

Transport Committee

Oral evidence: Mobility as a Service, HC 590

Monday 14 May 2018

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Watch the meeting

Members present: Lilian Greenwood (Chair); Jack Brereton; Ronnie Cowan; Huw Merriman; Grahame Morris; Luke Pollard; Iain Stewart; Daniel Zeichner.

Questions 142 - 229

Witnesses

I: Crispin Humm MBE, Head of Customer Journey, Rail Delivery Group; Catherine Hutt, Mobility Programme Manager, Addison Lee; Stéphanie Rivet, Chief Digital Officer, Stagecoach Group; and Julian Scriven, Managing Director, nextbike UK.

II: Chris Lane, Head of Transport Innovation, Transport for West Midlands; Shashi Verma, Chief Technology Officer & Director of Customer Experience, Transport for London; and Simon Warburton, Transport Strategy Director, Transport for Greater Manchester.

Written evidence from witnesses:

- [Rail Delivery Group](#)
- [Addison Lee Group](#)
- [Stagecoach Group plc](#)
- [nextbike UK](#)
- [Transport for West Midlands \(TfWM\)](#)
- [Transport for London \(TfL\)](#)
- [Transport for Greater Manchester](#)



Examination of witnesses

Witnesses: Crispin Humm, Catherine Hutt, Stéphanie Rivet and Julian Scriven.

Q142 **Chair:** Welcome, and thank you very much for coming along today. For the record of our proceedings, can I ask you to give your name and the organisation you represent?

Julian Scriven: I am Julian Scriven, managing director of nextbike UK.

Stéphanie Rivet: I am Stéphanie Rivet, chief digital officer of Stagecoach Group.

Crispin Humm: I am Crispin Humm. I am head of customer strategy in the Rail Delivery Group.

Catherine Hutt: I am Catherine Hutt, mobility programme manager at Addison Lee, and I run the MERGE Greenwich project on its behalf.

Q143 **Chair:** Thank you very much. Members of the Committee will ask you a number of questions. I will start. Why are the transport companies that you represent interested in Mobility as a Service? I do not mind who starts, but, Stéphanie, can you also say why Stagecoach has not joined MaaS Global's Whim app in the west midlands? If you could cover that in your answer, it would be really helpful.

Stéphanie Rivet: As a transport operator, we are at the heart of mobility. We believe that bus transport is the backbone of Mobility as a Service. We carry millions of customers every day and, therefore, we understand what their needs are. They want better provision of transport end to end. We want to be part of this and make sure that we are a big actor in deciding how we are going to shape the future together.

Specifically on Whim in the west midlands, we are not the key operator in that area. We do not have any bus services there. However, if we did, we would have been talking to MaaS Global, as we do for other areas in the UK. We have started conversations with them for other places and in other cities in the UK.

Q144 **Chair:** Is it about not wanting to invest the effort because you are not a major operator?

Stéphanie Rivet: We just do not have any bus services in that area to make it worth while being part of that service. That is all.

Q145 **Chair:** Julian, why MaaS for your company?

Julian Scriven: Nextbike has been around for about 14 years. The one thing we discovered relatively early in our business history is that by integrating multiple modes of transport you can deliver a genuine alternative to the private car. If you combine services such as coaches and trains, which are the long-haul part of a journey, with bikes and taxis for the first mile and final mile, you get a genuine alternative. There is no



point in people using public transport solutions like a hair shirt on a penitent: "I'm doing it not because it is great but because I want to feel proud of myself." Something like Mobility as a Service means we can get proper interconnectivity going. From our studies in places such as Cologne, for example, we have seen that massively extending the range of transport hubs means, crucially, that not just bike-share gets more business, but mainstay public transport providers do as well. I hate the word "synergy," but this is one of the few cases where I think it is apposite.

Q146 **Chair:** Catherine, I am interested to know what Addison Lee's take is on MaaS. What evidence is there that MaaS can deliver wider policy goals, such as reducing road congestion and improving air quality, because there is potential for people to use their MaaS apps and do all their travel in your vehicles rather than using Julian's bikes or Stéphanie's buses? How do you see it?

Catherine Hutt: From Addison Lee's perspective, we take quite a global view. I am not sure whether you are aware that we operate in 83 locations around the globe. We have a global network of about 50,000 vehicles and we carry 10 million passengers a year. We see Mobility as a Service playing a role in the integration piece. We can pick you up in the UK, we integrate with airlines through our proprietary allocation dispatch network, and we can pick you up at the other end. We see Mobility as a Service as the end-to-end piece, and it really has an important role to play with those different modes of transport.

With regard to achieving the policy goals, I mentioned that we are involved in MERGE Greenwich. That project is looking at new mobility services that focus on ride-sharing, autonomous vehicles and how they can integrate with current modes of transport. If you can bring out those next generation mobility services, there are huge benefits. The top three for us are accessibility, reducing congestion and addressing emissions and air quality issues.

Q147 **Chair:** If we are all jumping into Addison Lee cars, even if they are green electric vehicles, isn't there a danger that it will increase congestion rather than reduce it?

Catherine Hutt: We want as little of that as anybody else. There has to be some new thinking and some public-private partnerships to take a bird's eye view of the transport network as a whole. That is why we talk about integrated solutions to bring out the next generation of mobility services. For example, on accessibility, perhaps autonomous vehicle ride-sharing services could plug mobility gaps in a way that it is very difficult to do with current solutions. It is quite easy to scale up or down with demand, and implement relatively swiftly at low cost, compared with long-term high-investment infrastructure solutions such as a new tube or new rail station. Does that make sense? That is where we think policy that can encourage those new services can address significant mobility gaps at the moment.



Q148 **Chair:** Our railways rely on lots of fixed infrastructure that it takes a long time to provide. Why are the train companies interested in Mobility as a Service? How do they see it fitting in with wider policy goals or, more generally, people travelling by rail?

Crispin Humm: Over the last 12 to 18 months, the industry has embarked on a programme called the Customer Heartbeat. I can talk to members at length about that, but in broad terms it is an approach to ensure that the customer is at the heart of industry decision making. Through that programme, we have a clear idea and understanding of what our customers want. As my two colleagues have pretty much said, customers think door to door. They do not just think from station to station; it is generally an end-to-end journey. Customers want to travel without having to know all the restrictions and complexities of things like fares regulation, ticket restrictions and so on, and they want to be kept appropriately informed on their journey. The reason why RDG and the operators are interested in this is that our customers are telling us they are interested in it, and they want end-to-end journeys. By definition, a door-to-door and end-to-end journey is now multi-modal.

Q149 **Chair:** Those of us around the table are probably thinking that the railways have some challenges just to make sure things happen on the train, let alone the end-to-end bit. When we think about integration plus bus, it is pretty clunky. Do the rail companies have the space and time to address this when they have quite a lot of challenges just in delivering their own services to a standard that passengers expect?

Crispin Humm: I do. At Rail Delivery Group, we are just about to publish our business plan to deliver our vision of end-to-end journeys. All the operators are committed to that. We continue to focus on the important building blocks in delivering an intelligent Mobility as a Service proposition. Fares reform has been an important part of that, ensuring that we have a modern fares structure that reflects the way customers travel. We have been investing in smart ticketing. With the power of those two coming together, we already start to see the beginnings of a credible mobility proposition. A third element is personalised customer information, in which we are investing right now. We are already seeing those building blocks in place.

Chair: We will probably come back to some of those issues later.

Q150 **Ronnie Cowan:** Stéphanie, in your written submission you said it is a misconception to think local authorities have a leading role in Mobility as a Service because "innovation, collaboration and negotiation are becoming much more difficult and slower." Do you want to expand on that?

Stéphanie Rivet: The gist of it is that we do not think that one entity taking the lead is the only way Mobility as a Service can be developed. We believe in collaboration among several partners, in both the public and private sectors. We believe that we need common standards that we



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can work with local authorities to develop and adhere to. We need standards that drive outcome rather than specifically for how things need to be done. You do not seem convinced.

Q151 **Ronnie Cowan:** Not totally. I understand collaboration, and I'm all for collaboration. Is there not a problem that we are looking at design by committee, rather than individuals who know what they should be putting in place having the authority to say, "That's how this works"?

Stéphanie Rivet: There should be some common standards. There should be a minimum so that an ecosystem can function properly between the public and private sectors. That I agree with.

Q152 **Ronnie Cowan:** Who is going to take the lead?

Stéphanie Rivet: It depends on what we need to regulate. As a minimum, data policy, for example, needs to be regulated. Customers trust us with their privacy and data security, so there should definitely be some sort of governance that drives data policy. That is one element we are convinced about.

We need to start testing Mobility as a Service, because it is still quite a concept for lots of us. Different trials take place. I believe we should experiment, trial and learn and work together to define what level of standards and regulation we need for the ecosystem to function.

Crispin Humm: Local authorities are ideally placed to define what they want for their particular area. They understand the individual challenges. There is a clear role to play from a local authority perspective, and from a central Government perspective for national objectives. Transport is not an end in itself, so we would be looking for some leadership from local and central Government on the outcomes they want to achieve. It is then for the operators, in partnership with the private sector, to work out the best way to meet those objectives.

Julian Scriven: I broadly agree. I stress "broadly."

Q153 **Ronnie Cowan:** If we can't get agreement between the three of you, what chance have we got when we actually come to the real world?

Julian Scriven: Don't worry, I'll get to the disagreement bit in a minute. The challenge is that local authorities need to set that framework robustly and say, "If you are going to operate within our space, you must be compliant with our selected Mobility as a Service solution."

Q154 **Ronnie Cowan:** I do not want to hammer the point, but that is one local authority. There are lots of different local authorities. Presumably, there is an umbrella approach for all local authorities to get together to say, "This is what we want to do," because otherwise you would be going from one authority to another.

Julian Scriven: Yes, and there needs to be a common standard.



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Q155 **Ronnie Cowan:** Is that going to come from local authorities talking to each other or from central Government?

Crispin Humm: There is a role for central Government to play. Central Government would set the long-term high-level objectives and then it would be up to the providers, including the Rail Delivery Group, to work out how best to address the high-level objectives set by central Government.

Q156 **Ronnie Cowan:** Would that high-level agenda include the cost to the passengers, the customers? Ultimately, people are making money out of this.

Crispin Humm: From the Rail Delivery Group perspective, Mobility as a Service is not about profit; it is about delivering the experience customers want.

Q157 **Ronnie Cowan:** If you don't make a profit, you go out of business.

Crispin Humm: Absolutely, but the motivator for this—the reason why we are interested in it and want to understand and embrace it and create and deliver a proposition—is to address customer need. That is coming through loud and clear.

Catherine Hutt: May I jump in on the role of Government? I am sorry to agree, again, but we definitely think it is not up to one entity, be it public or private, to solve this on its own; it is a partnership approach, and there is a role for national Government to play in setting that framework.

There are some specific areas that could be focused on to help push things forward for Mobility as a Service. For example, in ground transportation there are some good things in place, such as the plug-in-car grant and the AEV Bill, but there needs to be a lot more ambition with regard to charging infrastructure. I can say a bit more about that if it is useful.

In terms of public awareness, there is a definite role for central and national Government to lay the foundations, so that when new technology and services are ready to be released to the market there is swift uptake, because public awareness and public acceptance is already there. An example is the plug-in-car grant, which was launched in 2011 to help the EV market get off the ground. It was a great and well thought-through policy, but, because nobody was aware of what electric vehicles were at that stage, there was not exactly the stampede manufacturers were hoping for. If we can learn from that and get on the front foot this time around with public education, we think that will help Mobility as a Service roll out and help uptake from day one. Those are two specific areas where we think there is a strong role to play.

Q158 **Chair:** Stéphanie, can I return to Stagecoach's approach? Other members of the panel have seen a leading role for either the local authority or central Government in setting standards. Does Stagecoach



fundamentally disagree with that?

Stéphanie Rivet: No, absolutely not. It goes back to collaboration and partnership between the public and private sectors. It can only be achieved that way. The spirit of the submission was around the fact that public transport needs to be at the heart of the thinking. We and other public transport providers—car hire and others, not just traditional transport operators—will be taking customers to work, to university and so on, to enable their lives. The spirit of the submission is that we are at the heart of it. We carry customers day in, day out, and we want to make sure we work in harmony so that we can develop the ecosystem.

Q159 **Chair:** Is there any worry that if MaaS develops sufficiently it might undermine the market for buses?

Stéphanie Rivet: No, because fundamentally we believe that if we have a very thought-through MaaS concept—it has been defined in lots of different ways—overall, the market will grow for everybody. For example, for a while, we had a nascent mini-MaaS system in Kent called TravelHero. It was based on two operators, bus and taxi. We set it up because we believe that customers do not always choose one mode constantly. We thought that, by mixing bus and taxi, customers would have a better service and better choice, on the basis that they may take a bus to a shopping centre but, if they have quite a few bags to carry back, they may want to take a taxi on the way back. On one platform we had a bus operator and a taxi operator. Customers could buy a ticket and plan their journey on that app.

The reason we stopped it is that we did not have enough mass, enough customers. We had quite a few customers who were very attached to the service, but not enough that it was sustainable. If we had had a connection with rail, for example, we believe the service would have been a lot more successful. Because there was no ecosystem or standard, or any ability at that moment to bring in the local rail operator, it was very difficult to drive it. That was a long way of answering your question, but fundamentally we believe that, by bringing together an end-to-end journey that is thought through, public transport will benefit.

Chair: Daniel has a specific question on the difficulty or ease of bringing in rail operators.

Q160 **Daniel Zeichner:** I apologise for being late, but I heard your earlier point about rail and I would like to pursue that slightly. This is probably addressed first to Crispin. The Committee has spent a lot of time looking at how franchising does or does not work. How likely is it that MaaS could fit into the franchising system? Could the franchising system at some point in the future insist that it includes a MaaS operation?

Crispin Humm: The franchise system is a great way to enable things like this to happen. Franchising aside, it would be useful to have a common understanding of the objective. Where do we want to get to? What is the outcome we want? We would look to the DFT for a role in helping to



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shape that appropriately, but the way we will really make a difference is through a healthy partnership between the railway, in our case, and the private sector, to work out how we deliver the outcomes that we collectively agree are the right ones to have. Of course, there will be a role for franchises to help that, but if we park that for the moment and work out what outcome we want to achieve, we can allow operators and providers to work out how best to deliver it.

Stéphanie made an interesting point in answering the question on buses. Where MaaS really comes into its own is in allowing each mode to play to its strengths. If we look at MaaS in that way, we will eventually find how the franchising process can support it and enable it. Stepping back from that, it is about the outcome and allowing individual providers and modes to play to their strengths and work out how best they can deliver it.

Q161 **Daniel Zeichner:** I hear that. I also hear all of you talking in very fluffy terms about collaboration, working together, partnership and all the rest of it. The lack of integration between rail and bus in this country is legendary. We have had years and years of it. It does not stop people integrating, but sometimes the same companies run both services, and it still does not happen. Doesn't franchising give someone else, in this case maybe the DFT, a lever to say that it will happen?

Crispin Humm: We agree with each other. There is an absolutely clear role for franchising to be used to drive that. A mature process would be to develop it and not require that stick approach. It would certainly help to take the industry in that direction.

Daniel Zeichner: We have had years of carrot. Perhaps a bit more stick is needed.

Chair: We are going to turn to what we want our cities to look like and how MaaS can help.

Q162 **Luke Pollard:** I am a big fan of bike-hire schemes. In Plymouth, we have the fantastic Plymouth Bike Hire. In London, we seem to have an explosion of different operators. I am keen to understand demand. Do you think there is evidence of real demand for bike-hire schemes right across the UK, not just in big cities?

Julian Scriven: That is an excellent question, Luke, because 2017 was the year of the bike, or bike share to be more precise. We saw more growth and more new entrants to the market than anyone else, but, crucially, at the same time we saw more demand from the consumer. I was looking through our figures for this year so far. Bearing in mind that we are only in May, we have already broken every record in the UK in terms of ride of the bike, in every single scheme from as far up as Stirling and as far down as Exeter. It is not only that. We are seeing demand for schemes across the country as well. We are growing from seven schemes as of the start of this year to 13 schemes across 19 towns and cities,



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including the West Midlands Combined Authority, which is seven towns and cities.

What is really exciting and relevant for this panel today is the approach that is being taken in the west midlands, which is to have from day one a fully-integrated approach. There will be seven towns and cities with the same bike-share scheme, which has to be integrated with their preferred provider of Mobility as a Service, and with their smart ticketing. By doing that, we can bring smaller towns into an overall scheme.

The big danger with the gold rush that we saw in 2017 was that there were great opportunities for operators to go to big cities and say, "We will give you a free bike-share scheme, but you need to leave it to us as to where we put it." They would then cherry-pick the most profitable parts of the city. There are clear examples of that from last year. That means it is very difficult for another bike-share provider to come in and provide accessibility to less economically affluent parts of towns and cities. That is incredibly dangerous. If we are to make sure that it is put in place in less financially viable parts of smaller towns and cities, we need a bigger perspective than just, "Great. Let's get bikes on the streets." There needs to be more collaboration with local authorities.

Q163 Luke Pollard: In my head, there are two different types of bike-hire scheme: the ones with a set docking station and the ones such as Ofo and Mobike where bikes are just littered across the streets, depending on where people are going. Do you think we need a better regulatory framework in the UK to manage the growth in bike share that we will see in coming years?

Julian Scriven: The short answer is yes. The slightly longer answer is that it has been very easy to divide it between docked and dockless because there is a visible difference. Traditionally, providers in the UK have gone with docks. The reasons for that are to do with antisocial behaviour predominantly, which is a lesser problem in Europe. Twenty per cent of our schemes outside the UK are dockless, which is not a well-known fact. That is because we do not need the security of the docking systems that we need in the UK.

It is not so much what you do as how you do it. In a regulatory framework, the focus needs to be on giving local authorities the ability to determine who does and does not work within the city and town, and the criteria for working within it. It is like franchising for every other form of public transport; a set of boundaries is put in place.

Q164 Luke Pollard: Is it similar to how local authorities decide who has a taxi licence?

Julian Scriven: It is something along those lines. Bear in mind that we had the rather ridiculous situation where one town had to resort to using their anti-littering laws to remove an operator because they did not agree with the way it was operating. When the operator refused to move, the



only thing they could do was to say, "Technically, we are going to define this bicycle as litter." We need something a bit better than that. If we had taxis going around that were not MOT-ed and things like that, they would be off the streets as quick as you like. We could have bikes on the streets tomorrow that had not passed any EU regulation, and I cannot think of anything more dangerous than that.

Q165 Luke Pollard: Bike-hire schemes seem to be the greenwashing in quite a lot of MaaS schemes. At the moment, buses, trains and taxis are not electric, potentially, so bike hire is the nice green bit. How can you make sure that your bike-hire schemes in Mobility as a Service are not just greenwashing?

Julian Scriven: The straightforward answer is, again, collaboration. Our experience in Cologne is a great case study, which I am quite happy to provide as written evidence to the panel at a later date. It shows that a bike-share scheme properly integrated with buses, trams and trains, all under one brand, KVB, which is wonderfully forward looking, results in a massive leap. It was in everyone's interest. Ninety per cent of the people using the bike-share scheme in the first 12 months were KVB season ticket holders who were using it as the first and final mile part of their journey. More importantly, it was taking people out of their cars and on to public transport. Lyon is another fantastic example of bike share being integrated with the transport system. After 12 months, there was a 7% drop in car usage in the city. That is not greenwashing; that is real impact.

Q166 Daniel Zeichner: I would like to pursue the bike-share idea because it is very real to my city. I have spent the last 18 months trying to get the Government to look seriously at the issue of parking, because that could be the thing that puts people off. Do you get any sense from the Government that they have decided which Department is responsible? The Department for Transport passed the buck to the Department for communities and that Department now seems to have passed it back to the Department for Transport. Meantime, the world moves on. Surely, we have to get it sorted with some urgency.

Julian Scriven: I hope that steps are taken very soon. As you know, we have been very much leading the conversation about regulation. I am pleased to say that the industry as a whole wants regulation. It is not Nextbike all on our own saying, "We're 14 years old and everyone should listen to us." As recently as last Friday, Mobike was on "News at Ten" saying, "We agree that some form of regulation needs to be in place." The industry is calling for it. Broadly, Members of Parliament who are interested in bike share believe it is a good idea. At the moment, there is lack of time to get it done, but it has to happen. This is a fragile industry and, without waving the red flag, it will take only one or two bad incidents, such as we have seen in Europe and further afield, for the door to be slammed shut.

Q167 Daniel Zeichner: How likely is it that you can move to an electric bike



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scheme as well? That seems to offer something slightly different for a whole load of people who do not necessarily want to end up getting a bit hot in the last mile.

Julian Scriven: Being a slightly older gentleman myself, I am a massive fan of pedelec. If anyone has not ridden one before, please do. You will understand what it is like to be seven years old and full of energy again. We have a scheme in Exeter. At the moment, we have a scheme in Warsaw—in a different country, sadly—which will have 1,000 electric bikes. I recommend anyone to go to see it.

Pedelec is a great opportunity for accessibility. It is our core mantra, whether it is about people who are less physically able to cycle than others, or people who are less financially able. That is what we need to focus on. It is very easy to get a 20 year-old bloke on to a bike. You put a bike on the street and he gets on it. I want to see over half our cyclists being female; I want to see them coming from ethnically diverse communities and from the less financially secure, as well as older cyclists. I want to get people back on bikes, feeling seven years old again.

Chair: One might require it to feel a bit safer, not just because of the bike, although that is an admirable ambition. We want to turn to data and MaaS.

Q168 **Ronnie Cowan:** I understand the idea that, if we are to develop this MaaS system, you have to be able to garner information about who is using what route, what mode of transport they are using, what time they are travelling and why, and that will change from season to season, even according to the time of day. How comfortable are you about sharing that information with other companies or operators?

Catherine Hutt: From Addison Lee's perspective, clearly we protect customer data.

Q169 **Ronnie Cowan:** You protect customer data. At what level?

Catherine Hutt: We do not share private and personal details from customer data, but we have been sharing journey and movement data for years. We think it is the right thing to do to help to look at the transport system as a whole, and it is something we will continue to do. For example, when the Energy Saving Trust was writing its report for TfL on charging infrastructure, it used our data to look at the movement of vehicles and where charging infrastructure might need to be. That is something we already do.

Q170 **Ronnie Cowan:** How do you actually share it? Is it in printed format? Are you printing the big numbers?

Catherine Hutt: They are digital files that are shared confidentially with TfL in particular, because it helps the transport network as a whole. We think that still needs to take place, but clearly there needs to be



segregation between customer personal details and journey movement data.

Crispin Humm: Questions around data will probably be the biggest challenge in MaaS. That is a fact. It is also the key to unlocking it. I have been in the rail industry for about two years, which still makes me a baby in rail industry terms. In the two years I have been there, I have noticed that we all have a perception of what data should not be shared for whatever reason, be it security, trust or, more importantly, commercial interests.

There are a couple of red lines. Trust and security are absolutely the case, but it is probably time to have a debate about the appropriate customer data to share, and how far we can push that envelope to deliver what should be a fantastic customer experience. That is something the Rail Delivery Group would be keen on leading, but it goes wider than railways. It is probably timely to consider a national approach. What can we share? What is appropriate to share? What are the red lines we cannot cross? I do not think the rail industry has ever stopped to ask itself that question.

Stéphanie Rivet: At Stagecoach, we are prepared to share data that allows customers to travel more on public transport, but it is quite a complex situation. There may be two types of data: operational data and customer data. Under the Bus Services Act, there are some rules about what information bus operators should share, and we fully support that.

From a customer data point of view, at the end of the day, the data belongs to the customer. We need to understand from customers what they are prepared to share with us in order to deliver a better service for them, and in what format they are prepared to share it. We need some further work on that. It is not for us to decide. In principle, the basic thing is that we need to make sure that when they share information with us we protect their data and they can trust us to do so, but we need a wider debate.

I would like to make a few more points on data. First, there are a lot of requests. We understand why public operators need to provide information to potential MaaS operators in order to deliver a service. It would be really useful if it could go the other way, and MaaS operators in the new world also shared some of their data, so that we could improve the service we provide customers. We should start to consider a two-way situation. Other types of data should be shared, such as freight data. There could be collaboration with transport authorities on housing data; I am sorry to go back to collaboration again. With further information, we would have a more holistic view of what kind of service we can provide for our customers overall.

Q171 **Ronnie Cowan:** The overriding question is, how can you share that big data so that you can plan routes and at the same time still protect individuals' right to privacy?



Stéphanie Rivet: I agree. The data allowing us to look at movements is anonymous. Mobile data would also be quite interesting, if it could be more widely shared. Movement data should be more widely shared because it would allow all of us to deliver a better ecosystem. I am sorry to repeat myself, but commercial data is intrinsic. We can only do that if they allow us to share it and say, "I am prepared for you to share that data about me so that I have a better service and a better journey in return." It is on a case-by-case basis.

It goes back to the need for standards. Basically, if somebody is selling a service, the person being provided with it needs to be able to know that the service has been sold and they have the ability to travel and the right to travel, so there will be a need to share data. If something goes wrong, how does the after-sales process work? None of that has been thought through in detail, but it will have to happen. Only by trials, experiments and looking at use cases will we be able to define what the rules and regulations should be for data.

Julian Scriven: We break our data into three groups. We think of it as model data, system data and customer data. We share model data with our partners—for example, a local authority such as Glasgow City Council. It uses fully anonymised model data to plan where it is going to put in future road improvements for cycle ways, for example, but also to see where people are not cycling, to try to understand whether there are blocking issues. That is modelling data and we freely share that with all our partners. It is fully anonymised, and tells you that X number of bikes went from there to there, took that route and at what time of day, for example. That is very useful.

The second group is system data. That is covered under something called the General Bikeshare Feed Specification. It was set up in the States but Nextbike has adopted it internationally. It is open sourcing of all our system data in terms of where our stations are, how many bikes are there and how many are available, so that anyone, whether it is a Mobility as a Service operator, Google or whoever, can show live the data on our systems. Again, there is no customer privacy issue.

The third group, where we have absolutely zero tolerance, is customer data. None of that is ever shared. We are hyper-protective of our customers' right to privacy in that regard. We can provide model data, sharing data and all of that, but when it comes to protecting the individual customer's right to privacy, that is absolutely a non-starter.

Q172 **Ronnie Cowan:** I am very glad to hear it. The customer will be okay.

Stéphanie, the Committee previously heard from Johan Herrlin, CEO of Ito World. He said that data on local bus services was incomplete and unreliable. How can it be improved?

Stéphanie Rivet: The difficulty is that there are very small operators that are still using manual ways of setting up and running their buses. I



am assuming that is what was meant. Local transport operators need some support to be able to feed into a system. Generally, they have just a few buses and they do not have the means to invest in big systems. I agree that it is incomplete. I do not have the answer as to how we sort it out, but I believe that local transport bus operators need some support to be able to jump on that wagon.

Q173 **Ronnie Cowan:** Would that not call for the Department for Transport to say that they have to be able to provide that information and share it?

Stéphanie Rivet: Yes, it would, but in reality some of the smaller operators do things in a manual manner. I am sure they will be prepared to adhere to standards, but the difficulty is the added workload that they are not used to and would have to be able to swallow.

Q174 **Daniel Zeichner:** But it is not just the small operators, is it? The big operators too have problems with their data, don't they? That is my understanding. Stagecoach's data is not complete at the moment, is it?

Stéphanie Rivet: No dataset is ever complete. Can you be more specific about what you mean?

Q175 **Daniel Zeichner:** The most basic thing is that there are people in my city standing and looking at real-time information at the moment, and finding that it is not very real; it is not complete, and in some cases it is totally inaccurate. The industry has quite a long way to go before you could say the data is anywhere near complete.

Stéphanie Rivet: I have not said that the data is complete.

Q176 **Daniel Zeichner:** You talked about small operators, but most of the services are provided by the big five.

Stéphanie Rivet: That is true. I was specifically answering in terms of weight. There are lots of reasons why real-time information is not always accurate. Some of it is linked to mobile connectivity, not that I wish to push the blame on to somebody. I assure you that we are working extremely hard to improve customer experience, and we understand that real-time information is at the heart of customers trusting to travel with us. I would not claim that the data is complete, but we are working hard on that.

We are looking at different datasets and data feeds; we are now looking at mobile data and trying to incorporate that into our systems, and looking at algorithms. In some areas, maybe we over-complicate, and customers just want to see where the bus is and make decisions themselves as to how long it is going to take, because taking into consideration congestion, accidents or anything else is very difficult to achieve. At the moment, Stagecoach is bringing in other datasets, but we are also trying to simplify the real-time information we provide customers.

Q177 **Chair:** Stéphanie, you talked about the possibility that smaller operators



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are not able to provide that data. Can MaaS operate without some of the smaller operators? Can you run a MaaS scheme effectively with incomplete data?

Crispin Humm: Data is inherent to a MaaS proposition working really well. Of course, you could operate a MaaS-type approach, but if we want to go for an intelligent service, it relies on data. I completely agree with Stéphanie. The effort that the rail industry has made to get its data into a position where it is able to share it with developers has been an almighty task. We share timetabling information and train running information through a data portal, but it took significant effort to make it digestible.

We have been working with the DFT quite recently on all the lessons we have learned about getting our data packaged appropriately. We are working with their bus and taxi teams to try to draw out those lessons. It is early stages, but I echo what a graft it is. If we are really serious about developing a national MaaS proposition, we have to acknowledge that the data piece will be a real challenge. As I said in a previous answer, this is probably a really good opportunity to have a debate about what we need to do and what outcomes we want. What are the appropriate data we need to share and get comfortable with?

Q178 **Chair:** Stéphanie, you said that you do not want just to provide data but you want to get data from MaaS operators. What data do you want to receive from MaaS operators? What are you looking for?

Stéphanie Rivet: For example, we would be interested in understanding where we have gaps in service provision. What are the areas where the public are not well served by public transport? MaaS operators would have a holistic view of the ecosystem. Having that information so that we can work together, not necessarily in the traditional way of delivering services but thinking about different ways of being intelligent in how we deliver services, would be very useful.

Q179 **Chair:** What journeys are happening using modes other than public transport, where you can think about how you could fill them?

Stéphanie Rivet: Or not happening, so that customers are not served properly to go to work or to university, for example.

Q180 **Chair:** It is when they have searched for how to go from A to B but there are not many options.

Stéphanie Rivet: Yes. Traveline supports smaller transport operators quite well by helping them to provide the information. It would be a very sad place if MaaS became the playground of a few, so we would support small and medium operators to be part of that.

Chair: We have a couple of questions about how smart ticketing fits in with MaaS.

Q181 **Huw Merriman:** We have touched on this. Crispin and Stéphanie, given that smart ticketing on the railways has been viewed by some as being



poorly executed, how can we be confident that an integrated payment system across different modes of transport in a MaaS system will work?

Crispin Humm: There are probably a couple of questions, and I will take each one. The first point is about the execution of smart ticketing to date. The transport sector, not just the railways, could have done better in creating up front a strong customer proposition. I do not think we did that. We were directed by Government as to the outcome they wanted, with a bit of a time box around it. I do not think that led to the right outcome. We have learned from that. In taking smart ticketing forward, we are taking an evidence-based approach. We are now spending a lot of time up front understanding exactly what customers want and building a strong proposition around it.

We know that by the end of 2018 seven out of 10 journeys will be taken using a ticket stored on a mobile phone. If we went back two or three years, we would never have imagined that would happen. Because we know that technology is driving the way customers travel, we are taking a longer-term view that is very evidentially based.

I am sorry. I have forgotten the second part of your question.

Q182 **Huw Merriman:** We will come back to it. You touched on what the Government wanted you to achieve. What was that? Where did it differ, or did you feel you could have got there in a different way?

Crispin Humm: Until relatively recently, the concept for smart ticketing was about a plastic card. That is probably reflective of what the technology was able to deliver at the time, but customers' perception or expectation of retailing is set by things outside the rail industry. If you think about how rail tickets are now bought, customers are shaped by how they would shop for other things. I cannot imagine my four-year-old son when he is older having the concept of going to a ticket office. It would not occur to him. He would do everything in the front room on his mobile phone. The challenge for the industry right now is not just to keep pace with technology but to look beyond the here and now and what is shaping the way people live.

Q183 **Huw Merriman:** I was going to ask whether you have difficulty with the rail industry buying into this as well. Without being too parochial, I am still carrying around a piece of paper that does not work at any gate of the London underground. We know how well we are received with a ticket that does not work, so some months ago I decided to invest in the Key, which is Southeastern's offer on a bit of plastic.

I was told I could not go to the counter because you cannot do it there, which is a pain. I applied online and was told, "Congratulations. Your Key is available for collection from the ticket office." I go and pick up my envelope only to be told by the person behind the desk that it does not work. I have call up Southeastern, email or use a tweet and get it fixed while she keeps hold of it. My point was, "You have the computer. Why don't you call up your colleague and get it to work?" She says, "I can't do



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that. I am not allowed to touch any of it." I just shook my head, as you do, and sent an email. That was about five weeks ago and I have heard nothing back from Southeastern. That is one person's example of the frustrations of smart ticketing. In every other industry, you just walk up to the counter, and they give it to you because it is just a replacement for the ticket. Job done.

Crispin Humm: That is a great example of the outcome of the wrong approach. We are looking at a very evidence-based, customer-driven proposition that effectively means we are able to track you around the network. For example, you would be able to search for a journey and book a ticket for that journey on your phone, and you would have your ticket on your phone. It would not be just to show the person at the gate. We are taking the proposition beyond that. You can tap it in; you can show it; and you can scan it.

That is the outcome of an evidence-based approach, from speaking to customers to find out how they want to travel and developing a proposition based on that. I completely agree with the example you gave. If I am being honest with you, Huw, it matches my own personal example.

Q184 **Huw Merriman:** Coming back to the second part of the question, given that what we have just discussed can occur for many passengers, how confident can you be that you can get an integrated payments system across different modes of transport when it is such a challenge even to use the rail system's smart ticketing?

Crispin Humm: From our perspective, the two challenges we have with MaaS are data and how to move money effectively, efficiently and fairly across the entire system. I do not think anybody right now would know how to do that. We know the outcome we want. It would be appropriate to run several trials to work out what options we have and to test them appropriately to see which work. By testing, I do not mean exposing the customer or the industry to anything that is not controlled. There are appropriate ways to trial and test, but because it is so complex we want to be very clear about what we want the outcomes to be, what options we might have to deliver them and then appropriately test them before we go live.

Q185 **Huw Merriman:** When do you think that is likely to happen?

Crispin Humm: There are a number of trials going on around the country right now. We are looking at three: one in Scotland, one in the west midlands and one in Greater Manchester. In all of those, we are looking at how best the railway could interact with the trial, and at how to unpick some of the complexities. The one about ticketing is the one we are trying to address in Manchester right now.

Huw Merriman: Stéphanie?



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Stéphanie Rivet: Unless you have a specific question about Stagecoach, there is nothing specific that I would like to add. We are part of the RDG scheme that is looking at what Crispin is referring to.

Crispin Humm: To be clear, we are looking at ticketing options around the west midlands, not Manchester.

Q186 **Huw Merriman:** Stéphanie, do you believe that Stagecoach will be able to harness successfully, and all the staff will buy into, the ability to use multi-transport smart ticketing, when, as we have discussed, there are problems in that sphere right now?

Stéphanie Rivet: We have some multi-modal ticketing; it is in its infancy. In several parts of the UK, there are successful multi-modal schemes. They are still on plastic cards, but that is just a means. Local authorities and transport providers have worked together to develop a safe ticketing system. I believe we can do it. I believe we can also work with our drivers in order to make sure that rights of travel under another scheme can be recognised in different formats.

Q187 **Huw Merriman:** How would the payment spread work? If a passenger is paying Stagecoach for the price of multi-modal transport, how would you have the ability to pay the other providers?

Stéphanie Rivet: We would have to look at different models. I do not think there is one specific model that would work. The way multi-operator schemes work is based on the number of trips being made and how big the zone of the bus provider is. In a situation where all partners provide services to a very similar level, you could look at sharing some of the revenue between them. If there are some transport providers with larger-scale operations, some reconciliation could be based on their potential journey lengths. I do not have exact solutions for dealing with it, but we have it in its infancy in different parts of the railway.

Q188 **Huw Merriman:** Does Stagecoach currently pay other non-rail transport providers for part of the ticket, if part of the operation of the ticket is for another mode of transport outside your group? Do you do that now?

Stéphanie Rivet: Yes. For example, in Oxford we have multi-modal systems and we share revenue between each other. As I said, it can be quite complex, as such things can be, but in principle, it is based on how many journeys you provide and how far your reach is. Based on that, revenue is shared between operators. It is in its infancy. It should be improved, but there are some bases and some real-life examples that we can learn from.

Huw Merriman: Thank you both.

Stéphanie Rivet: You are welcome.

Julian Scriven: Can I pick up on one small point, because it is quite a dangerous thing if it is not followed through? We see the app, Mobility as



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a Service, as a solution for the Key card that does not work. We need to remember that, while 80% of people are using smartphones now, there are still 20% who are not, and, more to the point, for the over 40s, that figure goes up to 40% or 50%, and it is higher still for the more economically challenged segments of the population.

If we say that the plastic card is a thing of the past, and put all our eggs into the app solution, we will probably be leaving the most important groups behind, and they could end up being further disadvantaged. It is like the old pay-as-you-go meters versus direct debit gas situation. We must make sure that we bring those people along with us, as long as we still develop Mobility as a Service at the same time.

Stéphanie Rivet: We fully agree with that. It is a given for us.

Chair: Even those of us who have a smartphone would still be nervous about putting a train ticket on to our smartphone when the train we get on has nowhere to plug in the phone to recharge it. That is the reality for a lot of people on a lot of trains, so, until that gets sorted out, I won't be doing it.

Q189 **Iain Stewart:** I have a supplementary question for Crispin. We have heard in the news in the last few days that the rail industry will be looking at a broader ticketing review on not having split-ticketing anomalies.

Crispin Humm: The fares reform.

Q190 **Iain Stewart:** Yes. Looking at MaaS and smart ticketing, is that the ideal place to be doing that review—the whole thing as one?

Crispin Humm: To give the background on fares reform, the reason we are doing it is that we want a fare structure that reflects how people, customers, live their lives. One of the challenges, certainly on the technology side, is that, for known and good reasons, our current fare structure is complex. It is old, and we have overlaid fares on top, again for good reason, and it has become quite complex as a result. The reason why we are doing the fares reform work is to get to a point where the outcome is a very clear, open structure that is fit for purpose for today and tomorrow.

We are starting with a public consultation, very deliberately. Part of that will include multi-modal fares, and we are already looking at them. I have referred a couple of times to building blocks for MaaS. It is important for that. Fares reform is one part of it and smart ticketing is another building block, but, absolutely, we are taking that seriously.

Chair: We have one final question on the role of central Government.

Q191 **Grahame Morris:** You have pretty much covered it, to be honest, but it is so germane to our inquiry about the role of public policy to have your views as operators about what Government's role should be, both locally



and nationally. *Stéphanie*, you were talking about data control regulation and *Catherine* gave an example about the importance of central Government in driving charging infrastructure for electric vehicles. Is there anything you want to add about the role of central and local government just for the record of what we are about?

Chair: Preferably in a sentence.

Stéphanie Rivet: We should not think that MaaS is a magic wand that will solve all the issues. We also need to look at further regulation as to how road is distributed between modes, to ensure that new modes of transport are able to function and customers feel safe to use them. Let us not just think that MaaS is the only way to look at it. We should also look at what we can do with the roads.

Catherine Hutt: Can I build on that point? You summarised some of the points very well. Picking up on the road-space point, we feel that is one of the areas that could be looked at with regards to forward planning in order to encourage Mobility as a Service solutions. For example, at your local rail station there might be a huge car park but a very small pick-up and drop-off point. What if we flip that on its head? That would really discourage private car usage and encourage new services that could help the whole system to work more efficiently, for example.

There are other policy areas, again looking at parking fees. I know that issue has been talked about a lot. From the simulation work we have been doing, it is a really strong lever to change behaviours.

Thirdly, another area that Government might need to look at is around the allocation of space—potentially zones or different lanes—to the new technology that is coming in; for autonomous vehicles, for example, perhaps just in the transition period. We have a report coming out in a few weeks, which we will be happy to share, that really starts to think through how implementation could look and asks some of the questions that have not needed to be thought about in the past, let alone answered.

May I add one final point? We did some customer research that really highlighted how much the customer expects regulation to be in place. There is a huge level of trust. More than eight in 10 people we asked said that they would trust getting into an autonomous vehicle because they would expect regulation to be there that meant it would not be on the road unless it was tried and tested to the nth degree, whereas they were much less trusting of other passengers and much more reticent to get into a ride-sharing vehicle. That emphasises the role that customers expect regulation and Government to play.

Q192 **Grahame Morris:** Julian, could you say something about the role of local government as well?

Julian Scriven: Absolutely. As I mentioned earlier, for me the role of local government is to make it part of a condition, whether we are talking



about franchising, licensing or a tender. It needs to be placed as a must have, because ultimately we are all commercial operations and if it is a nice to have, and towards the bottom of the list, it will be treated accordingly. If it is a condition of your licence or your franchise, you will make it happen, because it is commercially in your interests to do so. It cannot be more black and white than that.

Chair: Thank you very much, all the members of the panel. You are now free to go, as that completes our questions to you.

Examination of witnesses

Witnesses: Chris Lane, Shashi Verma and Simon Warburton.

Q193 **Chair:** Welcome, and thank you for coming along this afternoon. For the record of our proceedings, can I please ask you to introduce yourselves—your name and where you come from?

Shashi Verma: My name is Shashi Verma. I am the director of strategy and chief technology officer at Transport for London.

Simon Warburton: I am Simon Warburton. I am director of strategy at Transport for Greater Manchester.

Chris Lane: I am Chris Lane. I am head of transport innovation for the West Midlands Combined Authority, Transport for West Midlands.

Q194 **Chair:** I am going to pick up where the last panel left off, which was about the role of Government, with a really quick question to each of you. What are the top three things that the DFT should be doing to facilitate the development of MaaS?

Shashi Verma: Could I give a bit of a preamble? We believe that what people regard as Mobility as a Service is already running in London in the form of Oyster and contactless, where we have, over the years, integrated all forms of public transport under one umbrella. The residual things that are not included in Oyster and contactless, such as taxis, private hire or bicycles, are things for which we have not seen a huge demand so far. That may be different in the future, but it has not been the case so far.

The journey to get Oyster and contactless accepted on all forms of transport in London has not been easy, and the fragmentation of the transport system does not help in that regard. I can tell you all the stories about how tortuous a process we had to go through to get Oyster on National Rail and then repeating the same process to get contactless out on National Rail as well. The one thing the DFT could help with is where they have the power of either regulation or persuasion over other transport operators; to get them to band together and offer a combined service would be a very good thing.

Q195 **Chair:** Simon, you are working in a situation that is not where Transport



for London is, with a regulated bus market, for example, so what would your three things be from a Greater Manchester perspective?

Simon Warburton: We can start by saying that we do not have Oyster, and therefore we do not have quite that backdrop to be able to plan against at the moment. Again, to place the debate in context, probably quite similarly to other colleagues on the panel, we are trying to deal with growing cities that are becoming ever more densely populated, with new journey demands within them.

If we cannot provide a more flexible mobility solution for residents in our cities, there is a genuine risk that their travel needs will impede the functionality of the city region. It could be the simple reality of congestion starting to undermine the performance of the city region. Clearly, we have nearer-term air quality issues to consider, and the absence of complete mobility around a city inhibits the ability of our citizens to benefit from the opportunities—employment and other—in the city region. That is why we are so interested in Mobility as a Service at present.

What would we like from Government? First, there is a need now for Government to build on some very sensible positioning statements in last year's transport investment strategy that pointed to the need for further policy developments in this area. We are a year on, and it would be very helpful to see that start to flesh itself out in a clearer framework. Within that framework, I would point to two areas of development in particular.

We can continue to develop the role of devolution in supporting the agenda, so some of the powers and opportunities that the mayor is now considering could contribute to the agenda. That is clearly in our thought process. Some of the early work through Transport for the North is helping to speed up some aspects of smart ticketing roll-out across the rail system in the north. Devolution has a role to play because it allows us to map across to real travel markets quite effectively.

The third area is the debate around longer-term funding arrangements for transport arrangements in our cities, recognising in particular that what we are talking about is service development. Capital funding regimes alone are unlikely to get us where we need to be. We will need to revisit the opportunities, whether they are opportunities that we undertake locally through devolution or central Government opportunities for us to be able to secure more medium-term revenue funding in our city transport systems.

Q196 **Chair:** I was going to ask you a follow-up question about how confident you are about the things that you think need to be in place for MaaS to help us deliver an integrated transport system that tackles some of those city issues, which actually are common to all your cities, whether it is air quality or congestion, but I think you were pretty clear about that.

Chris, how do you see it? Is there anything different you would ask for



from central Government?

Chris Lane: It is great coming after London and Manchester, because we have similar but different challenges. The things that Simon and Shashi said apply equally to the west midlands, but to be a bit practical—thinking not about policy but about practicality—one thing that would be very useful to start with now is a code of conduct: how is the industry going to work? Rather than move straight to regulation, what about a code of conduct agreed between all parties as to how the new transport services and the new mobility providers are going to work together? We could actually see where that takes us and what it teaches us.

There has been a lot of discussion about data. There has been some really good stuff through the Bus Services Act about what has been opened up and what is available. GDPR is obviously around the corner, but there is a bit of a misconception on data. In Finland, they have looked at application program interfaces—access to the systems themselves. Julian talked about the fact that he opens up about where his bikes are; you could actually log on and find out where his bikes are if you are an app developer. There is a role to try to open up transport companies to make their services available. TfL does it a lot with access through its APIs, but can we do a bit more about that?

Thinking about enabling, again there was discussion about smart ticketing right at the beginning. The English national concessionary travel scheme created ITSO as a standard across the UK. It is very well used. Certainly in the west midlands every bus and tram takes ITSO smart ticketing. There was funding available to do that, and it may be that something like that in a MaaS concept could help kick-start that market and create an opportunity. It is an area where you could potentially influence what happens, because there is something there; there is perhaps some funding and some opportunity to use it to go forwards.

Q197 **Chair:** I have a specific question for you, Chris. In one of our previous sessions, Steve Cassidy of ESP Group mentioned that he had been working with Transport for West Midlands to improve access to transport for people with dementia, through the MaaS app Onwards. Could you say a little bit about that? Has it been successful and, if so, why?

Chris Lane: This is a really good opportunity. A lot of people see Mobility as a Service as being for the commuter, but there are a lot of niche markets, such as people with specific needs. ESP Group did a great piece of work with us called Car Freedom, for people who have to give up their driving licences for medical or age reasons to have access to transport services. What they did differently was to provide a telephone helpline, so that, if a person using those services in the market is confused and needs help, they can talk to somebody.

Mobility as a Service, as I think somebody said previously, is not just an app. It needs to be more than that. There are some niche players. There might be a niche market for younger people, for older people or for



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people with special needs for transport services for medical needs. There is a whole area to develop in terms of mobility services. It is perhaps when we start to bring those modes together that we meet a need for certain groups of people that has not really been met before.

Chair: Great. I am going to pass over to colleagues for a little more about Whim and other things.

Q198 **Grahame Morris:** Chris, I think you were here for the earlier session when Julian Scriven was full of praise for West Midlands, but the Whim pilot is still relatively small scale. He mentioned the seven towns. I know that it is still at the development stage, but how can you be confident that any positive effects will be replicated on a larger scale?

Chris Lane: The really important thing about Whim is that it is a commercial opportunity that we tried to create in the west midlands. It is not something the public sector has put in place. It is something we created as a commercial opportunity, which means, in a way, that it sinks or swims on the success of the commercial company running it, which is MaaS Global. I think you probably heard from them previously.

We encouraged MaaS Global to think about transport more broadly than just the west midlands. Within the west midlands, it is West Midlands buses, but we encouraged them to talk nationally to the other groups—Stagecoach, First, Arriva, and so on: what could they do there? We encouraged them to think about rail as National Rail, so that we use access to the National Rail ticketing system. Our rail system is good. There is lots of excellent work in opening up the systems; you can buy a rail ticket for anywhere in the country. That is what we would do.

Our partners run other services across the UK. Wherever there is a Nextbike, you could hire that bike anywhere in the country. We use Gett taxis wherever Gett taxis run, such as here in London. You could use the West Midlands Whim app to get a taxi in London. What we are saying is let's try, through this commercial partner, to think about a service that is not just local, although we have concentrated on the west midlands. If you can integrate a national service, you should try to do that.

Q199 **Grahame Morris:** Simon, following on from that idea of replicating on a larger scale and learning what does and does not work, is there enough research funding in the UK to support the development of the MaaS concept?

Simon Warburton: We have tried our best to attract research funding to Greater Manchester. At the moment, you have to be quite innovative as a transport authority to find sufficient research funding. There is one aspect that Government might want to think about in terms of developing the policy framework. At present, there is sufficient funding available for relatively small piloting activity, so we have undertaken a very small study activity recently, largely funded by ourselves locally, but, if we want to understand a series of the no doubt unanticipated consequences



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of moving from a very small pilot or study activity to something at scale in a city region, we will need longer-term funding arrangements, and they are not immediately apparent to us at the moment.

Q200 Grahame Morris: We have had evidence from witnesses in previous sessions, particularly from Scandinavia but from other EU countries. Are there any benefits to be had from co-operation with schemes that have been developed elsewhere, in Finland and so on?

Simon Warburton: Definitely. We are very active, and I know colleagues on the panel are active as well, through international networks such as UITP. We are looking to draw in experience from elsewhere, but, clearly, as we do so, we have to recognise that we all operate within different regulatory environments and, therefore, there is still quite a lot of research and development activity that we will have to undertake locally, if, as I said, we are not to come across unanticipated consequences.

Shashi Verma: There is no shortage of money being spent on smart ticketing, so it is not right to say that there is no money for fresh thinking or fresh development. Very substantial amounts of money have been spent on smart ticketing over the last couple of decades.

Q201 Grahame Morris: Did you hear the evidence from Catherine Hutt a little earlier when she talked about being quite radical and looking at the huge car parks at many railway stations and using them as a bit of leverage, changing car parks into drop-off points for buses and other modes? That would need finance, wouldn't it?

Simon Warburton: Yes.

Q202 Grahame Morris: Is that something that Government would tackle or that would be done on the basis of a combined authority or a devolved mayor's powers?

Simon Warburton: There is a great opportunity to do that, and it is something we are very interested in around our Metrolink system in Manchester. It comes back in part to some of the challenges that I talked about before around funding regimes. To build the next car park space at a park and ride site is capital investment, and, while we will never claim that we have sufficient resources to undertake all the activities that we would like, there is more access to capital for those sorts of activities than there is to the revenue that would be needed to help to kick-start equivalent types of services to replace those spaces. We are going to have to get ourselves into that position at some point.

If we look over time, it does not feel logical that we continue to build the next tier. Clearly, in a number of locations, certainly around our tram stops—I am sure it is the same for rail stations elsewhere—stations are in neighbourhoods, so we do not want to build car parks that are too large. We need to move to another model. But let us not lose sight of the fact that park and ride sites are very popular; they give great certainty to



commuters in terms of access. Therefore, we have to be able to build alternative models that give commuters equivalent levels of certainty.

Q203 Grahame Morris: Can I ask the Brexit question? Both Chris and Simon mentioned co-operation with other countries in Europe, and we have had examples. Are there any issues that we need to be aware of in terms of public policy for future funding for MaaS schemes because of Brexit? Has anything come to your attention?

Chris Lane: For us, probably not, because it is a commercial opportunity. MaaS Global, as you are probably aware, is funded by international partners, not just European companies, and it is interested in planting services not just in Europe but in other parts of the world. On that sort of scale, I suppose it could provide more of a challenge, where we look at a MaaS service that is available in the UK and in Europe, such as travelling from London to Brussels and being able to use something there, using the same app. That could make it a bit more challenging.

Grahame Morris: Yes, and if the regulatory framework is set in Europe, you are replicating that. I am not sure whether we will or not, but it is a possibility, isn't it?

Q204 Chair: Chris, when you were talking about Whim, you explained that it was a commercial venture. Was Onwards, the MaaS app for people with dementia, a commercial venture?

Chris Lane: It was an Innovate UK-funded project that was an opportunity to explore what that technology would do and achieve. What we need to do now, though, is decide whether it is something that ESP sees as a commercial opportunity for which there is a market. Is it something the public sector should support and put some funding into? That is where it is at this stage.

Chair: Thank you. That was the point I wanted to clarify.

Q205 Luke Pollard: Should MaaS apps include company cars, business fleets or freight?

Shashi Verma: To answer that question, you first have to back up two steps, because we still have the problem of trying to define what MaaS is. Ignoring that question is not going to get us to any clarity.

There is a jump very quickly to say MaaS means an app. That is not necessarily true. No one out there is asking for an app. People are asking for clarity about what they are paying, easier methods of paying and good information about their services. That can be provided with or without an app. An app can certainly help in that regard, but it is not necessary.

In fact, if you look at the experience we have had in London, and I have been running our fare collection systems for 12 years, the whole reason for thinking up the idea of contactless was that nobody wakes up in the



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morning thinking that the high point of their life is buying a ticket. Making that process more convenient is not enough when you can eliminate the process completely. That is what we have done. Providing people with clarity over fares, taking away steps in travel that are simply not needed and opening up all the information so that it is available to them in any form they want is what Mobility as a Service is. Unfortunately, it is not necessarily an app.

Simon Warburton: Shashi's observation is right; it is not just an app. If we think about what we might want to achieve through Mobility as a Service, clearly we ought to be considering the markets that drive company cars and we ought to be considering the implications of freight operations around our cities and elsewhere.

In principle, where we would like to get to over time through this whole area of policy development is smart city applications. Not only do we want to be able to provide the best set of travel options for a citizen, or indeed a business, but we also want subtly to nudge individuals and businesses at the same time. That is where challenges come in around commercial models, for example; as cities, we might be choosing to nudge businesses and individuals in a direction that does not necessarily fit best with the immediate commercial model. There are issues, but alongside some of the things we are trying to achieve more widely through the smart city agenda—not least a smarter way of managing pollutants around our city—we want to be thinking about freight markets and other commercial markets as we develop Mobility as a Service.

Shashi Verma: Can I come back and complete the question? The question of whether company cars are in or out of MaaS depends on what you think company cars are doing in that mobility service. If your company is paying for a company car and you are not, clearly, from a fares perspective, it is irrelevant, and from a payment perspective it is irrelevant, so what exactly is a company car doing inside the MaaS envelope? It really only becomes important when you as a user have to make a choice and you need to be given information about the choice you need to make. If the company car is sitting in your front drive, it is not particularly relevant to what MaaS is or is not.

Q206 **Chair:** But if the company says to you, "Instead of giving you a company car, I am going to give you 100 quids-worth of MaaS travel," it is relevant, isn't it?

Shashi Verma: But then it does not need integration. That is the point. A world that is fully integrated looks very nice, but it is not easy to achieve and it has costs as well. The important thing is to give people choices that they really value, but to do so in a manner that is elegant and cheap to deliver.

Chris Lane: In our original discussions about Mobility as a Service, we said that one of the objectives is to get people out of their private car, so that when they come to renew their car they do not, and take up a MaaS



package. From a private car point of view, to remove a company car and have it replaced with a MaaS package would be a good thing. From a local authority point of view, we look at things like car clubs, car share and all those sorts of opportunities. Those types of offers could easily be built into a Mobility as a Service package and could be made available to companies, and we would potentially start to see fewer independent company cars on the road.

Q207 Luke Pollard: Shashi, because London is so far ahead and has a much bigger scale in so many elements of transport, how do you see a MaaS system operating in London to make it different from where it is now? I know you said you have already kind of got it with the Oyster system, but the Oyster system is not Citymapper, which might be how most members of the public see a MaaS system working in London.

Shashi Verma: To be clear, Citymapper is backed by all the open data that we provide through APIs, which is a policy choice we made 10 years ago that resulted in Citymapper and many other companies of that kind coming around. But all the data that is available through Citymapper is also available through our website, and you will find that our website is used at a scale that is significantly higher than any use that is made of Citymapper.

The question of what else needs to be added to our MaaS envelope, if you want to call it so, is entirely market driven. If there was a genuine demand, and an ability to serve that need on a cost-effective basis, we would expand our envelope very easily to take in whatever was being demanded. I come back to the point that the reason there is no demand for it is that, if people want to consume taxis, they have other apps they can use; if they want to consume private hire, there are many apps that they can use. No one is asking for those things to be integrated, as long as there is clarity over fares and ease in being able to make the payments that they need to make.

Q208 Luke Pollard: Is that because the market in London is so hot that actually there is quite a lot of competition? Is it a different experience in other cities or regions where there might not be as many competitors or as many players involved?

Shashi Verma: That is possibly true. That is one of the advantages that London has from scale, but the big game is not MaaS. The big game is integrating public transport: 90% of what we are calling MaaS is actually in the public transport arena, and that is what is fragmented across the whole country.

Luke Pollard: That is a fair point.

Chair: We want to return to the thorny issue of data.

Q209 Huw Merriman: Mr Verma, does all data need to be made open for MaaS to work effectively, and should local or central Government be responsible for making it happen?



Shashi Verma: In TfL, we have a very clearly articulated policy on data. Let me elaborate on that for a minute. There are three types of data, broadly speaking, that we have in our domain. There is data about our services—things like timetables, movement of trains and buses and so on—all of which is freely available through APIs. Then there is personal data, which includes information about customers and their movement, none of which is available through APIs, although at an aggregated level we make some of that information available. If you want to see how our system is being used at an aggregated level, that information is available through APIs; but if you want to figure out what you as an individual are doing, only you have access to the data.

The third type, which is not relevant to this discussion but which is important for completeness, is commercial data, which may or may not be available, depending on what it is. Once upon a time, contracts used to be secret; now all our contracts are sitting on our website. But contracts under negotiation right now are not available on our website; they become available only once the contracts are signed.

That is the framework we have for data. We have been very protective right from the beginning about personal data, because we understand the sensitivities around it. Despite many requests for us to open up personal data, we have never actually done it, and have resisted doing it, because we understand people's concerns about making their data available to everyone.

To complete your question about MaaS, you have to get quite a bit down into details about what data needs to be shared. In our case, we are the MaaS platform operator, with Oyster and contactless, and, when you sign up for Oyster and contactless, we seek your consent to share a limited amount of your data with other people who participate in Oyster and contactless—the train operating companies. But they have to operate under the same principles as we operate under. With Oyster, for example, we collect all journey data, but it is deleted after eight weeks. That data is available for analysis for eight weeks, after which it is available only on an aggregated basis. All the operators in our Oyster and contactless envelope have to live by the same rules. You have to get quite deep into details to see what data needs to be shared or not shared, and you have to obtain consent from the individual whose data it is, right up front.

Q210 **Huw Merriman:** In doing that, do you think there is enough emphasis on selling the virtues of sharing data to the consumer? The downside, of course, is that consumers do not want their data to go outside their control, but the upside is that, if they really want the MaaS technology to take off, that is what they will have to give up to get that better service.

Shashi Verma: That is fundamentally the monetisation model that data companies hold, including some of the largest internet companies in the world. We are a public sector organisation and we are always in the firing line about data, more so than some people who collect more data than



us; and we have taken the very stringent line that maintaining trust with our travelling public is far more important than any other use of that data. That is why we have erected strong walls around personal data, and maintain it as such.

Q211 Huw Merriman: To bring in Mr Lane and Mr Warburton, what data standards and regulatory frameworks are needed to manage data within a MaaS system?

Chris Lane: I agree with Shashi. The work that TfL has done in opening its data is exceptional, and we have followed that lead and learned a lot from the guys down here. We have done the same.

Q212 Huw Merriman: But do you think it will only take us so far, for understandable reasons, because of the firewall, to a certain extent?

Chris Lane: I think it will. The question is not about data ownership but about data rights, and we need to start thinking about the right to give data to different people. That was mentioned in the previous panel discussion. We need to move away from data ownership, which is difficult with GDPR and other regulations, and think, "It's my data and I'll give TfL and Manchester the right to use it, and somebody else the right to use it, in a particular way." We need to find a way to do that, and to share data, while maintaining individuals' privacy.

Q213 Huw Merriman: Rather than it being the old, "I am happy to give my data to selected third parties," or whatever the box is, you would have to specify exactly which organisations you were giving their data to.

Chris Lane: Yes, and GDPR has gone part of the way to doing that, in terms of people having to specifically ask customers to sign up—if you want to be on their mailing list, for example. There is something to be done with apps and e-sharing data on ticketing services. I use London services and Manchester services, and if my data could be held once and shared with both organisations, that would be great. At the moment, I register with each of them separately, and they are my data owner in those particular circumstances. We need to find a way to share data, certainly for transport solutions, while maintaining individuals' privacy and control.

Simon Warburton: Another aspect, which Shashi's experience does not reflect, is that in other city regions there is not the same requirement on transport operators to share the data in the first place. The regime that Shashi describes, of bringing data into TfL through the particular TfL model, does not happen elsewhere. That is where MaaS is a real challenge to existing models, because individual transport operators are really required to compete with one another for customers. If I am competing with the other entity for the same customer, how at the same time do I best share all the data in one place? There are perfectly understandable competitive reasons why operators are nervous about releasing all the data that is really required to enable a MaaS system to tick.



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The other element that we are starting to learn about in terms of newer entrants into transport markets and around the new technology companies is that they have not necessarily worked out exactly how to capture the data in the right way in the first place to play into MaaS systems. We are probably expecting more from some of the new shared transport operators than they are actually able to deliver in reality.

There are real challenges from the supply side in how you create the right safe space for MaaS to act as the data aggregator that it needs to be. If a MaaS system is a good data aggregator, it plays benefits in a number of different directions. It plays benefits to the user, because we are able to take what is generally quite a complex set of decisions in most cities and put them in a far simpler way for users to decide how to travel around the place.

For operators and ourselves as local transport authorities, if a MaaS system works well, it allows us to understand our transport system in a way that we do not at present. It allows us to start to take far more flexible decisions about how we organise our transport system, and to invest better in the right priorities in our highway system, as was raised in the previous panel session. As I said, that requires a whole new level of confidence around a set of partners, and, in reality, we are only in the foothills with that.

Q214 Huw Merriman: Mr Lane, you talked about GDPR. It is quite restrictive in parts, but do you think that individuals may be more secure within those confines and more willing, therefore, to give their data, because they are in a more secure and smaller box?

Chris Lane: It looks more secure, but what has not happened is the agility of industry to catch up with the regulations. The regulations are very strong and will protect things. It is clear now that I am choosing not to sign up for all the mailing lists that I do not want to be on, because everyone is writing to me. With that sort of flexibility, it is easy to see in an app where my data is subscribed to, and I can unsubscribe if I do not like a particular company or I am disappointed with the service. GDPR is moving in that direction, but I do not think that the technology solution has caught up with it yet.

Q215 Huw Merriman: I have one final question. I do not know which of you wants to answer it. In the event that, under MaaS, we end up with a lot more data, which therefore requires a form of analytics provision, do you feel confident that you would have the in-house capability to manage that data and make use of it in that particular way?

Shashi Verma: We have an extensive data capability already and make use of data very extensively. Let me elaborate. As you would expect, a lot of the data is used for planning purposes, so our bus routes are now being planned on the basis of actual journeys that are made very day. That data is collected through Oyster and through our automatic vehicle location system on buses. We also use the data to give information back



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to customers that is useful to them. If you sign up at Oyster and get emails from us, those emails are tailored to you. They look at your journey patterns and are targeted to disruptions or improvements of services on your route.

The third thing is that we follow a policy of automated refunds for delayed journeys. In our case, they are genuinely automated refunds; we are able to see where your journeys have been delayed and, on days when there are major delays, we make automated refunds. We did that two weeks ago for the incidents on the Jubilee and District lines. Those are areas where we already use data quite extensively, and it is all being done by in-house teams.

Q216 Huw Merriman: Are you making compensation payments without the need for passengers even to apply, because you know they have been delayed?

Shashi Verma: Yes. Our policy is that customers can ask for compensation if a train journey on the tube has been delayed by 15 minutes or more. On days when there are substantial disruptions, they do not need to ask for it. We will make the refund without anyone asking for it.

Huw Merriman: I have a Bill waiting for its Second Reading that would force all transport providers to do that. You are a shining light that it is possible. Thank you.

Q217 Chair: I have a follow-up question for you, Simon. One thing that occurred to me when Shashi was talking was that the data that TfL has enables them to improve things like bus planning. In somewhere like Manchester, where the stated view of TfGM is to move into the bus franchising world, one thing would be to have the data to decide how you would plan your system. Will the operators be warier of giving you data because of the potential for something that they might not like to see? I do not think that is a secret.

Simon Warburton: Arrangements are set out in the regulations that support the Bus Services Act, in terms of provision of data, and we are going through the process at the moment of following through with those regulations and making the necessary requests of the data. The traffic commissioner is working very closely with us, because we are clearly the test case for that. At this stage, we continue to progress. Let's see how the year progresses. We will probably be able to answer that question for you better in due course.

Chair: Thanks very much. We will move on to look at business models.

Q218 Iain Stewart: First, I would like to pick up on a theme that was talked about in the previous panel: the integration of private transport services, taxis and car hire, and perhaps, as technology moves on, autonomous vehicles, with public transport provision, and having it all under the same app. Should that be encouraged, and is there a risk of unintended



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consequences? If more people find it easier to use an autonomous vehicle or a demand-responsive taxi, or something like that, will it undermine the business case for public transport?

Shashi Verma: In the case of London, our transport strategy is set out in the Mayor's transport strategy, which was published earlier in the year. Simon made the point earlier that all cities are growing and becoming denser, and, unless there is some control over car traffic, issues around congestion and air quality become very difficult to manage. That is very clearly set out in the Mayor's transport strategy. Having said that, trying to reduce demand for something by making it inconvenient is not the only way of controlling demand. There are other ways, by rationing space or not allowing people to drive and so on, if that is the eventual outcome we want.

Eventually, we have to come back to the question of what is driving that kind of integration. First and foremost, is anyone asking for it? I have not heard anyone in London asking for it so far. Secondly, is there overall social value to be derived from that kind of integration, which has very clearly been the case with the integration of public transport? The examples we can cite about the increase in public transport usage through the creation of an integrated ticketing platform in Oyster and contactless are very genuine. On National Rail, the introduction of Oyster pay as you go increased traffic by about 5% or 6%. That is a very substantial amount of increase, especially when it is marginal revenue coming into the National Rail system. Anything that runs counter to the overall aim of reducing car traffic, both because of congestion and air quality, would be a real problem.

Simon Warburton: As we think about Mobility as a Service, the reality is that we cannot ignore the disruptors that are out there. In one sense, certainly for us, and I imagine that it is the case for other city regions, there are real opportunities offered by some of the disruptors to address the first and last mile of journeys. As a city region that has invested hard in recent years in our fixed-track system in particular, we see that as offering real benefits to our citizens. We are very keen to work with those disruptors.

Is there the risk of unintended consequences? There absolutely is, and that is another reason why we see it as so important that we work with the disruptors as they come forward. To take the example of driverless cars, the worst outcome for ourselves, and, I imagine, any other city, is a model of driverless cars where cars still carry just a single occupant into the city at the morning peak, in a vehicle still powered by a traditional fuel.

The best outcome would be if we were able to put driverless cars together with shared mobility and, indeed, potentially shared ownership of cars and electro mobility. We would be starting to talk about a vehicle that is carrying multiple numbers of individuals into our city centre every day while also addressing its emissions. That would go a long way to



addressing the outcomes we are looking to pursue through our transport strategy. It would bring challenges along the way for our public transport system, which is one element that we are very keen to understand better at the moment, to understand how fundamental that could be in reality.

Our view is that we have to recognise that the disruptors are coming. Our public transport system is probably more vulnerable than is the case in the capital, and more vulnerable to disruption as it comes in. Therefore, we have to work with it, as it comes forward.

Q219 Iain Stewart: Do you have anything to add, Chris?

Chris Lane: Yes, I have a couple of thoughts. First, our business model does not just need to be app based. We have a successful smartcard scheme. Based on previous discussions, there are two options.

I take Simon's point about the new transport providers. What we are trying to do at the moment is to sign a memorandum of understanding with each of them, which we have managed to do so far. They sign up to our policies and practices, and they also sign up to reducing emissions and congestion—the key goals. We are working with them and they are working towards that. They are also signing up to not compromising the core public transport network, because if you do that, as Simon said, you will just have cars on the road and there is no more space. We cannot have that.

Mobility as a Service gives you some nudges. We heard Julian from Nextbike earlier. Just by plugging Nextbike on to the end of an app or on to our Swift card, all of a sudden you have cycling as an option at the end of your journey. We think that we will see people starting to use the bike, and, once they start to do that, they start to do other sustainable travel as well. Once they have got into using some cycling, they will start walking or doing other things, so it leads on to other sustainable ways. The big challenge is that I wonder whether the public sector is agile enough to deal with some of the new things coming along, because they are coming along quite quickly.

Q220 Iain Stewart: I can envisage a potential conflict of interest. For very good reasons, the objective is to reduce private car use in the major cities. Let us say that a company such as Addison Lee developed an autonomous taxi that took four people, car sharing. That would have the impact of reducing the number of actual cars, but if they are in a MaaS app and the alternative is taking the tube or a bus, people may say, "Actually, this multi-taxi is quite a good thing, I'm going to use that." That then starts to slice away at the public transport options. In getting people such as Addison Lee into an all-encompassing app, is there a conflict of interest with the public sector? If so, do you use differential pricing to try to regulate it?

Shashi Verma: I do not sense that there is a conflict of interest. Again, I go back to our core purpose, which is set out in the Greater London



Authority Act. Our job is to integrate all forms of transport. If there was a demand to integrate private hire vehicles or autonomous vehicles with public transport, we would do that, but it has to be led by either a policy outcome that we are trying to pursue or a customer need for that kind of integration. The reality is that people are taking private hire or the tube as alternatives to each other for some types of journeys perfectly conveniently today. It does not need to sit in the same app for people to be able to make that choice.

Simon Warburton: The reality is that we will need different marketing strategies in Mobility as a Service so that we can best mitigate unintended consequences. If the outcome is that we have switched to four people in an autonomous vehicle, from driving four individual vehicles into Manchester city centre in the morning peak, it is a successful outcome. Clearly, if the four individuals have been attracted away from a bus service, that is not heading in the right direction. A much clearer understanding of market strategies is very important.

There was a question about how we are trying to ensure that we have the right analytical capabilities in place to respond to changes. One area in particular where we have been looking to focus our efforts in Greater Manchester is for us to move from a traditional transport planning approach, which tends to view all individuals equally, to start to understand more subtly the different drivers that cause different individuals to make the choices that they do every day. That will be a very important element in any MaaS model, whether it is city led or commercially led.

Chris Lane: Shashi probably hit the nail on the head with the fact that in London at the moment people are choosing to use private hire or the tube already. If there was an autonomous driving service in Birmingham and people liked it, they would choose to use it. What is probably more fundamental is how we plan the whole network and support it, with rapid transit corridors, trams, rail networks and a bus service. Its being in one app is probably not the fundamental thing; the fundamental thing is the new service in the first place. We have seen the market being taken by a number of new services, and grow exponentially for some of those things.

Q221 **Iain Stewart:** I have one final question, which, again, is for you, Chris. In the west midlands, have you encountered any problems with negotiating agreements with transport operators as part of the MaaS solution?

Chris Lane: When we started the pilot, we said that MaaS Global needed to agree independent agreements with each of the partners, which they have managed to do. We have now moved to multi-operator, multi-modal ticketing schemes, which people can use in the Whim app, if they need to. The public sector generally, in Manchester and other places, has already negotiated multi-operator, multi-modal schemes, and can make them available to other parties, if they wish to do that. That opens up



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every operator and all the modes quite quickly for MaaS Global and any other company that might want to do that type of service.

Chair: We have a couple of final questions around ticket pricing.

Q222 **Daniel Zeichner:** This follows on quite smoothly from the previous point. One of the questions that people ask is how you will make sure that you get the pricing right. Are you aiming to offer people better value or a better service? Is it a bit of both, or is it dependent on the context?

Chris Lane: That is a really easy one for me to answer. MaaS Global is a commercial company, so how they want to pitch their product to customers is their decision. What MaaS would say to you, and hopefully did say when they came, is that they are thinking more of a lifestyle product than a transport service. They are not selling you a season ticket; they would like to sell you more than that and add more than transport to the solution they provide. They need to set that price. As a commercial company, if they set it wrong, they will have no business and no customers, so they need to find the sweet spot of the right package for the right people. The people in the west midlands are quite different from the people who live in Finland, so they have some work to do to get the package mix right.

Q223 **Daniel Zeichner:** From a public policy perspective, isn't there a danger that it ends up being a bit niche? It is quite small at the moment. To get large numbers of people using it, doesn't there have to be a broader-brush approach?

Chris Lane: We have a couple of ways of addressing that. We have our Swift smartcard scheme, which you can get bus, tram and train on. We are moving it into car hire as well. Last week, I was over in San Francisco. Google is putting Swift on Google Pay, so you will be able to use it from your phone and not just your plastic card. There is an opportunity to take a more pick and mix approach, as Shashi was suggesting, and load that on to your public transport card, rather than use the Whim app, so there are those two choices. We are looking for competition in the west midlands, and, if a third party similar to MaaS Global would like to come in, it can create that type of service.

Q224 **Daniel Zeichner:** Oyster is obviously a massive approach, whereas this is small at the moment. Which is the way to go?

Chris Lane: At the end of the day, we are looking at what we can create in terms of the commercial market. We have actually said, "Is there a commercial opportunity?" We are there to learn. We are not saying that we have all the right answers, but we want to see whether MaaS Global can make a commercial go of it as a company. If they can, it means that the private sector is solving some public transport problems, running a successful business and meeting our policy objectives. If it can achieve that, it is good for everybody.

Q225 **Daniel Zeichner:** If you get into much larger numbers, you begin to get



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into the realms of concessionary fares and how that might work with a MaaS system. Shashi, I am looking at you a bit. You already deal with this in London, presumably.

Shashi Verma: Yes. Both Oyster and contactless are running at scale. Between them, we get nearly 20 million transactions every day, so that is scale as far as it can go.

I want to pick up on one point. Although we are technologically very advanced and we keep advancing, we have an obligation to serve all corners of our market, including concessionary fares, people who have various forms of disabilities, people who are unable to pay for their transport and so on. Despite the fact that we are making rapid progress on technology, we have always sought to create a solution that is comprehensive and allows for all people to access transport in its entirety.

One of the reasons why, for example, we never did a pilot on contactless was that we were convinced that, if we launched it, it would work at scale. If we do a pilot, we have to ask what we are trying to learn from it. I would say that about any pilot being run for anything: what exactly are we trying to prove by running the pilot, and is the method of running the pilot scalable?

I have a concern about independent companies coming into MaaS. In the entire market for public transport in the UK, the total amount of fare income is of the order of £12 billion to £15 billion. As a thought experiment, let us assume that one company is doing the entire integration for Mobility as a Service across the UK. That is £15 billion of income that the company will take in and will then have to discharge to the people who have been providing the services. That is a very big bank, and a very different kind of bank; it is the kind of activity that traditional bankers do not want to get into. That is what we run. Between Oyster and contactless, we are processing more than £3 billion in transactions every year, and a lot of that money goes to the private train companies. We then have to stand behind the money that has been taken in, to make sure that the train operators that provided the service get their money, and we provide indemnity for that.

If you want to scale this up, you have to find an entity that is willing to stand behind guarantees of billions and billions of pounds every year. One reason why smart ticketing has been so slow to take off on National Rail is that it has never been able to discover an entity that can stand behind that kind of money.

Q226 **Daniel Zeichner:** That is really interesting. Simon, in the concessionary fares scheme, without getting bogged down in it, reimbursement has always been a complicated issue. In non-franchised areas, you would have all these problems replicated with a MaaS system, if you were not careful.



Simon Warburton: In principle, yes, which is why we come back to the debate around the provision of data, and the ability to establish a MaaS clearing house that can hold all the data in a way that is agreeable to all parties. In a non-franchised environment, that becomes more complex, with the additional number of parties around the table.

To come back to the original question of how you determine prices, the prices have to be determined by the public policy objectives that were set for a city in the first place. From our perspective, we would be looking to ensure that a MaaS system establishes prices that continue to nudge behaviour in a way that supports modal shift, but that also recognises the diversity of travel needs. That is where MaaS has something genuine to offer. If we continue to view travel within our cities in a very binary fashion, and continue to view markets as either travellers by car or travellers by public transport, we will miss the point and the opportunity in front of us in our cities at the moment. That is where I can see that MaaS has great potential to offer us something, but the devil lies in the detail of how you bring the data together and how you go about agreeing an equitable pricing system.

There are real challenges, particularly for incumbent parts of the transport system, in becoming engaged in that activity. As they would see it, they are to a degree opening up to new entrants markets that they have long benefited from, so we can understand why there is nervousness around all this. Therefore, further thought needs to be given to the extent to which there is a need for a different policy framework, certainly outside London, to allow that to happen. That is incredibly important over the next 12 months.

Q227 **Chair:** The panel has suggested different solutions in different places, but, obviously, London and TfL in particular have been ahead of the curve, let us say. Is it possible for the London experience that Shashi described to be replicated on a national scale, or does it rely on different solutions for different places? Could the Government just come to TfL and ask how to do it?

Shashi Verma: It can be replicated, and it is something we would like to do. That is a matter of national policy.

Q228 **Chair:** Do you think that it needs to be done on a more localised basis because travel markets are different?

Chris Lane: The regulations that Transport for London work under are very different from the rest of the UK. There is nothing stopping anybody turning up in the west midlands and just running this without talking to us. They could just create a MaaS-type service and get on with it. There is nothing stopping one of our operators saying, "I don't want to do that any more," and withdrawing from the service. We have a very different environment. If we had the environment that London had, we might have had the same sort of approach, because it has done a great job in integrating the different modes.



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In building up layers, transport as a service is at the bottom, with Mobility as a Service at the top. You need to harmonise each of those layers first. We could just abide by Oyster or contactless from TfL, and we have talked to the guys about it; but it is more fundamental than that.

Simon Warburton: I mentioned devolution at the start of the discussion. We still believe in Greater Manchester that the principles of subsidiarity can help enormously. There are a set of markets around a city region, to take our own examples, where city region authorities are probably very well placed to work with the new market to drive things forward. The establishment of subnational transport bodies then allows us to start to move those same principles out, across pan-regional rail markets in particular. There is also an area of real opportunity in freight markets, as was touched on. It is the job of Government to provide the right policy framework in the background, to allow the different levels of the transport system to seize the opportunity. That is a very important element of Government policy for us.

Q229 **Chair:** Are you saying, Simon, that you would still want it to be done at subnational level, even if you had all TfL's powers?

Simon Warburton: I think so. The complexity of the travel markets in our cities at present is such that we are well placed as individual authorities to understand them. The development stages of our cities are very different. Where London finds itself now is clearly where the rest of us would like to find ourselves over time. At this stage in the development model, using the devolved model is the right way forward. I apologise that I do not necessarily have the rural answer for you in that conundrum. Over time, the role of Government in looking to remove the differences between the environment in London and the environment for the rest of us is incredibly important. We have seen a big step forward with the Bus Services Act in that regard.

Chair: Thank you very much for giving evidence this afternoon. You are now free to go.