switching from

Spending on signalling and track renewals is due to fall in every region except North West & Central, driven by the need to upgrade northern sections of the West Coast Main Line. On August 3, Avanti West Coast 390046 waits to depart Wigan North Western with the 1156 Glasgow Central-London Euston. PAUL SENIOR.

manual inspections to using kit mounted on trains, equipping staff with wider skills to better respond to common faults, and changing the composition of maintenance teams so that NR has "the right number of people, with the right skills, on each maintenance shift" according to its *Strategic Business Plan* for England and Wales. (Note that NR's plan for Scotland was not published until after this article was written, despite submitting it to the ORR in the spring.)

Modernising maintenance sits close to NR's intelligent infrastructure programme. This aims to improve the way NR analyses the information it collects (increasingly from specialist and service trains), to provide assets with the right maintenance at the right time.

For England and Wales, NR expects to increase maintenance by 5% in track and electrification and by 10% in signalling, to compensate for deferred renewals. Further increases in maintenance spending come from NR taking on the enhancements being delivered at the moment - including electrification of the Midland Main Line, and the return to service of the route between Bicester and Bletchley with the East West Rail project.

ORR says in its draft determination that it found clear evidence of local planning behind NR's maintenance plans, with funding allocated according to each region's priorities. It notes that NR uses its own teams for track, signalling, electrification and plant, and off-track categories. It contracts out maintenance of earthworks, buildings and structures.

Pushing maintenance costs higher are several factors that include the offset for reduced renewals, higher input prices, NR's response to climate change for weather resilience, vegetation management and ash dieback, and work to comply with new and emerging standards, according to ORR. These all come to £838 million.

> *"ORR questions whether NR's regions have properly considered the impact of reduced renewals spending on operational staff levels. This reduction is expected to increase signal faults and result in more temporary speed restrictions."*

Countering this are efficiencies from NR's modernising maintenance programme, more use of technology for remote condition monitoring, and more risk-based maintenance. Across all regions, ORR estimates this to all total £727m.

Renewals

With Britain's railway set to celebrate its 200th anniversary in 2025, it's no surprise to see Network Rail's *Strategic Business Plan* noting that 80% of the network's metal bridges were built before 1900.

That's testament to their design (and perhaps their over-engineering), but it shows well NR's challenge. Of those structures, NR reckons there has been a 15% increase in bridges classed as in poor or very poor condition since 2012.

Further pressure comes from previous modernisation programmes reaching the ends of their lives.

For example, it's 50 years since British Rail modernised the northern end of the West Coast Main Line, replacing mechanical signal boxes with power signalling boxes at Warrington, Preston and Carlisle and electrifying the route. And NR's Southern Region has plenty of transformers and switchgear dating from electrification schemes in the 1960s.

Thus, it argues that there's a natural cycle of renewals that drive large-scale spending, making comparisons between control periods harder.

In signalling, the nature of renewals is changing. For most of the railway's history, signalling renewals lay chiefly with infrastructure managers. Rolling stock was indifferent to signals with arms and oil lamps or with colour lights. Safety systems such as AWS and TPWS were not a fundamental requirement - their absence from a cab does not make it impossible for a train to run. ➤

NR CP7 maintenance spending

Region	CP7	Change from CP6
Eastern	3,390	6.8%
North West and Central	2,255	-0.9%
Southern	2,414	-1.2%
Wales and Western	1,490	-2.7%
Scotland	1,041	-1.1%
National function	595	n/a

Note: £m in 2023-24 prices.

Source: ORR.

NR CP7 renewals spending

Region	CP7	Change from CP6
Eastern	4,260	-15%
North West and Central	4,384	15%
Southern	3,651	-17%
Wales and Western	2,576	-10%
Scotland	1,941	-14%
National function	3,157	23%

Note: £m in 2023-24 prices.

Source: ORR.

> *"There's a 16% cut in spending on earthwork renewals, which sounds surprising given events such as the embankment collapse at Hook last winter. However, ORR points out a 22% increase in spending to renew drains, with poor drainage a frequent precursor to earthwork failures."*

➤ That's changing with the switch to digital signalling and ETCS (European Train Control System). At the level NR plans to install, ETCS has no need for lineside signals. Permission to move (a movement authority) comes by radio to the train itself. Without it, the train's on-board computers prevent it moving. Thus, fitting trains with ETCS is fundamental to them working on lines signalled by ETCS.

Previously, such resignalling projects might have been classed as enhancements, but they are now considered renewals. While ETCS delivers an improvement on conventional signalling in safety and performance terms, its introduction is replacing conventional kit that is either worn out or obsolete, to use NR's definition of renewals.

Overall, ORR expects NR to cut renewals spending by 4% across Great Britain when compared with CP6 spending.

The heaviest fall comes in track renewals, expected to fall by 28% in spending terms.

There's a 16% cut in spending on earthwork renewals, which sounds surprising given events such as the embankment collapse at Hook last winter. However, ORR points out a 22% increase in spending to renew drains, with poor drainage a frequent precursor to earthwork failures.

ORR's draft determination notes: "Network Rail proposes to manage the risks posed by the reduction in renewals by increasing its maintenance activities. It also proposes to use more operational controls - for example, speed restrictions. Nevertheless, it still anticipates an increase in service-affecting failures of assets towards the end of CP7 and a decline in its overall measure of asset sustainability."

To counter this decline, ORR's draft determination proposes increases to renewals with the money found from elsewhere in NR's coffers. For England and Wales, it recommends adding £0.55bn to renewals budgets.

The biggest chunk comes from NR's plan to renew the northern end of the West Coast Main Line, with ORR proposing to release £0.30bn from this project. It argues that NR had been planning to pull forward renewals planned for CP8-10 into CP7, to better package work and to complete disruptive renewals before High Speed 2 services start using the line.

ORR justifies it recommendation by saying:"Our analysis of work in the North West & Central region shows an average 12-18 months slippage for these types of programmes. On that basis we consider that 25% of the proposed work is likely to slip into CP8, reducing cost in CP7 by £0.30 billion, and should be reprofiled into the next control period."

Further money comes with ORR suggesting that NR will not progress digital signalling as quickly as it thinks, and that NR need not refurbish its high-output renewals equipment because no regional plans propose to use it in CP7. And according to ORR, NR could save £0.14bn by not pursuing its Project Reach joint venture to replace lineside communication cables and share their increased capacity with the private sector.

From this released money, ORR suggests that NR spend £210m on earthwork renewals across the Southern, Eastern, and Wales and Western regions, and £150m on structures and tunnels and £100m on track in Southern, and Wales and Western. Another £50m should be spent on London Victoria's roof, where renewal has been deferred from CP5 and CP6 (ORR appears unimpressed with NR's plan to install netting to catch falling debris, rather than renewing the roof).

In Scotland, ORR wants to see NR add another £50m to its budget for renewing metallic structures - chiefly bridges.

NR and ORR are both concerned about lower levels of renewals spending leading to the network deteriorating, with NR also noting the challenge that comes with doing the work as well as finding the money. It admits that renewals could become "likely prohibitively disruptive for customers".

In funding, it estimates that long-run renewals might need funding of £17.5bn in CP8 and £19.8bn in CP9.

ORR notes: "To return to steady state would take until at least CP11 and cost between an additional £9.0 billion to £12.0 billion above current levels of funding in England and Wales. Based upon current asset strategies and outcome requirements, this funding will need to be phased over the next four control periods.

"To return to steady state in Scotland would take until at least CP12 and cost between an additional £1.0 billion to £1.5 billion over current levels of funding phased over the next four control periods, based upon current asset strategies and outcome requirements."

For digital signalling, NR's plans allocated £1.7bn with the two biggest components being infrastructure renewals (£742m) in England and Wales (Scotland is not pursuing ETCS in line with Transport Scotland's wishes) and fleet fitment (£699m) including passenger, freight, heritage/charter and on-track machines.

ORR proposes spending of £1.5bn for digital signalling. It justifies the cut by saying it thought NR's plans were too optimistic - for

Checks are completed on May 29 following the replacement of a stretch of track and lifting of a speed restriction on the climb towards Whiteball Summit. NR plans to significantly reduce manual trackside inspections including a shift away from maintenance based on time to maintenance by condition. CHRIS PENNEY.

NR's planned changes in renewals spending from CP6 to CP7

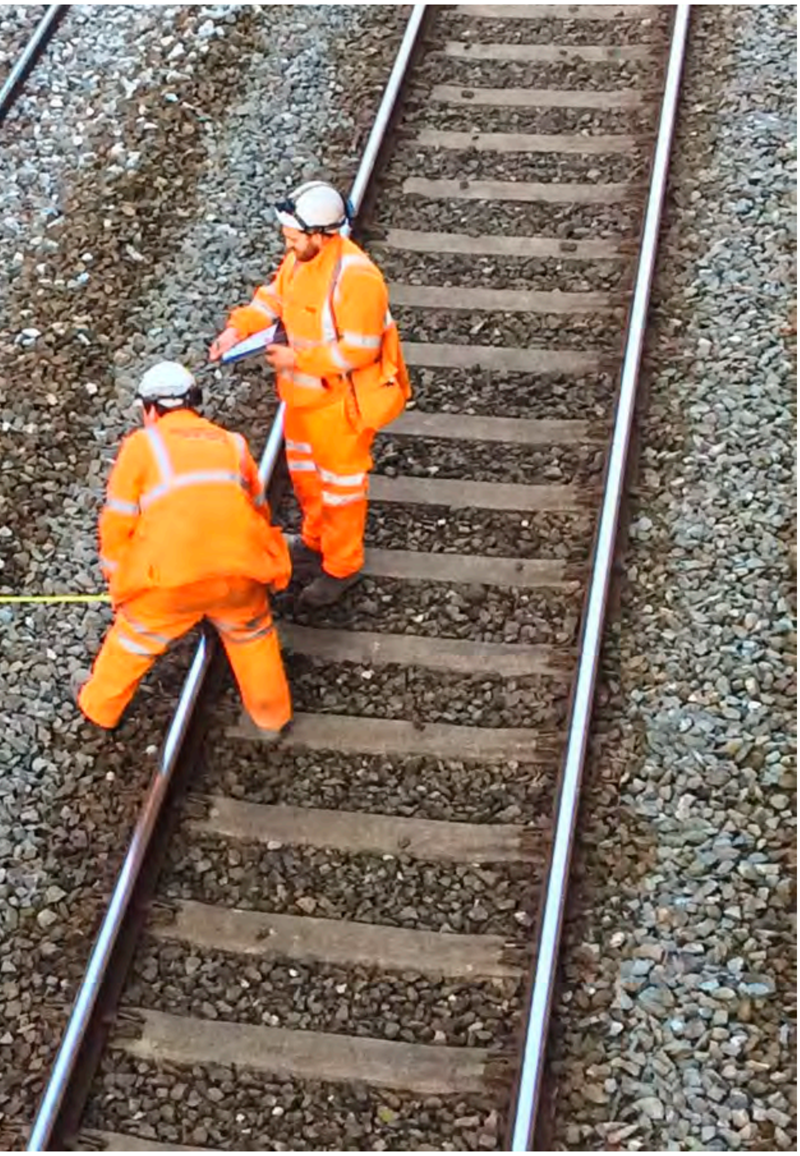
	Eastern	Southern	Wales and West	North West and Central	Scotland	England and Wales	National functions	GB
Track	-36%	-30%	-32%	-4%	-29%	-28%	N/A	-28%
Off-track	35%	255%	219%	-11%	49%	96%	N/A	89%
Signalling	-28%	-27%	-16%	-6%	-16%	-6%	N/A	-7%
Level crossings	-8%	-38%	6%	44%	33%	-6%	N/A	-4%
Structures	-6%	-7%	-37%	3%	-8%	-11%	N/A	-11%
Earthworks	-15%	-32%	-7%	-3%	15%	-18%	N/A	-16%
Drainage	28%	49%	37%	-11%	64%	16%	N/A	22%
Buildings	2%	-17%	24%	10%	3%	1%	N/A	-1%
Electrification and fixed plant	21%	-8%	-2%	4%	-29%	6%	-77%	-2%
Telecoms	-2%	-8%	65%	-7%	-8%	-1%	35%	18%
Other	-189%	87%	118%	57%	-96%	221%	38%	53%
Total	**-15%**	**-17%**	**-10%**	**15%**	**-14%**	**-8%**	**23%**	**-4%**

Source: ORR.

example, by using installation rates higher than those developed with suppliers to NR's East Coast Digital Programme. Lower rates would shift spending in CP8, it said.

Operations

Everyday train running comes under operations, with NR's 5,500 signallers, 1,200 station staff, 750 mobile operations managers, 600 controllers, and 200 electrical controllers.



In CP6, weather drove key changes to the way NR manages daily train operations. For example, it now imposes speed restrictions along sections of line according to local rainfall levels, to reduce the risk of train accidents occurring on flooded tracks (as happened at Carmont).

NR has acted to improve the way the network recovers from incidents, with its Integrated Train Service Recovery programme that provides better guidance for operational staff.

It now makes more use of integrated traffic management systems installed at Didcot and London Liverpool Street, and has linked Didcot into train operator Great Western Railway's stock and crew planning systems to provide a better overall service for passengers.

CP7 will feature more emphasis placed on incident response, decision making, and integrated tools. In particular, NR expects to see traffic management deployed on the East Coast Main Line (from its installation of ETCS on the route's southern end), and its expansion from NR's Western Route to the whole Wales and Western Region.

ORR notes some themes across NR's regional plans, headed by recruitment of signallers to fill gaps and better manage fatigue, but also including training and management of operational competence.

Its draft determination endorses the principles behind NR's plans, but it says they lack detail that explains how NR has planned its changes to operational spending.

ORR questions whether NR's regions have properly considered the impact of reduced renewals spending on operational staff levels. This reduction is expected to increase signal faults and result in more temporary speed restrictions.

ORR notes: "There is no evidence available at this time to demonstrate regions have made changes to address the increased operational risk that greater numbers of asset failures will pose. We have not seen clear evidence of proactive operational measures to offset the impacts, such as planned timetable revisions to bring greater predictability for passengers and freight."

Support

To deliver the rail network, NR has several support functions including personnel (HR), finance and property functions. More specific to rail are NR's route services, technical authority, and system operator functions.

Route services provide supply chain and logistics to routes and regions, as well as a rail and road fleet that delivers maintenance and renewals, and which inspects tracks for faults needing repairs and to analyse developing trends.

The technical authority develops policy and strategy across safety, engineering, asset management, information management, environment, and sustainability. The system operator provides long-term development analysis and produces timetables. ➤

➤ ORR notes considerable change in CP6. NR's 'Putting Passengers First' programme increased staff numbers, while the management modernisation programme that followed reduced numbers.

It is now conducting further work to analyse the difference between NR's Eastern and its North West and Central Regions, because the former has relatively lower support costs and the latter sits relatively higher. This will feed into ORR's final determination.

Efficiencies, inflation and risk

Every five years, ORR sets efficiency targets for Network Rail. For CP6, ORR wanted £3.5bn in efficiencies to which NR added another £500m to bring the target to £4bn, with ORR saying the savings were coming mostly from planned reductions to pay awards and bonuses and other workforce modernisation moves.

ORR reports good progress, with NR delivering £1.9bn in the first three years of CP6 and reckoned to be on track to reach £4.0bn. However, at the same time, NR has underperformed financially by £0.9bn, according to ORR, which means that delivering its railway has cost more than expected.

NR has seen headwinds and tailwinds affecting its finances. These are unplanned cost increases and decreases which sit largely beyond NR's control. In CP6, headwinds included measures to counter COVID, while its tailwinds included a reduction in travel spending (also related to COVID) from better use of teleconferencing.

For CP7, NR estimates its headwinds to be around £780m by averaging those it saw in CP6, but without COVID because it doesn't consider that an average control period experience.

In terms of efficiencies, NR suggests £3.7bn, with ORR noting an ambitious profile that entails NR delivering substantial efficiencies early in CP7.

These efficiencies come from several sources. They include track possessions generating increased productivity, improved infrastructure monitoring, and changes in the way regions procure external work (for example, Southern's integrated delivery programme). And while Project SPEED (Swift, Pragmatic and Efficient Enhancement Delivery) applies primarily to enhancements, NR considers that it can also apply its principles to CP7's more complex renewal projects.

This leaves ORR to provisionally conclude that NR's target for England and Wales is "stretching but realistic", while Scotland faces a harder challenge.

Inflation provides a challenge across the network, but ORR thinks that NR has exaggerated the problem.

NR argues that half of its operations spending comes from staff costs, which are driven by the market but which also reflect its

Great Western Railway 802007 passes Coryton Cove on May 29, with the 0710 Penzance-London Paddington. NR assumes that passenger numbers will continue to grow in CP7 although the number of services will be held at around 88% of pre-pandemic levels. TOM MCATEE.

recent pay disputes with trade unions. For renewals, contractor costs account for over half of NR's spending, where there is pressure from general construction but also from projects such as HS2.

From this, NR has assumed £1.7bn of input price inflation and £0.3bn from general inflation for England and Wales, and figures of £160m and £80m respectively in Scotland.

ORR admits that forecasting input price inflation is difficult even when general inflation is stable. It then notes that inflation forecasts are highly uncertain, with the Office of Budget Responsibility issuing a new forecast of higher inflation than NR had used when it compiled its strategic business plans.

This leaves ORR saying: "We will continue to work with Network Rail to better understand the effects of CPI inflation and input prices on its CP7 plan before publishing our final determination."

Thus, inflation represents the greatest of NR's risks for CP7. It says that most of its funding comes in cash terms, leaving it short if it underestimates inflation, while it can't borrow money to cover gaps.

Risks that emerged in CP6 included storms, floods, landslides, COVID, and industrial action, which would not easily have been predicted in the previous periodic review in 2018.

So, NR's *Strategic Business Plan* says: "It does not make sense to plan or lock in all funding at the outset at region level, and where there is no efficient insurance market."

NR's initial CP7 planning had a £500m risk provision which it

ORR proposals to increase NR renewals spending

NR region	Asset	Increase
Eastern	Earthworks	£30m
Southern	Track	£50m
	Structures	£50m
	Earthworks	£80m
	Operational property	£50m
Wales and West	Track	£50m
	Structures and tunnels	£100m
	Earthworks	£100m
England and Wales (general)	Fire safety in tunnels	£20m
	Remaining high priority areas	£20m
Scotland	Structures	£50m
	Total	**£600m**

Source: ORR.

realised was not enough, so it took money mainly from renewals it considered were less important to bring its risk fund to £1.98bn for England and Wales. In Scotland, NR's risk fund is £206m.

ORR's summary of the situation that faces NR suggests that CP7 will be as volatile as CP6, so should need similar risk provision. However, CP7 faces more cost pressures from the need to increase spending in areas such as digital signalling, so there's a difficult balance between maximising delivery and confidence in doing that.

It suggests that NR would be prudent to increase risk provision for England and Wales by shifting provision from NR's estimates of headwinds and input prices.

For Scotland, ORR says that £206m is not sufficient and calls on NR to increase it using any funding left over after NR increases spending on core renewals (but also feeding some of any excess into a train performance fund).

Performance

Predicting train performance is difficult. NR's *Strategic Business Plan* contains a graph that shows NR planning for improving performance for every year back to 2009, but actual performance dropping across almost every year.

The plan for CP7 says: "Our train performance forecasts for CP7 have been developed in an unusually challenging environment, with continued uncertainty about levels of demand and ➤

NR CP7 operations spending

	CP	Change from CP6
Eastern	1,075	-2.7%
North West and Central	899	6.0%
Southern	1,127	2.8%
Wales and Western	664	18.6%
Scotland	419	14.4%
National function	0	n/a

NOTE: £m in 2023-24 prices.

Source: ORR.

NR CP7 support spending

	CP7	Change from CP6
Eastern	414	0.7%
North West and Central	554	-19.0%
Southern	448	12.4%
Wales and Western	165	-16.5%
Scotland	116	-3.2%

NOTE: £m in 2023-24 prices.

Source: ORR.

> "Inflation represents the greatest of NR's risks for CP7. It says that most of its funding comes in cash terms, leaving it short if it underestimates inflation, while it can't borrow money to cover gaps."

➤ service provision, and difficulty understanding the underlying performance trends given the impact of industrial action.

"Coupled with a lack of a stable baseline, these factors have contributed to a reduced confidence in the performance community's ability to accurately forecast future performance."

NR assumes that passenger numbers will continue to increase but that service levels will remain broadly at 88% of pre-COVID levels. At the same time, the changes NR proposes to renewals and maintenance will, it suggests, increase service-affecting failures (SAFs) by 2% by the end of CP7.

Passengers also face disruption from several major projects, including installation of ETCS on the southern end of the East Coast Main Line, the Transpennine Route Upgrade, and work to build HS2.

ORR doesn't wholly reflect this pessimism. Its draft determination sets targets higher than or at the top end of NR's estimates. For example, NR predicts for on-time passenger performance for North West and Central Region in the 60.0%-62.5% range, and ORR has provisionally set 63.9%.

ORR says NR's targets for passenger cancellations are not ambitious, so it has set them higher and put them on a trajectory of 2.3% improvement for each year of CP7. Conversely, it considers NR freight forecasts to be more ambitious.

Charges

ORR's aim in conducting periodic reviews is to set track access charges for passenger and freight train operators.

Network Rail's performance targets

	NR proposal	ORR draft decision
Scotland		
Passenger trains on-time	68.0%	72.6%
Passenger train cancellations	3.0%	2.3%
Freight train cancellations	2.0%	1.3%
Eastern		
Passenger trains on-time	68.4%-70.8%	70.8%
Passenger train cancellations	2.7%-3.8%	2.3%
Freight train cancellations	1.5%-2.8%	1.3%
North West and Central		
Passenger trains on-time	60.0%-62.5%	63.9%
Passenger train cancellations	3.2%-4.5%	2.3%
Freight train cancellations	1.0%-1.9%	1.0%
Southern		
Passenger trains on-time	66.0%-68.9%	68.9%
Passenger train cancellations	3.1%-4.3%	2.3%
Freight train cancellations	2.2%-4.0%	2.0%
Wales and Western		
Passenger trains on-time	63.2%-64.7%	64.8%
Passenger train cancellations	2.8%-3.8%	2.3%
Freight train cancellations	1.6%-3.3%	1.5%

Source: ORR.

The largest single element of these payments is the fixed track access charge (FTAC) paid by operators running under government contracts.

NR is updating the way it assigns these costs between operators. Through CP6, NR received around £1.3bn each year with 99% coming from FTAC.

Open access operators will continue to pay the infrastructure cost charge (ICC) first introduced for CP6. ORR sets this charge on operators' ability to pay and has provisionally decided to continue with the current £5 per train mile charge (in 2023-24 prices). For new open access operators, ORR plans to phase in the charge so that operators only pay the full charge from their fifth year.

Similar ICCs apply to freight services carrying iron ore, spent nuclear fuel, as well as biomass and coal used for electricity generation. Proposed rates for coal, iron ore and biomass are £1.25, £1.28 and £1.74 respectively per thousand gross tonne miles (£/kgtm), with coal and iron ore rates lower than in CP6. Also falling is spent nuclear fuel's rate, roughly halved to £21.23/kgtm.

In CP6, NR received around £300m annually from the variable use charge, and ORR notes that in real terms (that is, after inflation) CP7 charges are to rise by 7% for passengers, 13% for freight, and 9% for charters.

A northbound LNER Azuma passes the southbound Govia Thameslink Railway 700155 near Sandy on May 24. The ORR proposes spending of £1.5bn for digital signalling in CP7, after judging NR's initial £1.7bn allocation as 'too optimistic'. JACK BOSKETT.

It reports that the drivers for these changes are higher track costs and lower passenger traffic forecasts. This leads ORR to propose capping increases which would limit the impact on freight volumes but have little overall effect on NR's funding (it would reduce income by £36m over the five years of CP7).

The charge NR levies for traction electricity (known as EC4T) counts as a variable charge, but it's one based on electricity prices rather than being a charge ORR sets for the whole control period.

ORR Control Period 7 objectives

Safety: The rail network must be maintained in a safe condition for users, workers and the public.
Train performance: The railway must focus on customers, making effective use of its capacity to deliver punctual and reliable passenger and freight services.
Asset sustainability: Assets must be planned and managed to deliver the best value over their operational lives.
Efficiency: NR must be subject to stretching yet realistic efficiency targets.

Source: ORR.

Some operators receive bills based on actual usage as measured by meters on trains. Those without on-train metering receive bills based on modelled consumption.

Electric operators also pay a charge that goes towards NR's electrification assets - its overhead wires, third-rails, and associated transformers, rectifiers and switch gear. Work continues to set these rates.

Charges for stations came to £250m a year in CP6. ORR reports that NR's analysis so far predicts an increase in long-term charges for stations of around 20% when compared with CP6. It explains that this comes from an increase in renewals spending and the higher spending seen in CP6 compared with that predicted in the last periodic review.

NR also charged operators around £100m annually in CP6 in 'qualifying expenditure' (QX) for stations which went towards direct costs such as staff and cleaning plus a management fee. These fixed fees come from direct negotiations between operators and NR, with ORR only regulating the management fee.

More detail on charges is expected over the summer, when NR publishes price lists.

That leads ORR towards publication this autumn of its final determination, which it expects before the end of October. ■

DB 67013 passes Cheney Longville on July 14, while working a Transport for Wales service between Cardiff and Holyhead. Public ownership has not made the operator immune from operational problems faced elsewhere, with a decline in punctuality in 2022-23 compared with the previous year. NIGEL CAPELLE.

Devolution dissected: the state of the nations

Has devolution led to a coherence of transport strategy in Scotland and Wales that is still lacking in England? Would greater regional autonomy provide a more 'social' railway? **CONRAD LANDIN** reports

Amid persistently high subsidies, continuing industrial strife, and the indefinite postponement of reforming legislation, Network Rail has said that the rollout of Great British Railways (GBR) is "currently the only way on the table to resolve the biggest issues of responsibility and cost on the railway".

The language of this statement is distinctly defensive in tone. It seems a far cry from the rhetoric at the launch of GBR in May 2021, when then-Prime Minister Boris Johnson promised his government would "deliver a rail system the country can be proud of". Then-Transport Secretary Grant Shapps spoke of "a new era in the history of our railways" and "a single familiar brand with a bold new vision for passengers".

Current Prime Minister Rishi Sunak does not share Johnson's professed identity as a "great believer in rail". Having headed HM Treasury during the COVID pandemic, he is thought to have grown frustrated at the sheer quantities of cash absorbed by a mode of transport he rarely uses.

However, many rail executives were always sceptical of Shapps' promise of a "single familiar brand". Although much of the cacophony of liveries seen on the railway has stemmed from the franchising system which politicians of all hues now believe to have failed, some of the distinctions are the product of perhaps the only political legacy of the New Labour years that the Conservatives have not managed to undo: devolution.

Indeed, much as the governing party opposed the creation of devolved legislatures in Wales and Scotland, they have only further empowered them in government since 2010. This has been accompanied by the creation of powerful 'metro mayors' in the regions of England, albeit presiding over a financially castrated local government landscape.

The Transport Planning Society's (TPS) 2022 report *State of the Nations Update: Transport Planning for a Sustainable Future* states that "there has been an increasing divergence between the UK Government and the administrations in Scotland, Wales and Northern Ireland" in recent years.

> *"We're spending £1bn on [the South Wales] Metro, we're spending £800m on brand new rolling stock, and we're having to subsidise the running of the railway to an extraordinary extent because of the changes in passenger use."*
>
> ***Lee Waters,***
> ***Deputy Minister for Climate Change, Welsh Labour***

On the railways, the direction of travel in Scotland and Wales has been clear. Since the outbreak of COVID, both ScotRail and Transport for Wales (TfW) have been taken over by publicly owned companies under 'Operator of Last Resort' (OLR) provisions. Caledonian Sleeper followed suit earlier this year.

However, the change has not brought about significant differences for the passenger, and all three operators suffered declines in their annual punctuality figures for 2022-23 compared with the previous year.

But both devolved governments see potential for long-term improvements as well as better delivery of significant infrastructure projects, for which the Scottish and Welsh Parliaments have approved significant investments in line with more ambitious net-zero targets than the UK Government's - in particular, the South Wales Metro and the rail decarbonisation scheme in Scotland.

As the language of 'last resort' suggests, ministers at Holyrood and Cardiff Bay have yet to close the door on franchising (and on the contracting that would continue under GBR) on a long-term basis. EU competition law which remains in force after Brexit requires rail services to be re-tendered on a competitive basis, although this could be changed relatively straightforwardly, and would also affect the UK Department for Transport's (DfT) OLR governance of four English franchises.

Perhaps more importantly, how is it working out in Scotland and Wales?

Projected costs for the South Wales Metro have almost quadrupled, from £260 million to £1 billion. The departure last December of Chris Gibb as chief executive of Scottish Rail Holdings (SRH), the company set up by Transport Scotland as an intermediary between it and ScotRail, has raised questions for SNP ministers, too. In a briefing to the SRH board seen by *RailReview*'s sister publication *RAIL* earlier this year, Gibb left his role due to "continuing micromanagement from ministers, advisors [sic] and officials".

Yet both nations will be looked upon with envy by cash-strapped TOC managers in England, not least for the heavy state subsidies they receive. In England, 46% of franchisee income came from fares in 2021-22, with 48% coming from subsidy. In Wales, only 30% came from fares in the same year, with 64% from subsidy, while in Scotland the divide was even starker, with just 27% from fare income and a whopping 71% from subsidy.

As metro mayors eye up new powers and responsibilities - such as bus franchising in Manchester and the direct procurement of Merseyrail rolling stock in Merseyside - they will be closely following the growing autonomy of Scotland's and Wales's railway networks. However, with budgets tightly controlled by central government, they are unlikely to find the resources to develop major infrastructure projects on their own. And with central government funding normally comes central government prescription. ➤

➤ "We're spending a ton of money on rail," says Lee Waters, Wales's Deputy Minister for Climate Change, whose brief covers TfW.

"We're spending £1bn on [the South Wales] Metro, we're spending £800m on brand new rolling stock, and we're having to subsidise the running of the railway to an extraordinary extent because of the changes in passenger use. So, I don't think anybody can complain about the Welsh Government's commitment to rail."

Fiona Hyslop, Scotland's Transport Minister, is less bombastic in her assessment, but she has a similar message: "Scotland's Railway has a turnover of around £1.8bn, but passenger revenue is only around £400m. So, the Scottish Government will continue to provide the bulk of funding for Scotland's Railway under any realistic scenario."

Surprisingly, the Scottish Conservatives have an even more radical view. The party's transport spokesman Graham Simpson says there "probably" needs to be an even higher subsidy to ScotRail, adding that "we need some analysis on that".

He adds: "That is my view of public transport - that it is essential. A lot of people do not have cars. Even if you do have a car, you should be able to not have to use it."

Rail industry sources seem united in the view that the Scottish and Welsh governments are unlikely to be penalised for continuing public operation in the medium term.

"There is the obligation enshrined in EU law, which is therefore enshrined in UK law, which I guess would be one of the things that eventually would be taken out of UK law. But for now the OLR can't in theory go on indefinitely," says one.

"You can imagine a real constitutional crisis where Westminster says 'you have to let a competition'. That would depend on which party was in government in Westminster, I guess. I also think it's quite unlikely anyhow."

Public operation, where it already exists, is also increasingly being accepted across the political spectrum.

"The model we have is ScotRail is in public ownership - that's not going to change," says Simpson.

"I don't see anyone coming into government that's going to change that - that's the reality of the situation."

He criticises the transfer of Caledonian Sleeper to the OLR as "completely ideological", but says of ScotRail: "My criticism was not 'don't take it into public ownership', it was 'if you're going to take it into public ownership, you need to tell us why, and what you plan to do'. And they never did that."

ScotRail is now owned by Scottish Rail Holdings, which also is legally responsible for overseeing the franchise contract. This is in turn owned by the Scottish Government, but effectively overseen by the Government's executive agency Transport Scotland, with ministerial oversight from Hyslop.

The structure in Wales is different. Transport for Wales is a not-for-profit organisation owned by Welsh ministers. TfW also oversees the contract. Rail services are delivered by its subsidiary, Transport for Wales Rail.

TfW also owns Pullman Rail, the engineering company based out of Cardiff Canton and formerly owned by Colas Rail. And it is the majority shareholder in TfW Innovation Services Ltd, which is charged with "enabling the delivery of an integrated multi-modal transport system", in which KeolisAmey, the former Wales and Borders franchisee, holds a minority stake.

> *"We can't achieve our climate-change targets unless transport emissions fall, but transport emissions will not fall without modal shift, and the railways are an integral part of achieving modal shift."*
>
> ***Lee Waters, Deputy Minister for Climate Change, Welsh Labour***

In England, contrastingly, the OLR franchises (LNER, Southeastern, TransPennine Express and Northern) have their contracts overseen directly by the DfT. The holdings company, DfT OLR Holdings Limited, is responsible for ensuring good corporate governance.

In Scotland and Wales, the power to award the franchise rests with the devolved administration, but the legislation which sets the conditions under which this can be done is set at Westminster.

Hyslop, who took over the transport portfolio in June following the resignation of Kevin Stewart after just two months in the role, says it is the SNP's "long-held belief" that Scotland's railways "should be fully devolved and publicly controlled".

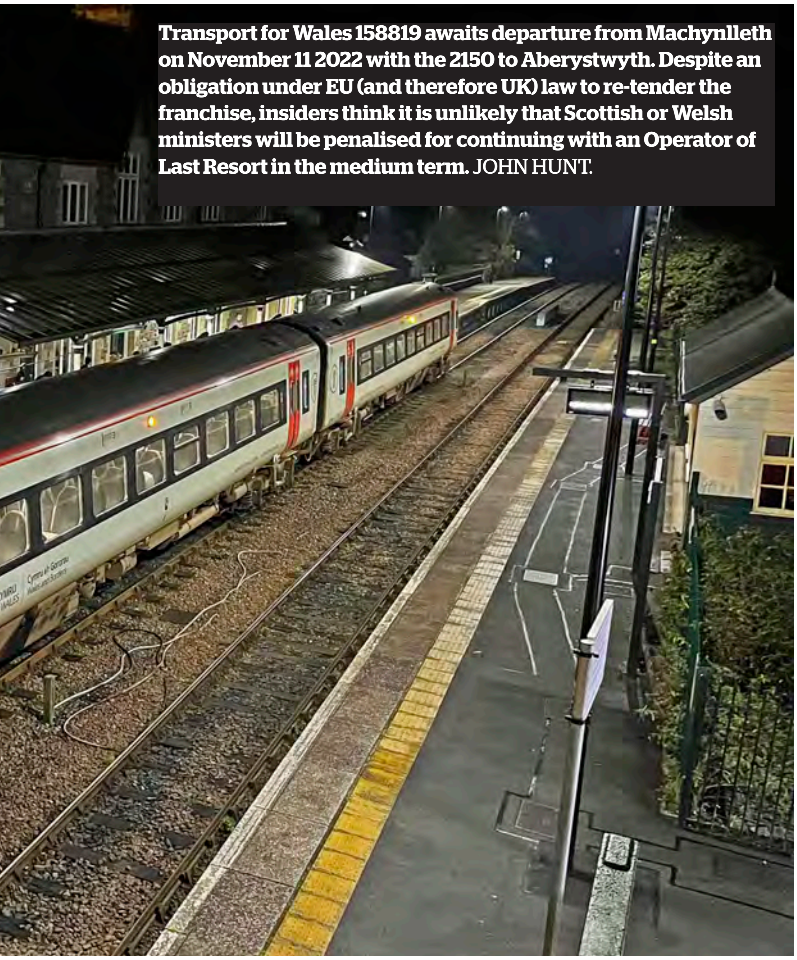
She tells *RailReview* that OLR was not a positive choice, but "tied up in the limited powers we have through the existing flawed UK Government legislative framework, and the much-delayed UK Government rail reform process". In light of how the UK Government has "clearly failed to deliver the much-needed rail reform", she adds: "I do not foresee conditions which would make it efficient and appropriate to return to a franchising process."

Unlike Wales, Scotland has a degree of control over rail infrastructure despite the nation's tracks remaining under Network Rail.

Alongside ScotRail, Network Rail's Scotland region forms half of the Scotland's Railway alliance, with both companies headed by Managing Director Alex Hynes. The rail infrastructure budget is also controlled at a devolved level.

However, for the SNP, the fact that Hynes reports to Network Rail Chief Executive Andrew Haines as well as SRH Chief Executive David Lowrie means the arrangement does not go far enough, with Hyslop pursuing "a fully devolved, public sector-controlled railway system".

Although Jenny Gilruth had left the transport brief by the time Gibb's allegations of micromanagement were revealed, the Scottish



Transport for Wales 158819 awaits departure from Machynlleth on November 11 2022 with the 2150 to Aberystwyth. Despite an obligation under EU (and therefore UK) law to re-tender the franchise, insiders think it is unlikely that Scottish or Welsh ministers will be penalised for continuing with an Operator of Last Resort in the medium term. JOHN HUNT.

Government vociferously resisted allegations of wrongdoing.

Most controversial was the allegation that she had broken the ministerial code in ordering the postponement of decarbonisation work on the Fife Circle Line, which serves her Mid Fife and Glenrothes constituency. Gibb had said that the period between Christmas and New Year last December would result in the least disruption for passengers, but Gilruth believed disruption would be too heavy on passengers travelling over the festive period. First Minister Humza Yousaf ruled that she had not broken the code.

Hyslop describes Gibb as "an experienced railwayman of many years" who "made a significant contribution". She believes it's "incumbent on ministers and officials to work with SRH to understand the effectiveness of ScotRail's management and operations", and says it's recognised across the board "that a successful ScotRail requires good working relationships and strong governance".

Waters, who has served in his Welsh Government post since 2021, says his own role is at "arm's length" from operations: "I think that's clearly as it should be - I have no interest in trying to micromanage TfW. I'd like a bit more challenge in it to be honest, and we are looking at how we can strengthen the TfW board to give local government and the Welsh Government a seat at the table, because we've previously been very hands off.

"As we move towards trying to design a bus and rail system that integrates, with TfW as the guiding mind for that new bus system as well, it's essential that we shift TfW from a simple rail-delivery body, which is what it was set up to do, to being a proper, more diagnostic transport operator across the piece, to have a key role in delivering and driving our modal-shift targets."

That will involve, most importantly, a "culture change" in the organisation, says Waters.

"Because we can mess around with structures, but as the old saying goes, 'culture eats strategy for breakfast'. And with the mindset of a silo of rail engineers, and a silo of highway engineers, and a silo of bus experts and a silo of active travel people, you're not going to integrate just because you put them within one organisation. You have to actively look at ways to cross-fertilise that thinking to get multi-modal projects hardwired in, and from our view, I see TfW as a behaviour-change organisation.

"Rail is a part of that, but it's only one part of that. That is a big change to the marching orders that [Chief Executive] James Price had when he set up TfW, and that's not going to happen immediately, and it's not going to happen without a very conscious embracing of that philosophy by the board and the leadership and by the teams within TfW. And to be fair, they've accepted that challenge with enthusiasm and we're working that through."

Waters says Scotland has "a much better model than we have" because "they have their own envelope within Network Rail, where they have discretion to invest within that". He describes his relationship with Transport Scotland officials and SNP ministers as "productive, constructive, friendly".

He argues that the rail-funding formula" profoundly disadvantages Wales just because we don't have a dense population for large parts of Wales" - a historic issue, but one reinforced by recent decisions.

He points to the maiden speech in the House of Lords of Network Rail Chairman Lord Hendy, who argued it was "strange that, as a consequence of spending on HS2, Scotland and Northern Ireland received additional funds as part of the block grant, but Wales did not".

Waters says that "the way that devolution was developed in Wales right across the policy piece has been messy and incoherent", having already described the set-up of the rail industry as a "complete dog's breakfast".

His frankness is notable: "Here, the railways see themselves as very much an England and Wales operation. That may work for the centre - it doesn't work well for Wales.

"Where this now matters far more than it has done historically - which it always has done because we've suffered from underinvestment under multiple governments, the system has not worked well for Welsh passengers - is in achieving our climate-change targets. We can't achieve our climate change targets unless transport emissions fall, but transport emissions will not fall without modal shift, and the railways are an integral part of achieving modal shift. So, it's not simply a 'nice to have', it's now an essential reform that's needed if we're going to avoid catastrophic climate change."

Could the Welsh Government's recent halting of all major road projects free up more funding for rail?

"It won't make any difference in the short term - this is a medium to long-term policy change. Anything takes forever in the world of transport to do, and costs far too much. The freeing of funding from a never-ending pipeline of expensive road schemes is going to happen over time, and will allow multi-modal schemes to be funded first.

"Rail is really difficult from a funding point of view, because we have quite limited control of the spend in rail, because of so many sunken fixed costs, and because once having taken over a railway, you can't really switch it off. If you did, you wouldn't save much money."

One area where the Welsh Government has made progress, albeit at a high cost, is the South Wales Metro.

Based around the former Valley Lines network, which has Cardiff as its hub, the programme will feature a number of new tracks and stations, including a road-based extension to a new Cardiff Bay station and new Class 231 diesel electric multiple units built by Stadler in Switzerland, some of which are already operational on the Rhymney line.

Most significantly, Network Rail has handed over ownership of the infrastructure to TfW, in the most extensive act of vertical re-integration since track and train were separated in the 1990s.

In his first interview since quitting Scottish Rail Holdings, Chris Gibb will not comment on the circumstances of his departure. But having also served as a strategic adviser to TfW and the Welsh ➤

> *"Scotland's Railway has a turnover of around £1.8bn, but passenger revenue is only around £400m. So, the Scottish Government will continue to provide the bulk of funding for Scotland's Railway under any realistic scenario."*
>
> **Fiona Hyslop, Minister for Transport, Scottish National Party**

➤ Government from 2015 to 2021, and as the founding managing director of Wales and Borders from 2001 to 2003, he is visibly excited by the ambition of the South Wales Metro project.

"The Valley Lines solution is a very innovative one. I think it's a really excellent idea, the whole discontinuous electrification, because it reduces the cost, it reduces the disruption, it makes all the costs much more predictable. I think there are about 60 dead sections on Valley Lines now where the battery-electric trains will go through them on battery power.

"I think that's a brilliant concept. I don't think Network Rail would have gone down that route, partly because it would have been a small-scale distraction for Network Rail, because it doesn't work so well for freight trains - they were never going to adopt discontinuous electrification for long-distance routes.

"Network Rail is a large company that just could not nimbly adapt to that project in South Wales, whereas for TfW and the Welsh Government that project is everything. It's fundamental to the Valley's economic development, the social development and the success of the railway operation."

Waters is more circumspect and upfront about the challenges which have led to the cost of the project spiralling: "It took forever, it was very difficult to get over the line, and it's proving challenging to implement. The condition of the track is far poorer than we expected and we're having to spend far more than we'd anticipated in order to remedy that, and that is not reflected in the funding deal that has been agreed."

What impact could that have on the prospect of expanding vertical integration in the future?

"It does make us hesitate about future asks," Waters admits. "Because unless we're able to get access to the funding, having a liability is not going to make things better, it's going to make life harder. And we just have to be very alert to that."

Still, he believes the South Wales Metro will be worth it: "What it does allow us to do is to start to plan a longer-term vision for multi-modal operation, for deviating from standards. So, in a way, the less sexy but really important details about the Metro is the number of industry standards that we are departing from, and the innovation we've brought into the development of a light rail network.

"It is a massive project, as complex as Crossrail, and the things like the tri-modal operating where a train can go battery, diesel and electric on heavy rail, light rail and on road, is quite staggering really in the context of a slow-moving rail industry. We have been able to achieve leaps of innovation in Wales."

Is there more scope for vertical integration under OLR operators than under franchisees?

"Yes, to an extent," says Gibb. Owning both infrastructure and train operator allows a government to take "control over the total investment in the system" - across capital spending, subsidy and passenger revenue, he notes.

"But there's a fair bit of profit-making goes on in franchise contracts, from bizarre twists in the contract itself, so the Schedule 4 and Schedule 8 regime allows a franchisee to potentially make a profit on engineering work.

"So, you have to write a really clever contract that has to be really small and really to the point, and have the right incentives in it."

Although few would dispute that there is no turning back on devolution, both the Welsh and Scottish Governments are on their guard over future system-wide reform of the railways from Whitehall, whether that be Great British Railways or Labour's plan to take franchises back into public ownership when they expire.

Labour's own policy document on rail reform, *GB Rail*, was published in 2020 just as ex-Shadow Transport Secretary Andy McDonald (who had served under Jeremy Corbyn) stepped down from the brief. There have been mixed messages from the party as to how much of that vision still stands under Sir Keir Starmer's leadership. However, it did propose that Scotland and Wales would form "strategic management units" of the new railway body.

At Scottish Labour's conference earlier this year, the party's transport spokesman at Holyrood, Colin Smyth, said "the Scottish Government will be a stakeholder in the GB Rail model as well", through having "a 10% stake in the GB Rail business". It is not clear if a similar arrangement would apply to Wales.

"Power grabs are in the Whitehall DNA, regardless of who the ministers are - it's just the way the culture of the system is highly centralised," says Waters.

"There is insufficient understanding of life outside of London. I think that's true of any civil service department, so it would be naive to expect this to be any different."

He is keen to stress that he has a "very good working relationship with [Labour's Westminster Shadow Transport Secretary] Louise Haigh and her team" and is meeting them regularly to "ensure we align our aspirations, and there are no unintended consequences".

However, he is also keen to stress that he has had "some very productive conversations with Lord Hendy, with Rail Minnister Huw Merriman, and with the Secretary of State [for Transport] about how we might have a more sensible set-up, particularly as Great British Railways is developed".

The SNP's Hyslop criticises the GBR White Paper for failing to offer "the full devolution of rail powers and infrastructure ownership".

She explains: "While the White Paper stated that the Scottish

On October 15 2021, ScotRail 170432 approaches Dalgety Bay in Fife with the 1329 Edinburgh-Aberdeen. Former Scottish Transport Minister Jenny Gilruth was accused of breaching the ministerial code by allegedly ordering the postponement of electrification works in her mid-Fife constituency. STUART FOWLER.

ministers will retain the ability to exercise devolved powers as before, it is not at all clear how that can happen in the context of reforms which also talk about 'single national leadership' and a single 'guiding mind' at UK level. The obvious concern is that this will create unnecessary and inefficient complication for Scotland's Railway when the evidence clearly supports a simpler, integrated model for Scotland."

What lessons could the experiences of Scotland and Wales hold for England?

In March this year, the Institution of Civil Engineers (ICE) published a consultation paper asking: does England need a national transport strategy? It described a "fragmented landscape of modal, thematic and regional strategies" which "encourages siloed planning and results in transport services that often do not serve the needs of transport users".

The question at the heart of the paper has not often been asked, partly due to England's huge population compared with Scotland and Wales and (when it comes to rail) the historic regional structure of the railways.

Analysis by IPPR North shows why any pursuit of such a strategy must take care to maintain nuance. In England, an average of £413 was spent on transport per head from the public purse over the ten years from 2009-10 to 2019-20. But this was massively skewed by the London spend of £864. In Northern England, the figure was £349, in the East Midlands it was £301, and in South West England it was just £270.

Wales's per-head spend of £406 points to the positive impact that regional autonomy could bring, provided it is accompanied by regional funding. Scotland's spend of £696 per head put every British region bar London to shame.

However, one benefit of an English transport strategy would be to consider service users at the level of the polity in which decisions about them are being made. The ICE paper argues that "transport planning should begin by understanding who transport is serving, what their economic and wellbeing needs are and how transport systems can enable, or hinder, those goals".

"While the White Paper stated that the Scottish ministers will retain the ability to exercise devolved powers as before, it is not at all clear how that can happen in the context of reforms which also talk about 'single national leadership' at UK level."

Fiona Hyslop,
Minister for Transport, Scottish National Party

It suggests a "user-centred approach" which could consider "mobility as a service" - that is, "integrating transport modes to enable seamless end-to-end journeys and moving away from different modes competing for funding and customers" and "reducing social exclusion and addressing the needs of an ageing population".

These kinds of considerations are increasingly at the centre of discussions at industry conventions and rail fringe meetings at the party conferences, and have figured too in the recent debate over booking office closures. But they rarely seem to figure in DfT rhetoric or decisions over major infrastructure projects.

Senior industry figures emphasise that the climates in which different TOCs operate across the nations can be "very, very different" to each other.

"Companies in England, notably the inter-city ones, must be close to paying a premium to government again," says one rail executive.

"And they're in a very different situation - they're competing with airlines and motorways, they're competing with open access. It's not the same animal as Scotland, where you're providing a very social railway and where you're backing up the economy, jobs, housing - all that sort of thing."

With greater regional autonomy, could England's railways play a similar social function?

Many, arguably, are doing so already in ways we take for granted, which would only be properly noticed and evaluated in the event of closure. Some new stations have indeed been built in line with housing and economic development, such as Maghull North, which has been hailed by Merseyside Metro Mayor Steve Rotheram for making a significant contribution to reviving the local community since opening in 2018.

Changes of ownership will not shield the railways of Scotland, Wales or England from the escalating challenges they currently face: increasing costs, fraught industrial relations and the need to quickly adapt so they can play a major part in the road to net zero, rather than suffering from ageing infrastructure ill-equipped to deal with the effects of climate change. Nor will the different models preclude any nation's railway from relying heavily on the private sector, particularly in the supply chain, to deliver its ambitions.

Scotland and Wales cover vast geographical areas with significant economic, cultural and political distinctions across their own regions, which can sometimes be forgotten by devolved national governments with a tendency to centralise. The birth of Transport Scotland, for instance, was accompanied by the castration of the innovative Strathclyde Passenger Transport, leaving the prospect of multi-modal integration in Greater Glasgow more distant than it was a decade and a half ago.

However, experts at ICE and the TPS have identified a coherence to transport strategy in Scotland and Wales which is still lacking in England. And even if they have struggled in the early years, taking back control has given Scottish and Welsh ministers a confidence that seems totally absent from the DfT.

"I think in five to ten years' time, rail in Wales will look very different and feel very different," says Waters. "There will be a far more positive energy than there is today." ■

Devolution

Stephen Joseph
Transport Consultant and former Campaign for Better Transport CEO

This piece is very good in setting out the increasing differences in rail policy between England, Scotland and Wales. As it makes clear, the Government approach to railways in England is fundamentally different to that taken by the Welsh and Scottish Governments.

The general commentary from London on railways tends to ignore this. The long-running industrial disputes are now only with the train operators in England (though cross-border services are affected). There are no proposals to close ticket offices in Scotland or Wales. The Scottish Government is funding a trial of removing peak-time fares on ScotRail. And as the article makes clear, the Welsh Government and Transport for Wales have been highly innovative in the South Wales Metro project, with different approaches to electrification, trains and engineering than Network Rail would have used.

And of course, as the article points out, passenger rail operations in Wales and Scotland are publicly owned. Yet coverage of the UK Labour Party's commitment to this in England mostly ignores this.

This is, of course, an article for *RailReview*, but I can perhaps add some wider context. As the main author of the Transport Planning Society's *State of the Nations Update* (referenced in the article), I was really struck by the increasing divergence in transport policy, strategy and spending between the four UK nations. I've also been serving on the North Wales Transport Commission, whose final report is due this autumn, so have had further insight into this.

For a start, both Wales and Scotland have national transport strategies (as the article points out, England does not). These set frameworks for transport policy, and are linked to other policies such as spatial planning. In the case of Scotland, its strategy for tackling climate change includes a target of cutting traffic (vehicle mileage) by 20% by 2030 on 2018 levels - and this overarching target informs investment decisions, including in rail. Unlike England, Scotland has a rail decarbonisation strategy, including electrification of key routes. It is reopening the Levenmouth line and investigating others.

The Welsh Government's wider transport strategies also support the railways. The article refers to the roads review in Wales, which has led to the cancellation of a number of major schemes, and this follows the decision not to proceed with the M4 relief road near Newport. The default speed limit on roads in built-up areas has been reduced from 30mph to 20mph. It is pursuing bus franchising and seeking to integrate buses with trains - the TrawsCymru long-distance bus network is being developed and integrated with the

An aerial view of the new station at Levenmouth (Fife), where an island platform is under construction. The reconnection of the town to the national network is included in Scotland's transport strategy - a document for which there is no equivalent in England. THOMAS HAYWOOD.

Devolved authorities abhor a vacuum as much as nature does. Current Westminster inertia explains the clamour for a greater local say in railway decision-making. But in truth, this tension between local and supra-local railway decision-making has been going on since Stephenson raced by the good burghers of Newton Aycliffe at 4mph on his inaugural journey to Darlington.

"Local decisions are best taken by local people" is said so much on the railways, it's transcended truism into mantra.

But does decentralised decision-making really work in relation to a national mixed-use railway network which happens to be one of the busiest in the world, and which at some point helped shape our national psyche and (looking forward) is supposed to help meet national environmental targets?

Well, the article shows that it can - certainly at the GB-nation level with the different Scottish and Welsh models. But at that level of devolution, the purpose appears to be as much about achieving an ideological outcome as it might be about performance and user benefits, which is considered a successful outcome in and of itself.

Autonomy and budget scale down at smaller localities, to the point where any devolution takes place within (and so subject to) the national procurement model and operating demands. The chances of

Jason Chamberlain
Partner, Bryan Cave Leighton Paisner LLP

successful devolution scale accordingly.

At either scale, at some point devolution literally and figuratively runs out - as is said, when local issues of responsibility and cost are felt by centrists to go to "the biggest issues of responsibility and cost".

Because railway devolution is not federalism, as some would want it to be. And although the sense is probably right, there's no going back on intra-national devolution.

The GBR single guiding mind will not just rule out further devolution, but potentially row some of it back - the 2020 Internal Markets Act is perhaps a reference point, being described as "an opportunistic power grab" in the way it allowed the voiding of devolved economic and social decisions on the basis of maintaining universality.

trains. Both the Welsh and Scottish Governments are supporting active travel at a far higher level than is happening in England.

None of this means that things are perfect. Both ScotRail and TfW rail operations have suffered poor punctuality and reliability, with TfW at the bottom of Transport Focus's league table.

But there is accountability and a political incentive to improve things. And - unlike with the UK Government's current approach - there is an acceptance of the importance of rail to economic, environmental and social objectives, and a willingness to continue to invest in it as part of a wider integrated transport strategy.

We can only hope the UK Government will follow suit!

Even with full legal separation, ask Birmingham City Council (and the 26 other local authorities rumoured to be on the cusp of declaring bankruptcy) about the realities of devolved decision making in the present economic climate.

Or Transport for London. ULEZ might have been a locally-taken decision, but let's be clear: as part of the price for central government COVID bailouts, it was effectively taken in Westminster, rather than the Mayor's office in Newham.

So in the end, as Lee Waters alludes to, devolution is only as good as the budget devolved with it.

With the right circumstances, railway devolution can achieve a better outcome than a centrally directed one.

Could it therefore lead to a more social railway? Sure, if that's what the regional decision-makers want, but ironically only if centralised decision makers want it first. And they aren't currently deciding anything at the moment.

Even if they were, future decision-making appears to emanate mostly from Derby. And as Derby's (and all local) streets still ultimately lead to Westminster ones, and those we are told are not paved with gold, it may be some time yet before we get to chant the mantra further.

Noel Dolphin
Head of UK Projects, Furrer+Frey

In 2010, during Iain Coucher's last week as CEO of Network Rail, I asked him what he would have done differently in his tenure. He simply said he would have made Network Rail Scotland a separate company.

The gap between local needs and co-ordination across the UK is a battle that rages in everything the Government touches - and rail is no exception. However, rail has the added complication of the upcoming Great British Railways. Every significant question about strategy, direction and funding is deferred to a future GBR, from ticketing reform to industry structure. The big question here is: how will Scotland, Wales and English regions interact with the future GBR? And currently this is unknown.

What I feel is known is that the more local transport decisions are made locally, the more investment in rail occurs - devolved government results in increased investment in rail. Simply put, people want trains that run on time. And when they have a chance to influence decision-making, that results in more investment to allow that to occur.

Conversely, I would glibly say that the more decisions are made in Whitehall by HM Treasury, the more it feels there is less concern over whether we can get to work on time. Conrad highlights the 'user-centred approach' - it is much easier for a region to have a user-centred approach than for HM Treasury. The disparity between devolved and centralised can be seen in Conrad's article by the funding in devolved transport, such as Scotland, Wales and London, compared with English regions,

Devolved governments and regions have a clear strategy and vision. The issue has been how much freedom they have to fund this, and what fiscal limits we impose to realise their goals. Too much relies on competition, and the whims of national ministers and the current Prime Minister. None of these develop a long-term strategy, lower costs with rolling programmes of work, increased local training and skills, and any number of other benefits.

Devolved administrations can make decisions that move rail beyond existing structures, to how they can drive economic development. The South Wales Metro is a great example. Many high-value jobs are in the centre of Cardiff and the large business parks nearby. Getting into Cardiff from the Valleys is difficult in the morning. Getting between the Valleys is even more challenging. Having fast, frequent, high-capacity railways will make the movement of people for work and education much more accessible.

Only devolved administrations can really look at the needs of real people. The assessments of Benefit:Cost Ratio (BCR) undertaken by HM Treasury have traditionally been excellent at assessing the impact on house prices in London as a measure of a new rail line, but traditionally poorer at taking into account other benefits such as the ease of students getting to college and how this might reduce the numbers that fall out of education.

It has been almost four years since the Government published the Rail Network Enhancements Pipeline. We currently have no idea of the final dates or structure of GBR. Until an election in 2024 and a clear direction, the rail industry can only turn to devolved administrations for guidance.

Maggie Simpson Opinion

Does the planning system work for freight?

The Department for Transport's recently published call for evidence on freight, logistics and the planning system is an important opportunity for the sector to tackle a policy area which often causes significant difficulties for businesses looking to grow and expand their operations. It is clear that improvements are needed, but finding a way to embed change is particularly challenging in a system which is both complex and geographically diverse. So, what are the issues, and how can the call for evidence help?

The planning system as it relates to rail freight is made up of many different parts. For a start, the call for evidence only covers England, as Scotland and Wales have different frameworks, which I have not included here.

In England, Strategic Rail Freight Interchanges such as those at East Midlands Gateway or Daventry are included in the planning framework for nationally significant infrastructure described in the Planning Act 2008, and consequently work to an entirely different process than smaller sites.

The core document which underpins this regime, the *National Networks National Policy Statement* (NNNPS), was re-consulted on earlier this year by Government, and we await an updated version in due course. (The 2008 Act also covers infrastructure at ports, which can also be relevant to rail in some cases.)

Railway infrastructure is also covered by the NNNPS, but the planning for new railways is most often progressed via Transport and Works Act orders, or in the case of HS2 via hybrid bills in parliament. The railways also have some permitted development rights which enable some works to be undertaken without explicit consent.

However, most rail freight facilities are not included in these regimes, but are consented via the 'normal' planning system, administered at local planning authority level.

This system includes myriad complex requirements and guidance, necessary to cover housing, domestic alterations, retail facilities and industrial use. It relies on skilled planners who often have to be expert in a wide range of different areas, and local councillors on planning committees who have to balance the local political needs and planning guidance, particularly on controversial decisions.

Despite this, new rail freight sites are consented and built, but often at a significant cost both in time and money.

One particular challenge for freight is that in recent years the focus of the planning system has been almost exclusively about house building, so much so that the responsible Government department (Department for Levelling up, Housing and Communities) has housing in its title and not planning! This has tended to skew planning guidance and decision-making towards residential development at the expense of other uses, in particular industrial land, including land for logistics.

The loss of land for industrial uses is severe. The Industrial Land Commission established by the Centre for London estimated that London had lost around a quarter of industrial land in the last 20 years, with Greater Manchester and the West Midlands each losing around a fifth of the available land.

This is having an impact on businesses which cannot find suitable locations for new facilities, on the city economy and on the environment when activities are pushed out of cities, leading to longer journeys for distribution activities.

Of course, not all industrial land is suitable for freight and logistics use, and rail freight sites have the added complication of needing to be by the railway, but the general trend is concerning. The lack of focus on industrial development also sets a worrying trend whereby such uses are seen as 'second rate' to housing in the planning system and thus not desirable.

A further challenge with the loss of industrial land is that housing developments are being built closer to existing rail freight and logistics sites.

Freight locations are not always ideal neighbours to luxury flats because they generate road movements and can be noisy or dusty. This is not a problem when they are appropriately zoned, but by pushing developments closer together, businesses are suffering an increase in noise complaints and similar issues, making it more expensive and difficult to do business in that location.

By the same measure, freight and logistics companies need to play their part, ensuring they are using the land they have to full advantage and acting to minimise nuisance factors where they can, but there is a viscous circle here with businesses disinclined to invest in locations if they do not have security of tenure or fear the site will be lost to housing development.

There is no simple solution to this, but it is clear that local planning authorities do need to safeguard land more effectively for industrial and freight use both in local plans and in planning decisions. Central government in turn needs to set the right guidance to support local planners and provide a framework that allows a balance to be found between the demand for new homes, and the need for the infrastructure to support the economy.

> *"By pushing developments closer together, businesses are suffering an increase in noise complaints and similar issues, making it more expensive and difficult to do business in that location."*

DB 66148 hauls an East Midlands Gateway-Felixstowe intermodal service at Werrington (near Peterborough) on April 4. While large freight interchanges are included in planning frameworks for nationally significant infrastructure, smaller sites often encounter significant time and financial penalties while moving through the local planning system. PAUL SHANNON.

Another challenge arises from the fact that freight and logistics movements are rarely confined to a local area. A freight terminal in one town will receive inbound goods from and despatch products to locations across the country. This means that the local area will tend to see the disbenefits of the site, such as increased road movements, while the benefits accrue at a regional or national level. Rail freight sites are particularly affected by this, with the carbon-saving benefits of modal shift generally accruing on the trunk road network outside of the local area.

While there is a duty of co-operation between planning authorities, the political pressures at a local level can make it very hard for new developments to get consent. This is likely to get worse under plans which would set carbon-reduction targets for tailpipe emissions at a local plan level. Although this is to be welcomed in some respects, it does mean that developments which deliver modal shift and overall carbon savings could be negatively impacted, making rail freight growth harder to achieve. Solving this dilemma is likely to need specific guidance from Government to support authorities in taking such decisions, and in being able to take credit for carbon savings arising elsewhere in the country.

Another area that needs improvement is how freight and logistics is considered in new developments.

For road freight, this means ensuring that HGV and van deliveries can be appropriately made to new retail units, schools, offices and homes alongside infrastructure for liveable cities and active travel.

> *"While there is a duty of co-operation between planning authorities, the political pressures at a local level can make it very hard for new developments to get consent."*

For rail freight, it means making space for terminals in urban centres and ensuring that capacity is available on the network, for example when new services are being planned. And where there is the opportunity for express freight to be handled at a station, this also needs to be considered in development plans, including looking at whether there is space for local consolidation on the station estate.

At the other end of the scale, it might also mean encouraging major new developments onto rail-connected sites, such as new factories or warehousing, or adding new connections to industrial areas.

The final part of the jigsaw is how to help local planning authorities to become more knowledgeable about freight. The industry has a role to play here in seeking to influence local plans and in sharing knowledge, but with over 300 different planning authorities in England alone, this is no small task. The sub-national transport bodies such as Transport for the North also have a role to play, and their strategies are helping to bring awareness of the needs of freight. However, they have no statutory powers and have to be careful to properly maintain boundaries and responsibilities with respect to their key stakeholders.

It is clear that improvements do need to be made to planning to enable the freight and logistics sector to become more productive, and for rail freight to achieve its growth target. And while this is a complex space, some modest changes could well start to deliver change, bringing a renewed focus on freight in local plans and in decision-making.

Freight companies need to respond with measures to become better neighbours, safe in the knowledge that they have security of tenure, and planning authorities need to work better together to ensure that low-carbon transport is supported. This call for evidence is the start of that journey, one which is essential for freight to thrive. ■

About the author

Maggie Simpson is executive director of the Rail Freight Group. Previously she worked in a range of passenger and freight roles at the Strategic Rail Authority and Office of Passenger Rail Franchising, including freight strategy development and franchise management. She has also worked in consultancy.

Great Western Railway 800006 speeds east at Boulking (near Uffington) on April 3, with the 1028 London Paddington-Cheltenham Spa. Rail's sustainability credentials and potential contribution to reaching net zero could prove to be an ace card in attracting Gen Z candidates who are typically more environmentally conscious than their predecessors. JOHN STRETTON.

Selling the railway to the next generation

Faced with an ageing workforce and the need for younger, more diverse recruits, how can the rail industry reverse the 'brain drain'? Intuitive Founder and Director **NINA LOCKWOOD** examines the opportunities

The UK rail industry has plenty of reasons for optimism. Many billions of pounds are being ploughed into major infrastructure projects - most notably HS2 and Northern Powerhouse Rail - which should (all being well) cement UK rail's place at the heart of public transport for decades to come, as well as driving economic growth and bringing communities closer together.

There's also the ongoing digital transformation of rail to consider. For passengers, the experience of travelling by rail has changed greatly in recent decades, with the rise of journey planning and ticketing apps, for example. New tech has revolutionised many other areas of rail as well, including vehicle design, engineering and maintenance.

Then, of course, we have the issue of climate change. This summer's heatwave and the ensuing wildfires across much of southern Europe have concentrated many minds about the need to reduce carbon emissions as a matter of urgency. Public transport - and the railway in particular - will play a crucial role if the UK is to meet its sustainability goals and play its part in combating climate change in the years ahead.

With the rail industry being in such a period of strong expansion, there is obviously increased demand for employees with the right skills. But there's a problem… and it's a big one: those skills are proving increasingly difficult to come by.

UK rail has an ageing workforce, with nearly 50,000 rail industry workers expected to retire by 2030. According to NSAR (National Skills Academy for Rail), the average age of the workforce stood at 44 in 2022. There are also concerning signs that younger people are mostly unconvinced that a career in rail is for them.

UK rail has been presented with a generational opportunity. But unless the industry acts swiftly and collectively to address its ongoing 'brain drain', it may prove unable to capitalise. This would have negative implications for the economy, the environment and communities across the country, which are crying out for more reliable and more frequent rail travel options. But it doesn't have to be that way - and first, we need to understand the scale of the challenge.

> *"UK rail has an ageing workforce, with nearly 50,000 rail industry workers expected to retire by 2030. There are also concerning signs that younger people are mostly unconvinced that a career in rail is for them."*

Mind the skills gap

There are several factors that have left the UK rail industry in the situation where it finds it increasingly challenging to recruit the skilled workers it needs. For one thing, the rail workforce is getting older at a time when the demand for skills is growing and when other industries are also eager to find skilled workers. Deteriorating industrial relations on the railways, meanwhile, have resulted in a concerted wave of strike action unlike anything we've seen in Britain for several decades.

Other factors have also compounded the skills shortage on the railways. For example, cuts in Government spending have resulted in reductions in the number of university courses training students in the kind of skills sought by UK rail.

To make matters worse, the National College for Advanced Transport and Infrastructure (NCATI) - previously known as the College for High Speed Rail, which was established in 2017 to train workers for the construction of HS2 - closed in July.

The stated reason for the closure of NCATI is revealing. The institution had persistent difficulty in attracting students, and by the time its closure was announced earlier this year, it was teaching only 2% of the total number of students for wich it was intended. This is indicative of the rail industry's wider image problem and its apparent lack of appeal for younger people in particular.

The *Great Jobs* report, published in 2022 by City & Guilds, provides some very useful - if not always comforting - insights into the nature and size of the problem.

With as many as 120,000 new jobs forecast to be created in the UK rail industry over the next decade, the sector should be looking to the future with unbounded optimism. Yet it is failing to attract the fresh talent it needs. Why is this?

Of those people surveyed by City & Guilds, only 32% said they would consider a career in rail, while 47% rejected the idea. Just over a quarter (26%) of respondents who were between the ages of 18 and 24 indicated that they could be interested in a career on the railways. And of these respondents, only 24% were female.

This points to the alarming, and worsening, gender imbalance in the industry. According to last year's NSAR annual workforce survey, women accounted for only 14.6% of the UK rail workforce in 2022, down from 16.8% in 2021.

The City & Guilds report also points out that 28% of UK rail employees are over the age of 50. The accelerating loss of these experienced and skilled workers to retirement is compounding the rail sector's difficulties with recruiting younger employees. The proportion of under-25s among those working in the industry, which currently stands at just 3.8%, reflects this. The skills that are being lost to the industry are, therefore, not being replaced at the required rate.

The industry also seems to have a serious problem in recruiting candidates from ethnic minority backgrounds. According to City ➤

Engineering work takes place in Clay Cross Tunnel (Derbyshire) on May 29. The rail sector suffers from an ageing workforce with some 50,000 workers expected to retire by the end of the decade. MICK TINDALL.

➤ & Guilds, only 27% of people from ethnic minorities said that they would consider working in the rail sector.

The prevailing image of UK rail, then, appears to be that of an industry dominated by older white men, which continues to deter people from other demographics despite the plentiful career opportunities on offer in the sector.

While technology is opening up a lot of exciting new avenues for UK rail, this poses further challenges as well. The industry needs to ensure that it is properly re-skilling its workforce so that its most valuable resource - its people - are fully equipped for the transformation that's already in progress.

Anecdotally, there are also indications that some employees are leaving the railway industry in search of better pay elsewhere, even though the evidence we have tells us that the sector pays above-average wages.

Why the industry finds it so hard to recruit

UK rail's much publicised skills shortage is partly a matter of image. As the City & Guilds report suggests, many young workers and others looking for a change of career have a negative view of working conditions in the sector. While railway organisations have taken real and positive steps to increase diversity, and hence boost recruitment among underrepresented demographics, it is clear that more needs to be done.

A lot of younger workers tend to see the railway industry as being set in its ways, both culturally and in practice. Yet given the amount of innovation we have seen in the past few years alone, it is difficult to sustain the case that it is old-fashioned. Digital skills, for example, are becoming increasingly important in fields ranging from engineering to cybersecurity.

According to NSAR, this process of modernisation means that 80% of the UK rail workforce will have to be trained over the next two decades. Some 200,000 rail workers will need new digital skills by 2030 - this includes 110,000 who will require upskilling, 80,000 in need of reskilling, and the creation of 10,000 new apprenticeships. The industry must ensure that employees are given the support they need to keep up with the pace of this change.

Another problem facing the railway industry is that post-Brexit, there is now a greater necessity to hire and train employees who are already in the UK and have the right to work here. Prior to Britain's departure from the European Union, UK rail had long been reliant, to a substantial extent, on workers recruited from abroad. With the UK now outside the EU and freedom of movement with mainland Europe having ended, it has become much harder for employers in the rail industry to bring in workers from the continent, exacerbating the skills shortages that exist in the sector.

Additionally, a lot of rail projects recruit workers on short-term contracts.

It can be tough planning your life outside of work around these contracts when you have a mortgage, bills, and whatever else to pay. This lack of security and longer-term certainty serves as another strong disincentive for a lot of people who might otherwise be tempted to try their hand on the railways, as well as causing some of those who already work in the sector to take their skills elsewhere in search of more stable, long-term and consistent work.

Meanwhile, UK rail's failure to recruit more people from underrepresented communities - including women and people from ethnic minorities - continues to hinder the industry's wider progress. Unless the sector does more to convince people from these communities that it is a welcoming, exciting and forward-thinking place to work, it will simply be denying itself talents, ideas and energies that could serve as a vital spur to further innovation - and ease its skills shortage.

The problem with regards to recruiting more women on the railways is two-fold: first, that the industry itself is viewed as predominantly male; second, that certain roles within rail are, even now, largely considered to be primarily masculine, or 'men's work'.

Jobs in areas such as rail engineering, logistics and construction are still stereotyped as being the preserve of men. This can lead many women - regardless of their own skills or ambitions - to write them off as career options, or mean that they are written off by others as being inherently less suited to those lines of work.

Some potential candidates from under-represented backgrounds also worry that the railways might not provide them with a welcoming and supportive environment in which to work.

This also includes aspects such as the facilities on hand: is there a multi-faith prayer room that's actually fit for the purpose, and which isn't just a cramped cupboard somewhere? Are there separate toilets available for women colleagues? Is there PPE that's genuinely designed for women to wear?

Questions such as these shouldn't be looked at merely in isolation. Together, they add up to a bigger picture, and potential candidates will draw their own conclusions from this.

UK rail needs to reconsider how it engages with people from under-represented communities across the board. Employers in the railway industry must therefore think about how they do outreach to these communities, and how the recruitment process itself works for diverse candidates. This is a matter not just of procedural change, but of cultural and behavioural change too - people from under-represented backgrounds need to see concrete evidence from day to day that employers' commitment to diversity is sincere and steadfast.

Ultimately, to recruit more people from these communities, and to hang on to those who already work in UK rail, organisations must demonstrate that they are serious about diversity and fostering a lasting sense of belonging.

Diversity and why it matters for the future of UK rail

It is worth taking the time here to elaborate on why equality, diversity and inclusion (ED&I) is so vitally important for the future of the UK railway industry.

At Intuitive, our commitment to ED&I, giving people the opportunity to shine whatever their personal background, is fundamental to what we do. A more diverse workforce is a more dynamic one. In fact, one study found that more inclusive working

"Some 200,000 rail workers will need new digital skills by 2030; this includes 110,000 who will require upskilling, 80,000 in need of reskilling and the creation of 10,000 new apprenticeships."

Rail Minister Huw Merriman (second left) meets two female apprentices during a visit to Siemens' factory in Goole on August 18. Despite the rail sector making determined efforts to increase diversity, the gender gap is widening. Women accounted for less than 15% of the workforce in 2022, a decline from 16.8% the year before. SIEMENS.

environments can boost innovation by a stunning 83%.

Meeting ED&I obligations is a legal requirement for UK industry, rail included. More to the point, it is a moral duty as well - it is simply the right thing to do. It is a question of basic fairness that everyone should have an equal opportunity to succeed and to realise their full potential.

It's important to emphasise that in UK rail, there has already been much change for the better over the years, and at Intuitive we pride ourselves on the role we are playing in bringing this about, connecting talented, diverse leaders to progressive-minded organisations in the sector.

The UK rail industry currently has an unprecedented opportunity to build a workforce that is more genuinely representative of the public it serves, from senior leadership roles to the frontline workforce.

This is sure to benefit not only the people working in the sector, but passengers as well. When every voice is heard, and every experience and perspective is truly valued, everybody wins. That said, it's clear that the industry still has work to do on this front.

We often talk about the importance of greater diversity to the passenger experience, and this is, of course, absolutely crucial. But there isn't always enough attention paid to the importance of greater diversity when it comes to boosting recruitment to the railway industry. This is far from a mere box-ticking exercise and must not be treated as one. Instead, it is vital if we are to ensure that UK rail meets the challenges which are now in front of it, including its contribution to the UK's net zero goals and in building a railway that's truly fit for the future.

With a workforce that more closely reflects the railway's customer base and the broader public, the industry will be in a much stronger position to recruit the skills it so urgently needs.

At Intuitive, we believe that positive change is driven, first and foremost, by dynamic leaders. To make the railways a more attractive career option for people from a broader range of backgrounds, we need to ensure that the industry's leaders are themselves drawn from more diverse communities. This will give diverse recruits to UK rail real reason to believe that they too can rise up its ranks, making the sector a more attractive proposition.

Reasons to be cheerful

As important as it is to be candid with ourselves about the challenges facing the railway industry, we should also acknowledge and celebrate the reasons for optimism about its future.

To be clear, in recent years the rail sector has changed decisively for the better, with some genuinely committed and energetic leaders leading the charge, making the industry much more inclusive. There are, in addition, some exciting new developments in the pipeline.

For example, the construction of the Global Centre for Rail Excellence (GCRE) in South Wales holds out much promise. In a clear vote of confidence in the railway industry, an estimated £400 million is expected to be invested by the UK Government, the Welsh Government, local authorities and private investors into the GCRE, which is scheduled for completion by summer 2025. The site will provide cutting-edge technology for testing rolling stock and infrastructure, as well as storage and maintenance facilities.

The aim is to develop GCRE as a major world-leading hub of innovation not only for the UK rail industry, but one that's renowned internationally as well.

Built on a 550-acre site previously used for open-cast coal mining, the centre will have a high-speed track for testing rolling stock, along with another testing track for rail infrastructure. GCRE, it is hoped, will play a vital role in developing the eco-friendly ➤

> *"With the UK now outside the EU and freedom of movement with mainland Europe having ended, it has become much harder for employers in the rail industry to bring in workers from the continent."*

➤ transport systems of the future, helping the UK to meet its emissions targets.

Another plus point for the future of UK rail came in the form of a £106m funding boost for research and development.

It was announced in July that the UK Research Partnership Investment Fund (UKRPIF) would provide £15m to the University of Birmingham (home to the Birmingham Centre for Railway Research and Education, BCRRE) and a group of Welsh universities to develop the new Centre for Railway Testing, Validation and Customer Experience at the GCRE site in Neath Port Talbot. This forms part of a £30m investment which also includes the foundation of the new Centre of Excellence for Railway Through-Life Engineering in Goole, East Yorkshire.

As well as spurring the development of new technologies within the rail industry itself, projects such as these demonstrate the central importance of UK rail to the Government's 'levelling up' agenda as an engine of broader prosperity.

The creation of new, highly skilled rail industry jobs in areas of the country long blighted by deindustrialisation and disinvestment could prove vital to rebalancing the UK economy away from south-east England and towards other regions, stimulating growth and hopefully putting these areas on a more secure economic footing for many years to come.

Indeed, the HS2 and Northern Powerhouse Rail projects are explicitly designed with this in mind. It is to be hoped that HS2 - for all its much-publicised problems to date - and the long-awaited investment in Northern regional railways will encourage more businesses to invest in the North and Midlands, creating more jobs and acting as a stimulus for wider economic activity.

The importance of this should not be understated. These are regions with huge potential but which, for a variety of reasons, have struggled in recent years. UK rail could prove instrumental in unlocking that potential.

Speaking of potential, the industry has to be willing to act so that it can unlock more of its own. Challenging preconceptions about the industry, working to change its internal culture so that it is more welcoming to a broader range of people, and taking account of changing expectations about how we work, are all vitally important.

In June 2022, a Class 717 is operated for the first time on the Northern City Line using newly installed European Train Control System technology. Approximately 200,000 rail workers will need equipping with digital skills by 2030. NETWORK RAIL.

> *"A more diverse workforce is a more dynamic one. In fact, one study found that more inclusive working environments can boost innovation by a stunning 83%."*

However, alongside all this, we also have to ensure that we're highlighting the amazing opportunities that are on offer within UK rail.

Trumpeting our successes and changing minds

There has been much talk over the past decade about the 'digital railway' and the potential transformation it heralds. With the number of passengers travelling by rail in the UK having doubled since the mid-1990s, and another billion journeys per year forecast by the middle of the next decade, Britain's railway infrastructure is under mounting pressure. The industry is therefore in the process of rolling out new technologies to boost line capacity while reducing delays and improving safety standards - and (as if all that wasn't enough) cutting costs as well.

Putting this transformation into practice is going to require the help of a workforce with the requisite skills. The upshot of this is that the industry needs to make sure it's doing enough to reskill the workers it currently has, allowing them to adapt to new ways of working as the pace of technological innovation accelerates. But it also needs to recruit younger, tech-savvy employees who are prepared to remain on the railways for decades to come.

We've already touched on how many people - particularly under-25s, women and people from minority ethnic backgrounds - simply don't feel that the rail industry offers them the kind of working environment where their talents can truly flourish. But another problem here is that people just don't realise how many career opportunities are available in the rail industry, or the breadth of vocations the modern railway offers.

As City & Guilds points out in its *Great Jobs* report, many people when they think of the rail industry often associate it with jobs such as train drivers, maintenance operatives, engineers and technicians. While roles like these remain fundamental to its functioning, the modern-day rail industry needs to draw on a much more diverse range of skills - among them environmental protection, finance, law, marketing, and even professions such as archaeology. The fact that this is so little understood outside the industry suggests that we are failing to get that message across to the wider world, when we should be emphasising the sheer variety of fulfilling jobs that the railways can provide.

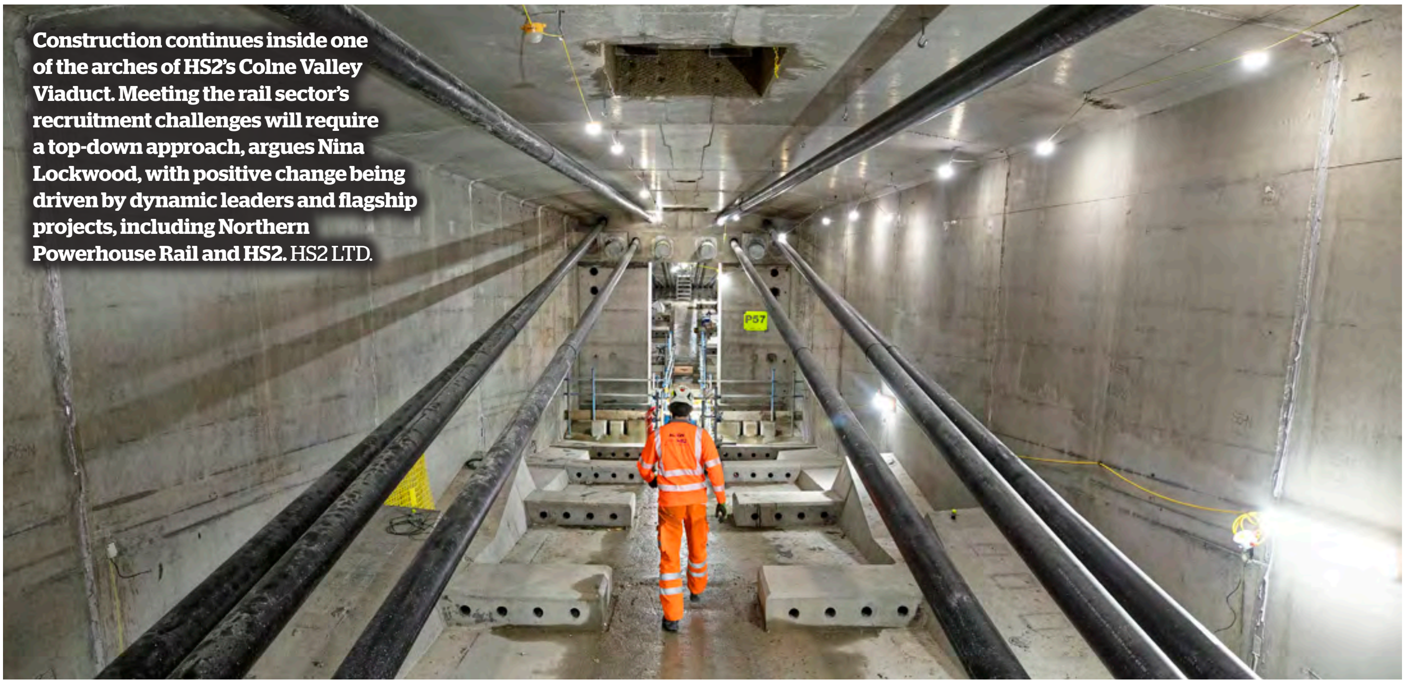
There are also plentiful opportunities for training and career advancement in the rail sector. Industry leaders including HS2, Northern and Govia Thameslink Railway are among those paving the way in this area, with apprenticeship schemes for the next generation of skilled railway workers.

Yet the breadth of opportunities for personal and professional development on offer in UK rail remains widely unrecognised by the public at large. This continues to hinder recruitment, leaving many talented workers unaware of what a career in rail could do for them.

However, two recent schemes provide encouraging signs that major rail organisations are working to reduce the gender gap.

HS2, in conjunction with Women in Construction, is set to open a four-week training programme in October (with childcare and transport costs both included), giving women the chance to earn a construction skills accreditation and acquire key skills.

Network Rail, meanwhile, has launched a new recruitment campaign hoping to inspire more women to take up roles, including maintenance and signalling jobs, in its busy Southern region.



Construction continues inside one of the arches of HS2's Colne Valley Viaduct. Meeting the rail sector's recruitment challenges will require a top-down approach, argues Nina Lockwood, with positive change being driven by dynamic leaders and flagship projects, including Northern Powerhouse Rail and HS2. HS2 LTD.

Ultimately, the rail industry needs to be much less reticent, and to instead play a more active role in raising awareness about the diverse career paths in the sector. In particular, it must do more to engage young people, reaching them directly through schools, colleges and universities as well as through wider awareness campaigns.

NSAR's Routes into Rail initiative, which promotes rail careers to students and young people through social media and other platforms, represents a positive step in the right direction.

Gen Z is eager for meaningful work and is highly conscious of the need for environmental sustainability, so a career in rail should be directly relevant to its interests and concerns. There are a lot of other advantages to working in rail, among them a sense both of personal fulfilment and public service, varied and satisfying work, and competitive salaries, but too many people don't know about them. This needs to change, and quickly.

Conclusion: the change UK rail needs

It's important to stress again that the railway industry really does have a lot going for it. There are amazing career opportunities to be had at all levels throughout the sector. What's more, UK rail already has plenty of dynamic, forward-thinking leaders who are redoubling their efforts to attract candidates from a broader range of backgrounds into the industry. But the hard reality is that more needs to be done. The industry needs to be honest with itself about the scale of that challenge, and to commit itself wholeheartedly to bringing about the necessary change.

With almost 50,000 railway workers expected to retire by 2030, the timing of this could hardly be much worse, given the tens of thousands of new rail jobs that will soon need to be filled, the disruption to recruitment from overseas following Brexit, and the industry's ongoing problems in recruiting both under-25s and people from underrepresented communities. The rail sector therefore needs to urgently step up its efforts to reach out to these groups and do more to convince them not only that UK rail is a welcoming place to work whatever your background, but that it can also offer a genuinely fulfilling career.

> *"The creation of new, highly skilled rail industry jobs in areas of the country long blighted by deindustrialisation and disinvestment could prove vital to rebalancing the UK economy away from south-east England."*

Partly, this is a matter of changing outdated perceptions of the industry and what it does. Part of the reason that so many young people don't see the railway as a viable career option is that they simply don't understand how many opportunities it offers. But it also requires the industry to reckon honestly with its own internal culture and the ways in which this has perhaps been exclusive - that is, white and male-dominated. Confronting this and taking consistent, positive action to change it would represent a crucial step towards tackling UK rail's skills shortage.

The key point in this regard is that UK rail must do more to engage with under-represented communities. This starts with the recruitment process itself: organisations need to think about where they're advertising jobs and whether this is helping them reach diverse candidates. They must also consider matters such as unconscious bias and whether their hiring managers are properly trained to understand it.

Addressing these matters cannot be a mere formality, it must be central to creating an open, diverse working environment and making people feel like truly valued colleagues.

In addition, the rail industry must do more to alert people to the training opportunities that it offers. There is, increasingly, a welcome recognition on the part of industry leaders that there is now a need to train new employees rather than bringing in people who are already suitably trained and qualified. But all too often, people who could make highly valuable contributions to UK rail (and the many millions of passengers who use it every year) don't give it so much as a second thought because they simply aren't aware of the numerous schemes now available, and which are designed to help people who are new to the railways get their start in the industry.

For years now, UK rail and the Government alike have talked a great deal about the skills shortage on the railways. But this recognition that it exists and that it needs to be tackled - although it is an important first step - hasn't always been backed up by concerted action.

Although it's excellent news that so much money is being invested in the rail industry, we need to ensure that the sector is in a position to translate its big ambitions into reality. The career opportunities on offer in UK rail are the country's best-kept secret, so we need to be prepared to shout from the rooftops and make sure that more people know about them. ■

Despite concern and confusion in some quarters around AI, it is increasingly being seen as an opportunity to optimise operations in the rail sector. ALAMY.

AI and the railway: the future is already here

Artificial intelligence is a relatively new concept that could lead to a major step change in the rail industry. Atkins Client Director **CARA MURPHY** looks at how AI is already changing our sector for the better

Artificial intelligence (AI) is a phrase that conjures multiple reactions: excitement about the opportunities it makes available; fear of overreach by machine-led thought; confusion over what exactly AI currently is and can do.

For the rail industry, all of these reactions are valid. But equally, as a sector, we need to ensure that we come to a collective understanding of this new toolbox, and how we can safely use it to make a step-change in our industry.

Firstly, it's important to understand what the current status and limitations are of AI, and to come to an understanding of what really qualifies as AI.

AI refers to the ability of machines to imitate and perform tasks that have historically required human intelligence. It's a branch of computer science that focuses on creating intelligent systems capable of learning, reasoning and making decisions. AI enables machines to analyse and interpret data, recognise patterns, solve problems ,and even interact with humans.

You might not realise it, but some devices and daily activities already rely on AI technology - for example, mobile phones, video games and even going shopping.

Defining AI

The AI space is fast-moving. And with recent breakthroughs such as ChatGPT, Bard, DallE 2 and Midjourney, it is becoming more accessible.

Unlike traditional code, AI can function without being explicitly programmed for every possible situation, and adapts in response to new data and experiences to improve efficacy over time. This adaptive capability is the true differentiator of AI, separating it from other tools. For example, Power BI, while a powerful digital tool, is not classed as AI.

With the influx in recent technology, accessibility of AI will continue and is likely to accelerate, affecting all of us as individuals and within our infrastructure systems. Rail is no exception. It is therefore critical to understand AI's 'adaptive' functionality before looking to potential use cases.

There are three components to pick out when we state that AI systems are 'able to adapt and learn from their environment':

> *"Unlike traditional code, AI can function without being explicitly programmed for every possible situation and adapts in response to new data and experiences to improve efficacy over time."*

- **Adapt:** these systems can adjust and improve their performance based on their experiences and the feedback they receive.
- **Learn:** these systems can acquire knowledge and understand patterns by analysing data. They can make informed decisions based on the information they gather.
- **Environment:** these systems operate and encompass external factors, data inputs and interactions that shape their behaviour and enable them to perceive and respond to the world around them.

Of course, as with human intelligence, an adaptive ability can be applied differently depending on the model or use cases, and there are broadly three branches of AI which are currently in operation:

- **Machine learning:** algorithms that learn about their environment from feedback expressed as a cost or reward function. Here, learning is either supervised, unsupervised, semi-supervised or reinforced, and 'environment' means data in the form of a training, validation and test set.

For supervised and unsupervised learning, the cost or reward function is a performance metric between predictions and target labels and a distance metric, respectively.

- **Symbolic AI:** approaches that describe the environment as well-defined logical rules from which they draw inferences exhibiting emergent behaviour (like natural intelligence). This logic can be represented using numerous architectures - one of the recent examples that shows promise are knowledge graphs.
- **Other adaptive methods:** some analysis methods fall within the definition of AI due to their ability to adapt to the data they are fed.

Adaptive Bayesian networks are an example of a probabilistic approach that adapts; particle swarm optimisation is a family of population-based techniques that adapt; simulated annealing is an example of a stochastic method that adapts. These examples can either be used independently as non-machine learning AI methods or used as learning algorithms for neural network architectures.

Trusting AI in rail

With greater accessibility of AI technologies, we're likely to see its adaptive capabilities used far more widely. This is a great advantage for making rail systems faster, better, more affordable, greener, and safer.

However, as rail industry professionals, it is also critical that we feel confident in what adaptation really means. The fact remains that it's quite hard for most of us humans to understand the actual rationale behind predictive AI decision-making. How does it work behind the scenes? And what happens if these robots make the wrong decision? Won't that have an impact from a legal, ethical and safety-critical point of view? Surely, we need to start interrogating their responses, and not settle for the computer saying yes or no without really understanding why.

While any good data scientist is expected to show their calculations, when it comes to AI - which is powered by systems ➤

To fully realise the potential uses and benefits of AI in the rail sector, extensive upskilling and a 'digital ready' culture will be required. NETWORK RAIL.

➤ generating predictions based on billions of calculations every minute - it's not so straightforward.

The excellent news is that this doesn't mean that it is impossible. For example, when challenged recently to interrogate an AI 'black box' process, our response at Atkins was to develop a reverse-engineering algorithm which, when wrapped around the black box that drives the automated vehicle, can approximate the logic and rationale for every prediction made.

Reverse engineering can help us understand how tasks are accomplished through deductive reasoning.

Take a washing machine, for example. We know you put dirty laundry in at point A, and at point B clean laundry comes out. To understand better how that process works, you can work backwards, stripping away at each stage of the process until you're right back to the blueprint. Once there, you have revealed in reverse the chain of events that, going forward, results in clean laundry.

Similarly, with AI algorithms we can reverse engineer to provide a picture of the logic of each decision made in that process. And while we will never have a completely full picture (using a 1,000-piece jigsaw as a comparative example, reverse-engineering algorithms give us the means to see where around 750 of the pieces go), it does mean we can pinpoint a higher degree of certainty (around 75%) than ever before.

Humans at the centre

Trust is one part of the puzzle, but AI shouldn't mean visualising humans always on the outside trusting a central machine. In almost all cases, AI is supported and enhanced by natural (human) intelligence.

A person might pose or frame an initial question. They should apply checks and balances to ensure bias isn't present. And they should always be present to interpret and communicate the results, particularly when those results need to go to non-technical specialists. AI is a tool for us to use, rather than a tool that uses us.

To ensure we do use AI well, we need to upskill our sector in working with digital outputs (and digital inputs), behaviours that support AI use, and a digitally ready culture.

We don't all need to become data scientists, but we need to stand ready, whatever our role, to be able to get the full value from data and the associated AI processes applied.

This could mean site personnel recording findings digitally, and with correct schemas rather than rich text or even paper input. Or it may mean that when a new process arises and needs documentation, the first question asked is "How should this fit with our data architecture?" rather than reaching straight for a spreadsheet, or similar.

A core element of this data-fluent culture enabling AI is in realising the true value of the data we hold, ensuring we can establish 'single source of truth' data reservoirs which are machine readable, but also enhance our own human intelligence systems by uniting our efforts rather than requiring later rework to combine a patchwork of differently versioned data.

We can all help achieve this area of progress by ensuring the data we create is as open as it can be, subject to sensitivity. This isn't just about sharing the data, but also about documenting it. After all, documentation of AI algorithms must sit alongside documentation of their inputs.

The opportunity space

So, we are confident and knowledgeable about AI. What does the opportunity space look like right now? To help unpack some of the many areas in which AI has already been leveraged for the rail sector, it may be helpful to focus on the key goals of any initiative: being safer, greener, more affordable, and ultimately better.

Firstly, AI has positive implications for safety cases, which is a priority for any rail professional. One of the first uses of AI to emerge at scale is object detection - taking video, photo or 3D-point cloud data and using this to automatically detect issues.

Taking this data from cameras mounted to trains, or from drone scans, enables 'boots off the ground' - live survey avoidance that reduces risks for maintenance teams, and enables them to head straight to areas with issues rather than continuously surveying to first find the issues, then address them. Areas of application include vegetation encroachment, where features can be automatically identified via 3D GIS, overhead line or structure maintenance points, or any obstruction or potential obstruction to the line.

With the improvements in technology, AI algorithms are constantly improving the immediacy of issue identification, and the granularity of issues which can be identified while still ensuring processing time and power is kept to an achievable level.

Secondly, our environmental responsibility as a sector also has the potential to be enhanced via AI. Energy use per engine is closely monitored, but identification of patterns of low-efficiency areas are a complex process within traditional spatial data science. GIS experts are required to examine minute-by-minute data, and using natural intelligence this requires both specialist skills and specialist software. AI opens the door to faster identification of 'problem areas' for energy efficiency, or low efficiency of the energy-generation systems in braking.

Using trained algorithms, AI can automatically pinpoint where energy is repeatedly being used at higher rates and link it to causation via background data - from the obvious topographic variations to other engine movements nearby, human factors and high-finesse data on environmental conditions. With these areas identified, AI is increasingly being used to take the next step: identifying fixes for these inefficient areas and building ways to change for the better.

Affordability often goes hand in hand with a better service, reducing delays via efficient control centres to benefit both rail customers and service providers.

AI advances are already well in development in control centres up and down the country. While this can require whole-system alterations to facilitate, it's extremely beneficial. For example, in a recent collaboration, Atkins assisted first in replacing obsolete on-train monitoring devices and replacing them with new software

> *"We don't all need to become data scientists, but we need to stand ready, whatever our role, to be able to get the full value from data and the associated AI processes applied."*

> *“We would recommend any organisation takes a strategic look at how they can utilise the technology, to drive a joined-up approach which should preclude any unethical or ‘black box’ risks.”*

that could enable more powerful AI applications. The result allowed the control centre to monitor and analyse (in real time) the state of 270 channels of data, from doors to traction systems to brakes, and have pinpoint accuracy on each piece of rolling stock.

The responsiveness this provides, when layered with AI-processing systems, allows the human intelligence still embedded within control centres to leverage the full extent of their decision-making power, fully driven by the best available data and advice. Root cause analysis on the data enabled the client to create new rules and apply them to old data, allowing them to easily spot future trends, failure points and anomalies. With a focus on strategic CapEx, OpEx cost is set to reduce thanks to these efficiencies, while also improving results.

Moving forward with AI

To conclude, it’s clear that the frenetic growth of AI applications should be seen as an opportunity for rail, but to take up that opportunity we need to confront and move past any remaining issues of concern or confusion around AI individually and collectively. We would recommend any organisation takes a strategic look at how they can utilise the technology, to drive a joined-up approach which should preclude any unethical or ‘black box’ risks.

AI has recently been used by Network Rail to analysis onboard footage to identify scrap metal and materials alongside the railway. NETWORK RAIL.

Following that strategy will enable individual pockets of innovation to employ structured governance to their inputs and AI outputs, documenting methodologies, biases and any limitations. With governance in place, these innovations should be relatively easy to build into an interoperable tech stack across an organisation, and interface with external stakeholders if required.

As with any other technology we’ve previously embraced, from steam onwards, the rail sector is ready and willing to continue to optimise our operations, and we should therefore be placing AI firmly in our toolbox. In doing so, we need to learn from other sectors who are more advanced in their AI journey. It’s time to put the AI in rail. ■

PeerReview

Vaibhav Puri
Director of Sector Strategy, Rail Safety and Standards Board

Ginni Rometty, the former president and CEO of IBM, is quoted as saying: “Some people call this artificial intelligence, but the reality is this technology will enhance us. So instead of artificial intelligence, I think we’ll augment our intelligence.”

The question is where, how and to what end. The exponential growth and developments in this area provide an opportunity and pose a challenge to us all as individuals and at organisational and sector levels.

This article is a very useful overview on the potential of Artificial Intelligence (AI) in the rail sector. The use of AI in activities which for one reason or another can be dirty, dangerous and (exceptionally) difficult for humans is not difficult to make. The overwhelming balance in those situations is on reduction of human exposure while enhancing performance.

However, the discussion becomes challenging when AI is meant to enhance or even replace human instincts and expertise where the balance is not so clear-cut. In this context, the article rightly focuses on the adaptability aspects of AI and the associated confidence and trust that is necessary. It correctly highlights the need for the development of reliable reverse engineering algorithms to ensure that there is traceability and transparency of the rationale that underpins AI decisions.

The article also rightly highlights the need for new capabilities to deal with digital inputs and outputs - the need to ask ‘How should this fit with our data architecture?’.

Some questions remain, however. How does AI learn if there is a lack of data, or when there is lots of data but the quality, structures and reliability is questionable? To what extent do our current data strategies account for AI? Collaboration and sharing of data have been a challenge for the railway, and one that must be overcome to enable the use of AI.

The article highlights the opportunity space that exists for AI in rail - particularly safety cases, environmental applications, and of course affordability challenges. The computational power of AI to outdo human performance in specialist pattern recognition tasks will provide many use cases if we look hard enough, and when looking for AI use case becomes part of the continuous improvement.

At the heart of greater use of AI is enabling good decision-making. However, there is a need to ask what is ‘good’ and ‘for whom’, and who decides?

Trade-offs, especially sensitive ones, have remained the domain of the human mind shaped by collective discourse and decision-making, shaped by experience. The article talks about the need to confront any remaining issues of concern individually and collectively. The Rail Safety and Standards Board (RSSB) enables the rail industry’s collective decision-making on matters related to safety, interoperability, cross-sector research, and sustainability - and we are keen to use our role to enable this aspiration. The genie is out of the bottle, and we need to help the industry embrace it confidently.

As the article states, there is a need to strategically and proactively think about AI and its usage, and at RSSB (through our Futures Lab capability) we are already exploring and assessing the risks and opportunities AI brings.

To end on a quote from Eliezer S. Yudkowsky, an American AI researcher: “By far, the greatest danger of Artificial Intelligence is that people conclude too early that they understand it.”

Ian Tucker Opinion

Passenger demands and the effect on industry structures

The pattern of rail demand is changing, particularly since the pandemic. While some data is gradually emerging to illustrate what those changes might be, the pace of change remains fast and probably hasn't stabilised yet.

If the industry is to focus on the needs of the passenger and user, responding to that change will be key to how it functions and how successful it is in the next few years.

However, the very fact of substantial change to the way passengers (in particular) behave may also have a deeper effect on the structure of the industry as a whole.

The operational gears and levers on which the industry structure is designed were based on assumptions for what passengers and users wanted in the 1990s and before. If those assumptions are no longer valid, tweaking the various levers built into industry regulation and contracts may no longer be effective. Where such effects might manifest is worth considering.

As the post-pandemic return to rail proceeds, the change in demand patterns is gradually manifesting. That (and everything else about rail passenger demand) is likely to be a continuously changing pattern, and it is not entirely clear when a 'new normal' will be reached. However, at least anecdotally, some tentative predictions might include:

- Season ticket sales are unlikely to recover in the short term (Q1 2023 still had them at 36% of pre-pandemic sales). This suggests that a large body of rail users simply no longer see themselves as travelling in the same regular way.
- Advance, peak and off-peak journey tickets will sell at a higher rate to cover the fewer days a week that people commute to work (all are over 115% of pre-pandemic sales). Those tickets were not necessarily designed to be commuter tickets, and passengers may want them to be different and buy them according to different drivers.
- Long-distance journeys will (probably) rise as a share of overall journeys.
- Leisure usage may continue to grow at a faster rate than non-leisure recovers.
- Weekend use might recover preferentially to weekday use. It is, however, not obvious that this conclusion emerges from the DfT's published daily use data yet. In fact, average weekend use and weekday use seem to track each other uncannily. Monday and Friday demand vs midweek demand remains an open question statistically.
- Industrial action could increasingly be focused on weekends and holidays, as commuters have got used to minimising the impact by working at home on strike days. Again, this conclusion (while anecdotal) does not obviously emerge from the published data.
- If the Elizabeth Line experience is replicated, new offerings will generate sizeable new passenger journey numbers.
- Split ticketing will continue to rise as a share of sales - at least until a different ticketing scheme is developed. This may reflect an increasingly canny or mature passenger outlook (at least in some categories of passenger).
- Perhaps contentiously, ticket sales will continue to become increasingly remote, PAYG and/or electronic.

There are other anecdotal conclusions, and many readers may have different predictions to those above. Whether they will come to pass and what to do about them is not really a legal question, and for the purposes of this article, the precise changes which occur do not matter so much.

From a legal point of view, the point is that the rail industry structures were designed, explicitly and implicitly, around certain assumptions about what passengers would want and how they would behave - and which have been gradually evolving and, more recently, suddenly evolving.

Such change (whatever form it manifests in) has the capacity to make contractual/regulatory obligations and procedures on which industry operation is based no longer effective.

Some obvious examples stand out. Farebox revenue allocation is probably the matter that most will immediately point to, as values are currently built into the system for flows and splits of ticket type. If passenger behaviours have changed, these may no longer apply fairly to revenue allocation.

In principle, they can be reallocated and reapportioned, and there are mechanisms to do so. But how good is the data for such reallocation? And when is it obtained (as well as considering the work required to get reliable information from across the network)?

Current passenger behaviour is different every month. New trends are not established and will almost certainly vary for a while yet.

In that case, how can you decide what values it is safe to apportion to certain flows? And if the majority (but not all) of the revenue is going to HM Treasury anyway, how much is it worth pursuing?

One answer is that the structure of assuming the value of flows should be replaced by a means of 'actual' use tracking - if that is now technologically possible. Track mobile phone densities? A new contractual structure of allocation would be needed.

There are other relatively obvious effects. What is the right way to value disruption (for example, Schedule 4 and 8 rates) where flows may no longer be used by similar numbers or types of passengers as the marginal revenue effect figures assume.

Within the existing structure, the Office of Rail and Road is looking at adjusting the rates. But how can a reliable assessment of

> *"If the answer to the question 'what is the railway service for?' is adjusted slightly to loosen the priority on commuting services, that may have quite significant ramifications."*

A Great Western Railway IET arrives at Bristol Parkway on March 19. Drastic changes to post-pandemic travel patterns may challenge the accuracy of assumptions currently made for revenue allocation among train operating companies. JACK BOSKETT.

the financial impact be made, in the context of the rate of change of passenger usage which might be expected in the coming years?

Is there enough reliable data yet to say how a commuter who is delayed on one of their three weekday trips (using a peak return ticket), and who has a home office set-up, is going to behave in future purchase decisions. Surely not the same as that commuter might have behaved when they had a season ticket pre-pandemic.

This leads to the question of whether, structurally, a marginal revenue effect of delay works best as a 'liquidated damages' regime anymore?

The reason for a 'fixed' marginal cost per minute delay in the first place was to make it easy to assess an approximate figure that could be paid 'in the round' for each event of disruption, and thus avoid costly (and often impractical) modelling.

But if this no longer works, could some form of more holistic compensation mechanism be designed, based upon (for example) comparative ticket sales on similar lines which are disrupted differently on a rolling annual basis?

Or is there a new source of data available from a form of technology which could illustrate how much industry revenue is lost as a result of delays?

That is a question for an economist, not a lawyer. But the point is that the current assumption of a relatively steady or predictable impact of delay on which the original contracts were built may no longer be reliable, and so trying to adjust those mechanisms to deal with a new reality may never be satisfactory.

Weekend travel and leisure travel also have an impact on industry priorities. If the answer to the question 'what is the railway service for?' is adjusted slightly to loosen the priority on commuting services, that may have quite significant ramifications.

When should engineering work be best carried out, if weekend services are increasingly busy? How about timetabling? Are the precedents for how Network Rail should decide on allocation of capacity where there is congested infrastructure going to produce the right result?

One of the decision considerations is "that the spread of services reflects demand" - if demand has changed, are a large number of existing timetables suitable as the basis for next round decision-making?

There are also provisions around reducing journey times which, while still relevant, may not hold such primacy for a leisure-focused service than for a commuter one.

Other more subtle areas may arise from consumer rights, equality act, and passenger communications regulation.

Leisure travellers and those who are increasingly expecting digital information and turn-up-and go services are likely to have different expectations - in relation to everything from delay compensation to how they are communicated with.

That suggests it may be time to look again at Delay Repay (which has already evolved massively in the last decade), the requirements of the licences, and how they are interpreted. Examples may include updating published guidance and requirements on complying with (say) Article 4 on passenger information obligations.

And at the centre of changes in the industry is likely to be ticketing. Almost everyone accepts that ticketing needs to evolve, although a consensus on how precisely is still to be reached.

Arguably, the current debate around the Ticketing and Settlement Agreement and the offering being made to passengers (in all its aspects) is arising in part because customer demand for tickets and for the way in which they are retailed has changed. Back to the drawing board of asking what passengers actually want from ticket retailing.

Seen in this context, ticketing might be only one aspect of a much more wide-ranging point across the industry: that the frameworks in which everyone operates incorporate assumptions about the railway's end users which those end users would no longer recognise. ■

About the author

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Northern 156488 forms the 1449 Barrow-Carlisle at Providence Bay (near Parton) on March 27. Plans to prioritise renewals spending on a 'market-led' basis has raised the possibility of less cash for assets on rural routes such as the Cumbrian Coast Line. TOM MCATEE.

CP7: the good, the bad and the unknown

Network Rail's Control Period 7 highlights an 'incredibly challenging' time for the railways. **PETER PLISNER** looks at some of the proposals, particularly those associated with less-used parts of the network

Strategic plans for the railways always make interesting reading - and Network Rail's Control Period 7 (CP7) documents are no exception. Flicking through the *England and Wales Strategic Business Plan*, published in May, you're left in no doubt how serious things are.

There has been COVID-19 and the associated lockdowns and restrictions. There have been radical changes in the way that passengers use rail. COVID has led to a significant reduction in revenue across the industry. The pandemic and the Russian invasion of Ukraine have made already challenging economic circumstances in the UK even worse. And then there have been the months of industrial action and its impact on train performance.

Another financial headache has been the sudden rise in inflation, which has pushed up construction costs and has called into question the viability of even some of the smallest rail projects. In his foreword to the *England and Wales Strategic Business Plan*, Network Rail Chief Executive Andrew Haines said: "With the impact of inflation and constrained public finances, our funding will need to go further than ever before."

Funding for CP7 came via the much-delayed High Level Output Specification (HLOS), while £44 billion was confirmed by the Statement of Funding Available (SoFA). Designed to pay for the operation, maintenance and renewals of rail infrastructure over the next five years, it hass been described by Network Rail as a "significant vote of confidence in the industry's future".

Rail Partners, which represents both passenger and freight operators, suggests that the latest funding settlement for the railways is a real-term increase in the cash available.

Director of Policy John Thomas says: "We are in a very fiscal-constrained environment, but the fact that the HLOS and SoFA is a real-term increase from CP6 is a positive thing. Obviously, we had to look at what the operations, maintenance and renewals costs are for the network, and the fact that there are peaks and troughs in renewals."

That means that Network Rail would have needed a higher increase in the SoFA to deliver on long-term renewals expenditure.

So, the first thing to say is that it's not all bad. The funding is seen as recognition of the economic and social value of rail and its role in supporting the country's economy.

Network Rail's strategic plans for CP7 highlight the fact that large parts of the rail network continue to depend on structures, buildings and earthworks assets that were built between 1850 and 1920. A growing number of these assets, it said, are reaching "end of life", as well as being exposed to changing weather patterns, which increase defects, failures and weather-related disruption to passengers and freight users.

> *"We are in a very fiscal constrained environment, but the fact that the HLOS and SoFA is a real-term increase from CP6 is a positive thing."*
>
> ***John Thomas, Director of Policy, Rail Partners***

"We have made resilience improvements to our assets over the last decade. However, we have seen a 50% increase in adverse weather impacts over the past five years compared to the previous ten - a trend that we expect to continue," the document says.

Along with COVID, the war in Ukraine, interest rate rises, constrained public finances and continued industrial action, it seems the rail industry is facing a perfect storm.

HLOS and SoFA were both published in December 2022 and cover England and Wales. Separately, Transport Scotland issued its own HLOS and SoFA in February 2023. Both sets of documents have informed the development of Network Rail's strategic regional business plans.

The Department for Transport's HLOS statement maintained that the Government strongly supported the recovery of the UK rail network and made it clear that it was well aware that there remained an urgent need for continued modernisation and significant efficiency improvements to "bear down on the cost of the railway, thus increasing value for money for the taxpayer, while delivering for passengers and freight customers".

And part of the statement made it clear that in the light of the challenging fiscal environment, the Secretary of State considered it "essential" that Network Rail played a full role in supporting the financial sustainability of the railway to ensure that its operation can continue to support economic growth and appropriate provision of services to communities, "while considering the potential impact that it may have on local government objectives and on inclusion and accessibility".

However, at the same time, the HLOS stated that Network Rail's plans for CP7 should show an approach to its asset management strategy that supported "key revenue-generative flows", while ensuring that flows with a higher subsidy requirement continue to receive an appropriate level of service.

The HLOS statement further suggested that the Secretary of State "expects to see a clear and effective stakeholder engagement process between Network Rail and its customers and stakeholders, including Transport for Wales, during the business planning process, with a strong focus on this continuing through CP7."

This, the statement said, should include a "proactive approach by Network Rail to the annual business planning process by train operating companies contracted to the Department for Transport and an effective framework for responding to the outcomes of the process, ensuring an aligned approach over CP7".

NR's *England and Wales Strategic Business Plan* makes it clear that consultation has already taken place: "Our regions and functions ➤

> *"What Network Rail is trying to do is be more proficient in spending the amount of time and effort in those areas that are less used and which don't degrade as quickly and don't have to perform to a greater level."*
> ***Steve Fletcher, Deputy Director, ORR***

➤ have undertaken extensive engagement with customers and other stakeholders to understand their priorities for CP7. We have established regional challenge panels to provide external scrutiny of, and input to, our CP7 planning. We have also carried out a survey jointly with Transport Focus, called *Britain's Railway: What Matters to Passengers*, which asked 15,000 passengers about their priorities, and has helped inform our CP7 planning."

It continued: "Now that the level of CP7 funding has been confirmed and we have developed our SBP in response to that, we can engage more fully with our stakeholders on the detail of our plans."

However, the HLOS says that what the Secretary of State is suggesting will require a degree of flexibility and structured change control to enable effective outcomes. He particularly expects there to be "evidence of Network Rail and train operating companies working effectively together (including in the context of the annual business planning process from train operators contracted to the DfT and planning processes of other funders) to identify system-wide opportunities to improve whole-system outcomes at lower cost".

What does this all mean exactly? There's concern in some quarters that it could mean lines that rely on subsidy to provide a service, perhaps in rural areas, could receive less renewal work, leading to poorer levels of service and reliability, and could put passengers at risk.

First to quantify the changes was the Office of Rail and Road (ORR) in its determination document *Periodic Review 23* (PR23).

Periodic reviews are one of the principal mechanisms by which ORR holds Network Rail to account and secures value for money for users and funders of the railway. PR23 will determine what Network Rail must deliver as part of CP7 and the funding it requires to do this. It was published at the end of August and at the time of writing was out for consultation with a final determination due at the end of October.

PR23 states that Network Rail proposes to manage the risks posed by the reduction in renewals by increasing its maintenance activities and using operational controls - for example, speed restrictions. Within each of its regions, the determination says, Network Rail has sought to "prioritise its proposed expenditure on renewals, including in a manner which is consistent with the UK Government's HLOS: to support revenue generation while contributing to national and local growth priorities and levelling up". It refers to this as its 'market-led' approach."

ORR Deputy Director Steve Fletcher says: "We, like others, have said (to Network Rail), 'Hang on a minute. What's your interpretation of this? What do you really mean by 'market-led'?"

ORR maintains that through the determination process, it has reminded Network Rail that it is the custodian of the railway and that it must maintain safety and think about the financial consequences in the future. There's also the question of connectivity between towns and villages, and the need to continue to grow freight on rails.

Fletcher says: "They were trying to express how they were going to be more proficient in making those right decisions and be more proportionate about where they spent the money that was available, but this wasn't obvious in the early material we saw.

"ORR has likened the process suggested by Network Rail to 'route criticality', something that's been around and adopted for years. It was originally designed as a way of influencing policy around asset management, effectively helping to work out where to spend money on the rail network."

Fletcher maintains that route criticality is quite a blunt tool: "It would primarily be driven by speed. If it's a really fast route, you're likely to have a lot of higher fee-paying passengers."

However, ORR says it has now engaged with NR about its 'market-led' approach and appears to be happier with what's being proposed.

"We now understand a lot more and feel a lot less concerned," says Fletcher.

"We now believe that there is evidence that they are controlling safety, they are maintaining their custodianship of the whole network. What they are doing is attempting to be more efficient, so they don't 'gold-plate' areas that are not used very often."

Fletcher cites Scotland as a good example of what Network Rail is now proposing. There, it used something called 'critical corridors', which has criteria that are beyond just speed. The critical corridor methodology could apply to a vital junction linking multiple routes of varying speeds which, if it failed, would have a big impact on many services and ultimately revenue.

Based on the market-led principle, funding would be earmarked to make sure that resilience of the junction was maintained to a high standard. But what about remote parts of the rail network?

Fletcher suggests that if there's a line with only a handful of trains per week, and they travel at slower speeds than perhaps the inter-city services, then the needs of that line are different to that junction: "What Network Rail is trying to do is be more proficient in

An aerial view of Shrewsbury Bridge Junction, from where routes to Wolverhampton, Chester and Crewe, mid-Wales and the Welsh Marches all diverge. Sufficient funding is expected to be earmarked to protect the resilience of key junctions like this. TOM MCATEE.

> *"Lines that are more peripheral to the network are naturally likely to have lower footfall and generate less revenue, but they tend to also act as valuable 'feeder lines' into busier parts of the network."*
> ***Jools Townsend, Chief Executive, Community Rail Network***

spending the amount of time and effort in those areas that are less used and which don't degrade as quickly and don't have to perform to a greater level."

Groups representing rural lines across the country have also expressed concern. Community Rail Network has already been part of discussions and challenge panels that have taken place as the CP7 strategic plans were being formulated.

Chief Executive Jools Townsend says: "We've been really pleased with the engagement that we have had from Network Rail's strategic planning teams, which has been unprecedented in terms of their interest in hearing community rail's insights and perspectives.

"There has been some keen interest in how community rail can help the railways deliver greater socio-economic value and develop into the backbone of a more sustainable transport network, as well as supporting specific objectives, such as around station development and biodiversity."

However, she makes the point that any plans to "de-prioritise" parts of the railway on the basis that they are not making as much revenue would be at odds with this: "It would be simplistic to assess the value that each railway line delivers on the basis of revenue alone. There's much more to it than that, as we see first-hand through Community Rail's activities."

She maintains that the amount of revenue each line generates is related to its position on the network and not necessarily how it's valued and utilised by the communities it serves.

"Lines that are more peripheral to the network are naturally likely to have lower footfall and generate less revenue, but they tend to also act as valuable 'feeder lines' into busier parts of the network."

Townsend acknowledges that the criteria for deciding how renewals work is prioritised should take into account patronage: "I'm not saying that the current use of each line is irrelevant - of course it's important. But there's a lot more to it than that - including, when it comes to rural lines especially, the level of dependency within communities on those lines for local mobility, prosperity and wellbeing, now and into the future.

"If you start to take into account the wider socio-economic and environmental impacts that the railway delivers and the potential for rail to play a bigger role and have a greater modal share in the coming years, as is vital to transport decarbonisation, then that changes things quite significantly."

Townsend suggests that many lesser-used rural lines could be used more than they are at the moment, to boost local tourism and get people more sustainably to and from those areas: "All these factors need to be taken into account when we are carrying out strategic planning. That's something we've been encouraging through our input to the CP7 plans."

Those sentiments are echoed by Transport for the North, which has also been keeping a close eye on what's happening.

TfN Strategy Manager David Worsley says: "We understand that this requirement could be interpreted to mean that investment, related to asset management (which would include renewals as well as enhancement investment), might be directed towards routes with higher passenger numbers, leading to the relative neglect of less busy railways.

"However, it is our understanding that the railway industry can make future investment decisions in accordance with a more sophisticated appreciation of the contribution of individual route sections to the network as a whole and to wider society."

TfN suggests that there are various economic and financial models that allow the allocation of financial value to specific sections of track, based on formulae which allocate the real revenue value of feeder routes and quieter sections to overall industry revenue.

This includes not only the importance of feeder routes to passenger revenue (through being the origin or destination of many longer journeys with higher ticket prices), but also their contribution to the freight market, with many depots and industrial sites located on quieter routes.

Worsley says: "We expect the information the industry has on passenger journeys being made along all routes will, in due course, be used to estimate the wider social and economic benefits provided by less busy railways, as these are ultimately based on the same data as the revenue forecasts. This should fully ameliorate any concerns."

Another strategic transport body, Midlands Connect, which covers East and West Midlands, has concerns about its ability to meet the aims of its own strategic plan, which has three main objectives: 'Fairer', 'Greener', 'Stronger'.

With plans to improve lines all over its patch, some are in places which could well be affected by any cuts coming as a result of CP7.

There is a general acceptance that the rail industry needs to ➤

> *"We expect the information the industry has on passenger journeys being made along all routes will, in due course, be used to estimate the wider social and economic benefits provided by less busy railways."*
> ***David Worsley, Strategy Manager, Transport for the North***

➤ move away from a one-size-fits-all approach to something more flexible, while maintaining safety and the rights of freight and passenger users. Most would agree that despite a generous settlement, the railways could have done with more money - and that means there probably is a need to move to some kind of market-driven investment regime.

"The funding does require us to look at the bigger picture, working smarter and stretching what is available in the pot, " says Midlands Connect's Head of Rail Karen Heppenstall.

"There's also a need to ensure that cuts to spending don't derail plans to further decarbonise the railways. The routes that are expected to be most affected by the cuts are the sort of routes that will never be electrified and are the ones that will clearly need an alternative solution to make them greener. But if the railways are deteriorating, an alternative solution could be more difficult to find."

Concerns about rural and coastal services are uppermost in the minds of those at Transport East, another strategic transport body with planned improvements in East Anglia. It too maintains that frequency of service and connectivity with main line routes have a major impact on patronage and make it more difficult to maintain a higher level of services.

Transport East is worried that changes could effectively undo some of the work it's been doing.

Head of Strategy and Technical Programme Suzanne Buck says: "Frequency of service has been shown to be a significant factor in the use of rail - for example, providing an hourly service on routes including the East Suffolk line between Ipswich and Lowestoft, Norwich to Sheringham, Norwich to Cambridge and Ipswich to Cambridge, where passenger numbers increased between 100% and 260% following the provision of a core hourly frequency. Ensuring frequent services that can also connect with other services will make rail travel more attractive. Journey time is significantly impacted by how direct a service is."

Transport East suggests that most 'out of region' trips involve a connection via London or a significant wait for connections to more direct services. Providing increased east-to-west connectivity to Cambridge to link up with the western section of East West Rail and an hourly service from Ipswich to Peterborough are good examples of improvements to services.

For freight operators, the stakes could be quite high. Currently, they enjoy 'go anywhere' rights across the rail network - and that could potentially change. If parts of the network are to be downgraded, that could restrict where freight traffic can go.

Rail Freight Group Director General Maggie Simpson says: "It's still a bit unclear. In some documents they talk about value and in others they talk about revenue, and they aren't necessarily the same thing. But they are often made to look like the same. So, is it value or is it revenue?"

The two terms clearly have different implications for freight. On a value analysis, freight might score quite highly. But on a revenue analysis, there wouldn't be a score at all, as freight trains don't carry passengers.

Simpson admits that even now, not every part of the network is maintained to the same level, citing aspects such as freight sidings, which get less renewals work: "There is already a granularisation of approach depending on the category of the line. In a way, it's already embedded."

> *"The routes that are expected to be most affected by the cuts are the sort of routes that will never be electrified and are the ones that will clearly need an alternative solution to make them greener."*
>
> ***Karen Heppenstall, Head of Rail, Midlands Connect***

Freight operators are understandably very wary of Network Change, as their go-anywhere rights are vital for them to be able to bid for new business with confidence. Network Rail no doubt understands how important rail freight is to the country and is committed to growing the sector. Whatever decisions are made on market-led investment will need to protect freight, as it's vital for the future of the country.

So, the big question everyone's asking is: what criteria will be used to decide which lines get the most funding?

Network Rail appears to have gone some way to answering that question, or at least suggesting a broad area for how those decisions will be made. In a background briefing, it suggested that the key thing to remember is that NR won't suddenly be able to get rid of freight routes or shut parts of the railway which don't make any money.

CP7 is clearly the first iteration of what Network Rail calls a "market-informed investment". Under the new regime, it will be forced to take a harder look at where investment goes and be more flexible about how it's done. And that effectively means that gold-plating every part of the railway, whether it's a main line or branch line, will be a thing of the past.

Asset renewals are largely based on engineering, and when the records say a bridge needs replacing (in most cases in the past), Network Rail would do it. Under a market-informed investment regime, more questions would be asked about whether the bridge actually needs to be renewed at all - and if it does, are there cheaper ways of doing it? Part of that decision-making process would include an analysis of the traffic on the line to understand how fast it is, how frequent and, in the case of freight, how heavy. The same analysis would look at what other work needs to be done on the line and whether it could be combined into one big blockade.

Ultimately, saving money could also mean extending the life of

On June 8, at Barkston in Lincolnshire, LNER 91105 works the 0656 Skipton-London King's Cross as East Midlands Railway 170418 passes beneath with the 0920 Skegness-Nottingham. The latter route was recommended for closure under the Beeching cuts but survived owing to the hardship it would cause local communities. Six decades later, the Community Rail Network has warned NR against Beeching's folly of ascribing a value to lines based on revenue alone. PAUL CLARK.

the bridge or rebuilding it with a lighter structure if there's no heavy freight and unlikely to be so in the future.

Another example would be replacing a 90mph turnout - if market research shows that very few trains use that turnout at 90mph, and a 75mph one might add just 30 seconds to the timetable either way, maybe that's a way of saving cash.

"The Government has backed Network Rail with over £44bn of investment over the next five years and it's important we make that money go as far as possible, says NR Director of Planning and Regulation Paul McMahon.

"Taking a more market-informed approach to our business will do that by taking a strategic look at how we do our work and where we do it."

He points to work being done in the Southern Region and in parts of Europe, where they have already changed their approach to how they do engineering work. Week-long blockades are now standard on some routes, allowing more work to be completed for less money.

McMahon adds: "We will look to roll that out further. In addition, we will look at what we renew, too, and whether it reflects the actual services that run.

> *"Maintaining the railway exactly as it is, instead of reacting to who uses the railway and where they use it, is just not sustainable given the need to use taxpayer's money wisely."*
>
> ***Paul McMahon, Director of Planning and Regulation, Network Rail***

"As an example, a life-expired crossover could be replaced with one designed for a lower speed, to better match post-COVID timetables. Maintaining the railway exactly as it is, instead of reacting to who uses the railway and where they use it, is just not sustainable given the need to use taxpayer's money wisely."

ORR's Steve Fletcher agrees: "It would be unaffordable to gold-plate everywhere, but note different assets perform differently depending on their usage. It's about spending funds available most wisely and proportionately to the need, while always remembering that there is always a minimum investment requirement to sustain safety and to sustain the ability to run the train to meet the needs of the timetable."

Clearly, not everything is driven by Network Rail. Its CP7 settlement reflects the current complexities and challenges facing the industry, including inflation, but there's also a need to ensure that cuts to spending don't derail plans to further decarbonise the railways. The changes being brought about by NR will obviously have to be part of a consultation process, some of which is already happening as a result of the ORR's recent PR23 determination.

The fact that track and train operations are still separate won't make things easy, but it's not impossible. A lot can clearly be achieved when minds are focused and different parts of the rail industry work together.

And it's even more risky when you take into account the impact of climate change. A recent report from the Joint Committee on National Security Strategy said that the evidence is "overwhelming" that the impact of climate change on critical national infrastructure is "already significant" and is "set to worsen under all reasonable climate change scenarios". Its inquiry was concluded in the midst of an unprecedented heatwave in 2022, when the UK faced significant rail disruptions, flight delays, and power cuts.

The report concluded that unless investment and resources were earmarked for what it termed "climate adaptation", particularly to enhance the resilience of our critical national infrastructure, there will be an enormous price to pay in future, and that price will not only be paid in money.

Transport Consultant Jim Steer agrees: "The reality of changed weather events and sea-level rises makes embankments built 120 years ago less able to cope with what looks to be an expectation of increasing intensity of rainstorms, higher tides, and increased lengths of dry weather/drought."

A lot of the focus in climate change is on how we are going to decarbonise, but the area Network Rail needs to worry about here and now is 'adaptation'. It is a real additional cost, compared with a period of stable climate.

Steer adds: "I think Network Rail has to balance that with other spending demands. What they are going to have to do is ask, how are we going to prioritise renewals in this world? For safety reasons, we're going to have to spend more money with an already tight budget. That, in effect, means that asset lives will have to be stretched beyond previous expectations. It all has to come out of the same pot."

John Thomas from Rail Partners says: "It's not just a money thing. It's a cultural thing as well, and there is a need for Network Rail to improve its performance, not just through getting more money. It has to do things better and more efficiently.

"We are not overall concerned about the fiscal constraints, but what we do want to do is put pressure on Network Rail to deliver a better performance for both passenger and freight operators, because we know that is absolutely key to customers coming back to the railway."■

Control Period 7

Ian Tucker
Partner, Burges Salmon LLP

This funding settlement comes at a tough time, and it is consequently easy to understand and sympathise with the difficult decisions - principally for Network Rail - that arise.

The railway probably could not realistically expect to receive more funding than it got, although that probably is not as much as it really needs long-term to sustain and develop the infrastructure everyone would like to see.

There is also a nagging sense that pressure on cost can be more expensive than the savings it creates. If revenue is affected by cost savings, the financial case quickly reverses - and that is before giving due weight to the wider social importance of less high revenue lines, freight interests, externalities (including environmental), reputation, and safety risks. All are noted in the article and give an overall impression of how unenviable some of the decisions NR will have to make are.

Even though there has been a real-terms increase in budget, there is clearly a tight constraint preventing NR doing all it would like to do to provide a network with the same or improved capacity and functionality.

On the one hand, that is arguably one purpose of such funding settlements - to force the recipient to introduce as much efficiency as possible and incentivise proper prioritisation. On the other, there are many reasons why short-term economies should not be enforced where they represent long-term missed opportunities. However, you look at it, if NR has to prioritise some works over others, the infrastructure will not be as good as it could be.

It is easy to refer to gold-plating (and there have almost certainly been instances of that happening), but a decision to implement speed restrictions on less revenue-generative lines to release maintenance money to keep other core lines going sounds more like the sort of rationalisation that has in the past led to reductions of capacity (or at least to service quality).

In this respect, there is a degree to which decisions now will affect future generations through the legacy which is passed on. In Wales, they expressly consider future generations in such decision-making. This is perhaps something which has a place elsewhere in the UK too.

Clearly, when making these decisions, safety must be the first concern. NR will be aware from history of the need to ensure its maintenance and renewal regimes preserve operational safety, even where priorities must be chosen. Changes of maintenance/renewal expectations bring risks with them. Decisions (in a very different context, with different motives and with different risk awareness) to 'extend the life of assets' had been a Railtrack approach prior to the large-scale issues in the early 2000s associated with gauge corner cracking.

NR was very conscious of the risks arising from climate change and (very) ageing infrastructure before the Carmont fine in early September (£6.7 million) - an incident which was, arguably, affected by both.

Carmont is not on a high revenue generative line, so may not have been top of the list where priorities have to be chosen. Nevertheless, it is an illustration of the risks that exist and a reminder (if NR needed it) to keep preventative works going.

And those risks are likely to get worse with time. Climate change will accelerate, and infrastructure will continue to age. More infrastructure renewal, maintenance and reinforcement would therefore be expected to be the base case to maintain similarly safe operations. Better, more efficient, use of approximately the same amount of funds will have to achieve the same aim.

Speed restrictions and alternative solutions to bridges coming up for renewal are mentioned in the article as examples of the outcome of prioritisation. NR will make these decisions with a careful understanding of impact and weigh them up against alternative priorities. Ultimately, such changes to practice may be Network

Martin Fleetwood
Consultant, Addleshaw Goddard

Funding for each Control Period has always been a balancing act. Indeed, it is arguably a set of balancing acts - between what HM Treasury is prepared to give the Department for Transport in its overall funding budget, and what DfT considers is appropriate (or affordable) for Network Rail to spend on its infrastructure.

There is also a balance between what Transport Scotland provides to Network Rail north of the Border, compared with that available further south. Arguably this cross-border balance has a greater effect on freight operations than it does on passenger services, given the cross-border freight routes that exist.

Once there is a funding pot for Network Rail, how do you put in place a balance between the Regions and the types of services operating there, which can be affected by different infrastructure projects? As Peter points out in the article, the needs of infrastructure to support local passenger services may be different to inter-city services, and are likely to be different to those of freight.

As we move into CP7, it will be even more important to get the biggest return on that Network Rail expenditure. But the key will be how to value that work.

Arguably, this is where some of the old metrics for evaluation don't reflect the full benefit of the work.

"We don't need gold-plated infrastructure, but we do need something which is focused on the use of the infrastructure in relevant locations."

Upgrading a relatively short section of infrastructure which is a key link for long-distance freight may have limited benefit for any passenger service and cause significant disruption for passengers, particularly when considered from a particular NR Region's standpoint. Indeed, there may be wider benefits which do not come onto Network Rail's balance sheet.

However, the net effect for UK plc could be significant, with increased freight flows transferred onto rail and a significant reduction of CO_2 and NOx on the road network. Can we (and should we) think smarter with such valuations?

The same may also be true for the lesser-used parts of the network, where some of the knock-on effects could be significant. Local services may provide an alternative to a car - a potentially helpful benefit where an area contains a city region with a low

Changes giving effect to 'market-informed investment' decisions.

It is worth noting that, at least in principle, the market was supposed to be informed through customer demand under the existing industry structure. Compensation for additional delays, disruption and Network Changes was intended to be paid to (economically) signal market priorities. In most cases such economic signals were thought to be more accurate than consultation or seeking opinions.

For Network Rail to get its market-informed investment decisions right on where to prioritise its efforts, it will have to make sure that it fully understands what the rail industry's ultimate clients (freight clients and passengers) really want, and the management information is available to track the revenue and other effects which actually arise.

Track renewal and re-ballasting takes place at the Southern end of Dinmore Tunnel (Herefordshire) on September 18. Safety must remain the primary concern when NR chooses how to prioritise maintenance spending in CP7. JOHN EDEN.

emission or clean air zones.

If tram-train technology can be introduced, consideration could be given to the use of various light rail standards for maintenance and renewal of infrastructure.

There is now significant data from the Sheffield tram-train operations to sit alongside that from other European regions using tram-trains. If the costs of using the infrastructure can be significantly reduced, then the possibility of introducing shorter but more frequent tram-trains becomes an option, particularly if there is a longer-term possibility of running the tram-trains directly into the city centres. This can then become a win-win for both rail (increased ridership and income for the mode) and the wider society (better intermodal operation and lower carbon/road usage),

Such decisions are arguably something that a 'guiding mind' should be considering. But while we await the arrival of Great British Railways, we need Network Rail to take some strategic actions in this area. We don't need gold-plated infrastructure, but we do need something which is focused on the use of the infrastructure in relevant locations. Something close to a 'one size fits all' solution often becomes a 'one size fits no one'.

Sensible discussions are required between NR and its main customers, both passengers and freight, and decisions taken around the bigger picture - with clear reasons given for taking those decisions. Not doing anything because we are waiting for the arrival of GBR should not be an option!

Steven Murdoch
UK&I Rail Lead, AECOM

Much more rests on the 2023 Periodic Review (PR23) than a funding settlement and a to-do list for industry.

Behind the headline figure of £44 billion lies a complex web of stakeholders, all trying to piece together the five-year cyclical jigsaw of how industry stretches to keep our railways safe, resilient and reliable, as well as meeting customer (both passenger and freight) needs. This year, the jigsaw has added pieces which challenge, but which also offer the potential to drive exciting change.

To take the challenges first, there has been a fundamental shift in the cost of construction work. The real-term cash increase doesn't directly translate to a comparable increase in resources and materials. Our infrastructure only declines with age, the impact of climate change is increasing, and we're seeing fewer big-ticket commuters and more weekend travellers.

So, how do we harness these challenges to deliver for customers? And can we also better build the case for third party funding, which can offer great opportunity for our industry?

A good place to start is by integrating track and train. We don't need to wait for legislation to do this, industry can reform itself. We should treat the railway as a system and adopt a systems-thinking approach to decision making.

On a practical level, this could mean taking a line of route approach to drive value and efficiency - not doing works on an intervention by intervention basis, but looking at grouping works together when a stretch of line is closed. To do this successfully, we will need integrated stakeholder engagement, including train and freight operating companies, passenger groups and other transport bodies. But it is one way we can collaborate as a collective, align our goals, and successfully achieve more.

Better use of digital engineering and data analytics will also help us to respond to the challenges of CP7. Through the harnessing of data, including putting train operations at the core of decision-making, we can also better target investment - and in doing so drive a minimum viable product approach. We should continue to focus on not 'gold-plating' projects, but instead use digital tools, predictive technology, data science and intelligent infrastructure to inform efficient decision-making where possible.

We must also continue to question the regime of asset renewals on a like-for-like basis, challenging ourselves on whether a cheaper alternative or reduced specification can deliver the same performance in line with the post-pandemic requirements of the industry.

The pandemic also offers industry the opportunity to rethink track access strategies. If weekends are now one of the busiest days for passengers, could there be alternative strategies around taking track access on quieter days, including potentially daytime working? This could offer the opportunity for greater output and productivity, safety benefits and reduced enhancements for unsociable hours.

The rail industry has exciting potential over the next control period to achieve a step change, driven by technology and collaborative working. Let's make it happen.

Alistair Lees Opinion

A clear product offer... and a single brand

Three and a half years after the pandemic started, rail revenues remain around £3 billion per annum (allowing for inflation) below what they should have been today, with costs continuing to rise. That's clearly a recipe for disaster - "unsustainable", as some in government have said.

Cutting costs is one way to bridge this gap. But you can only cut costs so much - and attempts so far have been largely unsuccessful (and also too late - the time to cut costs was during the pandemic, not after it).

But I digress. The solution is, of course, to focus on increasing revenues. With that being the case, the question arises: what's the best way to achieve this?

If you ask the DfT, or perhaps the Rail Delivery Group, the train operating companies (TOCs), Rail Partners or the owning groups, their answer will be something along the lines of "free up the TOCs to chase revenue, innovate, and find new customers".

There's a tacit assumption that having lots of semi-independent TOCs - with different identities, product propositions, and service delivery quality and brands - is the way to maximise revenues and to win new customers to rail. I don't think it is.

Is almost 30 rail brands too many?

Between the DfT-contracted TOCs in England alone, there are 18 different rail brands operated by 14 different TOCs. That's not including four open access operators, three 'concessions' (two in Transport for London, one in Merseyside), and three brands controlled by the devolved governments in Wales and Scotland. Plus National Rail!

A further 60 or so brands have come and gone since privatisation. That's almost 100 in 26 years. Only one brand - Virgin - has really resonated with customers, and the rail industry managed to get rid of that four years ago. No wonder people are confused.

This proliferation of rail brands creates a barrier for new people to travel by train. It presents rail as complex and hard to understand. What's the difference between them? What ticket do I need? What will the service be like? What do all these names mean? How many websites do I need to read? And, if my train is cancelled, which alternative trains is my ticket valid on? Better drive instead.

There are many different brands because each TOC has been (and is still being) encouraged to 'differentiate' itself to win franchise bids (or to continue with contracts today).

The many brands are a manifestation of the many real differences between TOCs that have been created over the past 25 years. Each one now has a distinct customer proposition - different ticket structures, pricing, on-train service delivery, at-station experiences, and so on.

As an existing customer, it's really hard to know what you are going to get (or should get). For a potential new customer, it's practically impossible to understand, beyond the basic concept of a train between A and B (probably).

You might say that this doesn't matter. That customers (both new and potential) don't need to know anything more than what is offered in their local area, on their local trains.

For people making journeys in some areas of the country where there is a single operator - think of Kent, Devon/Cornwall, or Norfolk/Suffolk, for example, then this is probably mostly true.

> *"This proliferation of rail brands creates a barrier for new people to travel by train. It presents rail as complex and hard to understand."*

But these are (and I hope you'll forgive me here) on the fringes of England. In most of England, including all the major cities, there are many operators and brands. Leeds has four. Manchester has six, as does Birmingham. London has 14, not including the six TfL and open access brands.

This has gone too far. We need to get back to basics.

A brand is only as good as the product or service

To create a successful brand, the product or service needs to be delivered well and consistently. Clearly that's a bit of a challenge at the moment, but the opportunity to do this will come again.

Today we have (in England, at least) a view from the centre that the rail product - what it's actually like to travel, and what tickets and fares there are - is best left to each of the individual operators, in isolation.

But that's at least 14 different approaches to everything. You can see the outcome of that in the ticket offices closure consultation, where some TOCs are proposing to close every single ticket office, and others are proposing to create travel centres at key locations. There is no network-wide customer strategy. Meanwhile, non-DfT TOCs pursue different strategies again.

Why the TOC-by-TOC approach? TOCs 'know their customers' needs best' (or so the DfT thinks), so they should each do their own thing. In practice, this means each TOC provides something different.

I overheard a conversation in Avanti Standard Premium in August, where two customers were comparing this with Great Western Railway First Class (which they had just travelled in) and trying to work out what the differences were, whether they should have travelled in Avanti First Class instead, and what service they were about to receive in Standard Premium anyway. Clearly, all very confusing for them.

TOCs often argue that it doesn't matter if they each offer different things - they are 'tailored to their customer market'. But

On May 24, an LNER Azuma overtakes a Govia Thameslink Railway Class 700 on the East Coast Main Line near Sandy. These are just two of the 100 or so brand names to have emerged since privatisation. Alistair Lees is calling for a single, unified brand to offer a clearer and stronger proposition to rail passengers. JACK BOSKETT.

that's an insular view - customers often need to make journeys to different places, and to travel on different TOCs to do so. Each time they do, they need to reset their expectations as to what the travel experience may be like.

To tempt customers out of their cars, rail needs to offer a much clearer, stronger, and more consistent proposition.

Naturally what's offered is going to differ between fast long-distance, regional/inter-urban, rural and wholly urban routes - people don't expect the same experience on every train.

But they do expect something that's easy to understand, consistent where appropriate, and well-delivered though. On-train experience (seats, tables, WiFi, power and USB sockets, luggage space, food and drink), fare structure (the same ticket types and names, family and group offers, time restrictions) and station experience (staffing, safety, information, ticket purchasing, food and drink, accessibility) are what matter here.

Funnily enough, one TOC has already differentiated its service groups and rebranded them in such a way. East Midlands Railway now has 'EMR Intercity' for long-distance services from London, 'EMR Connect' for shorter-distance services from London, and 'EMR Regional' for everything else. Minus the TOC name, this is something to build on.

Owning the brand

Coming up with a single, unified brand for the DfT-contracted English railways does mean that the Government (or its arm's length body, Great British Railways) is going to have to own both the problem of, and the solution to, delivering a better train service than is currently available.

The convenient fiction that "the railways are privatised", when they are not and never really have been in recent history, and which DfT uses to deflect blame/responsibility onto the private sector, will no longer be available.

But maybe that's not such a bad thing? Scotland and Wales manage it, as do other countries. Surely this is what GBR is for, anyway?

Shades of green

What might a new brand be like?

First, it should be a decisive break from the past - none of this fondly looking back to imagined glory days of the 1920s with LNER, GWR and Southern. Rail needs to project a modern, forward-thinking and fit-for-the-future identity, rather than one of nostalgia and wistfulness.

Second, it should grab the opportunity to reinforce how much more environmentally friendly train travel is than other forms of travel, by painting every train green. Different shades/designs/sub-brands can identify trains as Inter-city, Regional or Local, to indicate what type of service they offer and what to expect on them. This could even be used to indicate ticket validity, at least in some areas. What could be simpler for customers?

Third, let's keep the BR 'Double Arrows' symbol. It's widely recognised by the public and gives a sense of continuity and unity. In green, of course (RDG's reimagining of the double arrow symbol in 2021 was along the right lines).

Imagine a railway system rebranded in this way - not just trains, but stations too. The private sector could still run individual TOCs, focusing on service and product delivery, managing staff, optimising the train services offered, localising the product offer, and conducting tactical marketing. Very much like a real franchise, or even a concession approach. There's plenty to do and to get right here.

Talking of concessions, it's essential to recognise that city regions rightly now enjoy a much greater say over local transport matters, so the brand will need to be able to work well with (or even to be subsidiary to) those city-regions' identities. This will be challenging to get right, but it's not insurmountable.

Of course, open access operators would continue with their products and brands as they wish.

What are we doing this for?

The overriding reason is to raise more revenue, by winning more new customers to rail and keeping them.

A clear product offer, delivered well and underpinned by a unified brand, maximises our chances of achieving this. Advertising and marketing can be much more effectively deployed, with better returns on investment, greater purchasing power, and the development of a loyalty programme, for example.

Of course, we could leave everything as it is. Rail would still (I hope) win new customers. But will 18 different brands and product offers be as effective as a unified approach? I don't think so.

So, where do we start? Simplification of fares and ticketing is a good place. It will make rail more comprehensible and usable to new (and existing) customers, and will enable the first steps in unifying the brand to be taken by ending operator-specific fares.

Retailers - already having to help customers navigate a world of differences between TOCs - will be able to drive sales higher, and we can start on the long road from a world of many brands and product propositions to a world where there is just one overarching one which the public understands, buys into, and spends money on.

A true rail renaissance awaits us. But we must take the right actions for it to come true. ■

About the author

Alistair Lees is managing director of Assertis and Chairman of the Independent Rail Retailers association of licensed rail retailers in Great Britain.

DB Cargo UK 66105 approaches Ashchurch for Tewkesbury (Gloucestershire) on July 18 2022, when the UK endured an unprecedented heatwave that brought temperatures of around 40°C (104F). All forecasts point to a steep rise in network delays caused by extreme heat. JACK BOSKETT.

Climate resilience in an era of budget cuts

With temperatures increasing, our weather becoming more extreme, and our railway's infrastructure ageing, **NOEL DOLPHIN**, Head of UK Projects at Furrer+Frey, considers how to tackle these huge challenges

At a time when global warming is rapidly shaping the future, understanding the significance of climate resilience in the railway sector has never been more critical.

For a year, since the heatwave of 2022, we have studied how our industry can implement climate resilience on the UK railway. This is incredibly important because we need a reliable system if we want passengers and freight to use the railway.

On the hottest day of the 2022 heatwave, the railway let its customers down. Passengers were left stranded and wilting under the glass canopies of our great termini.

To sustain the current performance levels, maintaining assets is becoming more complex, particularly as budgets are squeezed. Our year-long exploration of climate resilience has highlighted the need to act now if we want to keep our current customers - let alone encourage new customers to the railway.

The sparks effect and modal shift

At the heart of the railway's enhancement is the 'Sparks Effect' - a term coined over 70 years ago as railways were modernised and electrified away from steam and diesel.

But the need for modern, reliable, frequent and clean modes of transport has never gone away. The UK's Climate Change Committee has emphasised the need for a modal shift to achieve decarbonisation and net zero. How we achieve a modern 'Sparks Effect' in an efficient, budget-friendly railway system is an essential stepping stone in this transition.

The climate puzzle

After a year of work, the biggest single lesson I have learned is that making local climate predictions is hard.

Although it is evident that global temperatures are rising, predicting specific climate impacts in the UK remains challenging. While we anticipate hotter conditions, we also anticipate increasing unpredictability as localised weather patterns are harder to decipher.

For example, while the world is hotter than ever, events such as this year's wet summer following movements in the Jet Stream show that changes locally are complex and specific predictions are tricky.

With limited budgets, the challenge is in making the railways reliable when we cannot accurately forecast the weather. This is particularly complex for rail infrastructure, since we are often building infrastructure that must last for at least 100 years.

Humans have recorded weather globally for over a century. And using other measures such as ice cores, we can track global weather back thousands of years.

However, on a local level, our records only go back 30 years and are not digitised. We know little about local changes over long periods, so we struggle to make long-term predictions at this local level.

The UK's climate forecasts are based on the United Nations Framework Convention on Climate Change and its Representative Concentration Pathways (RCP). Essentially, the RCPs are a range of potential temperature changes and probabilities. However, they are focused globally - not locally. A hotter planet puts more energy into our climate, and the impact this has on wind or rain locally is very difficult to forecast accurately.

Existing weather-related events in the UK, spanning from storms to heatwaves, have financial ramifications to the tune of £200 million to £300m annually on the railway.

Network Rail's accounts for 2022 already show how extreme weather is having a financial impact on maintenance and repairs, while reducing revenue at the same time. Over the past 15 years, this toll has amounted to approximately £3 billion on the railway, according to Network Rail. And the figures are rising rapidly.

A review of the historic delay minutes and delay costs over that same time period shows that wind and flooding incidents are the most damaging (at 49% of the total). Cold and snow-related disruptions account for 19%, adhesion issues for 10%, subsidence 10%, heat 7%, and lightning strikes 5%.

Heat has traditionally had little impact on the railway, but most of that 7% has occurred in the past three years. All our forecasts show that delays due to heat will surge in the coming years, showing the need for urgent action.

> *"With limited budgets, the challenge is in making the railways reliable when we cannot accurately forecast the weather. This is particularly complex for rail infrastructure, since we are often building infrastructure that must last for at least 100 years."*

Real-life scenarios

The past three years have given us a glimpse into the future. Three significant events underscore the need for change.

■ On July 25 2019, temperatures reached 38.7°C, surpassing the maximum operating threshold for legacy systems. Numerous failures occurred within a few hours around the UK.

I have worked in railway electrification for almost 25 years, and until that day I had never seen events like this unfold. Within a few hours, the rail network experienced 34 electrification failures spread over the UK.

Other assets fared no better. The heatwave illustrated the ➤

➤ shortcomings of old infrastructure, with enormous delays and stranded passengers making headlines nationally. For example, passengers were stranded on trains near Peterborough for over three hours.

While legacy electrification systems failed, recently electrified sections of the railway performed well. On the Midland Main Line the newly electrified sections performed well, whereas the legacy systems between London and Bedford failed.

■ In February 2022, the UK was besieged by storms *Dudley*, *Eunice* and *Franklin*, which inflicted widespread damage - including the toppling of overhead wires and structural damage, once again bringing the rail network to a standstill.

Traditionally, storm damage has been limited to specific regions in the UK. However, these resulted in widespread damage over much of the country, from Cornwall to Dumfries, with a depot roof ripped off in Banbury.

■ Finally, in July 2022, temperatures soared beyond 40°C. Until then, even with rising global temperatures, the UK was not forecast to surpass 40°C until post-2050. This dramatic heatwave showed the difficulty in making predictions on a local level.

The climatic anomaly resulted in extensive disruptions, from National Grid lines collapsing on railways to unexpected power failures. Lineside fires occurred all over the country, damaging signalling and even bringing down trees onto the railway.

Major stations suffered massive disruption, with damage at Euston, Milton Keynes and Birmingham New Street. Many train operating companies closed entirely.

Climate projections: A glimpse into the future

Forecasts indicate wetter winters and drier, hotter summers for the UK. Although predictions vary in intensity, there is consensus on rising temperatures, but these are weighted to the summers.

While we talk about global temperatures rising, local changes may be much more significant. A 1.5°C global rise may mean that the southern part of the UK will bear the brunt, with an increase of 2°-3°C in the summer. This may result in failures increasing more substantially in the South.

For example, it is forecast that there will be a staggering 600% rise in failures in regions such as the South East by the 2040s on older legacy systems.

Wet winters and hot, dry summers are a worst-case scenario for the Victorian earthworks that comprise the bulk of the UK railway. Embankment and cutting instability, moving track, and landslides will become increasingly common.

Rail infrastructure: a precarious balance

Legacy systems are those that bear the most significant impact of climate change. Systems that were built before the 1990s are not designed for current conditions. The storms and heatwaves of 2019 to 2022 have shown us that modern systems are reliable.

So, while electrification on the Great Western Main Line, High Speed 1 and the newly electrified parts of the Midland Main Line stood up well to heatwaves, older OLE systems performed poorly.

For example, Manchester to Hadfield and Glossop has some of the UK's oldest currently running electrification systems. Even modest temperatures now make these systems fail.

Over the past decade, the Great Eastern Main Line's electrification has been modernised and upgraded.

At Stratford station on the GEML, which briefly became the UK's busiest station during the COVID-19 pandemic, one single platform has legacy equipment yet to be renewed due to limited access in this very busy part of London.

While the new equipment has stood up to the test of recent heatwaves, the small amount of legacy equipment failed, underpinning the fallibility of legacy equipment.

However, when that legacy equipment affects junctions at a major station, the impact can be enormous for passengers struggling to get home in a heatwave.

With the River Exe in full flood after heavy rain from Storm *Dennis*, the main line is temporarily closed between Exeter and Taunton on February 16 2020, while engineers install a flood barrier at Cowley Bridge Junction. Weather-related events have an annual financial impact on the railway of around £200-300 million. DAVID MITCHELL.

The rapid temperature fluctuations between day and night further strain these assets. Forecasts predict that heatwaves may come earlier in the year when night-time temperatures are lower.

A heatwave in May is unlikely to reach the daytime extremes of a July heatwave, but the temperature range between day and night may be larger. These extreme fluctuations can cause rails to crack and systems to fail. Network Rail has found that early heatwaves between April and June cause an 80% surge in failures.

Climate change will increase solar radiation, where the sun heats exposed materials on the railway. Modern systems are designed to cope with increased solar radiation, but legacy systems were often built when this was poorly understood and heat waves were less frequent.

It is forecast that by 2100, there will be an additional 10W of heating per square metre. This may not sound like much, but for a track that runs for thousands of kilometres, that is a lot of additional energy. These changes will amplify the heat stress on these systems, especially those erected before the 1990s, leading to compounded problems during heatwaves.

I have already mentioned the impact of wet winters and dry

> *"Wet winters and hot, dry summers are a worst-case scenario for the Victorian earthworks that comprise the bulk of the UK railway. Embankment and cutting instability, moving track, and landslides will become increasingly common."*

summers on embankments, but the impact does not stop there. Almost all assets are affected.

Increased plant growth will also require an increase in vegetation management, to mitigate a multitude of issues from signal obscuration to an increase in lineside fires.

The path forward: strengthening resilience

While the challenges are diverse, modern systems having proved their endurance to extreme conditions is testimony to modern engineering.

I have already mentioned the resilience of HS1 and other new or modernised parts of our railway. To enhance the resilience of older segments, while maintaining affordability, prioritisation is key. Upgrading outdated equipment and re-evaluating current industry standards is urgently needed.

We have seen that very old electrification systems such as those at Hadfield and Glossop have failed in extremes. Poor reliability means that these need speed restrictions when the temperatures rises above 26°C. Similar sections of railway needing renewal are scattered across the UK, such as much of the West Anglia Main Line from London Liverpool Street to Bishops Stortford.

We need to continue to review our standards and practices. We must understand the problem of a changing climate and ensure our standards are up to that. We need to operate railways safely, but we cannot afford to unnecessarily close the railway in heatwaves.

Some systems may just need calculations and minor adjustments to ensure they will perform in extremes. Reviews into climate resilience in standards are already under way by Network Rail.

A lot of the UK is in a middle category - not quite ready for renewal, but not entirely up for a changing climate.

In these situations, affordable campaign changes may be needed to fettle systems, by removing high-risk parts or tweaking system temperature ranges. Electric railways are more reliable than railways with other modes of traction power, but we need to focus our efforts on the weak links in the system.

Remote monitoring is pivotal to predicting and addressing issues proactively. Currently, a lot of inspections are done by foot. Sending people out in PPE is not possible or desired in 40°C heat.

Work is already under way to increase remote monitoring on the railway, and embankment monitoring is already being rolled out in the UK. Embankments are probably our most vulnerable asset.

Monitoring can also help with almost every asset, from enhanced vegetation management to predicting electrification failures.

Nothing I have listed above should scare HM Treasury: reviewing standards, more remote monitoring, minor campaign changes, and small renewals. But what is critical is that we act now, before the bow wave of work becomes overwhelming.

Government initiatives

I asked Rail Minister Huw Merriman, how the Government is tackling railway climate resilience. He said that the UK Government continues to envision a net zero railway.

Network Rail published its strategy for delivering this (the *Traction Decarbonisation Network Strategy*) several years ago, but we are no further seeing how this can be delivered. The exact implementation of the Government's net zero railway remains nebulous.

The Plan for Rail (Great British Railways) prioritises climate resilience, but how GBR will be fully implemented as an entity is unclear. Noteworthy initiatives include the Office of Rail and Road and its Periodic Review for Control Period 7 (2024-29) funding. CP7 funding underscores the importance of resilience.

Merriman also points to the Department for Transport's Transport Adaptation Strategy. But again, this is in its embryonic stages, although there's hope that it will pave the way for a robust, resilient infrastructure.

Conclusion

Resilience is important. We need passengers and freight, and a reliable railway is essential to this.

Modal shift is critical to both decarbonisation and the survivability of the UK railway.

The industry is already working towards a more resilient railway, but how the railway will be structured and funded will have the most significant impact on reliability, as Great British Railways implementation and the Department for Transport's Transport Adaptation Strategy also have a major part to play. ■

Climate resilience

Gareth Dennis
Track Engineer

Let's address the elephant in the room. Noel won't mind me pointing out that he has a strong interest in the UK investing in modern conventional overhead electrification - Furrer+Frey is one of only a handful of suppliers in this domain.

But, do you know what? His interests align with yours, with mine, and with those of the rest of the country, because overhead electrification is the quickest and most efficient way to enhance the railway we already have.

Anyway, back to the article. Noel is right to point out that forecasting for the future is difficult when it comes to weather. But, as he later points out, we do know that a changing climate means more extreme and unpredictable weather - often referred to as "global weirding".

When I'm delivering lectures on the subject, I use a lava lamp analogy. Much like a lava lamp, our atmosphere (which is the driver of our weather patterns) is a collection of gently circulating blobs of air mass with varying properties of temperature and moisture. Turn up the temperature on the lava lamp even a little and the behaviour of the blobs becomes more erratic, more unpredictable, and more violent. The same is true of our atmosphere, as the greenhouse effect warms our climate.

So, as a railway we also know that we need to build, operate and maintain our assets (trains, tracks, stations, signalling centres, and so on) to cope with an increasingly wide range of conditions. This is explored in great detail in Network Rail's 2021 *Third Adaptation Report*, which is well worth a download.

As Noel highlights, much of this work is desk-based (assuming we have sufficient knowledge of our existing assets, which isn't always the case). Universities (through the UK Rail Research and Innovation Network) and the railway's own research bodies (Network Rail and the Rail Safety and Standards Board) can and must collaborate with bodies such as the Met Office to audit every existing standard and stress test it against likely future conditions.

For track and other visible infrastructure, this is easy enough to visualise. But less obvious are the standards related to (for example) air-conditioning in signalling centres, to ensure staff and hard drives survive in increasingly aggressive heat.

Some of this work is ongoing, but a significant effort is required - and I daresay this is a situation not helped by the decentralisation of powers to the Network Rail routes. No matter what, the clock is ticking, and a reactive, scatter gun approach to evaluating the need for change will be slower and more costly.

Of course, a lot of work will involve the physical replacement of sub-standard equipment and materials. Old jointed track is an obvious example, but signalling, telecoms, and everything down to the choice of surfacing on platforms threatens the resilience of the operational railway, and must be triaged and prioritised according to the risk of failure and the rewards from renewal (for example, in reduced maintenance costs or increased capacity).

A key consideration in how the railway responds to global heating is climate justice. Only half of households in the bottom 20% income bracket have access to a car, so when the railway chooses to stop operating in extreme conditions, it (or rather, its government funders) is choosing to limit the ability of Britain's least well-off to travel, whether it's for work or otherwise.

We also push people back onto more polluting and less safe means of travel - once again highlighting how transport modes cannot be looked at in isolation.

Noel has pointed out how this and other considerations are served by running a resilient, reliable railway. But after more than five years of navel-gazing, Britain's railways are on the backfoot. As

> *"The clock is ticking, and a reactive, scatter gun approach to evaluating the need for change will be slower and more costly."*

Dr Steven Wade
Technical Director Climate Resilience, AtkinsRéalis

Noel Dolphin's article on the climate resilience of UK rail infrastructure argues to push ahead with modernisation to deliver a climate-resilient railway before the amount of work needed becomes untenable.

There is no doubt that anticipatory action on climate change is the right approach and that, delivered properly, it will save costs and enhance the performance of national rail systems. It mirrors the Climate Change Committee view in its 2023 annual progress report, noting that the transport sector had some "credible policies and plans" but had made "mixed" or "insufficient progress" on climate adaptation.

Noel's article highlights the impact of extremely high temperatures, which exceeded 40°C across a large area of south and east England in July 2022, when "major stations suffered massive disruption, with damage at Euston, Milton Keynes and Birmingham New Street".

From the perspective of an applied climate scientist working in transport, I know that these types of heatwaves are much more likely than we previously thought, and will expose infrastructure systems to much greater risks.

> *"The reliability and long-term resilience of modern systems will only hold true if design standards and guidelines keep pace with the changes in the climate we observe."*

The article states that "systems that were built before the 1990s are not designed for current conditions… but modern systems are reliable".

But the reliability and long-term resilience of modern systems will only hold true if design standards and guidelines keep pace with the changes in the climate we observe, and by incorporating latest climate projections and applied climate science into designs. Some British Standards still use an outdated baseline climatology, so it is the job of diligent engineers to identify gaps, update approaches and ensure future resilience.

Following the 2022 heatwave, AtkinsRéalis mapped the probability of extreme temperatures across the UK for current '2022' conditions, including climate change to date, revealing the unseen risks of high temperatures. We also considered future

East Midlands Railway 222013 approaches Braybrooke (between Kettering and Market Harborough) with the 1012 Nottingham-St Pancras International on December 29 2022. The resilience to high temperatures of newer overhead line equipment installed on the Midland Main Line has proved markedly better than older OLE. PAUL BIGGS.

real-terms funding is reduced, budgets are squeezed, and skills are shed in rounds of redundancies, Network Rail's own documentation has suggested that reliability and resilience will not improve over one or more control periods.

Managing resilience and reliability should be our bread and butter, and we should be planning for a future where the railway shoulders more of the burden of mobility - greater frequencies, speeds and capacities should be our aim. Without those stretch targets, it isn't easy to understand what resilience actually looks like.

We desperately need some leadership and accountability to reverse this course and make the GB rail network the key piece of climate infrastructure it should already be - because the cost of not doing so far outweighs the cost of investing for the future.

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scenarios based on the UK Climate Projections 2018, to inform the development of new standards and guidelines for a major rail operator.

We estimated the chance of exceeding 40°C in any year was around 0.5%-1% for the South East but was likely to increase five to 20-fold by the end of century under plausible medium and high-climate scenarios, in agreement with some of the latest Met Office climate studies.

Rail operators and HMT set out guidelines on how climate change should be considered in decision-making and investment.

Investors are also increasingly seeking greater climate disclosure on individual companies' actions to transition to net zero and deliver resilience. Noel's article rightly highlights that the DfT's Transport Adaptation Strategy will have a major role to play, but it will be down to private sector action to deliver a more resilient rail network.

Three things are urgently needed:

■ An earlier and greater engagement of climate and other environmental professionals in projects to enable sustainable infrastructure (something AtkinsRéalis is reinforcing across our own projects).

■ To deliver better climate risk assessments that consider rail systems, and how failure is one component can affect overall performance.

■ Better monitoring to collect information on impacts and help us anticipate and make the case for more investment in climate resilience.

Mike Muldoon
Business Development Director
SYSTRA UK & Ireland

As I write this, the UK has just endured seven consecutive September days of temperatures in excess of 30°C. This is more than twice as many as we have ever seen since records began, yet it follows what most people would consider a pretty miserable summer.

We've become blasé about 30°C these days, but for those of you old enough to remember, that's 86 degrees Fahrenheit - a truly exceptional occurrence not so long ago. Noel's point about the growing unpredictability of weather is being made day in, day out.

Of course, 30°C is nowhere near as hot as the 40+°C that we saw in 2022, as the railway network failed around us and the £200 million to £300m of costs rapidly ticked up. Perhaps we will soon have to redefine what constitutes a heatwave? Noel tells us how the past three years have given us a glimpse into the future, and I agree. We must be under no illusions about this - what we are seeing now is the impact of the already "baked-in" approximately 1.1°C impact of climate change to date.

The debate around net zero is all about arresting our continuing upward trajectory, about limiting global temperature increase to 1.5°C (more likely 2°C it seems).

But no matter what we do now, it won't reduce what we have already done - we will have to live with that. While that means the future may be bright on some days (and hotter), it will also be wetter and more unpredictable in terms of familiar seasonal patterns. In addition, there will be more energy in the atmosphere to tear at our wires, to erode our embankments, and flood our routes.

Against this backdrop, Noel is spot on to highlight the need to start addressing this now. We're not just addressing what is likely still to come, but also what is already here to stay. Infrastructure that is performance-limited at over 26°C is simply untenable in today's world.

I'm not convinced that minor campaign changes and small renewals will get us all the way. But in this era of budget cuts, they would start the journey and improve resilience at those weakest points, helping the rail industry to make a viable case for reliable modal shift in these challenging times while we await the next strategic plan.

> *"If the system is left to crumble, the chances of recovery fade."*

Demonstrable modal shift (with associated revenue growth) will help us to improve the case for greater, more extensive measures in the future, continuing to manage the requirements we face and avoid the bow wave Noel warns us of. If the system is left to crumble, the chances of recovery fade.

However, rail has endured before - and there are innovative solutions available to us. Keeping people safe using automated monitoring systems, changing standards to reflect the new realities, and designing in resilience from day one are pressing priorities. Underpinning all our climate resilience measures is safety. As always, we cannot afford to (nor should we contemplate) skimping on that.

Research and reports

Here's *RailReview's* digest of documents and reports released by industry bodies during the past quarter. All those listed can be downloaded from the Rail Hub database on *www.railreview.com*. If members would like to submit a report for inclusion, please email: *rail@bauermedia.co.uk*

Annual Health and Safety Report 2022-23

RSSB - June 29 2023

Rail sector sickness levels stand at more than twice the national rate, according to the Rail Safety and Standards Board (RSSB).

The biggest increase (and reason for time off work) is in the 'unknown/unspecified' category. This accounted for 31,000 absences in 2022 - almost one in three of all reasons for time taken off work.

The increase appears to be linked to changes in self-certification absence rules. The figure was negligible in 2019, when mental health problems were the most common cause.

In other health and safety subjects, RSSB's analysis shows that Britain's railways maintained "high levels of health and safety performance" in 2022-23.

Key trends include improvements in workforce trackside safety and better management of asset integrity in extreme weather.

Annual Report on Major Projects 2022-23

Infrastructure and Projects Authority - July 20 2023

HS2 Phase 1 (Birmingham-London) and Phase 2a (West Midlands-Crewe) have both been given a 'red' rating in the annual report from official watchdog the Infrastructure and Projects Authority.

While it does not explain why a project has been given a particular rating, or what the issues are, IPA defines a 'red' rating as: "Successful delivery of the project appears to be unachievable. There are major issues with project definition, schedule, budget, quality and/or benefits delivery, which at this stage do not appear to be manageable or resolvable."

Phase 2b (West Midlands-East Midlands) has been given an 'amber' rating for the second year.

The IPA describes each rating as "a snapshot at the current time" of the likelihood of the project delivering on time and to budget.

Reviewing 244 major government projects in 21 departments, worth £94 billion and with £758bn of benefits, only 26 are rated 'green' with 23 'red', 183' amber and 12 not rated (exempt) due to national security.

RIA briefing: Transport Decarbonisation Plan

The Railway Industry Association - June 8 2023

The Government is making insufficient progress on its key UK rail decarbonisation commitments, according to detailed quantitative analysis from RIA.

Two years after publication of the Government's *Transport Decarbonisation Plan*, RIA's analysis reveals "a concerning picture when it comes to rail decarbonisation", says RIA CEO Darren Caplan.

RIA has reviewed all TDP commitments and measured them against public announcements. Each commitment has been rated as red (commitment not met), amber (partially met), or green (met). Out of eight commitments on rail, three were rated red, five amber and none were rated as green.

Electrification is the main area where RIA says the TDP has failed, having promised "new infill electrification to allow a significant rise in the electric haulage of freight".

Annual report on HS1 Ltd

The Office of Rail and Road - July 31 2023

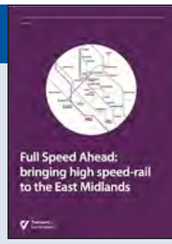
The ORR has called for urgent action from HS1 Ltd to address missed key performance targets.

According to the regulator's annual assessment of the high-speed infrastructure operator for 2022-23, expectations have not been realised on escalator and lift availability, plus workforce health and safety.

Train performance is also in need of improvement, says ORR, although it points out that the 7.25 seconds average delay per train on HS1 remains "much better" than the main railway network.

The reports adds that where targets have been missed, ORR is satisfied that the company is "taking reasonable steps to improve". It will nevertheless continue to closely monitor HS1 Ltd and its main contractor Network Rail (High Speed), to improve the situation and deliver a better experience for passengers.

Full speed ahead: Bringing high-speed rail to the East Midlands



Transport for the East Midlands - June 2023
"The case for delivering HS2 from Birmingham to the East Midlands is overwhelming."

That is the verdict of sub-national transport body Midlands Connect, which argues that delivery of this key pledge in the Government's £96 billion *Integrated Rail Plan* would help "transform an area so poorly served by rail at the moment".

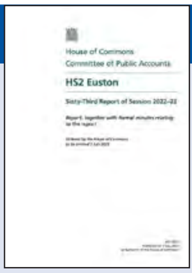
And this new report, published by Transport for the East Midlands, supports MC's position, estimating that full delivery of HS2 combined with other flagship projects including Midland Main Line electrification would lead to a vast increase in job opportunities and trade for local businesses.

It says that labour markets would be expanded by bringing an additional 500,000 people within 90 minutes of Derby.

It adds that HS2 would nearly double the number of jobs in high-value, rail-linked sectors that can be accessed within an hour of Nottingham by rail to over 150,000, and quadruple the number within two hours to 1.5 million.

In total, 74 stations from across the region would benefit from improved journey times to Birmingham and London.

HS2 Euston



Public Accounts Committee - July 3 2023
The influential Public Accounts Committee has slammed the Department for Transport as being clueless about how to proceed with the High Speed 2 station at Euston.

Its damning report says that despite being eight years into planning the HS2 terminus, the DfT "still does not know what it is trying to achieve with the station and what sort of regeneration it will support".

"It is clear now that the £2.6 billion budget HS2 Ltd set for the project was completely unrealistic, even before the impacts of inflation are considered," says the report.

"The DfT will now need to reset the project for a second time in order to find a design that is realistic, affordable and provides value for money.

"It does not know what the additional costs and impacts will be from its decision to pause construction at the station for two years."

The PAC added that it was "disappointing" that HS2 Euston is another example of the DfT "making the same mistakes and failing to learn lessons from its management of other major rail programmes".

The report makes six recommendations, including that the Department for Transport produce an interim report by the autumn on how it and HS2 Ltd are managing the costs of the pause, exactly how much has been spent, and how much design work is yet to be completed.

Track to growth: Creating a dynamic railway for passengers and the economy

Rail Partners - July 11 2023
Put aside ideological battles of public versus private - the evidence shows a thriving railway should be a shared responsibility.

That's the message from Rail Partners, which is calling for a "reinvigorated public-private partnership to get Britain's railways back on the track to growth".

Publishing research it commissioned, the trade association says that where competition among train companies is harnessed effectively across Britain and Europe, there are more customers, more services, newer trains, cheaper fares, and reduced subsidy.

It argues that while greater public control through an arm's-length body is needed to give the system greater coherence, operators need freedom within that system, and that allowing decisions to be made closer to the customer in a public-private partnership is the right answer.

Annual report on health and safety on Britain's railways

The Office of Rail and Road - July 19 2023
"Maintain focus on the day job."

That's the message from HM Chief Inspector of Railways Ian Prosser CBE in his annual safety report.

He said that while large projects and industry restructuring are taking the headlines, statistics show that focus on day-to-day operation remains key.

The report has four key themes: climate, drainage and management, vegetation management, and the management of fatigue.

Prosser's warnings come after a series of incidents, from those involving passengers at platforms to enforcement action after a trackworker injury investigation at Chalfont.

While he praised Network Rail for introducing new protection to improve trackworker safety, "implementing this technology needs to go further, faster and properly involve the end user staff, to drive their buy in."

On new technologies, Prosser said there should be much greater use of remote asset monitoring techniques to remove technicians from the running line altogether.

Turning to the current financial challenges, changes to staffing and working practices, he said that "strong leadership and no doubt difficult decisions to implement the planned changes to how staff are organised will be required".

He also called on the industry to improve its own investigation of incidents, and to adopt the Rail Safety and Standards Board's guidance on incident factors.

We've read it for you

Keep up to date with developments in the rail media. Read more on *www.railreview.com*

Railway Gazette International

July 2023, p8

ADIF eyes more open access

Spanish infrastructure manager ADIF has put forward proposals for the expansion of open access services across the country's rail network, building on the experience of competition on selected high-speed lines.

According to ADIF Present Maria Dominguez-Gonzales, "a second phase of liberalisation" is about to start, enabling new entrants Iryo and Ouigo to expand beyond three arteries linking Madrid to Catalunya, Levante and Andalucia, for which both have a ten-year capacity allocation.

Although liberalisation of high-speed services has been regarded as successful in terms of increasing rail ridership and market share, the two new operators consider the access charges imposed by ADIF as excessive. Reforms introduced in December 2022 will allow ADIF to restructure charges to encourage more efficient use of the network.

Today's Railways Europe

August 2023, p11

Dutch royal trains bows out after 159 years

King Willem-Alexander and Queen Maxima of the Netherlands bid farewell to their royal train with an official visit to Belgium on June 20-22. The royal train will now be donated to the Dutch Railway Museum in Utrecht.

The King and Queen travelled in a single ICR coach similar to the large numbers manufactured in the 1980s by German manufacturer Talbot. The blue-liveried coach entered service in 1993 and features a saloon, two small bedrooms, modest kitchen, and a meeting area.

It requires a major overhaul and modernisation to remain in service and is not considered financially viable. There are no plans for a replacement train.

Railway Gazette International

July 2023, p12

CMA warns on signalling competition

Hitachi's proposed €1.7 billion (£1.46bn) acquisition of Thales' Ground Transportation business could lead to a substantial lessening of competition in the UK signalling market, the Competition & Markets Authority has announced.

CMA said it would undertake a consultation on its provisional conclusions and potential remedies, which could range from requiring the companies to sell parts of their existing businesses or prohibiting the merger.

In a recent market study, the Office of Rail and Road had found the UK signalling market to be dominated by Siemens and Alstom. It made a number of recommendations to increase competition from alternative suppliers such as Hitachi and Thales, but CMA argues the merger would mean fewer credible bidders for main line signalling work.

Passenger Transport

July 14 2023, p13

Virgin's 'brand catastrophe'

Internal company emails revealed in a $250 million (£197m) lawsuit suggest that Virgin Group was on the verge of a "brand catastrophe" due to challenges faced during the pandemic.

The case in London's High Court involves Virgin's legal action against Florida-based rail operator Brightline, which briefly operated as Virgin Trains USA from 2018 until ditching the 20-year licensing deal with Virgin Group less than two years later. Brightline used an exit clause in its contract, claiming the Virgin brand had lost "its international high repute".

This assessment appears to be based on public criticism of the tax arrangements of Virgin Group founder Sir Richard Branson and Virgin Atlantic's request to the British Government for a bailout during the pandemic while also asking staff to take unpaid leave.

Virgin said the claims were "cynical and spurious".

International Railway Journal

July 2023, p10

'Deep seated problems' with Sydney Trains network

A report commissioned by the newly elected New South Wales Labor state government into Sydney Trains has concluded that the network is fragile and has "a great many deep-seated problems" with the way the commuter system is operating.

The interim report was compiled by a review team that is required to issue a final report, consolidating its findings and recommendations, by October 31.

The document says that major maintenance backlogs resulting from timetable changes brought in by the previous government in 2017 have led to network incidents and inconvenience to passengers. These backlogs are said to pose a serious challenge to restoring a reliable network.

International Railway Journal

July 2023, p8

Prasa chairman dismissed

The Chairman of the Passenger Rail Agency of South Africa, Leonard Ramatlakane, has been removed from his post after an investigation found he misused a property owned by Prasa in Cape Town.

Ramatlakane was appointed Prase chairman in October 2020. In March this year, *The Sunday Times of South Africa* reported that he had moved his family into the property while his own home was being renovated. Prasa officials were concerned that this constituted abuse of public funds, and on March 6 the Prasa board referred the allegations to an internal inquiry.

Today's Railways Europe
July 2023, p9

Eurostar to suspend Amsterdam services for a year

The secretary of state for railways and public transport at the Dutch Ministry of Infrastructure, Vivianne Heijen, has approved a proposal from Dutch rail infrastructure manager Prorail to ban Eurostar from Amsterdam Centraal between June 2024 and the end of May 2025, due to major reconstruction and remodelling of the station - a project that is not supported by many of the train operating companies on the Dutch network.

Following talks with Prorail CEO John Voppen, Heijen says she is convinced that banning Eurostar for the duration of the project is the right option as it will not be possible to provide facilities to the international operators, including security and passport control, while the works are taking place.

Eurostar currently operates four trains per day between St Pancras International and Amsterdam, with Rotterdam the only intermediate station on the route. Eurostar states that terminating trains at Rotterdam is not economically viable – Amsterdam generates an average of 265 passengers per train while Rotterdam can only deal with a maximum of 150 passengers due to limited space for border controls and security checks.

Today's Railways Europe
July 2023, p9

Fret SNCF to be broken up after EC ruling

The European Commission has been investigating state aid for SNCF's freight arm in 2007-19, when €5.3 billion (£4.6bn) was "absorbed" by the SNCF group, a move that is suspected of being illegal.

In response, the French Government and SNCF are now proposing measures for SNCF Fret to give up 30% of its traffic (20% of its revenue) to competing operators, these being 23 flows of dedicated block trains, many of them intermodal. The company would lose around 500 staff (10% of its workforce) and hand over 53 locomotives to companies taking over traffic. It would also be banned from competing for lost traffic for ten years.

Today's Railways Europe
June 2023, p8

Finnish gauge conversion ruled out

The cost of converting the Finnish network from broad to standard gauge would outweigh any benefits, a report published by the country's Ministry of Transport and Communications has concluded. The study follows a June 2022 European Commission proposal to harmonise rail gauges across the EU.

The commission proposed that all new railways be built to standard gauge and gave member states until 2025-26 to respond. In Finland the proposal received a mixed reception. The Finnish Government initially rejected the idea, but many business organisations support it.

Complete regauging of the current network would cost around €5.5 billion(£4.7bn), excluding rolling stock, and take around three years, according to the report.

International Railway Journal
June 2023, p14

Court of Auditors criticises German COVID rail freight support

The German Federal Court of Auditors has criticised the financial support given to freight operators by the government during the pandemic, saying that the amount paid was around double the actual cost increases suffered by operators.

The German government provided €627 million (£539m) of support covering track access charges between March 2020 and the end of 2021. Partly retrospectively, this support was initially provided to DB but was later extended to include private companies.

The Court of Auditors believes that only around €280 million (£241m) was necessary to cover additional costs. As a result, it believes that by meeting almost all track access charges, the support enabled freight operators to reduce their rates, meaning that the main financial beneficiaries were their customers.

However, freight operators argue that as road freight rates also fell, the support was not wasted as traffic would have shifted away from rail purely on price grounds.

Passenger Transport
June 29 2023, p7

UTIP highlights light rail stats

New statistics collated by the International Union for pPublic Transport (UTIP) have found that light rail systems continue to expand around the world.

UTIP has found there are currently an average of 6.7 new systems opening each year. As of 2021, there were 15,824km (9,833 miles) of LRT network in operation, mainly distributed between Europe (58%) and Eurasia (22%).

At a global level, the length of infrastructure has been increasing by 1% per year on average since 2015.

In 2019, light rail patronage was around 14.8 billion trips. Globally, this reduced by 37% on average the following year due to the pandemic.

The global number of light rail vehicles has remained stable in recent years at around 37,000.

International Railway Journal
June 2023, p9

EC investigates Renfe over alleged abuse of market position

The European Commission has opened a formal investigation to determine if national operator Renfe may have abused its dominant position in the Spanish passenger market by refusing to supply content and real-time data to rival ticketing platforms.

Renfe currently offers this on its own websites and apps, but may have refused to provide third-party ticketing platforms with direct access.

The EC is concerned that Renfe's alleged refusal to supply content may prevent these platforms from competing with Renfe's own direct digital channels, to the detriment of passengers.

If proven, this may breach EU competition rules prohibiting the abuse of a dominant market position.

HOUSEKEEPING

Useful notes and reminders to help you make the most of your *RailReview* membership or subscription.

Current Editorial Board members

The ***RailReview*** Editorial Board meets quarterly to discuss the content of the previous issue and to debate current focus points in the industry that warrant exploration in the next edition.

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You can read any issue of *RailReview* back to the first one published in September 2014, even if you have not been a *RailReview* reader since then.

Upcoming events

Next *RailReview* published - December 2023.

***RAIL* 100 Breakfast Club - October 12 2023. Guest speaker: Ruth Todd, Chief Commercial Officer, HS2 Ltd.**

Further information about upcoming events will be available on www.railmagazine.com.

Behind the mask... Sambit Banerjee

PAUL STEPHEN fires the questions at the newly appointed Joint CEO of Siemens Mobility UKI and Managing Director of Rolling Stock and Services

If you could buy any type of food (right now) what would you buy?
Kolkata Kati Roll.

What is one of the things you would put on your 'bucket' list?
Boxing Day Test at Melbourne.

Morning or night person?
Morning.

What annoys you the most?
Dishonesty.

Strangest thing you've ever eaten?
Live fish in China (I could not eat it after first bite).

What is one of your weird quirks?
Rubbing my nose when I am tense.

What is your biggest addiction?
Cricket.

What book are you reading at the moment?
And God Created Cricket by Simon Hughes.

What is your lifelong dream?
To have played cricket at highest level.

How long does it take you to get ready in the morning?
Twenty minutes.

What is the one thing you have always wanted to do?
Play cricket.

Prized possession?
My wife and my daughter and son.

If you were stranded on a tropical island, what two things would you want with you?
My wife and my phone.

Pet hate?
I have no hate.

What have you done that you are most proud of?
Becoming Joint CEO of Siemens Mobility UKI.

What is your favourite song?
Jodi tor dak shune keu na asche (Bengali song by Rabindranath Tagore).

What is the best advice you have ever had?
Only survivors rule the world. Winners come and winners go.

Person that influenced you the most?
Mahatma Gandhi and Rabindranath Tagore.

What is one food you wouldn't want to give up?
Fish curry and rice.

If you had access to a time machine, where and when would you go?
Back to Kolkata where it all started.

What was your favourite cartoon show growing up?
Tom and Jerry.

Greatest sadness?
My parents and in-laws are not there to see my success.

Favourite film?
Gandhi, directed by Richard Attenborough (pictured).

Temptation you wish you could resist?
To eat mutton curry .

Best childhood memory?
Being pampered by my grandmother on many occasions.

The book that had the greatest impact on you?
Anandamath by Bankim Chandra Chatterjee.

Takeway: Indian or Chinese?
Chinese.

ALAMY.

Introvert or extrovert?
Extrovert.

Beer or wine?
Single malt whisky.

Egg: scrambled or fried?
Omelette.

Cats or dogs?
Dogs.

Adventurous or cautious?
Cautious.

Saver or spender?
Spender.

What nugget of wisdom would you pass on to your grandchildren?
There is no substitute for hard work.

Favourite poem?
Where the mind is without fear where the head is held high (Rabindranath Tagore).

The hidden talent that would surprise people?
I can cook.

TV programme that you wouldn't miss?
I do not follow any TV programme.

Last time you shed a tear?
When my Dad passed away in 2020.

First record you ever bought?
Classical Music by Jagjit Singh.

What do you drive?
Jaguar XZ and sometimes my wife's BMW Z4, if I'm allowed.

Perfect Sunday?
Walking in Great Windsor Park and having a family meal.

Who would you like to play you in a film?
Uttam Kumar (Bengali film actor).

Favourite UK place?
Great Windsor Park.

How would you like to be remembered?
Hardworking sports-loving guy.


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