HOUSE OF COMMONS

Transport Committee

Oral evidence: Rail investment pipelines: ending boom and bust, HC 575

Wednesday 18 June 2025

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Watch the meeting

Members present: Ruth Cadbury (Chair); Steff Aquarone; Catherine Atkinson; Alex Mayer.

Questions 172–193

Witnesses

I: Neil Robertson, Chief Executive, National Skills Academy for Rail; Jonathan Spruce, Chair, Policy and External Affairs Committee, Institution of Civil Engineers; Lydia Amarquaye, Education and Policy Skills Leader, Institution of Mechanical Engineers; and Stephen Barber, Chief Executive, Permanent Way Institution.

Written evidence from witnesses:

- National Skills Academy for Rail
- Institution of Civil Engineers
- Institution of Mechanical Engineers

Examination of witnesses

Witnesses: Neil Robertson, Jonathan Spruce, Lydia Amarquaye and Stephen Barber.

Chair: Welcome to the third session of our inquiry into rail investment pipelines. Today's session will focus on workforce planning and skills development in the rail sector, and how they underpin and inform the development of stable and effective rail investment pipelines. In our first panel, we will hear from representatives of professional associations. In our second panel, we will hear from trade union officials. Could the first panel of witnesses please introduce themselves?

Stephen Barber: I am Stephen Barber. I am the chief executive of the Permanent Way Institution, which is a learned society first established in 1884. We became a professional engineering institution in 2019. We have just over 4,000 individual members and just under 100 corporate and heritage company members.

Lydia Amarquaye: Good morning. I am Lydia Amarquaye. I am the education and skills policy lead at the Institution of Mechanical Engineers. It is a professional engineering institution made up of over 110,000 members across the globe, and has over 5,000 members in the railway industry.

Jonathan Spruce: Good morning all. My name is Jonathan Spruce. I am the trustee for policy and external affairs at the Institution of Civil Engineers. We represent about 98,000 engineers globally. In my day job I am a divisional director for transport at Stantec, which is a global infrastructure organisation.

Neil Robertson: Good morning. I am Neil Robertson, chief executive of the National Skills Academy for Rail, an independent, not-for-profit body set up by Government and industry together about 15 years ago. We work particularly on data, quality assurance, designing apprenticeships and creating pathways into the rail industry for young people and for diversity.

Q172 **Chair:** Thank you. I should have said that people should feel free to take jackets off, given the heat. That is perfectly acceptable.

I will ask each of you this in turn; it would be preferable if you don't repeat things, but if you have anything to add to what the previous person said, please do. What is the relationship between investment in railway infrastructure and railway assets and the development of skills in the rail supply workforce?

Neil Robertson: There is a direct relationship. We help the supply chain with workforce planning. They very much see the need to build capability and capacity. If there is uncertainty in the supply of work, it significantly reduces their training. To quantify that a bit, to help you to understand, we are only training about half the number of people we should be training. That is significantly more than we used to train, but it is still only about half. For further quantification, the forward business confidence of a supply chain company is typically 11 to 18 months. The return on investment for a level 3 apprenticeship—our bread and butter apprenticeship, if you like—is three years. So why would you?

Jonathan Spruce: Neil is right that certainty is one of the biggest factors. There is also credibility of the pipeline. It has to be a credible pipeline. For example, the current rail network enhancements pipeline has not been updated for over three years. It is a pdf on the gov.uk website. That in itself is certain, but it is the credibility and the stability that are important.

It is linked to cross-departmental, long-term objectives. Rail investment is an infrastructure investment. It is a community investment. It is a transformational economic investment. It crosses Government Departments. As well as its owning Department, the Department for Transport, it should be fixed to long-term Government objectives around skills, environmental enhancement, economic growth and housing, and seen in that wider context. It is credibility, stability and certainty.

Lydia Amarquaye: The only thing I would add is innovation. When you require innovation in the rail industry, you need a skilled workforce to meet those requirements.

Stephen Barber: I don't have anything to add to that quite comprehensive response.

Q173 **Chair:** In a pipeline of projects, how far ahead does industry need to see to ensure that its workforce are prepared?

Stephen Barber: That reflects back to the point about credibility. You will appreciate that in the rail industry, investment decisions are taken and then untaken. If you are in the supply chain, you have to think very carefully about how secure that forward look is. It comes back to the credibility point. It does not take very long to destroy that confidence.

We are here talking about a skills shortage. In parallel with that, at the moment, companies are laying off people because work is drying up. What sort of horizon and how much certainty can we offer? It also comes back to the point about transport strategy, or rail investment strategy, which is a subset of transport strategy. It would be nice to have one. We have to become credible to get people to invest.

Lydia Amarquaye: It is what Neil said earlier about the training pipeline: when we think about investment, we need to make sure that we are thinking about having the right people in place to deliver it. If the training is going to take three years, you need to think further ahead to meet that need.

Jonathan Spruce: Perhaps I could bring a personal perspective to this. As a company, Stantec is now already planning its graduate programme for September 2026 and September 2027. We are 14 to 15 months and then 27 months ahead of what that graduate recruitment programme looks like. In a multidisciplinary consulting organisation, that is our planning horizon.

There is the idea about who delivers some of the key infrastructure in rail. It seems a bit trite to say it, but the people who deliver it are not sitting in this room. They are sitting in secondary schools or primary schools. It is about visibility of the industry being really exciting for a whole range of people of diversity of gender, ethnicity and talent. It is about setting that out and thinking that that is a 15-year pipeline. The delivery of that 15-year pipeline will be apprentices who are today in primary school.

Neil Robertson: Three years is how far ahead people need to see. There are a couple of other arrangements from other sectors. I used to have a similar role in energy and utilities, which also have control periods and have faced the same question.

There are a couple of things that are worth drawing to the Committee's attention. First, to mitigate the risk we are describing, companies were given four-plus-four-year contracts, so effectively an eight-year contract with a break clause. They were then incentivised to make a lot of investments in skills and in innovation in the first part of that. That is one thing: contracting mechanisms with longer-term contracts, with break points to allow appropriate political and regulatory action.

The second thing is regulation itself. The way that the rail industry is regulated does not help the clients to incentivise their supply chain, whereas the regulatory mechanisms in other sectors do.

Chair: Which sectors?

Neil Robertson: Water and energy especially. I have three examples. The contracts for difference in energy have been a fantastic mechanism. We have grown a whole new industry and a whole new supply chain and capacity through those 15-year contracts that the Government did, working with regulation. Another example was incentivisation around price. The water sector's prices—not the flavour of the month in many ways—have come down because the regulator said so. They were given five years to bring the price down.

The consequences of what we are talking about here are very high levels of wage inflation, which we measure. Let's say that it is 11% per year wage inflation; as half the cost of a project is skills and people, you have an over 5% per annum compound increase in cost. That is a cost. If you treat it as a real cost that you are responsible for, you have to do something about it at the regulatory level. There is a role for regulation.

Perhaps the third area, which we have partly used, and we can use more—again it is a mitigation—is procurement mandates. That is where a contractor would be told, “If you win this work, you will train this number of apprentices.” They were invented by Transport for London in 2007. HS2 has done a fabulous job at implementing them, and has done a great job of taking lots of people into work who were previously workless. With various changes in the way things have been structured in the main line railway, it has not been such a priority. I notice that it is being considered that it would be encouraged further in the infrastructure strategy. I strongly encourage that. It is a real way of mitigating the risk.

Chair: Hopefully, we will come on to the mechanics later.

Q174 **Catherine Atkinson:** I am very interested in procurement mandates, but can I clarify something? You started your answer by saying that you need three-year certainty, but you explained that the actual time it takes to get the qualification is three years, so people will only be qualified at the end of that three-year period. You were also then talking about the benefits of looking at 15 years. While I appreciate the position of Mr Barber saying we have to balance credibility versus being able to allow for planning into the future, where would you draw the line between three years and 15 years in terms of actually allowing people to prepare for their workforce? What is the right period of time that we should be looking at?

Neil Robertson: I think somewhere in the middle. I gave the example of the four-plus-four-year contracts. They provably drove investment, skills and innovation. Three years is a minimum, so it should definitely be more. Fifteen is a luxury, but it allows for much bigger investments in other kinds of innovation or longer term. While it takes three years to train an apprentice, my colleagues here will tell you that at that moment they are useful but not necessarily a skilled technician. A skilled signalling technician takes eight to 10 years to train. Colleagues were talking about losing them from the industry to other sectors.

There is a longer-term gain as well. The way we do that just now is to keep those longer-term people often on short-term contracts. That is expensive and means they move very quickly.

Q175 **Chair:** We are trying to understand whether there is a difference. We have had everything from three years to 15 years. How important is it to have clarity about the types of assets or enhancements that are being invested in, to prepare the workforce accordingly? Is there a significant difference in the skills needed, say, to build high speed versus conventional rail, or delivering electrification versus signalling enhancements?

Stephen Barber: The short answer is yes. Touching back on the contract point, it is not just the length of the contract; it is visibility on volumes. Minimum guaranteed volumes would be really helpful because that gives you some idea of what scale of work is coming.

It is interesting. I don't know whether you have had a similar discussion with the Department about the way the roads programme is managed. National Highways seems able to manage a supply chain somewhat more effectively than the rail industry does. It does not have quite the same problem with skills and the variability of workload that the railway industry does.

The difference in skills between the signalling technician, the electrification engineer or technician and the track technician is very different, as is the specificity to the industry. If you want to build more bridges or embankments, there is quite a large pool of contractors and engineers out in the general construction world who can apply their skills. There are certain railway specialist bits and pieces, but they can generally apply their skills to those areas. If you look particularly at electrification, signalling and to some extent track, you are looking at specialist skills that have nowhere else to go. You can't swap them about within the industry, so you need to understand the profile of the workload within those broad specialist disciplines particularly.

Q176 **Chair:** That is quite logical. What is the overriding challenge in building and maintaining the skills base in the rail supply workforce at present?

Neil Robertson: We can look ahead 10 years, and we do look ahead, but at the level of the contractor who says, "I will take on 100 people," they have to carry the risk. That is what the private sector is for. It is there to take risks. That is why we do not put everything in the public sector. An element of that is appropriate, but it has reached much higher levels, or deeper troughs, depending on where you are on that wave, than usual. It is worse than usual. When you have exceptional variation, you get lower confidence, as my colleagues have all said.

Confidence is the right word. I talk to companies and say, "We have a service where we put apprenticeships in." They say, "Yeah, we'd normally take 10, but we'll take two because we are so uncertain." It is about confidence. The answer to that is partly about planning. Remember, it is a five-year settlement. How we plan can really help us with that. There are things we can do within the current regulatory mechanism that make things better, but they are not incentivised in the same way. The leadership of the railway has often been incentivised on other issues, but less so on this one. It is possible, just by the change of incentivisation and with the future new arrangements, that it could be a higher priority—we hope.

Lydia Amarquaye: The other issue is an ageing workforce. We know overall in rail that—I cannot remember the stat now—

Chair: I think we have figures on that.

Lydia Amarquaye: We need to think about how we attract people into the industry. At IMechE, we run a challenge called the railway challenge, which is for university students to get experience of understanding what happens in rail. There are some things that can be done, but overall we know that there is an engineering shortage. How we incentivise or encourage young people into engineering would help with some of the issues.

Stephen Barber: The key for the specialist disciplines is having consistency of workload so that you have the same volume in design, in construction and in conceptual design. Those numbers should be consistent year on year, and should be tied back to asset condition. You are actually attempting to smooth out the big variations in demand, because that gives you the most efficient delivery in the end.

Jonathan Spruce: There is also a slightly wider issue about making the industry attractive when there are lots of other things that young people can do. As well as setting out certainty, it is about credibility—that it is something that people would want to be in and want to do—when there are lots of other things going on.

It is not just about an electrification, a piece of ballast or a track. It is about affecting a community and bringing people into the workforce who can help to deliver really good and well-designed infrastructure that works with the community. That involves a lot of softer skills that would be much more technologically focused than we have had in the past. It is about setting that out collectively as something to bring people into the industry.

It is also how we talk about the industry. Today's news in the Secretary of State's statement this afternoon about HS2 will be quite negative in some ways. It is absolutely right that we should understand what has happened there and learn lessons. As Neil said, HS2 has done some fantastic work with training apprentices. There will be some people who have worked on that job who are set for life. We forget that. It is all about some of the negativity. Actually, we should celebrate the positive effect that that job has had on a lot of people's lives, and what that can mean for our industry. There is a little bit about how we sometimes talk about it, and that is a collective view.

Q177 **Steff Aquarone:** I have a few different questions around transparency and certainty. I will talk about the control period in a moment. Neil, you have already given some answers as to what you would like to see changed. Let me put a challenge to you. The two big questions are about whether there are the people to do the work if the Government decide to do some rail stuff and, from your perspective as people involved in the training of the workforce, whether there are people to do the training and make sure people have jobs to go to. Isn't it also, to some extent, down to industry to prepare better and forecast the boom and bust? Let's assume that every decision was followed through, and every timetable was executed as planned. There are still going to be peaks and troughs. I put it to you that there is a job for industry to do a bit more prediction.

Neil Robertson: Perhaps. We do a lot of prediction and data for industry. It is quite reliable to predict what work will happen and how many people we need. It is much harder to predict where and which company will have it.

You could say, "What is the role of the private sector? It is to take risk and grow market share, so I will invest." That would be the normal business way of doing it. It is a great question. Why doesn't that happen as much as it should? It happens, but not as much as it should. I think it is partly because of the exceptional boom and bust, but it is also possible—we reflect on this at something called the Rail Supply Group—that we have a slight sense of entitlement in the supply chain.

There is a slight risk of language in the creation of GBR, when we talk about "guiding minds" and "directing minds". What we cannot create is a situation where we infantilise the supply chain into little chicks waiting for food. I suspect that is what is behind your question. There is a tiny element of that just now, but instead of blaming people for the current situation, how could we incentivise them differently? The same companies that perhaps have less of a risk-taking attitude are taking a massive risk in other adjacent sectors. It is possible. It is not to do with the structure of the supply chain.

On the second point around transparency—this was referred to earlier—there is the decision to take on an apprentice. I take on an electrification apprentice who will be ready in three years' time and will be useful from one and a half years. There needs to be precision around the planning. You might say that they should plan for a range of scenarios. That is true, but ultimately you have to have work. The sector are very responsible people. I try to get them to be a bit more risk taking, but the thing that they are most worried about is, "What if we don't have work? I don't want that person's mother coming down and saying that I'm laying somebody off." That is why we have introduced a new mechanism where NSAR employs them, to de-risk it. It was a DFE scheme, actually. It was a good scheme called FJAA and was a way of de-risking the investment. There are other ways of de-risking the investment that we have not yet explored.

Jonathan Spruce: You are absolutely right that we have a duty to work with that. Again, the industry can only work with the level of information that we get. I said at the start that a pipeline is good, but it has to be credible and it has to be adaptive. When that pipeline is published, as it should be with the 10-year infrastructure strategy, industry can think about how that looks and plot it out.

When changes happen to the pipeline, if those changes are communicated, industry can then change and adapt with them. It is an iterative process between Government and industry. What has tended to happen is that the pipeline has been published and it just sits there, static, and then announcements are made, changes happen, and schemes are in and schemes are out. The industry is left chasing that a little bit. It is about the level of information and adaption, and the relationship that industry would need. Yes, you are right that we have a duty to do it and, given the information, we can do it. If it is just a static—say, a pdf on a gov.uk website that does not change—we are chasing our tails to react to it.

Lydia Amarquaye: Data is important. Data comes from Government plans and things like that. If the information is available for businesses to consider what is happening, that is really important. We are in a technological age where things are advancing faster than previously. The data is useful, but there have to be mitigations around it to support that.

Steff Aquarone: That is interesting. You are answering a lot of my other questions as we go along.

Stephen Barber: Industry is willing to predict against a reasonably stable decision-making process. For better or worse in this country, we do not appear to have cross-party consensus on how transport should be funded or what the railway network is for. That translates through into changed decisions and changed priorities.

A bit of the industry I know reasonably well, dealing with electrification, has been electrifying the midland main line. The expectation, and the prediction that the companies involved made, was that that would roll on and there might be some minor dips, but broadly that workload would continue. It has not. They did their best. They predicted, but the industry has just recently laid off about 180 people from those disciplines. They predicted—they had a go. Spending reviews have changed Government priorities, the and electrification of the midland main line no longer appears to be anywhere near the top of the heap.

Industry will do it, but we come back to the point about confidence all the time. You need a relationship between industry and client. If Government are the client, as they appear to be for major investments, there needs to be some sort of trusting relationship between the industry and Government so that nasty surprises do not appear and destroy confidence and create unwillingness to predict.

It is quite interesting that some of the electrification companies have laid some people off but they are now looking at Ireland. A big electrification programme has been launched in Ireland. One of the things the Irish Parliament has done is to emphasise that it is a cross-party priority. Even if the Government change colour, there will be a continued commitment to the Irish electrification programme and the Dublin suburban area network expansion. That is hugely valuable to the supply chain. People will invest on that without a guarantee of winning a contract. They will speculate and predict, as long as they have confidence that there is something to underpin their prediction.

Q178 **Steff Aquarone:** Do you think the Government take into account workforce considerations when announcing enhancement projects?

Lydia Amarquaye: Overall, there probably isn't as much workforce planning within Government as we would like to see. We have been speaking about the industrial strategy. The key thing for us underpinning all of that is the workforce. We need engineers, and we need engineers with the right skills. Overall, there has not really been an appreciation of the number of people and the workforce skills needed to underpin any of the work that has been planned. I know that there have been announcements about training in construction and in other industries, but there has to be a wider strategy around that. As I say, the professional engineering institutions have called for an engineering technology workforce strategy so that the planning can be in place.

Steff Aquarone: Do you want to build on that, Jonathan?

Jonathan Spruce: We drop down into our silos very quickly: the rail workforce, the highways workforce or the building workforce. This is where there is an issue across Government.

If the Government's programme is a decade of national renewal, is it an economic programme in a 10-year infrastructure strategy that we are going to see tomorrow? What is the holistic set of skills needed to deliver that infrastructure strategy and that decade of national renewal? It is not necessarily what the rail skills are or what the building skills are. What is the holistic set of skills? I think that partly answers your question. If we can do it at that level, then as peaks and troughs happen across road or rail you can flex skills and move things around.

To come back to the point, if you are trying to make a young person excited about being part of transformational change, doing it on that sort of scale is where they will say, "Yes, I want to be part of that. I want to contribute to that." You then bring in the wide range of skills and the diversity that we absolutely need.

Neil Robertson: The Government undoubtedly do. It was a feature of contracts for difference, under the coalition agreement with Lib Dem leadership. The previous Government used different terms for it and didn't always hit on exactly what it was, but levelling up was a consistent priority. HS2, the Levenmouth line and the Northumberland line were all signed off beyond the Green Book because of the social value.

Railway is about the third best job-creation scheme you can do if you are the Government. The Treasury understands that, but there are better things. Advanced manufacturing is one example. There is a lot the railway could do to move us up that league table; we have talked about the structural things today. I think HS2 has been one of the best job-creation schemes we have done for a while. It is a shame it was not a bit further north, where we needed a bit more of that, but that is a political judgment.

We have heard a lot about the Green Book, and we welcome a way of looking at the Green Book. The costs of having lots of unemployed people are very high. It is much cheaper to train than pay wage inflation, so there is a double business case for it.

Q179 **Steff Aquarone:** Does the stop-start actually make it more expensive, or is it just suppressing investment appetite and creating capacity problems?

Stephen Barber: Hugely so with demobilisation and mobilisation. To go back to the midland main line example, it is estimated that with a three-year break, effectively, you lose your workforce and then you have to recreate it. It is going to be £50 million to £70 million, which would not be cost incurred on a continuing project.

Lydia Amarquaye: It creates a false wage inflation as well, where key skills are required in different areas. It will definitely affect that.

Q180 **Steff Aquarone:** Thinking back to the control period and the data that you mentioned, Lydia—Neil talked earlier about some of the changes you would want to see—are there any other pet changes to the control periods that we have not heard so far that might help to address some of these issues?

Stephen Barber: Some element of rolling predictability in control periods. Historically, at least in the rail industry, control periods tend to be rather humped. There is a mobilisation period at the beginning, high volume delivery in the middle, and then it drops off in the final year of the control period. You get that effect. It would be really good if, in year three of a five-year control period, you could start to see what years one and two of the next control period might look like. That would give a bit of confidence and allow client organisations like Network Rail to actually let contracts over the end of control periods, so that we don't end up with a hiatus of workload in the vacant space where one control period ends and another one starts.

Neil Robertson: Control periods are part of a wider regulatory mechanism. I think the control period is reasonable. It is similar to other sectors. I agree with the comments made by my colleague about some visibility; you can look either side of that. Perhaps the Committee could look at the wider regulatory aspects, so that it is part of a regulated regime. The regulator has done a superb job on safety—an outstanding, world-class job—but on the economic regulation of the railway, perhaps less so.

Other regulators that operate in the public sector—dare I say Ofsted—create a fairly meaningful regulatory regime that has an impact. It could be the case that we could strengthen the economic aspects. I note that in the current consultation it might be going a bit the other way. That just leaves Government with a bigger job to do. Somebody ought to strengthen economic regulation in the railway. You would hope that GBR would apply some of that to itself, but it is not the whole industry. TfL and others have their different mechanisms. There is a role for wider economic regulation that creates better incentives.

The numeric answer to your question is 30%. Wage inflation is adding 30% to the cost of most rail investments.

Jonathan Spruce: I absolutely endorse Stephen's thinking about the rolling nature and adaptive pipelines. It also depends on different levels of delivery. In an increasingly devolutionary environment, giving certainty to mayoral authorities for five years for smaller-scale improvements and new stations, like one I am involved with in Rotherham at the moment, or something like that, is all that is needed. The certainty to plan for the five-year period and to take forward small-scale improvements that can be quite transformational locally is good enough and fine, but not when we are talking about bigger projects.

It is not necessarily one size fits all. As Neil said, the control period is a regulatory issue and a regulatory thing, but if we are talking about a proper, grown-up relationship between client and industry and about an adaptive pipeline, we should be able to flex depending on circumstances. It is all about the outcome you are trying to achieve and how you work the system best to get that outcome.

Steff Aquarone: I can definitely relate to local projects with high-value impact on communities, from a place where I stood in a previous election. It is no longer relevant to me, but it is still relevant to them. Lydia, are there any other pet things that you want to see done to the control period?

Lydia Amarquaye: I guess it is about an appreciation of other Government projects, whether nuclear, defence or other things like that. The railway industry will be affected by that. Whether it is part of the rolling review or the set control period, there has to be an appreciation of other impacts on the railway industry.

Q181 **Steff Aquarone:** Sure. That affects workforce, concrete demand and all that sort of stuff. It is very interesting. My last question goes back to that pdf that sits on the Government website. In the very short term, what difference would it make just to update that? Is that enough to give us a bit more certainty? What is the role of the RNEP in the short term?

Jonathan Spruce: We are expecting, as part of the 10-year infrastructure strategy, a new adaptive pipeline. I think the industry would welcome that and look forward to seeing it. That is a major step forward.

How could you take the process forward to be more devolutionary? Would you be looking for mayoral combined authorities to have a similar pipeline for their five-year transport for city region programmes? Would you be looking for the devolved nations to have something similar as well? What is published tomorrow and in the pipeline that follows could well form a template for us to work with. Anything that is better than three and a half years old would be good at this moment in time.

Stephen Barber: Whatever you publish will have an effect, dependent on when the spend is going to happen. If you are talking about publishing something that says we are going to spend in three or five years' time, that is not going to make any immediate change. There is lots of good news about what is going to be spent on east-west rail or HS2, but they are quite a few years away. Companies are not going to invest in a workforce on the basis that we then leave them sitting around doing nothing for four or five years, waiting for east-west rail and HS2. It would be good to have some spend that is next year or the year after, which would give people confidence to retain the workforce or, indeed, take on apprentices and build a workforce.

Neil Robertson: It is valuable but not sufficient. We have got out of the habit of taking local people from local communities and giving them apprenticeships. We have increased the number of apprenticeships, but it has been with a push. It is not just in the rail industry. We have got out of the habit of it. We became addicted to earnest, hard-working Europeans, who have done a fabulous job for us.

If you are an employer, think about it: why would you reach into a hard-pressed community for a slightly less shiny candidate when all the incentives for training are on success rates? I notice that the Government are doing this in terms of foundation apprenticeships in Skills England. There is something important in that, but culturally we have to get back into the habit of taking local youngsters—hopefully, from a much more diverse set of backgrounds than we do now—taking the extra hassle, and being incentivised to do that through proper apprenticeship funding and other wider incentives. We have disincentivised people from doing that. It is entirely possible that it could be fully re-incentivised.

However, the signs are positive. I am optimistic, as you can perhaps tell. It is a well-understood question. We are now into the detail. We all agree on that—or most of us do—so what can we do on Monday morning to make it a bit sharper and a bit better?

Chair: I apologise to all attendees about our numbers today. It is a combination of people being on Bill Committees, ministerial visits to constituencies, and so on. It is not for lack of enthusiasm and interest in the topic. I hope the witnesses and those watching will understand, just for this week.

Q182 **Catherine Atkinson:** Given our workforce challenges—we have seen data on a third of the workforce being 50 or over and fewer than 10% being under 30—how important is it to have a more diverse workforce for the long-term sustainability of the industry?

Neil Robertson: Obviously, it is important, yes, but why is it? We are obviously leaving a lot of talent behind. The job of building and running the railways is getting harder. We used to be a level 2 industry. Going way back, we were a level 1 industry. We are now a level 2.5. We are going to be a level 3 before you know it. Jobs get more complex, so we need more talent to help us to do them.

We will not save money or modernise without technology, which requires a new group of people coming into the rail industry. There are real opportunities for diversity within that, especially neurodiversity, given the roles in data and those kinds of things. We have doubled the number of women in the industry from a very low base to a quite low figure, but we have doubled it. It is a settled question now in people's practice that we will continue to do that. Everybody here will have examples. There is still a long way to go with that. There are other areas of representation that remain stubbornly low, particularly around ethnicity.

It is often said that as well as introducing new technology, we want to have more people using the trains. It is often said that having people who represent the customers would be a good thing. I think we are on the journey. There is a lot more we can do, particularly in the digital space, to help us with that diversity. There are practical issues. I am a board member of Women in Rail. We support lots of young women who continue to face challenges in the day to day. Those are structural challenges in the railway around facilities, expectations and shifts. I think we can be more flexible. I am personally hopeful that the new structures that are emerging will help us with that. I sense it being a priority.

Jonathan Spruce: The other thing to look at is the outcomes and the communities. The trans-Pennine route upgrade is a huge programme in the north of England. They employ about 5,000 people. I was talking to Jo Griffiths last week, and at the moment 85% are recruited within 40 miles of the route. There is sustainability in people being invested in their area. If we are looking at diversity of ethnicity, gender or economic inactivity, some of those investments will be in locations where you want local people to be involved. There is also spin-off for local businesses. TRU aims to use 25% of its supply chain in local businesses, which has other benefits for people getting into work, because the investment is taking place in their area.

We hone it down quite quickly to, "Is it rail skills?" It is about the impact and the outcomes. If we look at that as a starting point for the workforce in totality, and the communities where there is an impact, it is a much more interesting way to say, "We can really do something here about bringing people in, and getting real, long-term benefits from the investment that are not just the piece of infrastructure that is left behind." It is lasting benefit.

Lydia Amarquaye: To continue from that, I guess diversity of thought is big, when thinking about technology and how it is deployed. Generally, engineering is 14% female. I think that statistic is from two years ago, but it has not really changed in the last 10 years. To use an example from another sector, in the car industry a female test dummy was developed only a few years ago, so it is important to bring diversity of thought to the table when thinking about safety in rail.

There is also diversity in terms of people being at the required levels. We have spoken a lot about apprenticeships. We are talking about advancing technology, as well. That is a different level, where we look at the graduate system. There has to be diversity in the levels at which people are required to engage in the system.

Stephen Barber: I agree, particularly with opening up the talent pool. We need to go everywhere there is talent, and bring it into our industry.

Q183 **Catherine Atkinson:** Can I ask a specific question, Lydia? In your written evidence you say that the current shortage of engineers in the UK will be exacerbated by the Government's industrial strategy. Could you tell us more about why?

Lydia Amarquaye: We wrote evidence on the industrial strategy, and the main point we made was that engineering underpins a lot of the industrial strategy in many key growth areas. Be it advanced manufacturing or defence infrastructure, engineering underpins all those sectors. We still have a workforce issue with rail and nuclear and a lot of sectors, so if we need more people for the industrial strategy, that will be exacerbated. Overall, we have a shortage of 124,000 a year in engineering skills, and if we advance on that, we will have a further issue.

Q184 **Catherine Atkinson:** Yes, having a strategy means it is clear that we need more, but doesn't having one mean that we and industry can plan to identify and meet the shortfalls?

Lydia Amarquaye: Absolutely. What we found was that the industrial strategy barely mentioned engineering. Engineers were not seen as the key sector to support the industrial strategy. Yes, the strategy will provide support, but it is about appreciation that there is an issue and that things have to be put in place. A recent Universities UK report said there is a demand for STEM subjects in universities, but that the supply is low at this point because of university funding structures, and things like that. Where there is an understanding of the issues affecting people entering the sector to meet demand, the strategy can develop things further.

Neil Robertson: Maybe it is time to be radical. I see lots of hard work by responsible people in the industry to try to get more diversity, particularly on gender, in their shortlists and longlists. They try hard and still do not get the diversity they want. You look at them and think, "They're trying really hard and it's not moving the dial."

There is one thing where we see real potential. We love apprenticeships. They are a job, and are subject to employment law. If we say, "We'll only let women, or some other category, into these jobs," we are breaking the law; but there are pre-apprenticeships and work experience. I am being slightly smug, because I have two females on work experience in NSAR, who are here today, but don’t listen to my smugness; this is a structural point. What happens before apprenticeships now is a bit of a mess, and we are waiting for Skills England to tidy it up.

Local authorities understand it a bit better, I think, but in a more systematic pre-apprenticeship programme, with work experience, where we say that as we are very short of women, or young black men—we did a project in Walthamstow—or neurodiversity, or whatever, it is reasonable for us, given our requirements, to have a cohort of work experience that is all girls, and we will retain some of our apprenticeship recruitment for that group. They will not all get the jobs, but they will all have had a good work experience. Work experience, coupled with meaningful pre-apprenticeship programmes, is the only thing that is going to move the dial. If that sounds like positive action, I wouldn’t go so far as to say that, but it is certainly decisive action.

Q185 **Catherine Atkinson:** Are pre-apprenticeships early enough? My friend and constituency neighbour, Baggy Shanker, the MP for Derby South, is clear about the need to inspire people in primary school. You were talking earlier about the fact that the apprentices we need and will get in the future are already in primary school. Are we leaving it too late if we just talk about pre-apprenticeships? What more could be done sooner?

Neil Robertson: For me primary school is important, and we focus on that. NSAR runs something for the industry called Routes into Rail, which is a platform for encouraging that, and primary school is our second priority. Our first priority is the 14, 15 and 16-year-olds who are making decisions about where to go in the workforce, and looking at their subjects. I would say yes, but second to that group.

Lydia Amarquaye: There are things that can be done throughout the age ranges. At IMechE we think, with primaries, about inspiring and problem solving: what skills do you need to look at a problem and think about solving it? We do not necessarily talk about engineering or things like that.

In secondary school there are things that can be done in the curriculum. Design technology has seen a decline in interest over the last 10 years, and practicals in science have gone down as well. To understand what engineering is—obviously, it is not a subject in school—there are opportunities across the board to bring it into subjects. Even in geography we can talk about renewable energy and things like that. A lot of things can be done within the curriculum to get young people to think about where they can go with that.

Jonathan Spruce: There is definitely something more we can do at the GCSE decision-making level. That is quite key, because once you have made your decisions on GCSEs, you have kind of set a pathway.

I am thinking about Neil's point about work experience, or visits to organisations. We had some young people going round our London office yesterday. I'm a dinosaur and I have paper everywhere. I still print out and scribble on things—as an engineer I love to do it. They went past my desk and were like, "Yeah, no problem," but the guy next to me had some traffic modelling, with little cars running around, and they were fascinated: "What's happening? What's that doing?" They could see a real-world thing. It was almost like a computer game and they were straight on to it. If two or three of them take that away and think, "That's quite interesting; how can I find out more about it?", that hour when we had them round was really good.

It is about bringing more people into the industry and advertising what we do. Maybe that is what the industry needs to do: we need to showcase some of the new and exciting things we can do, that are not just paper and pencil-based, as we are used to.

Q186 **Alex Mayer:** Stephen, you said earlier that there was a lack of cross-party consensus, and we have heard evidence about the need for more public support for investments, to help to insulate a pipeline from political changes. How might that look? How do you make it happen?

Stephen Barber: To be perfectly honest, I'm not sure. I might turn the question back to the politicians, because they are the people who are driving some of this. There is an issue of transport strategy in the country as a whole, certainly in England, because for the last 60 years or so our default transport strategy, other than in major cities, has been, "Get in your car." We need to try to work across the political spectrum at some vision of what transport strategy in this country looks like and, within that, the purpose of railways.

There are some reasonable examples in Switzerland, Austria and now Ireland—all being well—where they have been pursuing consistent transport strategies despite changes in political governance. I don't know how to make it happen. I wish I did, because I would wave my magic wand. I encourage politicians to go and have a look at what they do in Switzerland, Italy and Austria, and why it seems to work.

Neil Robertson: I have a few thoughts. I would take it away from the politicians. The politicians should set the direction. I think there would be very few who would disagree with any of the things we have been talking about today. I would depoliticise it and make it calm and cool.

Economically, longer-term contracts—contracts for difference-type models—have survived four different Governments and three different parties. PPP—you can call it by another name, but we have moved on. We can think about slightly stronger ones. On economic regulation, the high-level imperatives are set. There is something about local that I am interested in, because we are trying to devolve more, aren't we? Local authorities have a good understanding of need, and that does not change. I used to work in regional economic development, and it did not really matter who the political leadership was at the time. The issues were still the same. I am optimistic that with some devolution we can get the focus on where the local opportunities and challenges are.

The last area is one that I mentioned earlier around education and skills policy. We have all agreed, helpfully, that apprenticeships are a priority. That has been consistent across four Governments, but the pre-apprenticeship funding is a disaster and could be much stronger.

Jonathan Spruce: The Government have established the new National Infrastructure and Service Transformation Authority. There is potentially a role for NISTA, as it grows and finds its feet, to own the strategy and challenge Government and industry—to be the conduit between the Government of the day and industry—about the infrastructure pipeline itself. As NISTA grows into its role, that might be something we could look to do.

Stephen Barber: I disagree strongly with Neil about moving strategy out of politics. We spend a huge amount of public money in this country, as most developed nations do, on infrastructure and transport, both providing it and maintaining it. It is right that the oversight of that spend and the direction of that spend is a political matter and not a thing that the Treasury sorts out behind closed doors.

Q187 **Alex Mayer:** Is there really a lack of political consensus? East-west rail has been talked about since before the millennium. Twenty-five years ago groups of local authorities came together to say they wanted it, and in 2011 the Government backed it. We have been through loads of different types of Government. It is still sort of there. Is it really political consensus that you are worried about, or is just getting on and doing it the issue?

Neil Robertson: Get on and do it, yes. I agree with you completely. Wherever you look, there is consensus around what needs to be done. There are sensible people advising locally and the evidence is there. On this topic politics is not the problem.

Q188 **Alex Mayer:** Thank you; we are always happy when politics isn't the problem. You mentioned that some other countries do this better, and you mentioned the concept of more regional devolution. Are there any countries that do regional rail policy well?

Neil Robertson: The French—French high-speed rail. You didn't expect me to say that. The mayors, or whatever they are called in France—the regional political leads—all want high-speed rail to come to their patch, but you have lots of colleagues over the road who spend a lot of time trying not to have high-speed rail on their patch. The big difference is that those mayors, or whatever they are called, are very confident that when the line comes through their patch, people on their patch will get the work. Whether that is compliant with European procurement rules is a separate question. They are very confident that the work will come to them: "Please can I have the high-speed line through here, because the local civil engineers will be the suppliers to it, and probably the local manufacturers."

We are not now, for whatever reason, part of all that European stuff, so we can be a bit more ambitious around local content in our procurement strategies. We have talked a little bit about procurement centres, so you can cement that. But the bottom line is that the assumption of those people is, "We'll get the jobs."

Jonathan Spruce: It is a much larger country, with some states that are as big as the UK, but Australia has a very clear link between its national infrastructure strategy and that of the states. Skills strategies and requirements flow from that. What that goes back to is that it doesn't straightaway drop into a rail skill or a mining skill; it is about what infrastructure the states need and what skills are needed to deliver that infrastructure.

In Australia, they had a similar thing with rail skills. They had a national rail action plan, but it came from a clear link to national infrastructure strategy, state-wide infrastructure and what was needed; it was that clear link through. That clarity of link through helps industry; it also helps to articulate the why. Why are people involved in it? They are involved in transforming their state and making it a more prosperous and equal and better place to be. That is the encouragement to come into the industry.

Q189 **Alex Mayer:** Excellent. Moving on a bit, how do you think that a stable investment pipeline would improve productivity and efficiency in rail projects?

Neil Robertson: I did a project on this for DFT, so I feel qualified to comment. The answer is half of the productivity issue. We are probably 30% less productive than we should be on the railway. There are six things you need to do to drive productivity. Two of them are to do with people, and that is probably about half the value. I mentioned earlier the return on investment. The return on investment for nearly all the investments or activities that you would want to do to drive productivity—we have a detailed list with the ROIs next to them that I could suggest to you—is three years. For almost everything you need to do to drive productivity, you get the payback after three years.

To give an example from another sector, the price of offshore wind used to be £150 and it is now £40 because the mechanism—a 15-year mechanism in that case—allowed people to invest. In energy, they have taken 10% to 15% off their unit costs with the four-plus-four-year contracts. In water, they have done the same, by making investments. Productivity is always about investment. The environment, as we have heard, is less conducive, so to answer the question, if we can get forward business confidence in the supply chain to three years, most of the things we want to do to drive productivity should naturally happen.

Stephen Barber: Productivity growth comes from, as well as technology, having teams who have been given the opportunity to work better together. Productivity grows incrementally, as with the Japanese continuous improvement-type approach. If you then get to a hiatus and disband the team, when you recreate a team to kick off the work again you do not start from the level of productivity that you finished on with the old team. You start right back at the beginning, because they have to learn again. I don't think the industry is particularly good at keeping together teams that are good at what they do.

Q190 **Chair:** Thank you very much. Neil, you have mentioned economic regulation quite a lot. Could you explain what exactly the link is between economic regulation and the pipeline? Could you spell it out?

Neil Robertson: Those who spend the money would be more incentivised to create that pipeline if they were more sharply tasked with reducing unit costs, because with the wage inflation that is the consequence, and even the way we offer contracts to the supply chain, the Government take the risk on most things.

Q191 **Catherine Atkinson:** Jonathan, you gave Australia and its states as an example of determining the infrastructure needed and being able to determine the skills and workforce needed to deliver. I am pretty sure that the answer from you all will be, "Central," but what place should skills and workforce have in the development of the Government's overall rail strategy?

Jonathan Spruce: It comes back to what we said about iteration and a grown-up relationship between the client and the industry. Once Government set a direction for the investment pipeline and industry reacts to it, it is beholden on us to go back to Government and say, "This might be difficult," or, "This is needed." We need to get into that grown-up relationship between client and delivery at all levels. To date, that has been quite remote and static: "That's the pipeline; go deliver," and then, "It's all yours, guys." A more grown-up, interactive, iterative relationship would help.

Lydia Amarquaye: It has to be seen as one of the assets, as part of the process. With delivery there has to be an appreciation that the workforce has to come alongside that, so it is not just, "This is what we expect," but an understanding that this is how the delivery is going to happen and this is what is required to meet that. It is central that that is seen as one of the assets, as part of the delivery.

Jonathan Spruce: It is also where devolution plays a really big role—local area devolution, as more mayoral authorities look to get involved in local skills and attracting diversity, and dealing with economic inactivity. Picking that up, at that level, has a real role to play. The relationship between central Government, devolved government and industry works as a sort of grown-up conversation in a way it has not, really, in the past.

Q192 **Catherine Atkinson:** I declare an interest as a Derby MP, as the headquarters of Great British Railways is coming to Derby. What structural focus would you like to be placed on skills and workforce within GBR's organisation, when it is stood up? Does there need to be some sort of skills unit within GBR?

Neil Robertson: Skills are a means to an end, and the ends that we want are productivity, social value and safety. GBR should be incentivised, prioritised and tasked to focus on those. You will get training and skills as part of it, because you have to.

NSAR is an independent body. For three of the four things we do, the data is sitting in front of you. If GBR asked for that data, they would not get it. Most sectors have an independent skills body like NSAR to help them, so it is important that that continues. There is a very good training function within Network Rail just now, which presumably will transfer to GBR.

I think skills should be a priority incentivised through those other mechanisms, with strong local training. We also have 85 independent training providers scattered across the country, who suffer from the same problems that we have been discussing here, because they do not know who they are training next week. We have to fly people in from France to make small technical changes, because we do not have the specific skillsets.

The answer is yes. There isn't a national body that does not have skills as a priority. The problem is that if you make it just an HR priority it loses some of its focus, because it is about safety, money and social value.

The other thing that we have to remember with GBR—we share your excitement that it is going to Derby, and about the potential for it there—is that the industry is bigger than GBR. There are 250,000 people in the industry and there might be 100,000 in GBR, so what about the rest? That is why I keep talking about something that is central: the economic incentive that can apply to all the investments. That said, I would give us—the team that contributes to skills in the railway just now—a five out of 10. I think we can do a lot more with some right leadership, so yes, please.

Jonathan Spruce: I wouldn't necessarily like to pursue what GBR should do, but if I were in the transition board at the moment and I had my risk register, skills would be flashing red towards the top of it. I would want to know how, as an organisation and within the industry, we are going to address that.

Lydia Amarquaye: If something exists in GBR, it has to work alongside other departments. It is important that there is cross-collaboration, across Government, to understand the skills needs. We have Skills England, and there is a need to prioritise across the board an understanding of where railway skills are specifically required, and where deployment from Skills England is needed to meet those needs.

As to a skills department, there is a place for advocacy for railway skills, but apart from advocacy and making sure that there is a voice for skills within the railway, I don't know that there has to be a kind of overall workforce strategy from Government to meet all those needs.

Stephen Barber: The danger of creating something specific within GBR is that you then end up with a skills department saying one thing and a procurement department saying something else. You have to try to make skills development part of a mature procurement mechanism. If the incentives through procurement on the supply chain do not pay any attention to skills—if it is just, "Well, another one will turn up if we just keep letting contracts on a purely commercial or purely technical basis, or a combination of the two"—whatever the skills department is saying will have no impact, because commercial will fight it. We need alignment between technical or commercial procurement and people development.

Lydia Amarquaye: That is where there has been an issue with investment in skills in the past. It has not been seen as part of procurement or as part of the key investment in infrastructure. It has to have a place and a voice in the procurement process.

Q193 **Catherine Atkinson:** How can Government work with industry—you have talked about procurement being a part of that—to encourage entry into the rail sector? You talk about it going back and forth; what are the mechanisms?

Neil Robertson: The Government set up something called the Strategic Transport Apprenticeship Taskforce, under the DFT, which has enhanced some of those procurement mandates already, and set that as a priority for the arm's length bodies, including National Highways, that were mentioned earlier. It was a transport-wide thing. That is an example. I know from working with DFT that they are very interested in this topic, but you are right to ask the question. There isn't a mechanism just now specifically for that, other than devolving it. Procurement mandates are the most obvious thing, so I reinforce what colleagues have said about those, but there are other things around what you encourage and incentivise.

Let's give credit for what has happened so far. You will not see a press release about rail without somebody talking about apprenticeships. There has been a consistent focus on apprenticeships, so there is perhaps an opportunity to sharpen that. The new world is social value. To go back to my slightly loose language around taking the less shiny candidates, that is new. There is good will for that, but it will not happen without Government saying, "We expect social value, and this is what that means on Monday morning."

The current mandate says that for every £3 million of spend there must be one apprentice—we have hinted that that is not always adhered to, but it is the right kind of basis—or 2.5% of your staff should be in apprenticeships. Thirteen of the 14 train operating companies are now at that: 2.5% of their staff are in apprenticeships. We could nudge that up to 5%, or we could say, as we said for HS2, that 10% of the new jobs should go to someone from a disadvantaged background. We can say that tomorrow and make it happen the day after. It will happen slowly because generally there is positive good will for it, but Government could give it a shove.

Lydia Amarquaye: It is about removing any barriers to upskilling and bringing young people into the railway, wherever the inspiration is, and encouraging them to think about engineering and the sciences when it comes to their choices, or widening the choices at that stage to keep their options open. Where there are barriers within the skill system, Government can play a part in removing them.

Jonathan Spruce: It is probably a bit late now, but when the 10-year infrastructure strategy is published tomorrow, it would be great if alongside it there was a one-page fact sheet saying what it means for young people. That could be emailed to every headteacher of a secondary school across the country to give to their year 8 or 9 pupils to say, "When you make your GCSE choices, this is something you can do."

Chair: Thank you very much. Time is moving on. Thank you all for your evidence and the time you spent preparing for today. If there is anything you would like to add, please get it to us in writing as soon as possible. That brings our first panel to an end.