

Transport Committee – Wednesday 11 July 2018

Transcript of Item 6 - Future Rail in London

Caroline Pidgeon MBE AM (Chair): All right. Let us move on to our main item today, which is the future of rail in London. We have a fantastic panel of guests before us today to help us in our discussions on this. This is our second hearing and we have also been out and had a site visit looking at the Digital Railway. We met rail passenger groups yesterday and we have some further visits and meetings coming up.

Michèle Dix will be joining us at 11.00am. Michèle is the Managing Director for Crossrail 2. Welcome back, Geoff Hobbs, before the Committee. Geoff is Director of Public Service Transport Planning at Transport for London (TfL), but really one of the key people behind TfL Rail and the Overground. Welcome, Geoff. Paul Plummer is Chief Executive of the Rail Delivery Group (RDG). Thank you for coming along today. Mark Farrow is with us. Mark is Director of London Rail at Network Rail. Thank you for coming. Rupert Walker is Strategy and Planning Director (South) for Network Rail. Thank you so much for coming along today.

I will kick off with the first question. One of the challenges in the industry is how you forecast demand and how you plan the demand you are going to have for the rail services. We have seen the Office for Rail and Road recently reported a 2.1% fall in rail passenger journeys in London and the southeast over the last year. Why do you think we have seen that fall in rail demand? Who would like to open with that? Rupert?

Rupert Walker (Strategy and Planning Director (South), Network Rail): Thank you, Caroline. The amazing growth that we have seen in demand for rail travel over the last 20 years or so with rail passenger numbers doubling in 20 years - in fact, in London and the southeast they have doubled in the last 12 years - requires us to work together as transport organisations to plan really carefully for how we manage that growth. We are seeing the benefits of the planning that we did 15 or 20 years ago come out today in projects like Thameslink, Crossrail and the work we have done at Waterloo, where, within the next couple of years, we will be enabling another 90,000 passengers to get in and out of London in the peak hour. You are seeing the benefits of early and joint planning there.

As an industry, we work very closely to consider long-term passenger demand. We use the same models and so all of our work is based around the same modelling technique and the same framework for modelling, which is benchmarked internationally.

To address your point about the last couple of years, our forecasters generally look in the long term and so a change in any one or two years is not seen as a significant point. Yes, it affects the baseline of the modelling and will affect our forecasts in the longer term, but the change that we have seen in the last couple of years could be down to any one of a number of fairly short-term reasons: security, the way in which the economy is changing.

In the longer term, the modelling is based on things like housing, employment and population growth, and we see all of those things in the London context continuing to grow. Therefore, our forecast for growth, which estimates that within the next 20 years or so we expect to see a further 40% increase in passenger numbers, we believe is still very much valid.

Caroline Pidgeon MBE AM (Chair): Does anyone else want to come in on that? The Underground as well has seen some dip in passengers on other modes. Geoff, do you want to come in?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): Yes. I echo some of those points, but in the short run the change in Underground demand to negative year-on-year, certainly in 2017/18, you could correlate very closely with the start of the year last year, which correlates itself with the Westminster Bridge attack on 23 March [2017]. Notwithstanding the bulldog British spirit, there is a certain reluctance - certainly last summer we saw it - of the people coming in when they have some degree of discretion. Other sectors - the museum sector, the theatre sector, the cultural sector - saw some of the same things and that had a real and immediate impact. This is nothing new. We saw the same thing with other terrorist attacks. You see it elsewhere in other cities and countries which have suffered the same thing.

There is a reliability impact as well. It was not a good year, certainly on the National Rail side with Govia Thameslink Railway (GTR). You took evidence from them last month. That has an impact on public transport as a whole, particularly in and around central London, naturally enough. That is another, hopefully, short-run impact, but it is still working its way through.

Journey time matters. I am quite pleased to be able to say that in a perverse way in the sense that, if it did not, it meant that a lot of my forecasting models that I work on with Rupert would not be valid. In the short run, that is providing some degree of pain but, in the longer run, we expect some of the trends to re-engage. Some of them might be at a slower rate.

We are beginning to see, for example, the population expansion slow down - not go into reverse but slow down - by which I mean that from the period from 2012 onwards there were about 100,000 more Londoners a year and that has about halved. We have had the same number of babies; just migration has fallen somewhat, we think. There is some official data that supports that sort of thing.

There might be some economic stuff going on as well. It is always quite hard to tell because the Office for National Statistics publishes data but heavily revises them subsequently and so you only find out the level of jobs, say, 18 months in arrears of what is actually going on. In fact, organisations such as the Bank of England use passenger journeys as a leading indicator of what is happening in the economy, ironically. There is probably a little bit of that.

There is also something around, perhaps, travel behaviours. By this I mean the number of trips per person per day is beginning to fall a little bit. Again, this is not something that has emerged just this year. It is a long-run trend, but that could be for all sorts of reasons, some of them economic. Over the last few years, wages have not tended to outstrip inflation on the whole as they have done in previous years, but also technology.

Smart working: again, whilst not being a new phenomenon, more people are choosing to work at home. You see that as a much greater phenomenon on Fridays, for example, than you might do on other days of the week, but you also see people staying at home more. If Netflix is a good enough cover for the economists a week and a half ago, then it is good enough to have some sort of impact upon public transport demand, I dare say. Netflix is a few years old and has a steady impact along with all of these other factors and so I would not overemphasise it, but it is part of the multifaceted picture that is going on.

Caroline Pidgeon MBE AM (Chair): OK. Paul, would you agree with that? Is it almost a blip at the moment because discretionary travel is down and there is a change, or are lifestyles changing so much that you are going to have to look at your modelling again?

Paul Plummer (Chief Executive, Rail Delivery Group): Both, actually. What you have heard already highlights the complexity of some of these issues and the, inevitably, model-based approach when you are looking at the long term. You are looking at, potentially, changes in some underlying relationships. They need to be used with caution.

Therefore, what we are trying to do much more is a scenario-based approach to understand the potential range of scenarios in terms of the drivers of demand and what that could mean. Undoubtedly, there has been some softening of discretionary travel demand. Undoubtedly, there is some change in work patterns. One of the reasons we need to fundamentally look at the fares structure, for example, is because of that, which perhaps we will come on to later. That is a key thing.

At the end of it, though, in terms of the sorts of scenarios, that would mean that we do not need more capacity to enable our economy to grow, they seem quite unlikely. That is the key point to take out of it. It is sometimes quite confusing looking at some of the volume and ticket type data, for example, because you have to shift between ticket types and volumes and that sometimes distorts the data. When you see season ticket volumes reduce, it is partly people choosing different types of ticket as well as different travel patterns, partly because of underlying long-term trends and partly because of the short-term trends we have talked about. As I said, the key conclusion I take away is that it is implausible to think that we do not need more capacity to enable our economy.

Caroline Pidgeon MBE AM (Chair): What about the shift to cycling and walking? I appreciate not for necessarily - I do not know - zone 6 coming in; not everyone is fit enough or wants to cycle that. Actually, is that starting to take away from some of those shorter journeys and are you factoring that in as you look at modelling longer-term?

Paul Plummer (Chief Executive, Rail Delivery Group): I am sure that Geoff [Hobbs] will be more so. In terms of the main railway, in a sense, we see that as complementary rather than mainly substitution in terms of getting people to stations. For example, carparking space in many commuter stations is becoming the constraint. Therefore, having different ways of getting people to the stations is critical and more environmentally friendly and healthy ways as well.

Caroline Pidgeon MBE AM (Chair): Rupert, you mentioned at the beginning that the modelling that you use is used across the industry but you benchmark it internationally. Are there international examples of demand modelling that we should be looking to learn from? Are there other places where they are starting to adjust to this new way of living and working?

Rupert Walker (Strategy and Planning Director (South), Network Rail): You are absolutely right. We work together and sit on the Passenger Demand Forecasting Council, which is a group of people who are involved in passenger demand forecasting not just in this country but around the world. We use that environment to share our experiences and our learnings and benefit from how other people are doing it. There is no doubt that we can always learn from others' experiences and benefit from them and get better at what we do, but through our experiences with particularly France, Germany and Japan, we are seeing different ways of doing modelling, different approaches and building that into the way in which we forecast passenger demand.

Caroline Pidgeon MBE AM (Chair): France, Germany and Japan are perhaps leading the way on this internationally, would you say?

Rupert Walker (Strategy and Planning Director (South), Network Rail): Japan, certainly. In many areas, we have been sharing experiences with Japanese railways but France also in terms of their timetabling work.

Caroline Pidgeon MBE AM (Chair): That is very interesting. Are there any other thoughts from you on how demand for rail services will change going forward or do you think we are seeing the variation now and that is what you need to plan for?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): Certainly the history of the last few years is that we have under-forecast. We are now seeing something which we think is probably largely, but not completely, cyclical. We have under-forecast because population and employment levels have grown faster than expected. The models that Rupert and I use for the London area use things like RailPlan, which are based on London Plan forecasts. Within the London Plan, some of the most essential parts of the data are population and its distribution - that tells you a lot about where trips originate from - and employment - that tells you a lot about where trips end - but they are not the only factors. There are lots of others which affect it, tourism and car ownership and fares and service volume and all these sorts of things, but they are two very significant factors.

Both of those have overshot forecasts in the past. Take us back to 2001, if you will, and the forecasts then would have said that London's population would be a bit over 8 million. Actually, London is bigger than it has ever been in its entire history at about 8.7 million and that is a big reason for why the number of trips that we forecast has a bit undershot. At the moment, we are seeing some of the reverse things. Some of that will be cyclical.

The hardest bit in forecasting is always forecasting those tipping points and it might be that there are some more structural changes to the economy that are going on or, indeed, to travel behaviour or both. They are perfectly possible. There are some straws in the wind. There are all sorts of uncertainties. Economists always like to say that there is lots of uncertainty, which is a statement of the obvious because that is the future, but with Brexit there probably is, actually. For once, that is more than usually true. There are lots of those sorts of things which give one pause for thought.

However, I do agree with Paul that, on the balance of probabilities and based on scenarios, we still foresee significant growth in population, employment and how London will develop the Opportunity Areas - to use the jargon of the London Plan - building out and, therefore, a significant growth in public transport demand and transport demand more generally. Over that long run, notwithstanding this short-run impact, we will need to invest accordingly.

Caroline Pidgeon MBE AM (Chair): Shall we move on to looking at what we need to invest in? We are going to look now at London's future rail needs.

David Kurten AM: Good morning. Thanks for your answers. It is very interesting what you are saying about population growth and everything and population demand. If I could ask you: how do you think London's rail network needs to change and develop over the coming decades? Any of you can answer that question.

Rupert Walker (Strategy and Planning Director (South), Network Rail): Can I kick off and then the others can join in? We have been discussing growth. I explained briefly earlier on how we have seen the number of passengers double in the last 20 years and our response to that being projects like Thameslink,

Waterloo and Crossrail opening this year. Looking ahead and based on what we have just been discussing, there are a number of schemes which we feel are important.

Before I get into them, it is probably worth just describing the way in which we go about our planning because it is very much a joint process. Network Rail and TfL and the rest of the industry come together to consider where there are hotspots; in other words, where we are seeing demand for rail travel exceeding the capacity that is available. Then we, together, try to understand what sort of intervention is needed, whether it is more trains or longer trains or, ultimately, a change to the infrastructure, building new railway lines or changing the arrangement of those railway lines. Then, by understanding the relative benefits of different types of intervention, we can start to prioritise the projects that we would want to deliver and how these can help passengers and freight users of our railway.

Looking immediately ahead, just to give you some examples, we have a real focus on the Brighton Main Line. I know people have been experiencing real issues using that line over the last few months and years. One of the problems that it faces is the overcrowding on the trains, and the fact that there are more trains running on that line than ever before means that we need to do something. We are focusing particularly on trying to relieve the bottleneck around East Croydon to make more of the capacity that is available on the rest of the line. That in itself can help unlock commuter trains further into London. Other places that we are focusing on are, similarly, at Clapham Junction and the line out towards Woking and Basingstoke and also the West Anglia Main Line, where, for example, we are building a new station at Meridian Water funded by Enfield Council.

We have some really exciting schemes that we are working on together at the moment to make sure that we deliver and prioritise solutions to make journeys easier for passengers and freight users.

David Kurten AM: Thank you. Does anyone else want to answer that?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): I agree with all of that. You will see all of those schemes and others in the Mayor's Transport Strategy (MTS) and also a few others of relevance to heavy rail as opposed to the Underground or trams or the Docklands Light Railway (DLR).

There are some ideas that we are working up with Rupert [Walker] and his team around - stretching to some of the other questions you are coming on to - the Digital Railway and its impact on parts of the Brighton Main Line and the East London Line, a very busy part of the network. We have ideas around how to best make use of capacity in and around Old Oak Common. There is a whole range of station congestion relief schemes which are coming up on the blocks as well, which you will see reference to in Network Rail's route studies and indeed in the MTS, of which Victoria and Liverpool Street would be examples.

Then, for slightly longer down the line, we have things like the West London Orbital, to which there was reference in previous evidence to this Committee.

Paul Plummer (Chief Executive, Rail Delivery Group): Can I add a couple of more general points? Geoff and Rupert own the detail very much more than me, but in terms of a couple of really general points that are important, one is around the demand we talked about earlier. It is very much about responding to demand that is there, but the other aspect of what transport can provide - and I am sure you would agree - is in terms of how it enables and potentially generates further growth by connecting places and the demand that is not there at the moment if it can be there. Crossrail 2, which I am sure we will come back to later, is a good example. One end of it is responding to a demand that is already there; the other end is potentially generating

demand in terms of what it can do for that part of the economy. That is part of it that we tend not to talk so much about when we talk about rail demand and what it can do.

The other point is in terms of the railway as a whole. It is a network and it is being used for multiple different purposes in terms of inner London commuting, longer-distance commuting, longer-distance travel, freight and so on. Meeting all of those needs on the network is key and connecting, as you would know, London's needs as part of the economy as a whole and the country and creating those connections is an important part of it as well.

David Kurten AM: Thanks. What do you think are the priorities for major new infrastructure? I know you mentioned Crossrail 2 and you mentioned the West London Orbital. People talk about the Bakerloo line extension as well. What are the priorities there, do you think, over the coming decades?

Paul Plummer (Chief Executive, Rail Delivery Group): The one Rupert mentioned is the Brighton Main Line, yes.

Rupert Walker (Strategy and Planning Director (South), Network Rail): Yes, we have covered the priorities that we see at the moment as being most important and Paul also touched on Digital Railway. The opportunity that Digital Railway brings and I am sure we will talk about it in a minute --

Caroline Pidgeon MBE AM (Chair): We are going to come on to that in greater detail.

Rupert Walker (Strategy and Planning Director (South), Network Rail): OK. Thank you.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): The only other thing say is that in the TfL portfolio our big priority is around London Underground line upgrades, of which we are in the midst, of course. We are getting to the extremely interesting bit indeed with respect to the subsurface lines on the District, Hammersmith & City, Metropolitan and Circle [lines], where we are starting to turn on what can be described as digital signalling or Digital Railway, with the timetable uplifts to follow from 2020 onwards. We have also started letting contracts to the Piccadilly line upgrade as well and these are very substantial. Certainly, the Piccadilly line is a 60% increase in capacity from one of the weedier Underground lines to what is actually one of its busiest and where we can make a real big difference. We have all those things as well, but I entirely agree with the importance of the Brighton Main Line as one of the United Kingdom's (UK) absolutely busiest mainline railways.

David Kurten AM: Great. Thanks. Those are all larger things, but in terms of smaller things which could have a very great impact on passenger satisfaction, do you see any particular things like footbridges, underpasses, connectivity, etc, that would make a big difference and do you have any examples of that?

Rupert Walker (Strategy and Planning Director (South), Network Rail): Absolutely. I am glad you mentioned it because it is easy to forget the smaller things. We have a continuous focused workstream looking at congestion around the smaller stations. In particular, we would like to concentrate over the next few years on some of the south London stations - Peckham Rye, Denmark Hill, Lewisham, New Cross - many of which are really crowded and movement in and around the stations is difficult. In fact, at a couple of those, we are really keen to work with, potentially, third-party investors to deliver not just improvement to the railway station itself but to deliver homes and commercial premises around the stations - in some cases above the stations - where there is land available. This joint working is a real opportunity for the way forward in terms of

investment in rail where, using some Government money and some private money, we can deliver schemes and get more benefit from them that otherwise might have either taken longer or not been done so well.

David Kurten AM: I am glad you mentioned Lewisham because that is also a bit of a bottleneck area as well. Are there any plans for any major infrastructure changes in Lewisham to the rail?

Rupert Walker (Strategy and Planning Director (South), Network Rail): We have a study ongoing at the moment at Lewisham itself to understand what works might be required to unlock or release the bottlenecks around there and considering how we can effectively provide more capacity in that part of London.

David Kurten AM: Great. Thank you.

Steve O'Connell AM: Rupert, you raised the subject of the Windmill Bridge north of East Croydon. I would like to refer back to Geoff as well because Geoff and I have spoken about this a lot over the last couple of years because this is not just a Croydon thing. Our conversations have led me to think that that is unlocking services across that south London region that does not get mentioned a lot: the Norburys, the Balhams, the Peckhams, and that sub-region. We have the headline acts, but often that does not get covered. If you could amplify, perhaps, Geoff, our conversations and how the Windmill Bridge investment will improve commuter access across the south London sub-region in your view? We have discussed this.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): Absolutely. The railway jargon 'Brighton Main Line' gives the slight impression that somehow this is of benefit to Brighton users only, but absolutely not. By saying 'Windmill Bridge', the shorthand means two extra platforms at East Croydon station, some extra tracks heading north out of that station and a whole untangling of the spaghetti of railways that is between East Croydon and Selhurst and Norwood.

The purpose of doing that collection of things, which is quite a large intervention taken together, is multi-fold. Yes, it will allow you to run more longer distance trains from Gatwick and Brighton and places like that, but it will also allow you to run a more intense London local service. That can take lots of different forms. That could take the form of, for example, a more intense London Overground service between West Croydon and Dalston, for example. It could also enable you to run a more intense local service into London Bridge and/or Victoria. I sometimes characterise it - and it is described in the MTS - as 'metroisation', which is a term I use to say that making the heavy rail network a bit more like a metro in terms of its simplicity, its frequency, its capacity and its characteristics.

That sort of infrastructure will make a big difference and there are other places where one needs to do that to get the package as a whole up and running. There are turn-backs at various places such as Belmont or Wallington and places like this, and you also need to have rolling stock that is fit for purpose. At the moment, we have trains which were great for the 1980s, but the doors are really too narrow and the layout inside the trains is too poor to allow large numbers of passengers to get on and off as they do at places like Clapham Junction without really quite long waits, over two minutes on many occasions. You do not run a metro by having a train run stationary for over two minutes.

You will also need a bunch of other things to occur. You need cleverer signalling that can run trains with smaller gaps between them. You need staff that provide the right degree of - if I can use the use the term - 'hustle' or at least get passengers on and off as quickly as possible.

Steve O'Connell AM: This will be predicated around investment in Control Period 6 (CP6) on unlocking the north of East Croydon piece, which is on the CP6 wish list, hopefully?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): The single biggest intervention in infrastructure terms is, indeed, the north of East Croydon piece. This is going through its design and development stages at the moment.

There is something that the Government calls - and I might need my colleagues to help me with the new acronym - the Rail Network Enhancements Pipeline (RNEP). This is a new process. Instead of the Government setting out at the beginning of the five-year financial settlement - the next one being 2019 to 2024 - a whole menu of enhancements, they are going to take them through more slowly or more individually as developments come up for the right stage for going from a bright idea through to detailed design through to implementation, the idea being that you do not get into such a tangle as the railway industry did during Control Period 5 (CP5).

The purpose of mentioning all of that is that the Brighton Main Line intervention at East Croydon is in the midst of that right now and so it is getting to the stage where we are getting into detailed design.

Steve O'Connell AM: Very good. Geoff, we are going to meet separately and you can brief me more fully, but I just wanted clarification, Chair. It benefits south London, not just Croydon.

Caroline Pidgeon MBE AM (Chair): Yes, that is right, and it is in the note - and I know it was circulated only late yesterday to Members - on CP6. It is one of the projects in there. Caroline is going to continue with this question and then I have Navin [Shah AM].

Caroline Russell AM: Yes. Just picking up a little bit more on this, you are talking about a more intense service. Do platform extensions and longer trains form part of that and, if so, could you just expand on that a bit?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): There has been a lot of that already. Certainly, to take the south London example, most trains that used to be eight cars have been extended to 12 and those which were shorter have been extended to 10. The railway has that functionality already pretty widespread across most routes, not all, within London. We have done - I use this term slightly loosely - most of those sorts of things which are in general, train lengthening, being the relatively easy things. That is why in the MTS and elsewhere, the move on to metroisation would be the next step to get some more quarts out of this pint pot, quite a lot of quarts. That is why we would take that quite big railway, that 10-car railway, and we would like to see that turned into a more intense and more metro-style type of operation such as you see internationally. If you go to Tokyo, for example, you will see exactly that type of model applied there, for example.

Rupert Walker (Strategy and Planning Director (South), Network Rail): Just to add to what Geoff said, which is entirely correct, you will remember the work that we did at Waterloo last year involving extending the platforms to try to achieve 12-car platforms¹ right the way through the station. There is a similar opportunity at Victoria where the platforms are not all of the same length. By ensuring that we have 10-car platforms right the way through Victoria, we can make sure that we are able to support this concept of metroisation and any train being able to use any platform; in other words, having a much more flexible system that is able to cope in

¹ Clarified by Network Rail after the meeting: This figure should have been 10-car platforms.

periods of either high demand or delay or where there are problems. Absolutely, as Geoff has said, along most of the routes the train lengthening in many cases has already happened but there are some opportunities still existing.

Caroline Russell AM: Then I want to talk about accessibility. The MTS talks about accessibility in terms of people with visible and invisible disabilities, step-free access and then the connections on to other parts of the transport network. Could you just talk a bit about work that is ongoing in terms of addressing accessibility so that all Londoners are able to access this new intense service.

Rupert Walker (Strategy and Planning Director (South), Network Rail): I will kick off this time and then Geoff can build on that. Absolutely, accessibility is a key part of our plans looking ahead to the next Control Period, the next five years. After a programme of work over the last dozen or 15 years to provide lift access to as many stations as we can, we are just in the process of commencing a study, which we have called Railway For Everyone - recognising your point about access accessibility issues not always being visible to us all - which is going to look at where we can provide better access to the railway and make it easier, not just lifts and escalators and things but actually thinking about people's whole journey, interchanges at stations and all the sorts of issues that we all face every day getting in and out of the railway. We are excited to be working with the rest of the industry on that study as it moves forward during the next 18 months or so. We hope that it will identify ways and opportunities to invest in development work and then ultimately to deliver benefits for Londoners in terms of accessibility across the capital.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): We contribute to that by coming up with what we think will be the best recommendations. There are about 300 national rail stations in London and about half of them are step-free and about half of them are not. There are some really big changes going on in the near future in 2018 and 2019, by which I mean that through central London you will have an east-west and north-south cross of accessible stations in the form of the Elizabeth line and Thameslink, which is just a remarkable change and will make a big difference to the level of accessibility in central London.

That still leaves a really large number of stations to do and that will take time and energy and treasure. The Department for Transport (DfT) has the Access for All fund. We and colleagues in Network Rail equally wait to find out what the magnitude of that fund will be for CP5. They make all the decisions on which stations to do and which stations not to fund across the whole of the country. They ask for recommendations. We - and Network Rail through its study Railways for Everyone - will do just that. In the MTS in figure 21 there is analysis which informs how we would make those recommendations. We also have to meet the DfT's criteria and so on and so forth.

Yes, absolutely, it is a big challenge. It is a big priority. There are a lot of stations to go at. It is the work of CP6 and beyond to make that all happen.

Caroline Russell AM: One of the things that people raise with me about step-free access is that very often the information is not completely up-to-date. Can you try to make sure that you build in updating information for passengers as soon as changes get made? Even if a station is step-free in only one part of the station, if that information is out there, someone can maybe have an easier journey on their outward journey or their homeward journey because of that partial step-free access. It is very frustrating for people who need step-free access when that information is not completely up-to-date, if you can bear that in mind.

Something else that I have been made aware of recently is the Look Up campaign. What they are calling for is station announcements that say, "Look up. Is there someone who needs your seat more than you do?" That is a very simple thing that is not going to cost lots of money. It is just a behaviour thing, but it can make a real difference to someone's journey. If you are mobility impaired or if you have a hidden disability, managing to get a seat for your journey home or your journey to work can make the difference between a good day and a bad day and it is not a complicated thing. Is that campaign something you are aware of?

Paul Plummer (Chief Executive, Rail Delivery Group): I was not aware of that one, but I will certainly go and look into that one myself and find out about it. It sounds interesting.

In terms of the up-to-date information, absolutely, that is critical and we are focusing on that. As well as that, we are looking at better ways of making that information more easily available as well as it being up-to-date through apps, maps, films and so on so that people can have confidence when they turn up at the station that they know where they are going and what they are looking at.

Those are things we are all looking at, yes, and I will take away the Look Up campaign, which sounds interesting.

Caroline Russell AM: I will send you the details of it. The other thing is that you say about when you turn up at the station. Are you thinking about access to stations in terms of how people are arriving, whether they are arriving on foot, by bicycle, by bus or from a Tube or from some other Overground system? The connectivity between the different modes of transport is absolutely dependent on healthy streets and having streets where it is safe and convenient to get around on foot. Are you considering the areas around the outside of the station and how the station interacts with the rest of the public realm so that there are not difficult bits where it is on the boundary between Network Rail and TfL and you end up with a step that could actually be eliminated if people were thinking about those sorts of boundary joining points? Are you looking at healthy streets around stations to improve accessibility?

Rupert Walker (Strategy and Planning Director (South), Network Rail): Absolutely. That is a really important and valid point that you make and something that we did not use to do terribly well. Railway stations originally were these amazing edifices marking the start and end of a journey, but we did not think about the whole journey in.

In recent years particularly, we have become more joined up. Through our work with Geoff and his team we are beginning to look even more closely at people's whole journey and thinking of it as a transport system rather than just a railway. It is exactly the point you make: people are interchanging between different modes, more and more we are encouraging people to arrive on foot or by bicycle. Providing better facilities for these passengers and enabling them to get into the station more easily - and we spoke of accessibility just now - is a really important focus of our work. You are beginning to see the benefits of that at places like London Bridge, where the change has been absolutely profound, and King's Cross and in future we will see it at places like Euston as that station is redeveloped and at Victoria as we get going on that as well.

Caroline Russell AM: Thank you.

Paul Plummer (Chief Executive, Rail Delivery Group): Rupert quite rightly refers to things going on at some of the major stations, which is clearly critical. In terms of many stations across the country, we who are sitting in the centre, if you like, cannot sensibly plan and make those decisions and so the important thing is to empower the local teams to do that. One of the things we constantly focus on and make sure within Network

Rail is supporting the devolution to empower businesses, to work with train operators, to focus on local communities and customers. That reform issue is key to exactly being able to have local decisions really informed by the issues you are describing there.

The other thing we try to do from the centre, if you like, from RDG is around best practice. We cannot go into each station and say, "This is what you should do", but actually challenge the local ownership. Just last week we had the Station Summit, which was looking at a lot of those best practice issues: how to plan those things, the sorts of things you would be expecting people to look at in exactly the way you describe. It is about local empowerment in many ways.

Caroline Russell AM: The other issue is safety. There have been some terrible crashes certainly near Euston Station with pedestrians being killed by buses where you have the potentially very dangerous situation of people running for trains because trains run to a timetable in an area of streets where there are lots of bus movements. Thinking about how people get across the road safely, how the buses are accessing the area around a station and whether there are safe places for people to cross and whether there are any potential danger points, is that something that is also looked at?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): The answer is yes. All bus accidents, fatalities, injuries, whatever, be it of staff or of customers, are investigated very carefully. In trying to get to the bottom of those root causes, whether it is the design of the streetscape, the place, the vehicle, driver behaviours, customer behaviours or desire lines, all of these sorts of things are taken to account and there is an immense effort, which you see in the MTS under the title of Vision Zero, to get those numbers right down. It is a real change of thought processes to try to make all that lot happen. It is a big old job to do but, yes, it is absolutely top of mind.

Caroline Russell AM: It is top of your mind at TfL. Do you think that it is top of mind for Network Rail and the stations?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): In working up the MTS, we worked very closely with Rupert and the team and they will be equally motivated in regard to safety both in and outside the stations. We have a joint common purpose to ensure that our transport networks - plural - are as safe as they ever possibly can be.

Rupert Walker (Strategy and Planning Director (South), Network Rail): I could not agree more with Geoff. Safety is absolutely our number-one priority. It is not just about people travelling on the train and more people working on the railway. We have the safest railways in Europe and that is a reputation that has come about through a lot of hard work by a lot of people and a huge amount of focus.

As Geoff has said, that view extends beyond the stations. I am very familiar with the issues you have mentioned at Euston. I know about the fatality that happened there and, within Network Rail, we looked at that issue and the fatality and how it happened so that we could understand, thinking about the future development of Euston Station and how we could try to avoid it in the layout of the station and the way in which people access the station.

At London Bridge, you can see how the rearrangement of the pedestrian crossings there, which was done working closely with Geoff's team, has provided a better means of crossing the road than existed previously, but we are dealing with a culture. People will run across the road and not wait for the green man and try to cross when --

Caroline Russell AM: It is because they are late for a train and it is human nature, and so we need to design to minimise the risk.

Rupert Walker (Strategy and Planning Director (South), Network Rail): We have to help people understand, exactly, yes.

Caroline Russell AM: Yes. Thank you.

Navin Shah AM: Geoff, you and Rupert have already mentioned the issues about forecasts for growth and, Geoff, you mentioned also the London Plan and Opportunity Areas. This is something I would like us to explore a bit further.

The question is: what would it actually mean in terms of how this unprecedented growth, both in terms of the huge number of housing developments as well as other commercial office areas, etc, which will come about in those hubs, Opportunity Areas, etc? For example, I represent [the London Borough of] Brent and [the London Borough of] Harrow. We have Wembley as an Opportunity Area and then the Harrow Town Centre and Willesden covering all of that. Already there are tensions. There is confusion and chaos when you look at the local stations, not only railway stations but bus garages and stuff like that. As it is, we are bursting at the seams. This is not just in my area. Most Opportunity Areas will see that kind of scenario and then the problem will escalate as the growth actually happens.

The question is: what is the strategic planning to address this growth, both in the short term as well as in the long term? That is one area.

Then you have currently smaller stations, for example, you might say, which have not been historically busy, are quieter, but, again, given the growth that happens in surrounding areas - for example, Sudbury Town Station - require capacity as it is. How will all of this be built into the strategic plan to make sure that (a) there is that clear plan which is implemented in the short and long-term, and (b) funding? You do not need to go into details now. That will be dealt with under a different section, but I would like to know how in real terms people will see that difference and how you will cover that growth.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): That is a big question.

Navin Shah AM: It is.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): We have the London Plan. That gives us a representation of where the growth will occur in terms of population, employment and other factors --

Navin Shah AM: You are saying in some areas already you are finding that the forecast is being overshot?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): It is hard to ignore the London Plan for obvious reasons --

Navin Shah AM: You should not.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): -- and, therefore, our models do take account of that. The London Plan is itself subject to revision from time to time. It might even be under revision at the moment --

Navin Shah AM: It is currently, yes.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): -- and we continuously update our models for the latest state of reality and we continuously update our models for the forecast going forward, as set out in the London Plan. That would include growth in general and growth specifically of the 30 or so Opportunity Areas that exist.

When one looks at the degree to which there are stresses and strains on particular parts of the networks - plural - be that heavy rail, be that the Underground, be it the Overground, be it the DLR, be it the bus network, be it whatever, we look at that on a semi-continual basis, prompted by all sorts of things of which particular developments in Opportunity Areas would be one but also as particular parts of the network come up for reletting if it is done that way or as assets come up for renewal, which is most relevant for parts of the Underground. The Piccadilly line would be one relevant reference at the moment.

That allows us to say something about where we would want to put investment in the best of all possible worlds. There are never enough hours in the day or money in the pot to do everything that we would ever possibly like and so one has to prioritise. We look specifically at Opportunity Areas, all of them individually, to see whether they are firing on all cylinders as they ought to be or whether there are particular interventions - transport interventions in the case of TfL, for obvious reasons - that we need to make in order to make sure that they do what the plan says they ought to do. Those interventions take wholly different forms depending on the particular local circumstances. That can be heavy rail, and we talk to colleagues in Network Rail and the Train Operating Companies (TOCs) under those circumstances. It can be buses. It can be the Underground. It can be a variety of different parts of the network. In parts of Docklands, the DLR is the obvious one. For Wembley, you are absolutely right that there is a very active Opportunity Area that is growing very fast. You look at the number of cranes and buildings going up there and it is really quite remarkable. There, for example, it is a mixture of upgrading the Metropolitan line and that will increase capacity quite markedly and so the 22 trains an hour out of Baker Street at moment will increase to 28 by 2023, for example. There are changes to the bus network which are forthcoming. I have in the back of my mind all sorts of changes that will improve access and capacity in and around that part of the world. We would like to increase the Overground service going through Wembley Central. Eventually, in the fullness of time, we would upgrade the Bakerloo line. The list goes on. It would be an even longer answer for me to do not just Wembley but the other remaining 30 or so Opportunity Areas. I might have to spare your indulgence on doing all that, but I hope that gives an impression of the sorts of things that we look at.

For stations, we have, just as we have for trains, a strategic planning model that looks at the stresses and strains for all of the stations in the TfL networks. That allows us to say something about Sudbury Town as opposed to the many other stations that have stresses and strains and gives us pause for thought about which particular part of the station is the pinch-point. Sometimes that is writ very large, at Holborn, for example. At Sudbury Town, it might be a simpler intervention around gate lines or particular parts of the steps and stairs and so on and so forth. We do have a look across all of the large number of stations - about 600 in London - to see what we need to do, particularly prompted when large developments are put in for planning applications, at which point one can also take the opportunity, should that exist, of seeing whether the developer would be willing to fund some or all of any enhancement required.

I hope that helps to explain some of what we do.

Navin Shah AM: That was helpful. I have just one last bit very briefly. I would like to urge that, with so much going on now and so much more to do, something which TfL or Network Rail do not do very well is consulting and engaging local communities. You can do lots better, not just when you have major plans, whether strategic plans of the Mayor or TfL's Business Plan, etc, that you go out for consultation, but it is a matter of regularly keeping in touch with the community. We get a lot of lobbying on what is going on. We have concerns about infrastructure, transport congestion, chaos and so on. This is where, if you were more prepared and able to communicate regularly, it would really help.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): Your point is noted and it is a fair criticism. It is weasel words to say that there are not enough hours in the day, but your point is absolutely noted and we shall do our best to try to communicate better and more effectively.

Navin Shah AM: Thank you.

Keith Prince AM: Thank you. It will be a very quick question, actually. I have asked it before. I just wondered how much consideration you are giving to double-decker trains. I am sure the answer is probably none, but we see them a lot on the Continent. They do not appear to be that much taller than the trains that we have. There must be some routes where, OK, you may have to move a few bridges or do something, but there must be some routes where you could consider using double-deckers.

Rupert Walker (Strategy and Planning Director (South), Network Rail): Keith, that is a good point and, as you say, we perhaps have discussed it before. There are a couple of points here. Firstly, our Victorian railway infrastructure was not designed when double-decker trains were a thing. As you have quite rightly said, to introduce them - and generally they do require a bit more space - would require massive civil engineering work, which in itself is a case of money but it is the disruption that is involved in the civil engineering to the existing railway, affecting people's journeys every day, that generally makes that uneconomic.

The other issue regarding double-decker trains - and certainly you may have experienced it if you have travelled on them in France or elsewhere - is that they tend to take longer to load and unload. As Geoff has said, particularly in London, we are trying to move towards a more intense metro-style railway on the heavy rail as well as on the TfL network and so we need people to be able to get on and off the trains really quickly. The relatively marginal gain you get by having a double-decker train - and it is not twice as many people because of the way in which the wheels of the train and the stairs work - is not worth the expense that is involved in introducing them.

Traditionally, we have considered lengthening trains in order to provide more capacity. I know we are going to talk about it shortly, but the Digital Railway gives us an opportunity to further increase the capacity of the railway. Essentially, we are doubling the number of people who can get in and out of London over time through other means rather than just converting everything to a double-decker train.

Keith Prince AM: Can I just quickly say? Some of the rolling stock that you have may be configured with two and three seats. Is there any opportunity of taking away that third seat? Then it would mean many more people could stand during the peak period. I know it would mean there would be fewer seats but, frankly, you have a period of peaks and troughs. When it is really busy you need all the standing space you can get and

when it is not busy you do not need any seats at all. There cannot be many journeys where you need exactly the number of seats that are in the train.

Rupert Walker (Strategy and Planning Director (South), Network Rail): Yes. I could not agree more. I am sure others will want to come in, but generally the newer trains come with either a two-and-two configuration or even seats down the sides, as you will be familiar. The three-and-two configuration, as Geoff was saying, on the older trains does not enable people to get on or off the trains as quickly as we would like and so --

Keith Prince AM: I am talking about retrofitting or retro-unfitting, actually.

Rupert Walker (Strategy and Planning Director (South), Network Rail): I do not know if Geoff can pick up on that.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): Yes, we have done that in some cases. When we still had the old rolling stock on London Overground, we did just that in an effort to do just what you say. Then, as we have had new rolling stock being manufactured now, we have gone for the seats-along-the-side model instead as a logical extension of that.

Keith Prince AM: Thank you.

Paul Plummer (Chief Executive, Rail Delivery Group): The only other point I would add is that it clearly does depend on the markets you are serving. The longer-distance commuting, business and leisure markets are very different in terms of the seating configurations you would want.

Caroline Pidgeon MBE AM (Chair): Lovely. Thank you. That was a very good point to raise.

Florence Eshalomi AM (Deputy Chair): Just quickly on that, I know we are talking about future rail needs, but the reality is that at some of the stations there is an immediate crisis in terms of that overcrowding. Just to you, Rupert and Mark [Farrow], just yesterday I was contacted by two constituents at Denmark Hill. I am pleased to see that there are station improvements in the CP6 plan, which is great, and my understanding is that there is some modelling work on the pedestrian crossing as well, which is great, but there is an urgent crisis at some of those stations. Yesterday at Denmark Hill, Claire [a constituent] contacted me to say that just at the last minute her TfL Rail train was cancelled and then there was 30 seconds for them to change platforms. My understanding is that this happens on a regular basis and you are having passengers not being able to get on platforms because of the overcrowding.

Is there anything in the short-term period that can be done? It is really great to see that it is mentioned for CP6, but will it not be until there is a major catastrophe or death before this is actually looked at?

Rupert Walker (Strategy and Planning Director (South), Network Rail): I will kick it off because Mark is more familiar with the today's railway aspects that you are mentioning.

There are three elements to this. There is the short term that I will let Mark talk about in a minute and that is around the operational interventions we might make and our devolution to more locally focused routes and the close working we do with TfL.

In the medium term, we have a team that focuses entirely on station congestion and it has identified the hotspots, as I was saying earlier on. That is why Denmark Hill has been identified as one of the stations where we see a pressing need to invest. The team is, as we speak, developing the case for that investment to provide relief to passengers in terms of, at that station, potentially a larger concourse space at the street level and probably additional access down to the platforms so that people can get in and out more quickly.

Then, in the longer term, we are looking at bigger interventions to enable essentially more trains to run through, but you can only put more trains through when the station has been improved.

For me, it is those three elements, but I will let Mark pick up on the short-term stuff.

Mark Farrow (Director of London Rail, Network Rail): I would make three very quick points on this. Hearing that kind of example is worrying. We want everyone who travels and uses the rail network to be safe when they do so. It is the reality on parts of London's rail network that demand has increased and, therefore, that is, as you just outlined for us, putting extreme pressure on what we have out there at the moment.

There is a point here about the station staff. In the moment, quite often, these people are required to make short-notice, important decisions, and so there is a responsibility on all of our organisations to make sure that there are adequate staff and that those staff are adequately trained and supported so that, where it is possible to do so, they are able to make operational decisions which keep people safe.

Building on that, there is familiarity with the crowding protocols, which will be in place at all stations, and making sure that those are deployed and we are able to respond to issues when they arise.

The second point would be around station furniture. This might sound slightly prosaic, but quite often one of the challenges in existing infrastructure and platform-specific infrastructure is that there are seats or shelters or bits of railway kit which, to coin a phrase, clutter things up a little bit. I know one of the things that some of the London rail operators are looking at is how they can declutter platforms to make sure that people can move around more easily and that potentially there is a bit more capacity on those platforms. That also has a performance benefit as well to the extent that if people are able to distribute themselves more evenly along a platform, you are less likely to get the type of crowding at entrance and exit points that you are talking about.

The final point I would make is around devolution. Rupert just mentioned it. We are as an organisation in the throes of becoming a more locally responsive organisation and one of the things that unlocks is the ability for our teams to work more flexibly and in a more agile way with teams on the ground whether they are from TfL or whether they are from train operators. That then, again, hopefully, enables us to mitigate some of the problems that you have just talked about.

Florence Eshalomi AM (Deputy Chair): That is good to hear, but how often do you look at risk assessments? Again, if you look at somewhere like Denmark Hill, Nunhead or Peckham, the capacity just seems to be growing. Is that on an annual basis? Quarterly?

Mark Farrow (Director of London Rail, Network Rail): I could not tell you for that specific location, but my understanding would be that they would be done at least on an annual basis.

Florence Eshalomi AM (Deputy Chair): Thank you.

Caroline Pidgeon MBE AM (Chair): Tom, a very quick one on this. We should welcome Michèle Dix, Managing Director of Crossrail 2. Thank you very much for coming.

Tom Copley AM: It was on the Barking Riverside extension very quickly.

Caroline Pidgeon MBE AM (Chair): Very quickly and then I want to move on to the Digital Railway.

Tom Copley AM: Very quickly, yes. Is there an intention or is there potential for the Barking Riverside extension to be extended further under the river - or indeed over the river and probably under the river - to Thamesmead? Is the extension being built with that in mind as a potential future extension?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): All things are possible. However, in this particular instance, it will be quite a ride or at least the gradients involved to go down under the river at that particular location. Otherwise, you would have to have a bridge that was a long way up to maintain shipping. The gradients would be quite spectacular. Yes, it is possible and, yes, it would be neat strategically, but it would be hard in practical terms and by hard that also often means quite expensive.

Caroline Pidgeon MBE AM (Chair): Lovely. Thank you very much. We are going to move on to the Digital Railway now and that is very good because I know Michèle had some comments on this and so it is perfect timing.

Joanne McCartney AM: Yes. A couple of weeks ago the Committee went to a site visit with Network Rail and so the Committee knows about the traditional block system of signalling and the move towards digital signalling with greater automation means that you can get more trains closer together. Could I ask you to explain briefly to us - I am going to go for Network Rail first and then Paul - what tangible benefits this will deliver for passengers and are you able to quantify it? I know from the briefing you sent yesterday that you expect 70% of all passenger journeys to be covered in the next Control Period by some form of digital technology. What does that mean for London? I do not know who wants to start first. Mark?

Mark Farrow (Director of London Rail, Network Rail): I will kick this one off. Yes, with the Digital Railway, we are on the cusp of something very exciting and quite new that will have, as you have already mentioned, benefits in terms of capacity and being able to fit more trains on the network. There will be benefits in terms of a reduction in delay and there will also be a safety benefit, the majority of which will be delivered from removing traffic lights that sometimes drivers overshoot.

The thing I would say moving specifically to your question is what that means in terms of benefits. If we look at Thameslink, for instance, at quite a high level the expectation there is that the introduction of digital signalling and the European Train Control System (ETCS) there will enable the number of services at peak times of the day to increase by roughly 50%. That gives you the scale of magnitude of the capacity gain that you would have there.

As we go further out and we are looking, as you have mentioned, to 2034 and this pipeline that we are constructing at the moment, it becomes slightly more difficult to throw our hat on the precise benefits that we will get from this, but what I would say is that there is a process linked to the way in which these schemes are going to be funded of very forensically interrogating the scope of schemes and the benefits that will be flowing from them because that ultimately leads you to an investment decision whether to go ahead or to try something a little bit different.

I do not want to throw numbers into the wind willy-nilly here, but if we looked at a scheme that we are extremely keen on that is not yet funded, which is putting in-cab signalling on the East Coast Main Line out of King's Cross, what we would be aiming to achieve through that would be somewhere in the region of 1% to 2% performance improvement through that. However, as I have said, it is really as we get closer to the schemes themselves that are able to define the benefits and really do the sell in terms of the funding.

Joanne McCartney AM: Paul, did you want to add anything to that?

Paul Plummer (Chief Executive, Rail Delivery Group): Yes, please, I would love to. First of all, from a customer or passenger point of view, they should not care how the trains are controlled and signalled, just as they should not care about what sort of power supplier they are using, but the fact is that use of digital technology is the cheapest and most effective way of delivering more frequent services, more capacity and more reliability and maintaining safety that we can do. As well as that, renewing signalling across the railway with conventional technology would involve such a scale of work and the bow wave being pushed further out that it becomes hugely difficult to deliver. Therefore, the important question really is about how we get from here, where we have been renewing with conventional technology, to renewing and expanding with new technology that gives us all of those benefits.

The power of the recent statements of the obvious in terms of digital strategy, if you like, is actually those things we have said: that everybody was saying the same thing at the same time. We have a strong pull from train operators who want more capacity on the infrastructure. We have a strong pull from infrastructure routes saying, "We want to be able to offer that capacity". We have a strong pull from TfL and other authorities across the frontier, "We want more trains and more frequent services and this is the way that the railway believes it can be best delivered". We have a challenge from the Government to say, "There is a funding question and, if this is the cheapest way of doing it, let us move from here to there as quickly as we can".

The other opportunity that exists is that of exports. We have the opportunity because we have a greater need than many other countries to deliver this technology in an operationally intense, mixed-use railway to do that and then to be able to export those skills across the world.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): The analogy is highly imperfect but this is what Digital Railway has given for the Underground. The Victoria line used to run at 28 trains an hour and it now runs at 36. We want to run 36 trains an hour. There is a train every 100 seconds. You see the taillights of the next train disappearing even as the headlights of the one behind come into the station. We want to run that for three hours in the morning peak starting next year and that is pretty good. The journey times end-to-end are about 15% faster. I am slightly loath to mention this, but if you look at the reliability of the Victoria line compared to the manually driven lines, you will see a big difference there, too.

Joanne McCartney AM: Can I ask, again, Paul and Mark to start with, how confident are you that this will be delivered? Certainly, for example, in CP6, there is going to be some targeted deployment to sort out some of the major pinch-points, but the Committee has recently heard that the traffic management system (TMS) through the central section of Thameslink has now been delayed. We have been hearing about digital technology for quite a while now. How confident are you that you can actually deliver?

Paul Plummer (Chief Executive, Rail Delivery Group): Maybe I will kick off. The recent statement on the Strategy is really powerful in that sense of not just being a statement of the obvious but everyone is saying it. What that leads to is the Digital Railway Programme Team, which is part of Network Rail but really is an

industry programme, everybody getting behind that, the supply chain engaging with it much more at an early stage of development to inform it, and routes and the operators who are going to have to work with this, engage with it. The power of that is that we no longer have people looking from the side. We have everybody saying, "We want this to happen", and engaging with it in a way that will create a much more deliverable programme. We can learn from many of the issues we have had in the railway before in terms of making sure we really are ready with that, but it has the power to deliver more. Actually, the alternatives are even more challenging.

Mark Farrow (Director of London Rail, Network Rail): At some point in the next 15 years, somewhere in the region of 60% of the UK's conventional signalling systems will need replacing. That is at a cost of somewhere in the region of £20 billion. We have a choice as an industry whether to spend that £20 billion on replacing like-for-like what is already there or harnessing the possibility that the Digital Railway offers us.

Paul has already mentioned the supply chain. The team in Network Rail is extremely heavily engaged with the supply chain in conversation about the vision and where we would ultimately like to get to with this. The indications we have had from that supply chain are very optimistic, provided we engage early and have a long-term plan. That gives us a benefit not only in terms of confidence in delivery but also in terms of cost. If we can commit to some of those long-term relationships because, you know, one scheme, one scheme, one scheme, then that will, we hope, drive out a cost reduction.

Yes, technology is there. You mentioned Thameslink. We do not look at what is happening only within London or within the UK. There is extensive engagement through the European Rail Authority. We talk to people particularly in some of the Scandinavian countries and in Spain about what they are doing.

I suppose the final point I would like to make, really, is to echo one that Paul has made, which is about this cross-industry alignment. We need to find those sweet spots where signalling renewal is due to happen at about the same time as a franchise commitment to deliver new rolling stock. There is the will there at the very top of our industry to do that. You have this commitment that all new signalling renewals will be either digital or digitally enabled and all new rolling stock will be either ready or ready to be converted. Those things being true, I am fairly confident that we are setting out on something that in 20 years' time will mean we have a very different rail network.

Joanne McCartney AM: You have talked about talking to other countries. Have you been talking to - I presume you have - TfL and are you sharing lessons learned and looking at other countries and finding out how you can exchange best practice? I do not know who wants to go first.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): With TfL, Network Rail now employs David Waboso [Managing Director, Group Digital Railway, Network Rail], who applied this to a number of lines including the Northern, the Jubilee and the Victoria, and indeed some other members of his one-time team at London Underground. It might sound facetious, but for that reason and the ongoing contact between our organisation on a day-to-day basis, we apply a lot of lessons between ourselves, although, as I say, the analogy between a metro railway and a heavy railway is highly imperfect and there are lots of different operating characteristics that one must take account of.

Mark Farrow (Director of London Rail, Network Rail): As well as that metro versus heavy rail distinction, there is a difference between us and many other countries. We have a very intensive, mixed-use railway with Victorian infrastructure that we need to get more out of. In many cases, where the technology is being applied in other countries, it is on new lines with far greater simplicity, not quite on the level of metro but similar in

some ways. You have high-speed services on dedicated tracks and the issues are different. We have a different need and a greater need and I would say, therefore, a greater opportunity. Notwithstanding all of that, absolutely, we are engaging with all of those companies that are doing it elsewhere.

Joanne McCartney AM: Michèle, can I ask you about Crossrail 2? When it finally gets the go-ahead, will it be a fully digital railway from start to finish?

Michèle Dix (Managing Director, Crossrail 2, Transport for London): It is worth reminding everyone that it is work we have done with Network Rail and we work jointly with Network Rail and Network Rail colleagues sit with us in the team developing the scheme. All the work that has been done by Network Rail on the Digital Railway and David Waboso's work is reflected in the work that we are doing.

Importantly, how the scheme will operate has been taken into account at the early stages of design so that we can understand when the different signalling systems are in place and how Crossrail 2 will interact with those different systems. Ideally, you would want to assume it was all digitalised, but given that these things might be done in stages, then the trains and signals have to be able to operate under some different systems. Making sure that that work is understood now and the infrastructure that is required to help that now is really important.

One of the things that we have learned is ensuring that we can provide some additional infrastructure to help the benefits of Digital Railway actually be realised. It is not just a case of making sure that the trains and the signals work in that way but some additional infrastructure is required to support that. We have done our work on the assumption that the Digital Railway will be in place which will enhance the frequency of service on the fast lines coming in from the south west in particular, but Crossrail 2 is still adding a far greater increase in capacity over and above that through the physical infrastructure that it provides.

Joanne McCartney AM: Thank you.

Florence Eshalomi AM (Deputy Chair): If we look at the London Overground, the reality is that over the last few years since that has been devolved, it has been quite a success in London. We have seen high-frequency trains, high-capacity carriages, staffed stations, which is quite important, improved station facilities and improved safety and accessibility. Your customers and your passengers, our constituents, all they want is a reliable service, which they are paying for. The recent fiasco with the rail timetable changes has seen a lot of chaos where we are seeing things are not working. One of the solutions, which a number of people including the previous Mayor has been calling for, is for some of those services to be devolved down to London and TfL. In the MTS it states:

"Devolution would enable the Mayor to put in place better incentives for the franchisee to deliver the same reliability standards as London Overground, and to specify improved service frequencies ..."

That is all customers want. What more do you think the Mayor needs to do to get that message across?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): Shall I have a go at that? What more does the Mayor need to do? It is a message that we have consistently made under various Mayors for quite a long time and the last time was not so very long ago with respect to the refranchising of the Southeastern. This was in October 2016. We put together - I would say this since I wrote it - a 111-page document that sets out in immense depth at the civil servants' behest why we should take that on. Again, you

can take this as the propaganda it may well be, but I never had a particularly good or compelling or indeed any reason why that was rejected on any rational grounds.

What more can we do? All right. The Thameslink-Southern-Great Northern (TSGN) franchise comes up for reletting in September 2021. It may well be - because the DfT has said that it is thinking hard - that GTR might be, quote marks, "stripped of its franchise", close quote marks, in advance of that. That is a possibility. Because we know the refranchising is heaving onto the horizon, people like me are thinking hard about how one might do this sensibly. Amongst the things that one needs to do, in a transfer of this sort, there is a very large number of different things that one needs to prepare for. There are literally thousands of contracts for everything from track access to the staff canteen that need to be considered and split in the most sensible way.

It is a matter of public record that the DfT will be splitting up the TSGN franchise. I have read it in the *Sunday Times* and so it must be true. Therefore, we want to be part of the study that the DfT will be undertaking, as we understand it, to look at how that is most sensibly done. That study is called a remapping study. The Secretary of State has made some reference in the fairly recent past to the possibility of, for example, the contracting authority for the services out of Moorgate, which are currently part of TSGN, becoming part of TfL's remit instead. Therefore, what more needs to be done is that we need to go through the couple of thousand contracts or so with respect to that part of the railway to work out how we do that. To do that, I need the active co-operation of my colleagues at the DfT and colleagues at the GTR because I will need to know the absolute details of how that part of the railway works in terms of the trains, the depots, the stations and everything else that one needs to consider to make sure it is a functioning railway at the moment of transfer and beyond.

Also - and you will see all of this in the MTS - as you have already read out, on page 183 there is a map of what other parts of the railway network could perhaps transfer feasibly across in terms of the contracting authority from the DfT to TfL. Amongst those are the London local services from London Bridge and Victoria to places like Sutton and Croydon, and we need to do the same exercise for that as well. That is a much bigger exercise than Moorgate, which is a relatively self-contained part of the network, but we need to do that as well. That is another part of what we need to do and we will need all of your support and many others beyond in that endeavour. Does that help?

Florence Eshalomi AM (Deputy Chair): I am sure I am not speaking out of turn in terms of the Chair, but I think you definitely have all our support across the table on this.

Steve O'Connell AM: Hear, hear.

Caroline Pidgeon MBE AM (Chair): Absolutely.

Florence Eshalomi AM (Deputy Chair): It is an issue and in terms of who is in control and which department is looking at it, all of the party politics has to come out of it because ultimately it is about the services that customers are paying for and not actually receiving.

The other thing I wanted to add is that you mentioned the massive work behind the scenes and the scale of all the different contracts from track control right through to who is managing the canteens, but do you have any additional information or understanding on some of the infrastructure investment that may need to go into some of these services if they are successfully devolved down to TfL?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): Yes. For the Moorgate services, it is relatively modest, but Mark has touched on some of it, namely that there is a possible scheme to digitise the signalling on the Moorgate branch, which will allow us to increase frequencies there. There will also be works taking place on an additional platform at Stevenage. GTR has a set of rolling stock on order already which will be compatible with these new bits of infrastructure. There are potential enhancements which can be made there.

For the local routes out of Victoria and London Bridge, I have touched on it in answer to Steve's question. The single biggest infrastructure intervention there are the works in and around Croydon, both the station and the junction, the legendary Windmill Bridge slightly further north of Croydon, which would enable a more intense service to operate than is currently the case. It needs many other things to do as well such as turn-backs at various locations - Belmont, Cheam, Wallington and so on and so forth - would need a fit-for-purpose fleet of rolling stock for the reasons I described earlier and would need to change some of the operating philosophies about how long trains stay in stations and provide that level of urgency that characterises a metro and which does not characterise some of the operations at the minute. They are all perfectly possible and they are all part of the benefits that I would set out in making the case for this to my colleagues in the DfT and the Mayor to the Secretary of State when this occurs.

Mark Farrow (Director of London Rail, Network Rail): Could I just record the Network Rail perspective on this? We, in my view, work extremely closely and extremely well with the current TfL concessions at London Overground and TfL Rail. We need to work even harder. This is, after all, about getting people from A to B. There are lots of people day-to-day in Network Rail who are working extremely hard with colleagues in those concessions to make that happen.

In the longer term as well, there are some really strong working relationships. Earlier on, we touched on the East London line and the scheme there to deliver improvements. There is a positive working relationship there that we can really build on.

Ultimately, Network Rail needs to take a system-wide approach. That is why we have the system operator. As well as all of the services within London, we are concerned to look at what is coming in and going out as well. Whatever happens in relation to this debate, on which we as an organisation do not have a view, we would want to retain that system operator function that has the pan-system of view of planning moving into the future.

The other point I would make is just to go back to Network Rail devolution. We have embarked upon this programme of change, becoming a more locally responsive organisation, and irrespective of what happens on this particular debate, we are beginning to really be much more focused and much more agile when it comes to delivering the kinds of improvements within London and the lines within London that people want to see.

Florence Eshalomi AM (Deputy Chair): I will leave it there because I know there are some other Members who want to come in.

Caroline Pidgeon MBE AM (Chair): Paul, did you want to come in?

Paul Plummer (Chief Executive, Rail Delivery Group): Network Rail has already spoken on its behalf as one of my members. If you like, on behalf of the rest of my members, particularly the train operators - and this is not misaligned with Network Rail - certainly as a general point, where it makes sense to devolve accountability for franchising or whatever we want to call it locally, our members would all be very supportive

of that. It is a general point about getting the local infrastructure aligned with the local authorities, whoever they might be, with the local operators focused on customers and communities and what they need locally. That is something really powerful, albeit within a network context.

The second point I would make, though, is that changing that in isolation does not necessarily solve all the problems we have with the railway and it is important to be realistic and honest about that. In whatever way we organise, there are big issues with decades of underinvestment which we need to address, the things that you have all been raising. It does not solve all the ills. It may not.

Also, there are important points which Geoff [Hobbs] has alluded to in terms of which services it makes most sense to do differently or might in the context of it being a network. I have already mentioned that we have a very intensive mixed-use railway with long-distance business and leisure, longer-distance commuting, shorter-distance commuting and freight. If we are going to devolve more accountability locally, then we do need to make sure that we segment things sensibly and not create unhelpful interfaces for customers in that. However, we do all of that, making the partnership between the different parts of the railway work effectively, be it infrastructure or operations, is key. Those issues apply regardless of what decisions are made by the Government about how it wants to devolve those accountabilities.

Finally, I would just say that again, however those decisions are made, there is nothing to stop anybody, be it TfL or anybody, saying, "We want to procure additional services or additional infrastructure", even if they are not the franchising authority. There are ways we can make it work and need to make it work regardless of those decisions.

Joanne McCartney AM: My question is for Geoff. It is about the Moorgate services and the Great Northern Line. Even before the timetable fiasco we had real issues about reliability on that line. I have been lobbying for a number of years now for it to be devolved and have recently written to the Secretary of State again urging them. I was very concerned that the Secretary of State in Parliament said that, yes, one option was to devolve to TfL but the other option was to parcel it up with the new London North Eastern Railway (LNER) West Coast Line, which seems to me making the mistakes of the past. Is that your view as well, or not?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): It could go either way. It is not a done deal. It would be a mistake to parcel it up with the East Coast operator because they will put their time and energy into the longer-distance routes where there is a lot more discretionary travel and where the average fare for London to Edinburgh is unsurprisingly a darn sight higher than it is to Alexandra Palace. It would be a mistake commercially, operationally and from all customer perspectives, absolutely.

Joanne McCartney AM: My final question is: apart from the Secretary of State for Transport, have you come across anyone who does not believe it should be devolved to TfL?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): I have but they are few and far between.

Shaun Bailey AM: Just to echo the comments made by my colleague, Florence [Eshalomi AM], there is a great deal of support for devolving the services down to TfL, locally run and looked at, but to what extent do you think the case needs to be made to the Government that the Chair of TfL will be a good custodian of this considering the pressures that TfL budgets have because of decisions he has made? Do you think there is an

argument for the Government to push back and say, “We are not particularly happy with how the finances are being looked after so why would we devolve more downward?”

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): If the question is one of how we are making priorities locally and whether the Department [for Transport] agrees with the priorities we make, that is the purpose of devolution in some sense, that decisions can be made more locally. You might agree or disagree with those.

If it is about the state of the finances of TfL more generally and our financial management, I would have absolutely no problem defending that in terms of the volume of efficiencies that we have delivered over the years and the recent past, and the decisions that we have taken to get many more quarts out of the pint pot. We will have an affordable plan for these things. We can afford to make the improvements that we want to make on behalf of the railway users of London, and it is a plan that will balance. We will be able to defend that and show that it is value for money, that it will do good things for the London economy and the wider economy as well, and indeed square off the various trade-offs and interfaces that there are with a mixed-traffic railway, which is nothing new and which London Overground deals with on a daily basis on the East London line, North London line and elsewhere. Whilst these are all legitimate questions, all of them have very compelling and relatively easy-to-make answers. We have done that in the past and we shall do it again next time around.

Shaun Bailey AM: OK. The arguments around TfL’s budgets and the efficacy of your forecast rise in income because of increased passenger volumes is a whole other argument but of course historically they have not been that accurate. We were predicting very big rises in passenger numbers to cover what conceivably is a very large hole in TfL’s finances going forward. If you are the Government, you may wonder how well all of that is going to pan out considering that ultimately the taxpayer would be left with any shortcomings. Around this table there is a great deal of support for that, a great deal of support, but we need to make the case that TfL is run in a generally good way in order to take on these new bits of devolution. To my mind, some of them look quite complicated. It looks like we have all the low-hanging fruit and the next set may be slightly more difficult to deal with.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): On forecast accuracy, we talked a bit earlier about the fact that certainly in the noughties, if I can use such a term, we under-forecast the rise in demand. If you look at the MTS back in that period of time, the level of population growth and the level of employment growth outstripped what the London Plan said and, therefore, people like me under-forecast the amount of trips.

More generally, on the Overground, I was in an idle moment yesterday looking at the forecasts that we made with respect to the Overground back in 2009, 2010, 2011 and 2012, around about then, and seeing whether they were worth the paper they were written on. Actually, they were pretty close. Now, I might whisper it quietly that they might have been close for all the wrong reasons, but they were nonetheless reasonably close.

For example, in 2012, when we were forecasting the impact of all the changes to the Overground, we were getting the extension of the East London line around to Clapham Junction, we were increasing the length of the trains, we were trying to forecast what was happening to population and employment around many of these routes which pass through a whole crop of Opportunity Areas. The forecast for this year was 175 million trips for all the bits except West Anglia, which transferred later. We are there or thereabouts. We are about 170 million, 173 million, something like that. Not bad, I would say, on that particular occasion.

I am quite willing to defend our forecasting record. What we set out as well in terms of forecasts for Southeastern when we were doing that was again perfectly defensible, and indeed more generally across our financial management as well. We have a credible record. I would say that, but looking at the evidence previously from people like Stephen Joseph [OBE, Chief Executive, Campaign for Better Transport], I do note that he said words along the same lines in your evidence session.

Shaun Bailey AM: I will stop there, Chair, because of time, but I will say this. The forecast for the uplift in passengers on the Elizabeth line looks slightly optimistic to me, notwithstanding that TfL still has massive challenges around its budget. They are material factors.

Caroline Pidgeon MBE AM (Chair): We are going to be asking questions tomorrow at the Budget and Performance Committee on that subject.

Tom Copley AM: Thank you, Chair. Do you think that the Mayor and indeed all of us here who make the case for devolution need to be talking more about outside of London and making the case for the benefits to those areas? There has been this argument that has crept in that even though TfL or London Underground have been running services outside of London for well over 100 years there is an issue with accountability because TfL and the Mayor are not accountable to them, although you could ask how accountable the Ministers in the DfT are to these areas.

Do you think we and the Mayor need to be making more of a case and winning over Members of Parliament (MPs)? A lot of local authorities around London are won over already but should we be making the case of the benefits to those areas? They are not going to miss out on services. They are actually going to benefit from TfL running their services.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): Yes, absolutely. I might not often say this but I would direct you to [The Rt. Hon] Grant Shapps MP's Twitter feed. He is MP for Welwyn Hatfield. He is one such example of an extremely enthusiastic person in support of the transfer of the Moorgate services, for example. We had a letter from Hertfordshire County Council not very long ago saying a version of the same thing. Your point absolutely applies. Yes, we need support from outside. We had that support for the Southeastern attempt in 2016 and that counted not only for relevant MPs but also for user groups as well. The answer is yes.

Paul Plummer (Chief Executive, Rail Delivery Group): It comes back to the point that it is ultimately a network. We have some hugely valuable and very scarce capacity that we need to get more out of. Reference the previous discussions. We need to use that capacity for the commuting services Geoff is highlighting here but also those longer-distance flows in the East Coast, very long-distance flows, and business. It is hugely important for our economy as a whole. The reason why I say all of that again is because it is relevant, while giving the assurance that there is a way of balancing and making sensible choices about the best use of that capacity. Rather than one group of people saying they want it, it is another group of people saying, "How do we decide that based on what it delivers for our economy as a whole?" That is part of the way of addressing your question.

Michèle Dix (Managing Director, Crossrail 2, Transport for London): It is worth noting, say on Crossrail 2, that some of the trains on the suburban branches in the southwest will become Crossrail 2 trains. They will be running from outside of London, coming into London. They will be run by the same service, all branded in the same way. Even though we have been asked by many people, "Can you not extend the services further afield? Can you not come further out?" actually what they do want is more longer-distance non-stopping

trains rather than the Crossrail 2 trains. The Crossrail 2 trains are good for serving those centres just outside of London with the services that they require but by building the Crossrail 2 infrastructure we at the same time enable an increase in those faster mainline services. We are helping both passengers, the longer-distance passengers and importantly the passengers outside of London who are closer to London and actually want a stopping service, as well as those inside of London. It addresses all three users.

Caroline Pidgeon MBE AM (Chair): That is good.

Tom Copley AM: That is a very good point, yes.

Caroline Pidgeon MBE AM (Chair): Another reason it is a win-win project. Fantastic. We have two sections left, Members. We have a Rail Strategy for London and, Keith, you are going to lead this off.

Keith Prince AM: Thank you, Chair. This is a question for the whole panel, really. I have to say that normally I ask open questions, but on this question I want to ask a closed question. I just need a simple yes or no. On a lighter note, in light of the [World Cup semi-final] game tonight for England, Rupert, is it coming home?

Rupert Walker (Strategy and Planning Director (South), Network Rail): Keith, yes, it is coming home.

Keith Prince AM: Mark?

Mark Farrow (Director of London Rail, Network Rail): Of course. Of course, Keith.

Keith Prince AM: Paul?

Paul Plummer (Chief Executive, Rail Delivery Group): Yes.

Keith Prince AM: Geoff?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): Definitely.

Keith Prince AM: Michèle?

Michèle Dix (Managing Director, Crossrail 2, Transport for London): I hope so; otherwise, my house will be rather miserable tonight.

Keith Prince AM: Thank you very much. Thank you. Getting to the serious point, the Rail Strategy for London is the question, is it not? Why is there no single Rail Strategy for London?

Michèle Dix (Managing Director, Crossrail 2, Transport for London): There is a Rail Strategy for London because the MTS reflects not just what the Mayor can do inside of London but also reflects the ambitions from beyond London. If you look at the Strategy, it is about improving things in London but also the wider region of London and the connections that need to be made between London and places further afield.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): There is a lot of cross-working between Rupert [Walker] and me and our teams, such that he had lots of input into this, if I may

say so, and I have quite a lot of input into the stuff Rupert does, notably the route studies, which are absolutely essential. Indeed, the route studies provided a lot of the research and intellectual rigour behind schemes that get a mention in the MTS. There might not be a single document but it amounts to the same thing in practice and it is very closely aligned.

Keith Prince AM: However, would it be helpful if there was a single document? Clearly TfL has priorities and quite rightly Network Rail has priorities. Definitely, the two cross over. Would it not be helpful to have a single vision for London transport?

Rupert Walker (Strategy and Planning Director (South), Network Rail): The challenge is, Keith, that London is not an island, as we have been saying. People have to travel in and out from, in some cases, great distances. People who work in London, more than any other city in the country, choose to use rail to get to and from work, by a factor, and so it is absolutely vital that we continue to plan for and invest in enhancing the railway network. That is why, as Geoff has said, we work absolutely hand-in-glove in terms of planning how that network needs to evolve. The MTS that Geoff has referred to has close involvement from Network Rail in its development and the route strategies, which tend to look further afield, have close involvement from TfL in their development. It is very difficult to segregate the two because of the fact that people are travelling across these boundaries every single day. The final thing for me. The thing we have in common is that we both want to deliver the very best service we can for the passengers who use the railway and that is what drives us to get the best out of the capacity we have.

Keith Prince AM: Moving on from that, how do the two of you, ie TfL and Network Rail, work together to prioritise what is the most important upgrade or the most important improvement needed?

Rupert Walker (Strategy and Planning Director (South), Network Rail): Network Rail leads the industry-wide long-term planning process, which is a consultative and collaborative process that looks at rail demand, as we have spoken about, and identifies where the hotspots are and where demand for rail travel exceeds capacity. That process involves TfL but also consultation with rail users and stakeholders around the patch. Then we use those plans to identify and develop schemes and interventions, whether it is more trains, longer trains or changes to the infrastructure, that will provide benefits for passengers going forward. It is a very collegiate and joined-up process in order to deliver better train services for passengers.

Keith Prince AM: How does that work with TfL? If you look at the Anglia region, if I can call it that, where you have the start of the Elizabeth line, clearly when you are dealing with Tube lines there is hardly any interface between you but on what are called heavy rail lines, if you lengthen the stations that of course helps TfL but if you put new rolling stock on another area that does not help. If you change the track layout, for instance, that would have a massive impact on TfL. How do you liaise on that?

Rupert Walker (Strategy and Planning Director (South), Network Rail): We have already mentioned the devolution of Network Rail structure to route businesses. The other thing that we did as part of that was to create the system operator function. The system operator acts as the glue between all of the different routes with the interests of passengers and freight users at its heart, thinking about how we can get the best out of capacity. That is the challenge, as you have quite rightly said, in terms of trying to balance the cost of any intervention, the performance you get and the capacity you have and could have in future. That function, the system operator, is organised on a route basis. Our teams work very closely with the route teams and also with TfL in terms of planning how those trade-offs get made.

We have adopted a different approach for the next Control Period. Rather than making commitments at the beginning of the Control Period to deliver loads of projects for a certain amount of money, we are now working with Government funders and third-party funders to take decisions on a relatively incremental basis when we know we are ready to make a commitment and we understand what the benefits are of a particular scheme, what it is going to cost and when it can be delivered. That business case approach to deciding which schemes should be prioritised and brought forward involves TfL in the decision-making process, so that we can get the best out of the network that we have.

Keith Prince AM: Signalling is a good point. If we look at the Elizabeth line, I believe two or three different signalling systems are going to be used there. The Central line is going to be using a moving block system. Is that correct? To maximise the whole route, that would be the system you would want to use across the whole route. However, because of constraints on what I will call the Anglian section, that is sticking to the old system. How can you work with TfL to make those improvements strategically? I can understand that a train coming from Norwich to Liverpool Street would not necessarily need that system but to maximise the use of the Elizabeth line the section up to Shenfield does need that.

Rupert Walker (Strategy and Planning Director (South), Network Rail): It is a really good question. For reasons that Mark [Farrow] has mentioned, there are different signalling systems on the Elizabeth line route. Network Rail has been working really closely with the Elizabeth line team, originally Crossrail 1, since the very early days, ten or 12 years ago, in the development of the signalling system that will be used both within the central section, where a computer-based signalling system is deployed, and also as to how the trains will be controlled on either side on Network Rail's infrastructure. Obviously in the medium to longer term our goal is to move to a fully digital signalling system that is fully interoperable with the system through the central core. One of the advantages of using digital signalling is that by buying European systems that have been developed and we know talk to each other, we should be able to avoid the issues of the interface between different systems.

The point I would make is that we are working very closely together. There are clearly challenges to overcome in terms of these different systems that exist at the moment. We want to move towards a much more interoperable and integrated system in the future.

Michèle Dix (Managing Director, Crossrail 2, Transport for London): I was just going to say, in terms of prioritising and working together, that when we were looking at transport needs in London out to the 2030s, given that our philosophy is to maximise the potential of the network we have first, we identified that there was still a shortage in the southwest to northeast corridor and that physical interventions were needed to help address that. At the same time Network Rail was doing its own work looking at its own routes across the country, particularly in the southwest corridor and in the West Anglia corridor, and the options they had to improve those aligned with the sort of thinking that we had. They needed some physical intervention to solve their problems and we needed physical intervention to solve ours. We prioritised doing that work together. It is that close working and close set of objectives that is important.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): It means that idea generation is done collectively. We have a model that we all buy into and use. We have a common methodology. That means that when it comes to picking the priorities from the long list that is generated from that process, we have stuff that is, more often than not, all in apples rather than apples and pears. Therefore, the decision-making across our organisations is relatively simple and straightforward, and therefore one can come up with what the priorities are for the short, medium and long-term. Hence Crossrail 2 in the long run as opposed to Brighton Main Line more in the here and now.

Keith Prince AM: Good. Moving on from that, Geoff, how do those priorities fit in with the larger priorities for London such as housing and employment?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): In taking account of the costs and benefits of these schemes, one of the things one needs to do is make sure that there is some form of strategic fit with the London Plan and what is going on with Opportunity Areas. I described earlier how one can look at these individually or one can look at these as a collective, but absolutely we take account in our modelling and our methodology of where growth is expected to happen, be it population, be it employment or be it anything else. One needs to check that each of these Opportunity Areas is suitably firing on all cylinders and, where they are not, why they are not. If they are transport shortfalls or things that are not working well enough, then we come up with potential solutions through this process, first a long list, then a shorter list, and eventually a set of priorities for what we want to take forward and put resources from one or both of our organisations into. Writ large, that is Crossrail 2, where one looks across a very large corridor, northeast to southwest.

Michèle Dix (Managing Director, Crossrail 2, Transport for London): The whole region.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): Writ small, that means individual Opportunity Areas in a much more concentrated, focused fashion as well. It works quite well from that perspective.

Michèle Dix (Managing Director, Crossrail 2, Transport for London): There is an increased emphasis on supporting and enabling housing to happen, as much as there is in terms of improving transport connections to jobs. It is making sure that there are homes for people to live in and they can access jobs so that they are employed. That linkage is quite strong. It was a key driver for the Gospel Oak to Barking extension so that those homes could be built.

Shaun Bailey AM: Just continuing in the same vein, at present how well do national services integrate with other modes of transport in London from a timetabling point of view and in the physical interface? We talked earlier on about access and so on. How well are those systems working? What part of your organisation looks at that and tries to plan that into the future?

Rupert Walker (Strategy and Planning Director (South), Network Rail): The system operator function that I mentioned just now is responsible for the national timetable, for developing that and making sure that it works. A part of that is thinking about the whole journey and how people are going to interchange. We spoke earlier on about the importance of the interchange and considering all the modes that people want to move on to. We see some great opportunities in some of the stations that we have spoken about - for example, Victoria, East Croydon, Clapham Junction - to really improve the interchange, and the timetable will be a key part of that. Understanding how the interchange will work and then making sure that the physical interchange will work, that there is sufficient space for people to move around the station, wait for their train and also get a coffee or whatever is appropriate, is built into the planning of those developments. It is an integrated process.

Because we brought the timetabling function within Network Rail together with the planning function, we have that feedback from the operation of the railway and the understanding of what is happening on the ground, day-to-day, feeding back right through into the planning of new infrastructure, new stations and changes to stations.

Shaun Bailey AM: These conversations are routinely and regularly had with TfL?

Rupert Walker (Strategy and Planning Director (South), Network Rail): Geoff [Hobbs] and his team are in the room, figuratively or literally, in these discussions.

Michèle Dix (Managing Director, Crossrail 2, Transport for London): There are also lots of direct discussions about where there is a main rail station improvement about the ongoing mode of transport for passengers arriving there, whether it is via the Underground and whether there is sufficient capacity to get to the Underground, whether it is by bike, whether it is by bus, whether it is by taxi, to make sure those further modal provisions are provided for.

The other thing to mention in terms of national rail travel coming into termini in central London is that something such as Crossrail 2 is going to provide huge relief to Liverpool Street, huge relief to Waterloo and will provide the relief that is needed at Euston when the High Speed 2 (HS2) trains come in as well. It is working together to make sure we can address those.

Shaun Bailey AM: The question I am asking though, is: is this just because you all happen to have a great relationship or do you have an actual mechanism? Imagine one of your respective organisations has a task it has to achieve. How does Crossrail 2 immediately involve Network Rail or TfL? Is it natural or is it personnel-driven? What is the mechanism to make sure that you are bringing all of your organisations' needs to the bigger conversation readily? What does that mechanism look like?

Rupert Walker (Strategy and Planning Director (South), Network Rail): It is both those things. We all know that a successful project is built on common objectives but also the people who deliver it. The relationships are really important. We must not underestimate that. The joint planning process, the long-term planning process that I mentioned, which involves everybody and is as consultative and as collegiate as possible, is intended to draw in that involvement and make sure that it is happening on a continuous, year in, year out process. Then lastly on Crossrail 2, Network Rail is working in partnership with TfL. As Michèle [Dix] has said, we have people in the team working together side by side to make sure that those issues that you have mentioned are addressed both from the TfL and Network Rail perspective in the context of Crossrail 2.

Shaun Bailey AM: See, that is what I wanted to hear. I wanted to hear that you have a team and there is someone representing everybody's organisations in that room to say, "OK, let us try to build a common end point". It was interesting hearing the work you talked about with HS2. It also sounded like the extra infrastructure that you were about to build, just by happenstance, was going to help everybody else. I wanted to realise, if we are spending that amount of money, there is no happenstance. At no point should anything magical happen because it has been planned by every team. That is what I was going for.

In essence you have probably answered my last question but: has TfL been working with Transport for the South East to secure better rail services for London and the southeast? Keith [Prince AM] talked about the Anglian region and so on. Is there any idea or a backroom solution that says you are looking at the entire southeast, fixing a plan for the entire southeast? It seems to me that if we have London as an island in the middle we become a problem because we are always working for our own endpoint and not including other people. Quite frankly, a large number of those people come here on a daily basis. Who is looking at the entire picture? Again, I want to hear that it is a deliberate thing, not just because you all happen to like each other.

Rupert Walker (Strategy and Planning Director (South), Network Rail): From the Network Rail perspective, and Geoff [Hobbs] can pick up TfL, we work closely with Transport for the South East. We were

involved in their launch. My team works with their team hand-in-hand and goes to their regular meetings so that we can be involved in the planning process. We are supportive of that organisation and what they represent and are keen to have joined-up plans with them. We see it as a growing and building relationship, a really important one.

Shaun Bailey AM: Is there any scope for forming my imaginary organisation of all of you together in a room? Is there any idea that that should be done officially, that you should get together in some official capacity for the entire southeast region to figure out all of our problems around transport?

Rupert Walker (Strategy and Planning Director (South), Network Rail): I would say that we do come together quite regularly through a number of different forums, both in a rail capacity directly but also in a transport capacity, to make sure that there is cross-fertilisation and that we understand issues. Network Rail is considering how to broaden its planning ability to make sure that it is much more inclusive and involves local authorities and local enterprise partnerships (LEPs). Those forums do exist and we do work together closely in them.

Shaun Bailey AM: You are comfortable that we do not need to have a south England network planning body?

Paul Plummer (Chief Executive, Rail Delivery Group): The virtual institutionalisation of exactly what you are getting at, I think, is already there. It is not a body but the institutional process in terms of the relevant people from the relevant bodies coming together, being forced together whether they like each other or not, is there.

Shaun Bailey AM: That is the question. I am just trying to understand because it seems like there are all these little piecemeal things. The example you gave earlier on was great. It gave an example of where you had come to a nice mutual understanding that was going to work for everyone. Politics teaches you to look for the points where you do not have an understanding and who is going to resolve that in the speediest fashion. That is why I want to understand that you are comfortable as professionals that that virtually exists and that is good enough to achieve these tasks. That is enough from me, Chair.

Caroline Pidgeon MBE AM (Chair): I just want to pick something up. How do the train operators and others input into this? The train operators are running the services. Do you have the opportunity when developing strategies or whatever to feed in your views?

Paul Plummer (Chief Executive, Rail Delivery Group): The process that we have been talking about includes them in all of that. Network Rail, on behalf of all of the mainline rail companies, including the operators, manages that process. In a sense it is part of Rail Delivery Group that it does that. They are involved in that. There is a long-term planning and strategic element but the extra layer, if you like, is that to varying degrees in different parts of the railway, when you go out for competitions you want innovation from the market. That is an extra layer on some of this in some cases, where people in a competitive process are coming up with different ideas. That should be built upon the long-term strategic planning process that they are already involved in.

Caroline Pidgeon MBE AM (Chair): Thank you. Now we will move to our final section. We have talked about all these wonderful things all morning but how do we fund London's rail network?

Tom Copley AM: Can I just ask a quick point on the interchange first?

Caroline Pidgeon MBE AM (Chair): Of course you can, Tom.

Tom Copley AM: Thank you. Were you just talking about interchange between rail services or do you look at the interchange with buses and things like that as well?

Rupert Walker (Strategy and Planning Director (South), Network Rail): It is completely intermodal. Transport interchange.

Tom Copley AM: Intermodal. One of our previous investigations was into the future of rail, looking partly at data. How helpful would it be to get some of that Citymapper data back when it comes to planning rail services and interchanges between other modes of transport?

Rupert Walker (Strategy and Planning Director (South), Network Rail): Citymapper data relies on timetabling data and information that comes from rail operators and from TfL. In a sense, it becomes a bit circular. The other point is that certainly in the Network Rail stations - I will let Geoff pick up on the TfL ones - we regularly count the number of passengers going in and out and understand their movements. In fact, at Waterloo and also at Clapham Junction we are in the process of installing some really high-tech passenger movement sensors so that we can understand how crowds move during normal operation and in times of delay, so that we can better manage the process through the station. Geoff, do you want to pick up on TfL?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): We also have the means to turn counts at particular points into matrices of how many people are going from where to where else. You can trace those through from one part of the transport network to another, reflecting the fact that there are a large number of trips that go from the Underground to heavy rail, DLR, buses or whatever.

Michèle Dix (Managing Director, Crossrail 2, Transport for London): Or walk.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): Yes. I would not say that all this is perfect. It is an aspect of big data that people like me have an immense interest in, to try to do that.

Tom Copley AM: You have wi-fi data as well, do you not, to see how people are moving in the network?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): We do within the Underground. In the Underground you have lots of different route choices. Oyster will tell you where people tap in and tap out. Oyster will also infer where people tap out if, like on a bus, they do not have to. Oyster will not tell you where they are walking to and from and it will not tell you how they are making their way through. If you are going from Stratford to Bond Street you have two ways, Central and Jubilee, at the moment, and a third way in the Elizabeth line fairly shortly. You can use various means, of which wi-fi is one, to work that kind of stuff out, which is important for people like me because I want to know how many trains to run. We are getting better at being able to join the dots between the different modes. Walking is a bit harder because you do not need an Oyster card to go walking, but it is still possible with various other sources.

Tom Copley AM: Thank you.

Keith Prince AM: TfL supply data to different organisations such as Citymapper. We supply that information for free, which is good because they then have their own apps. As far as I understand it - I have met with

Citymapper - they would be quite willing to share their information. Now, the information they have that you do not is that they do know where the person starts their journey and they do know where they get off the bus.

Why do we not make more of an effort to work with them? We give them free data. I am sure that, in exchange, they would be prepared to supply certain data to yourselves.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): Sadly not free from them, would be the answer. We have a policy of giving free data through our feeds and many apps have resulted from that. Citymapper of course have their own app. They ask to track all of you - and myself, as it is on my phone as well - and they collect all that data but they are not so very munificent that they give it away for free, sadly. While if they were able to do that I would be absolutely delighted, we have other methods which we feel are more cost-effective for trying to trace journeys.

Keith Prince AM: Has that conversation been had with Citymapper? You supply free data to them. Surely there must be some *quid pro quo*.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): You might have hoped so, but we have not managed to find it just yet.

Caroline Pidgeon MBE AM (Chair): This is one of our recommendations in our Future Transport Report, that a condition of you giving the data for free is that you get anonymised data back from apps so that you can use it to help plan transport in the city. I think we are going to be pursuing that further because it is very valuable.

All right, let us look at funding all this.

Tom Copley AM: My question is: particularly with a lot of anti-London sentiment and a desire by Government not to be seen to be just funding things in London but to be funding things elsewhere, how are we going to secure funding for the rail improvement projects that we need?

Rupert Walker (Strategy and Planning Director (South), Network Rail): There are several points that are worth addressing in this really good question. As we have already explained and demonstrated, it is essential that we keep investing in our transport infrastructure in London in order to keep the city moving so that it can continue to be an economic boost for the country. There are different ways of doing that.

I have explained a little bit about how at Network Rail we see blended funding, hybrid funding, different types of funding, as one way forward to make sure that we are able to continue the investment that we believe is essential. That is a process of using funding from Government and funding from third parties. We have established our Open for Business initiative and created roles for people in positions around the country to engage with organisations who are interested in investing in the railway. That is not necessarily just about building new railway or new facilities on the railway, it is also about investing in building homes and commercial offices, especially where we can get a benefit for the railway out of building those homes. An example could be at Twickenham, where there are 115 new homes being built and as part of that we are getting a new station and a fantastic gateway for the rugby stadium.

From our point of view, it is not an either/or. It has to be about both investing in London and elsewhere in the country. We need to make the case and the reasons why that investment is so important so that London can continue to be that economic boost for the country.

Tom Copley AM: There is the case of jobs as well. Transport investment in London often creates wider economic benefits throughout the rest of the country. There are the new Tube trains for London, which are being built in Yorkshire. Any other thoughts on how we can make the case?

Michèle Dix (Managing Director, Crossrail 2, Transport for London): There is making a strong economic case for investment to say that if you spend this money here you will get all these additional jobs and you will get all these economic benefits, but there is also finding the money upfront, the cash. The challenge that London had, particularly for Crossrail 2, is to be able to fund half of the cost of the scheme. It is to get Government support for half of the costs but also for London to find half of the costs of the scheme.

We support investment in transport for the north and we are in lockstep with the Northern Powerhouse Rail but what we have identified to date are similar mechanisms to those that were in place for Crossrail 1, which includes those who benefit contributing to the scheme. Businesses who benefit contribute to the business rate supplement. Developers may benefit because the land that the railway goes through becomes more viable for development, so you continue with the Mayor's Community Infrastructure Levy (CIL). Also with a new scheme you are going to enable some oversight development that could take place above the station and on the worksites that you have had to use. It is trying to make the most of those so that contributions for those can go towards the cost of the scheme. Then finally, obviously, fair pay. As people pay to use the service, we may take that net operating surplus and use that as well.

However, there are other beneficiaries of the scheme who have not been earmarked to date to say that they should pay. Because, as I said, Crossrail 2 is not just a London scheme, it is a regional scheme, there are beneficiaries outside of London as well as inside of London. It is looking at mechanisms that perhaps could encourage contributions from outside of London.

There is also the work that was done last year on land value capture because some of the beneficiaries of transport improvements are people who own existing properties, be they private properties or be they big commercial properties. Some of the big estate owners have properties that go up in terms of their attraction because of the transport improvements. They can charge increased rentals. One wants to consider if there is a way of capturing the uplift that they will accrue. All of these are mechanisms to consider as to how to fund these schemes.

Tom Copley AM: Land value capture is something that I am quite interested in. It is something I think there is some appetite in Government to explore and we have not been very good in the past at extracting some value of the people, the landowners, who really do benefit. I did look on the work that TfL did on the Development Rights Auction Model (DRAM) and just as I got my head around it they decided that was not an appropriate way of funding transport infrastructure in London.

Michèle Dix (Managing Director, Crossrail 2, Transport for London): Not for certain sites. It may well work in other locations.

Tom Copley AM: It may work in other locations? Less urban locations?

Michèle Dix (Managing Director, Crossrail 2, Transport for London): Yes.

Tom Copley AM: What other forms of land value capture are you looking at? We have heard that TfL are looking at a transport property charge. Is that something that is similar to the old business rates levy or a form of mayoral CIL supplement? What would that entail and how far would it extend? There have been arguments about who directly benefits within London from it. How far away from the route do you think you would need to go?

Michèle Dix (Managing Director, Crossrail 2, Transport for London): In terms of the mayoral CIL, the consultation that was launched last year was to extend the mayoral CIL in terms of time so it could be used to help for Crossrail 2. There is an equivalent CIL outside of London where there are beneficiaries. Also, in terms of the business rate supplement, because businesses benefit, there is a proposal to continue that after it is finished being used for Crossrail 1. The other forms of land value capture - those two are forms of land value capture - are, as you said, the DRAM model, or transport premium charges. They are things that could be considered but they have pros and cons associated with them.

Tom Copley AM: Presumably they would require the Government to legislate for you to --

Michèle Dix (Managing Director, Crossrail 2, Transport for London): They would require legislation, yes.

Tom Copley AM: Yes. Is the only other way TfL can raise funds essentially road user charging or something like that?

Michèle Dix (Managing Director, Crossrail 2, Transport for London): Road user charging is a mechanism for raising funds. Certainly, the congestion charge was originally put in place and used to help generate additional funds to pay for public transport. You can hypothecate it towards transport improvements.

Tom Copley AM: Just turning to international comparisons, is there anything we can learn from other countries about how they fund new rail infrastructure, the different approaches they have taken and how applicable they could be to London?

Michèle Dix (Managing Director, Crossrail 2, Transport for London): There are a whole array of different mechanisms that different countries use. Some, like France, use payroll or employee taxes that they apply in terms of getting contributions. They might have specific taxes on properties within the vicinity of the actual proposal, a bit like a land value capture or transport premium charge. There are other cities elsewhere in the world which have used different mechanisms but it is whether or not they are appropriate in each of the locations within London. It is not just a London issue, grappling with this. East West Rail and the schemes up north will also be considering what mechanisms there are in place. The estimated untapped land value uplift associated with Crossrail 2 was about £60 billion.

Tom Copley AM: How much of that do you think we actually managed to claw back for the taxpayer?

Michèle Dix (Managing Director, Crossrail 2, Transport for London): The issue is that if a lot of that is associated with private residential properties, it is quite hard.

Tom Copley AM: Yes. Just quickly again in terms of authorities around London, how open do you think they would be about going to the Government and saying, "If this is going to make this happen, we will volunteer to

have some sort of charge?" Is it important enough to them that they would be willing to make that sort of case?

Michèle Dix (Managing Director, Crossrail 2, Transport for London): There is a huge amount of support that has been expressed in the counties and the districts outside of London, particularly for Crossrail 2. If the situation arises that we need sources beyond the ones that I have just described, there would need to be conversations.

Tom Copley AM: Thank you. I will turn now to the Government's new RNEP. I am wondering if our guests from Network Rail could tell us the opportunities and the challenges that will present for London.

Rupert Walker (Strategy and Planning Director (South), Network Rail): I spoke a little about this new approach earlier on. It is building on and learning from the experiences we have had in past Control Periods, instead of making a commitment on a five-yearly basis to a number of schemes that will be delivered. That has had its successes in the past. We are seeing Thameslink delivering its benefits and that project was planned 15 years ago. There has been some success, but learning from the experiences in the last Control Period we have now adopted an incremental approach to decision-making in terms of individual projects.

That enables us to look at where we need to make an intervention, whether that is more trains, longer trains or a physical intervention on the infrastructure, look at where that is needed across the whole network, begin to prioritise them, form a pipeline of projects, develop business cases for those projects to understand the costs, the benefits and when they can be delivered, and then prioritise them in terms of the timing of the delivery, making the decision to deliver at the right point rather than just in five-yearly increments because that is how we do funding.

We see it as a positive change to the way in which the railways can be funded going forward and also it supports the initiative to bring third party investment into the railways. There are a number of schemes that we are looking at where we see a real opportunity for private investment in the railways to get improvements that otherwise just would not have been possible. In particular, I point out rail access to the airports, to Heathrow especially.

Something that Network Rail has been closely involved in is both the southern access to Heathrow and the western access. On the southern access in particular, we are asking the market to come forward with their suggestions and proposals for how that could be built and also how it could be funded. On the western access, although there is a scheme that is quite well developed and we are aiming to go for planning permission next year, we want to introduce third party delivery and potentially financing and funding to that scheme as well, so that we can learn from the innovation that private sector delivery would bring and also benefit from private sector financing. Those are just two examples of schemes that we see can deliver things that otherwise just might not have been possible, given affordability issues.

Tom Copley AM: Would it make it more difficult to plan, moving outside of the more rigid five-year Control Periods?

Rupert Walker (Strategy and Planning Director (South), Network Rail): As a planner, in some ways I think it makes it easier because we are able to identify, "In an ideal world one might do all of these things", and then work out what the benefits are of each, what the relative priorities are of each and what the needs are of each. We mentioned, for example, the south London stations earlier on, Denmark Hill, Peckham Rye and so on. We are able to then bring these projects forward in a pipeline approach, demonstrate the case for

each of them and build support for them. In this new process, stakeholder support from local authorities, from LEPs and from the rest of the industry is absolutely vital to demonstrate how important these schemes are, so that we are able to then get them delivered. From my point of view, it will be working better than it has in the past. It avoids us making commitments to deliver benefits way, way off into the future until we are ready and really understand that we can achieve them on time and on budget.

Tom Copley AM: OK. Geoff, from a TfL perspective, do you think this is going to be an improvement in how rail infrastructure is paid for and does it present more opportunities for the Mayor and TfL to be involved in this process?

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): Yes, it probably does, in the sense that you are making decisions in a more measured way rather than in five-yearly chunks. Things change. They just do. Events come along, demand changes and so on. It is not without some concern that one loses a five-yearly look ahead but it has a lot of strengths as well. My response, as you can hear, is somewhat on the fence on this one. I can see why we are doing this and I can see the advantages of it.

Tom Copley AM: More flexible. Greater flexibility.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): Absolutely, yes.

Tom Copley AM: Any other comments on this?

Paul Plummer (Chief Executive, Rail Delivery Group): I would pick up Geoff's point at the end there and say we must not lose a forward look. Making decisions at the right time for the project is really important and that is one of the lessons but we must not throw out, the need for a rolling forward view, to your questions earlier, of what we need for a strategy for the whole of London and the southeast and the whole of the railway network.

Tom Copley AM: Do you think we need a further view ahead as well --

Paul Plummer (Chief Executive, Rail Delivery Group): Absolutely.

Tom Copley AM: -- instead of just in terms of five years? Paris Metro looks 20 or 25 years ahead, something like that.

Paul Plummer (Chief Executive, Rail Delivery Group): There is a difference in that context between the planning, the strategy, thinking, "What is it we want to do? How are we going to get there?" and then making the case for funding. The second bit previously was in five-year chunks and in some ways it was unhelpful because it forced people to plan in five-year chunks. If we are separating out, "What is the strategy? What is the plan? When are we making decisions for projects and the funding of those projects?" I think it actually makes it cleaner.

Tom Copley AM: My final question is: what are the key projects for London that should be put forward for the RNEP? I might just ask each of you for one, just to make you choose. I will start with Michèle. I wonder what Michèle will say.

Michèle Dix (Managing Director, Crossrail 2, Transport for London): You know what I am going to say.

Tom Copley AM: Crossrail 2. There we are.

Michèle Dix (Managing Director, Crossrail 2, Transport for London): The biggest priority.

Caroline Pidgeon MBE AM (Chair): Are we going to get it, Michèle?

Michèle Dix (Managing Director, Crossrail 2, Transport for London): Yes.

Tom Copley AM: There we go. Excellent.

Geoff Hobbs (Director of Public Service Transport Planning, Transport for London): Absolutely it is the biggest priority. The thing that is a bit more here and now is Brighton Main Line.

Paul Plummer (Chief Executive, Rail Delivery Group): Those were my two.

Tom Copley AM: They have been taken out of the pool now. You can choose a different one.

Paul Plummer (Chief Executive, Rail Delivery Group): I was going to choose Brighton Main Line. That is key in terms of unlocking a lot of that capacity.

Mark Farrow (Director of London Rail, Network Rail): On a stations point, Clapham Junction is a really big one.

Rupert Walker (Strategy and Planning Director (South), Network Rail): Showing how joined-up we are, those are the projects that I would have chosen. I will only add, let us not forget the smaller stations, the south London stations in particular, where congestion is becoming a real issue. We need to sort those out as well.

Tom Copley AM: Fantastic. Thank you all very much.

Caroline Pidgeon MBE AM (Chair): Thank you very much indeed. We have taken a long time on all of that. There was some really useful evidence. Thank you very much. Thank you, Michèle, for coming in halfway through and your contribution. Geoff, Paul, Mark and Rupert, really helpful. If there are thoughts you suddenly have afterwards that you wish you had mentioned and did not, please write to us.