



The central importance of the operating function

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Some of you might be surprised that a Network Rail Chief Executive is speaking today about the importance of how we operate the railway. We are a service provider. And to be a rail service provider we need to bring together all the critical elements of what we do as an infrastructure provider together.

I'm very passionate about this subject and I was delighted to take this opportunity to talk to you a little bit about it. I'm conscious that I'm almost certainly not going to say anything that you don't already know but I really want you to hear it from me just so you get some sense that I have a view on this subject and sense of just how important it is to me.

And indeed, if you think about 2018 and the lessons of May 2018 in particular, if it has taught us anything it show be just how inter-connected the railway system is. How dependant we all are on each other if we're to provide a decent service for the 4.8 million people who now travel with us every day. It requires the system to operate with efficiency and expertise.

To be honest, coming back to the industry after ten years away, I'm slightly dismayed at the extent to which we have allowed some of those core operating principles to be diminished, to be overruled, to be overshadowed by other matters. Asset management, major infrastructure projects and the safety of our workforce are all vital, critical, essential undertakings. They are all necessary but they are not sufficient if we're really going to be serious about delivering for passengers.

I would suggest regardless of where you look within the rail industry, rail operations as a profession – a profession with expertise and oversight of the whole system - has not, in general, been cultivated and valued in the way that it should have been. And that dwindling expertise has contributed to our collective failure to make sure the railway works seamlessly as a system.

Sir Michael Holden's report, which is an excellent report, identified these issues. But my question for my team was why on earth does it take someone else to tell us about these issues? That's the fundamental question we need to be addressing. Why do we as a system and, we as Network Rail in particular, need somebody else to come and tell us some really painful home truths.

Passengers I think are as a consequence paying the price of that failure to build an operational capability alongside our maintenance and asset management capability.

I just want to take a little bit of time to give you my sense of why we are where we are. Not so we can get ourselves into the doldrums but so we understand what we need to fix.

A fairly basic fundamental principle is that a common understanding of where we've got to where we are means we'll be better placed to do something about it.

I took this job to put passengers first and deliver a better service

And I'm also very conscious that when I talk about putting operations at the heart of the railway, it's not for operations sake. I know some of you in the railway will be very much more enthusiastic about trains than I am. I never joined the system because I was an enthusiast of any description. I joined because I'm passionate about what the railways can do for the economy. Now I've had fantastic friends who are enthusiasts and I'm not in any way denigrating that. But I'm not here to run trains, I'm here to move people and goods effectively for the economy of this country. And that's the point we need to keep coming back to at every point.

And of course we know that alongside value for money, they want reliable services, be they freight users or passenger users. They want confidence that they will get where they think they're going to get to in the time they expect to get there.

Despite huge investment in rail, greater than any previous generations can have imagined we've been delivering declining performance. And not only that, we've been failing every year, year on year, to deliver the performance we promised to deliver. Seven years of declining performance. And seven years of failing to deliver that year's plan. I'm not sure which is worse. The fact that we can't even predict what we're going to do or stick to our promise or the fact that we've actually presided over that long term plan.

The railway has grown in every sense and is harder to operate

There's lots of reasons why we're in that situation. Anyone whose worked in the railway or has travelled on it in the last decade will know how much it's grown, in lots of different senses. And not so much that the growth is of itself exceptional, but it has come in the last 10 years on top of prior growth. If you just look at the last 10 years growth it hasn't been remarkable but it is growth that I notice on top of what I would call a relatively pretty congested network.

Something like 40% more passengers travelling with us than 10 years ago. But if go back to when I was running SWT in 2005, we would have described most of those trains as full and standing 13 years ago. So in the last 10 years, 40% growth on top of what is in many places already a full and standing network. So, station dwell times are stretched in many parts of the country.

There are more services on the network than ever. In the busiest places, the network runs at or near to capacity at peak times. With very little to no recovery time when incidents occur. Some of you might know that my time away from the railway was spent in aviation and if you want to see what happens when you schedule so close to maximum theoretical capacity, go and stand at Heathrow on a day when there is just modest disruption and see what that does

to passenger service. And how long it takes you to recover when you plan to use 90% of your system on a daily basis.

Trains are much longer - train kilometres are up by 23 million a year compared to 2011. So more than ever, the smooth running of the timetable depends on precise driving. One of the pieces of work that Michael Holden did was to identify what that meant at the throat at Waterloo. Was that predictable? It probably was but in the excitement of all the engineering potential, we hadn't really grasped and generated a timetable that reflected the realities of a different layout at Waterloo.

Longer trains also mean longer turnaround times in terminal stations and longer platform reoccupation times. It may only be a matter of an extra 10, 15 or 20 seconds or so but, on a railway this busy with so little spare capacity, every second really does count.

Secondary delay now accounts for 70% of attributed delay – far more than the disruption caused by the original incidents themselves. Which of course shows the greater impact of each incident on a congested network.

And sub-threshold delay, which goes largely un-investigated, has rocketed. Around the system it makes up around 35% of all delay on the network.

Unattributed, little understood and in some cases, for some operators, two thirds of delay is sub-threshold. Now if you had said to those people who had designed the performance regimes in the early 1990s, that twenty years on, we would not be investigating two thirds of the delay, they would have looked at you aghast. We have found ourselves captured in a performance system that actually says we only look at an increasingly small percentage of what is causing delay. And that's not a comment on the commercial arrangements around Schedule 8, it's about how we are using systems and contracts which are not driving the right sort of behaviours to run a truly world class railway.

You will know individually very small delays are cumulatively having a huge impact on the reliability of our network. I've been amazed at the number of conversations I've had to have with my own organisation to explain to people that if you only manage TSRs at above threshold delay you are simply not getting to grips with the reality of what a temporary speed restriction can do to your railway.

But we are so fixated on that primary delay above 3 minutes, that in many cases we are not making the right decisions.

Operating the railway is our core activity

I think another area I want to talk about is the fact that we have not invested in our competence as operators at a time when we've invested hugely in other capabilities.

Let me be very clear - that doesn't mean there aren't phenomenally competent and dedicated people working in operations. I can say unequivocally that the very best part of my job is actually the time you get to spend with frontline people who are dedicated, passionate in many cases, not all of them, but actually phenomenally dedicated people who inside, often very frustrated, very often feeling trapped in a system, but absolutely focused and wanting

the railway to work well. Still overwhelmingly feeling actually part of a railway family and a railway industry and wanting us to work better together. I don't think they're receiving the support and development that they deserve. We haven't developed as we should have done a pipeline of world class operations talent or cultivated ops as a profession to rival any of the others within the industry.

Our knowledge and expertise is highly prized in many areas across the world and I've seen that actually in the appetite across the world for the work that Network Rail Consulting is doing. But we're not delivering in our own backyard on some of the basics.

And our structures, our systems, our policies and processes that support our ops staff are not as good as they need to be – in fact they've barely changed in many cases and in others they have regressed in the last decade despite the huge change and growth the railway has been through.

Albeit unintentionally, my fundamental premise is that we have been neglecting the skills of operations.

Why?

Well, first is the change to the overall structure of the railway in the early 90s. The separation of train ops from infrastructure management. It signalled an end to the broad-based operations careers that people had in the past. Careers that developed whole-system overview and gave people experience of all aspects of operations – from signalling and infrastructure to rolling stock diagrams and crew rostering. And I see amongst the audience people who benefited from that.

The second is franchising. Franchising not only carved up the system between different operators all working to different performance targets. None of which were aligned to control periods. It has also, as both Chris Gibb and Nick Donovan emphasised at some length in their respective reports, judged bids primarily in financial terms rather than in terms of operational deliverability.

This is not perverse behaviour, this is rational behaviour, bidders are rational and they have learned how to win. This has led to highly optimised, complex delivery plans that are much harder to recover when things go wrong. Don't take my word for it, read the Chris Gibb report which gives the example that the average train from Bedford to the South Coast will change drivers three times. It's easy to see how hard it would be to get trains and drivers back in the right place during disruption.

So the upshot of this is that the way franchising was done has made the system harder to operate and, in that context, the most experienced operators were no longer incentivised to use their expertise to best serve the system as a whole. Instead they were working for one organisation in that organisation's narrow interest.

There are really notable exceptions to this, but I regret to say that in my observation that they are largely franchises that have been in place for some time who have not won their franchise on the more aggressive recent terms or are working to different success criteria. For example, but not exclusively, in TfL concessions. I don't know the detail of how the

department judges and assesses its evaluation of franchises but it's pretty clear to me that the ability to deliver the performance targets you sign up to is not a determining factor.

I want to be really clear that I don't believe that the loss of operational competence was an inevitable consequence of privatisation or franchising. And this is not a pop at franchising, I'm a huge believer, and passionate advocate, of what privatisation has done for passengers in this country, and indeed the economy. I don't think the entire system needs to be controlled by a single party to make it work well. But we do have to be honest about the extent to which people behave rationally and respond to incentives set as part of a specification.

And of course following those structural changes, the railway was shaken to its core by a wave of catastrophic accidents in the late 90s and early 2000s. I don't need to tell you about Ladbroke Grove, Hatfield and Potters Bar. In the aftermath of such tragedy, the right and proper response was a laser-like focus on asset management, on consistency and compliance to make the railway safe again.

That focus was absolutely necessary. We saw of course some of the immediate consequences. Speed restrictions were imposed following Hatfield, a very very different approach to driving and driver training following Ladbroke Grove. I was running South West Trains at that time and the combined effect of these meant that performance collapsed. And it was only radical interventions with the timetable that allowed us to recover and eventually improve on our pre-privatisation legacy. Elsewhere punctuality recovered without that surgery, but I would suggest partly because the network had spare capacity. Operations did not need to be optimised to the degree necessary today for trains to run on time.

So, I think the gradual erosion of expertise that was already beginning to take place wasn't really felt, we were eating into the fat. In fact, years of performance improvements were delivered, largely driven by improved asset reliability which probably gave us a false sense of security.

But passenger numbers continued to grow. As did, quite rightly, passenger expectations for service opportunities and less congestion.

Capacity enhancements were needed urgently and on a pretty unprecedented scale for such a complex congested railway.

Network Rail became focused not just on safety but also on project delivery. It became an organisation focused on engineering and projects. Maintenance and enhancements.

Don't get me wrong, some brilliant work was delivered in those years. Where if we lost both operational competence and not got to grips with asset performance, we would have been in a very much worse situation.

Complex projects and programmes delivering big capacity increases and have given us hugely positive progress on asset resilience and safety. We are right to be proud of those achievements.

But operations continued to take a backseat and it was squeezed. In an organisation focused on project delivery it became the easiest place to look for efficiency savings. Expert operational management was sacrificed for other things.

And we also saw a flight from operations to projects. If you want a better salary, if you want a better work life balance, if you want better office accommodation, you're better off in projects, not in ops.

As the network got busier and busier, as secondary delay grew, the loss of operational expertise really really started to show.

Now I believe very passionately that we need build and rebuild that capability. I want a railway that alongside world-class engineering, alongside world-class project delivery capability, we have world-class operations.

Operators with top-notch competence and experience, excellent leadership skills and a system-overview that enables them to work effectively together deliver the best outcome for passengers. Supported by analysis, more decision tools that are ubiquitous on a congested network as we enter the 2020s.

At the moment we don't have formalised training and clear competence standards for operational roles or a clear career path to give people confidence that this is a profession worth specialising in.

The operations apprenticeship we offer doesn't yet have anything like the rigour of the maintenance apprenticeships we offer.

We don't systematically rehearse and simulate incidents so that our ops teams can practice incident management and recovery. And this is significant of course because, on a network where there are happily far fewer disruptive incidents, our staff have less day-to-day experience of managing some complex incidents.

We haven't robustly challenged some of the trade-offs we make in terms of safety systems. We've de-risked certain areas of our safety activity without looking at the broader safety system impact of those decisions.

In our frontline teams, the organisational structures currently in place mean that people with less operational competence are often managing those with more. There's always been some of that, I was one of those people, many people in this room were one of those. But we're now utterly reliant on a transit camp in ops of people transiting through ops for a few years just to keep our capability going. That can't be right. Experience does matter.

We should be developing those leaders, helping them to grow their operational excellence. And not just their experience of Network Rail operations but all aspects of rail operations including train diagramming and crew rostering so that they really understand how the whole system works. And we should be offering the same to those colleagues who work in train operators who would value seeing the other side of the equation. Again this is something that Michael Holden identified in his report on SWR. We all need to develop our people so

that they have whole-system knowledge and expertise and are much better equipped to work well together to deliver the best possible service for passengers.

We need to get to a point again where actually our very best signallers want to enter into management and control roles. Our employment structure, our reward strategies at the moment make what's always been a longstanding issue, even worse. It's now very difficult to entice people to move from one to the other. We've got to tackle that if we really want to build this world-class operational capability.

When we build new infrastructure there are striking examples where the voice of the operator has not been adequately heeded in implementation. The Ordsall Chord is a classic example of a fantastic piece of infrastructure which has unlocked great new journey opportunities and connections but where the new infrastructure was not supported by a sufficiently rigorous operating plan. We didn't really think about how we would reliably operate 15 trains an hour, in multiple formations, across 6 flat junctions in the space of a few miles, with disparate rolling stock, much of which will have travelled for several hours picking up potential delay on the way. We're trying to run a metro-style railway with none of the characteristics of a metro system. We slept walked into that because we've been captivated by the glory of big infrastructure projects and understating the value of the operational interface.

Another example of that I would suggest is in the state of timetabling on our railway system and I'm not going to rehearse the details of that that now. I know Chris Rowley who is here is going to say something about that later on today. What I would say is that the centralisation and relocation of train planning within Network Rail has cemented the divide between those who plan changes to the timetable and those who operate it on a daily basis and can, if given the chance, often spot problems before they happen.

Probably the most frustrated people I have met in my time in Network Rail so far are the signallers trying to operate Leeds station. And for those of you who've been travelling through Leeds might have some sympathy with them. That is a classic example of where we're not serving passengers well because of the way we're not integrating our activity.

Let me also at this stage absolutely defend and support the work that Chris and his team have been doing in the train planning unit. We make the mistake sometimes of criticising the individuals who are trying to make the system work. I think the way we do this currently is not optimised but this is not about the commitment or professionalism of the individuals doing that work. We actually owe them a huge service the way they're trying to make a sub-optimal system work.

And lastly, if you don't believe me in all this, all you need to know is that the head of operations in Network Rail reports into our Chief Engineer. Operations is subsumed by engineering instead of working in partnership and creative tension, to serve passengers.

We will restore pride in operations as a profession

So what can we do? There's already a lot that we are doing. I want to touch very briefly on some of those things.

We have already made progress in renewing our focus on operations

I kicked off my operating career in the South East, so for no reason other than that I'm going to use largely South East examples. Please don't think this is the only place that we're doing stuff. I would like to focus a little on the work that we are doing with Southeastern. Not least because we've seen big incidents there. We've seen the dreadful incident last March at Lewisham with self-evacuation which is one of my big safety risks and worries. I think we'll see more of that given the nature of passengers and the power of social media as well. This month South East are the first route to work with the British Transport Police using their Hydra Suite to carry out immersive, interactive simulation exercises so that our incident controllers are really practicing real-time response to critical events and risk-based decision-making.

We're rebuilding the winter Key Route Strategy emergency timetable to provide strong, regular train services to the critical parts of the route with full considerations of both infrastructure or fleet resource. A genuine whole-system contingency plan.

Following back-to-basics performance drives at London Bridge the joint teams have identified lots of opportunities to make minor adjustments; making timetable changes in quick time, not feeling victims of the current timetable process; changing headcodes to provide better information for signallers, providing new equipment to improve visibility of approaching trains to signallers in London Bridge and Three Bridges, changed regulating and re-platforming guidance to staff; and some selective changes to the information presented on signallers' workstations.

I've seen for myself a doubling of dispatch staff on platforms where teams recognise that bi-directional working meant that we were asking the same single team of dispatchers to do simultaneous departures. The point is collectively the teams have dealt with that and they dealt with it rapidly and expeditiously.

We've made a good start but there's lots more that we need to do.

On Western, I've given our most operationally experienced RMD, Mark Langman, the challenge of creating a truly world class operating model for Crossrail. Fortunately, as you know we have a little bit more time now to do that now. This is probably the only silver lining in the current Crossrail story. But it is really important. There's been a huge investment in the central section of the Crossrail route and it's not obvious to me that we've treated the on-network elements of this with the same level of rigour and discipline. We need one railway system that's working consistently if we really are to deliver a world-class railway which is what passengers deserve and what I know we're capable of doing.

A joined-up approach to putting operations front and centre

We must, and we will collaborate more to tackle the system of systems that the railway industry has become.

A more joined-up approach to professionalising ops training so that all our staff get broad training and experience so we're better able to recover services. I see operations where trains are leaving half an hour late, 14 hours after an incident occurs. And not once, I see it

happening week after week. We're not recovering the railway in the way that we know we ought to.

More co-location, undoing some of the damage done in recent years. Immersive training and simulation. Professionalising the work, I could talk about this for a very long time as you probably get the sense.

Externally recognised apprenticeship programmes and extend the level 2 infrastructure operator apprenticeship to other areas of operations. Creating facilities, locally based, that are needed for brilliant training.

And also the importance of leadership skills. Operational competence is absolutely vital, but ops also needs people to be capable of making real time decisions, difficult decisions, in tough circumstances and motivating a team of people to deliver the best possible outcomes.

Conclusion

I hope that much of what I've said has resonated with some of you. That you at least agree that operations is an absolutely core activity. And that you recognise the need for all of us to do more to support our frontline operations teams.

I'm not going to say much about the challenges facing Keith Williams and his team other than that for me it boils down to three things which I think are relevant. First and foremost, we are in an era of tricky trade-offs so our ability to make trade-offs in a system under pressure is a key issue for Keith Williams. How do we make those trade-offs both in real time and at a policy level in a way that focuses on end users?

What can we do for ourselves to incentivise all parties are aligned to deliver for end users and taxpayers alike? And thirdly, how should we foster behaviours that mean that we work together even when the going gets tough.

It would be oh so easy to wait for Keith Williams to come up and fix our problems for us. We don't have that time. If you think that there's going to be a miraculous piece of primary legislation through Parliament in 2020 to transform our railways then I suspect you've been out of the country for the last two years. My prediction is that we're not going to get primary legislation to change the way we're structured probably for another four years, if then. And then by the time that's gone through Parliament and been enacted, probably another two years. Are we prepared to wait six years for somebody else to tell us how to run our railways more effectively? Or are we prepared to work together to identify the issues, to change our behaviours, to set aside some of our prejudices and deliver what passengers and freight users really want?

Thank you.