Roundtable 2 – WIDER ECONOMY

<u>Chair: Peter Jones, University College London</u>

Chair's introduction:

Achieving net zero carbon in the transport sector is a major national and global challenge, and one that cannot be met by that sector acting alone.

Transport does have some powerful policy levers at its disposal, such as emission regulation and road pricing, to help 'shift' travel away from carbon emitting vehicles, but these are not sufficient, on their own, to achieve nationally agreed carbon reduction targets.

The most obvious need for wider sector collaboration is with the energy-generating sector, without whose active support we would not be able to 'improve' vehicle carbon efficiency, by electrifying the fleet and operating it using renewable energy.

But, the missing part of the jigsaw, up to now, has been to develop strategies to 'avoid' travel, both through reducing trip numbers and trip lengths – thereby making active travel an option for more trips. Here collaboration with the major trip-generating sectors is essential – and is starting to be achieved.

These various elements were explored and debated during this workshop, as summarised below.

This discussion focussed on the role of transport within the wider economy. We need a whole systems approach to transport decarbonisation that reflects the shift to digital connectivity and the integration of transport with land-use planning, travel-generating sectors, energy and green finance. A key challenge of delivering this will be overcoming the silos of government, both locally and nationally, and in improving cross-sectoral working.

Since the 1950s a car-based consumer culture has ensured that our transport system has been built on the assumption that the car is the predominant mode of transport and this assumption continues to be reflected in transport budgets and planning decisions. However, the decarbonisation of transport will require a decisive shift away from a car-based culture. We need a massive shift to clean technologies but we must also reduce traffic levels, and that will require us to reduce the need for travel.

This discussion looked at how decisions taken in other sectors impact on transport, and the extent to which they can be encouraged to take those into account when making those decisions.

The transport sector cannot achieve transport net zero alone

Most of travel is a derived demand (i.e. moving between locations to carry out activities), so is strongly influenced by conditions under which activities take place.

Most of these activities are provided by public or private sector operators, whose service delivery models often take little account of the transport consequences of their operations. They are seen as externalities they don't really have to worry about.

It was therefore argued that we need cross-sector collaboration to address transport challenges in the context of the wider economy

Looking at the National Travel Survey 2019, and assuming that all trips are influenced by specific service providers except visits to friends and family and holidays/day trips, 82% of daily trips are influenced by service providers (education, health, retail, leisure etc) and 66% of annual mileage.

"That means the majority of the travel that occurs in some way is influenced by the organisations that provide the services that people take part in."

In dealing with the transport carbon crisis, we are very much looking at accessibility rather than mobility. The important thing is that people can access the goods and services they need, but there are different ways in which that can be done, often without extensive physical travel.

Take health, for example. Historically, going back 50 years or more, we recognised that vehicles on the road network contribute substantially to air and noise pollution, and more recently carbon, and that they also contribute to traffic accidents, collisions and affect personal safety.

Recently there has been a strong interest in working with the health sector to promote healthy travel, both for its benefits to the transport system, in terms of reducing pressure on road networks, and the health benefits too. But what impact are decisions made in those sectors, such as the health sector, having on the transport network? For example, the construction of new hospitals on greenfield sites has been done with very little consideration about the impact it might have on the transport system and travel behaviour.

An 'Avoid/Shift/Improve' approach can be applied to deliver low/no carbon transport strategies. Avoiding the need to travel can be done by substituting digital for physical meetings, providing equipment in-home and localising facility provision, thereby requiring shorter trips. Shifting the need to travel can be done by encouraging people to switch to sustainable modes of transport, and the consolidation of freight. Improving vehicle travel can be achieved by decarbonisation of vehicle fleet and increasing energy efficiency.

There are significant barriers to cross-sector working, but there is now a common goal around achieving net zero carbon. As a result of that, both public and private sector organisations are starting to use the same accounting framework for greenhouse emissions. They have recognised that a core component of the carbon that they generate, either embedded through investment or daily activities, involves transport.

The CBI last year (April 2021) produced a report called 'Greener Miles: delivering a net-zero vision for commuting' where they accept that companies have some responsibility for the carbon that their employees generate in travelling to work.

This is very different from what the situation was historically, because there is an agreed overall objective across the economy, of reaching net zero by 2050, and in many cases earlier. We are using common metrics and timelines

"These other sectors are accepting responsibility for addressing sector generated to transport emissions, in a way that they have not previously. I think the view is that one sector cannot start externalising its carbon and dumping it on another sector."

Resetting the price signals

One contributor suggested that pricing is the key to delivering change.

"You are not going to get all these decisions co-ordinated across the whole economy in the right way, unless and until you price the carbon properly. Unless you do that, you are on a hiding to nothing in terms of achieving our objectives [to decarbonise transport].

"If you do price carbon properly, which is code for 'impose a substantial tax on the use of carbon across the piece', never forget you will generate a lot of revenue and that revenue gives you the means to deal with the problems that people always mention - to do with the people who are disadvantaged by the policy.

"If you do price the carbon properly, then you will have a measure of the true costs of the carbon zero policy, and you will reduce the costs quite a lot because people will respond in an efficient way to the need to reduce carbon emissions."

Another contributor pointed out that this discussion is not new. 20 years ago, Professor Ernst Ulrich von Weizsäcker in Germany advocated that prices must tell the ecological truth and he invented ecological taxation. Meanwhile. there were European Commission research projects that said the transport is under-priced and that we must internalise external costs.

There is an example of this in Germany, where owners of heavy transporters used for cargo shipping pay the LKW-MAUT road tax. This tax is levied for every kilometre travelled on certain routes. This has shifted considerable amounts of freight from the road system onto trains. Importantly, it has also led to a reduction in the distances over which inputs are sourced.

"We shouldn't accept that existing levels of demand are somehow correct, like gravity. They are a function of the wrong price signals and we need to reset the price signals."

Another contributor pointed out the freight operators are ready to react to what the market wants.

"Each of us as individuals [need to react]; when was the last time we made a purchasing decision and changed the delivery vehicle to a zero-emission vehicle? It's down to those business decisions, because freight operators will do whatever their customers want … Somehow we have to start to think about what those social, economic and environmental impacts are, when we as individuals and we as businesses make those decisions."

Another contributor also considered the shift to home deliveries.

"Are we reducing vehicle miles and carbon emissions through the transition of people having things delivered to them at home? Could price signals make that more efficient?"

"Supermarkets have been subsidising the cost of home delivery and are now trying to recoup that. Can they now use those pricing mechanisms to more strongly incentivise people to choose time slots which reduce the total vehicle mileage for deliveries?"

Another contributor asked about who pays for the trade-offs.

"We are seeing ready acceptance of the need to view these things holistically, but it's about who pays for the externalities, the trade-offs that need to be made."

"I just wonder whether [we should be] looking to other sectors who seem to be doing a better job than transport currently; for instance, the packaging industry or the food waste industry where there's a recognition by the key actors that there is a problem and that the full cost of those externalities are not being covered - the difference being is that they are very much being focused back to those who have the best ability to pay. With food waste and packaging it's very clear that retailers and producers are the two key actors who, frankly, have to pay."

"The problem we have at the moment with transport is that we spend so much time analysing whether or not someone is actually covering the full cost of home delivery, for instance, of food products, or indeed any products, that we perhaps concentrate solely on the handle of the barn door and miss the barn door."

"I just think this is going to be an absolutely critical issue. Otherwise I think that we will just end up with a melee of people disagreeing about who is responsible for the trade-offs, before we can actually move to solutions."

Another contributor suggested that the debate is too often framed purely in economic terms.

"Economics is a very powerful set of tools for thinking about how the world works, but it is not the only tool we use. People report that a reduction in their commute to work below a certain level is the equivalent of a pay rise of 10 or 20%. This stuff is very poorly captured in purely economic terms."

"The majority of our travel is not commuting, it's leisure and all these other things. We are very bad at understanding how those choices relate to life satisfaction, I think it's really important that we remember to paint a vision of the world that we want, that includes more than just the economic levers. We have to take notice of the economic levers. I wish it were as simple as just 'let's tax carbon'. The truth is it's much more complicated than that."

Another contributor warned that that fossil fuel-based mobility has increased the choices available to people and it will be very hard to reverse that trend.

"I think it will be very hard to get behavioural change on the scale that would have a big impact on carbon emissions, so I think we really going to have to focus on technology, because an electric vehicle will give you the access and choice you are used to from carbon-based mobility without the tailpipe emissions. I accept that goes against the theme of this set of discussions, but it's really based on the fixity of the built environment that we've created."

Another person pointed out that some of the world's fastest growing companies, like Google, are giving a lot of attention to accessibility planning, but the main driver for this is their people. "The strongest motivation for cross sector working is to focus on people."

Learned helplessness

Research into the behaviour of how businesses conduct their operations and why they won't change has found that "there is a significant element of learned helplessness within the behaviours of the senior leaders", one contributor said.

"[They] simply cannot figure out how they can make a change because all sorts of other people need to make changes in order to allow them to make a change … I think part of the problem is that we don't bring all of the various actors together enough. We have too many people talking in groups of people that agree with each other, rather than people that have a disagreement about how to do things.

"I am both hopeful and worried that decarbonisation in the transport sector will be driven more by the market then it will be by policy-makers or customers. It will be driven by the market as they figure out how to make money out of decarbonisation. We may end up with all sorts of fabulous and interesting solutions to decarbonisation, all acting together in a completely unpredictable way, and then end up with completely the wrong answer.

"Businesses are not solely economically driven, not solely price driven. A really good example at the moment is the way in which social value is being driven as major objective for major businesses. It's being driven through employment because young people won't join companies unless we've got a demonstrable record to show the impact that we have both in terms of carbon and in terms of social value."

"So, there are other ways that we can begin to influence the way in which the market behaves. I think we need to learn to use some of those other levers on behaviour, because ultimately we are going to need to find a way of the market getting over its learned helplessness."

Sometimes it takes an individual or an organisation to lead the way. One contributor explained that when the new CEO took over at a major motor manufacturer a couple of years ago there was a discussion about the company taking a lead on trying to get to carbon zero.

"At that time, they said it's very difficult to change the industry and so on. And they publicly committed, very nervously, to decarbonising by 2039. This was just two years ago."

"What happened then was all their main suppliers … came along and said 'if you've taken the lead we will match that'. And they've now got to the point where all new models within the next two years will be electric."

"In the public sector it needed brave politicians like Ken Livingstone to introduce congestion charging in London, and to remove guard railing in Kensington and Chelsea."

"It needs brave people in the public and private sector often to do that one step ahead. I think that will help everyone to move forward."

We can't just decarbonise operations

One contributor said it was problematic that the Government's Transport Decarbonisation Plan focuses almost singularly on the decarbonisation of the operation of transport.

"The big gap in policy is around the embedded carbon and the resources required to deliver that [zero carbon]. An interesting stat that the RAC Foundation came out with is that the highest mileage of new cars by manufacturer is Tesla. So Teslas do more miles on average than Mercedes, these sort of traditional diesel high mileage cars, and that's because we are making those miles cheap. They can be zero carbon, but we're not thinking about the embedded carbon and the battery."

"We need to think about the infrastructure, what we are building, as we move to a decarbonised energy system. We will have zero carbon from the miles and it will all be embedded in the built infrastructure, the built vehicles. That's where we need to start to focus some of our net zero ambitions. We are working towards an operational zero, but certainly not a net zero. I think that is probably the biggest discussion that we need to start now to develop as we go on. Should we build an environment that allows us to have that fully decarbonised mileage?

"We are having a tension about how many charge points need to be in the ground to support electric vehicles. At one end we need millions of charge points because everyone should be able to charge everywhere, so that they can run their electric vehicles. That is a huge cost. A huge embedded carbon. We have got to design the system we want and then build it."

The NHS as an example of a trip generator

About 15 months ago the NHS produced its own net zero carbon document, recognising their own impact on emissions. They estimate that 14% of all their emissions actually come from transport, passenger and freight, and they are taking responsibility for tackling that.

One contributor remarked: "The NHS is a significant trip generator, traffic generator, there's no argument about that. But actually, doing something about that is really very difficult, because many hospitals are building football field after football field of parking and raising millions of pounds for multi-storey parking, and public transport services are appalling."

"So, I think what we have to try and do is accept the NHS has a clear approach. It does want to reduce carbon. It does want to be best practice. But on the ground the reality of hospital-generated trip-making is largely car dependent and that has a lot to do with the poor quality of the alternatives."

Efforts to reduce travel generated by the NHS are aggravated by its clear and consistent policy of centralising facilities, which requires longer journeys to be made.

"There is a need to talk nicely to the NHS … and talk to them about different ways of organising the location and the concentration of what is offered."

Decision-makers in the NHS must be implored to take account for demands they put on people to travel.

"Hospitals look at the travel difficulties of their staff, their patients, their outpatients, and decide to build another car park. I would like to know how we stop that particular oil tanker accelerating in the direction it is now going."

Another contributor explained how an EU project with Transport for Greater Manchester tried to implement a cross-sector approach to transport, with some success. It worked very closely with health sector and social care sector.

Wigan took a fresh look at social care workers going to peoples' homes and found that the workers were going to clients all over the borough. They reorganised it so they could deal with people in a smaller locality. The result has been that many of those workers no longer needed a car, they can cycle and walk or use other modes instead.

"These are small steps but I think the oil tanker is slowly changing."

Another contributor who has worked with the NHS emphasised with success of accessibility planning approaches.

"It's not just a design of the building. In transport we are often focused purely on the location and the big planning decisions … We shouldn't underplay the positive impact of accessibility planning approaches. The net impact of that is far greater than the things that transport planners get excited about - light rail schemes or bus schemes. We do that work as well, but it doesn't have anything like the impact on transport or decarbonisation that we do through accessibility planning. We have a track record and we know what works."

"We have a tendency to underplay the successes of our achievements when we work with the NHS. We don't own the solutions that are highly successful. We don't talk about these things enough in transport circles. I think if we did, we would build the trust we need from the NHS to trust and believe in the travel plans we do. They would then learn how successful it is when we do it."

Buses are the biggest obstacle

One contributor said the lack of participation by the bus industry was the biggest obstacle by far.

"The bus industry is the cheapest sector to subsidise, far cheaper than rail to get people out of cars. And yet … despite the National Bus Strategy and the Bus Service Improvement Plans that stem from that, we still have no sight of how the long-term funding of the bus industry is going to come from."

"The local authorities don't have the money. Central government is refusing to provide any long-term commitment to it. And that is the only way that we can build the combination of bus services required."

"We need express bus services that can offer a time-competitive alternative to driving. And we also need the coverage of services to get people the first/last mile connections to express bus services and to rail services and connect up with walking and cycling. That bit of the puzzle is completely missing."

"All of our planning has to make assumptions that the only bus services that we can design around are the existing ones. We cannot design for a future where there are additional bus services, and different types of bus services serving different purposes. That completely hobbles all of our sustainable development planning."

A National Evidence Centre?

One contributor remarked: "I wonder whether a really effective intervention that we are not quite seeing here is some sort of national evidence centre that could gather together some of the best practise that has been talked about, in parallel to measuring and ranking different areas in terms of their effectiveness?"

"So, you name and shame and you do that in conjunction with a kitbag of demonstrated interventions, which means that you can much more effectively as a society target the interventions you know work at the places that need it most."

"That feels to me like a relatively cheap and potentially quite effective way for the Department for Transport, and society more generally, to start thinking about making progress here."

Another contributor called for international examples of best practice to be studied, especially where they demonstrate that decarbonisation does not hold back economic prosperity.

"If you go to Freiburg in Southern Germany or Lund in Southern Sweden, and several other places in the Netherlands and Germany, there are towns and cities and regions with much higher GDP than anywhere in England, including London; and their modal split data clearly shows that cars are responsible for less than 25% of all trips every day. Walking cycling and public transport is much higher."

"I think there is a cultural problem or a paradigmatic stubbornness problem of some kind [in the UK]. Mentally, certainly within local authorities I have dealings with, we still associate economic growth with road building and encouraging road travel."

In contrast, Lund is one of the best examples of totally integrated, planning, transport, public health and Climate Change policy.

"There's no problem, there's no argument, there's no discussion. You can have your cake and eat it. So please can we look around a bit at best practice"

Socially just solutions

One of the standard reactions to using the price signals is that it's the poorest people that are hardest hit. Contributors considered how we can get towards net zero, working across sectors, in ways that would be seen as fair and socially just.

One contributor said: "Transport policy, transport planning, transport spending, public sector investment, vocational policies, planning policies, can all deliver a massive improvement in social justice equity and progressive work and life opportunities for all sectors of society. The potential is enormous."

Germany, Denmark the Netherlands and Sweden were all cited as places where the public transport system delivers social justice very effectively. Some places are even offering free public transport.

It was proposed that the UK should switch funding away from "subsidising rich people buying expensive electric vehicles with expensive charging points" and instead put it into totally free public transport.

"The buses would be zero carbon, and there would be dense networks of public transport services. People wouldn't need to use a car. It would reduce congestion and reduce air pollution. So, therefore, it doesn't figure very largely in thinking in the United Kingdom."

Another contributor agreed that investing in electric cars is not the most socially just way to decarbonise transport. Firstly, there is the carbon cost of manufacturing them to consider. Secondly, there is the fact that they are likely to be bought by those of higher incomes, and those on lower are less likely to have an on-site parking space in their house or be able string a cable from their own personal electricity supply to their electric vehicle. Finally, the shift to electric vehicles requires an extra 50% of generating capacity, requiring a complete rebuild of our distribution network.

"The big move to electric vehicles has many, many, many problems, not least problems associated with social justice."

Meanwhile, another argued that allowing concerns about fairness to prevent essential changes would ultimately result in less fair outcomes.

"We are either serious about meeting these carbon targets or we are not. And if we are going to get close to meeting them, especially on the kind of timescales we are talking about, there is going to be a degree of rough justice. We cannot allow ourselves to reject potentially successful policies on the grounds that there will be social injustice involved. We have to face up to that."

"The reason for facing up to it is that to do nothing, or to fail to meet the targets, is not in itself socially just. Failing to meet the targets will mean we will get a situation which will probably

affect disadvantaged groups even more. We can't allow people to say 'you can't do that' just because one particular group is disadvantaged. We have to take a more balanced attitude on that."

Sweating the assets

"I think one of the key things we have got to think about is sweating the assets that we've got," said one contributor.

"The issue about charge points is that if you put them in the ground and don't use them they are a white elephant, and in fact there is modelling that ... says that local charging hubs that are highly utilised will actually bring the price down to domestic levels of energy cost."

"One of the biggest activities will be working out how we make best use of the assets and minimise what we make and build in the future. And, rather than having 40 million cars, should we have 20 million cars that are used almost twice as much?"

"That will actually give you a bigger reduction in greenhouse gas probably in the 2040 timeframe, because of this shift of greenhouse gas being fundamentally generated by the build and embedded in things, because we are going to decarbonise the operations."

"We have really got to think about the transport system we want and the efficiency of that transport system in terms of the assets that we utilise ... I would agree with commentary about 'let's not build £27bn worth of new roads', let's make much better use of the ones we've got."

"It's all about sweating the assets, because it's the assets that are going to be demanding the resource and the carbon, not the actual use, in the long term."

Another contributor asked how car sharing could be encouraged in order to make more use of existing assets. The point was made that we will see the utilisation of cars fall even further if we do start encouraging people to work at home more and travel less. This means they become even more inefficient compared to the embedded carbon.

"We do need to get that use of car sharing up and I think that's going to involve working not only with the finance sector and the manufacturers and software providers, but also with insurance companies, to make sure that the ability to share cars is easier. Because I think insurance is one of the big hurdles there at the moment."

Another argued that we need a much greater focus on the circular economy, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible.

"There are countries like Finland that have really moved heavily down the circular economy concept, and that's appealing because it's not a sort of anti-growth or anti-capitalist, millenarian lifestyle change thing. It's actually just making much better use of all the resources that we already have. Endlessly reusing and repurposing."

Meanwhile, in order to utilise transport assets most efficiently, we need to spread the working week across seven days, rather than five days on and two days off, with everyone travelling to and from work at peak times.

"That involves actually rethinking whole working patterns ... I think we have to do a lot more of that if we're actually going to not require new infrastructure to cope with people's mobility needs."

Picking up on this point, another contributor warned that hybrid working, whereby people work partly from an office and partly at home, could have the opposite effect.

"If we can spread that over five days then essentially we make better use of the infrastructure and we don't have to provide some of that very expensive peak capacity. On the other hand, if it's all concentrated on Tuesday, Wednesday and Thursday then we are much worse off than we were before. We need the same capacity but we are using it for an even smaller percentage of the time."

Another argued that demand management was also part of sweating the assets.

"I agree we need to sweat the assets but the way to do that has to be to reduce the demand. It can't be to fail to provide the capacity and hope to do it by congestion. That's just potty. You will not meet your objectives. Congestion just creates more carbon, not less. The idea that you let traffic grow or stay the same, but you fail to provide the capacity for that movement and hope to meet your targets by congestion is not the way to go."

Focus on what matters most

"We get distracted very easily by the new and exciting," lamented one contributor. So, if you take the DfT at the moment, we have got a 'Bus Back Better' [National Bus Strategy for England] document and it's struggling, but there is a load of focus on e-scooter trials and everything else. What's moving the most people around is not e-scooters."

"It's the same currently in freight. People are obsessed with cargo bikes. Unfortunately, a lot of these are almost handmade. They don't have any annual tests for roadworthiness, or for safety. The drivers aren't managed effectively and they don't have insurance."

"Big is beautiful. Tesco is out trialling 37-tonne electric vehicles. An HGV is basically a bus. We need to make sure we get the right vehicles in at the right time to the right places. If you want cargo bikes for the last mile, great. But let's make sure we've got the space for it, the land for it, and we can actually get the majority of the stuff in as easily as possible. Cargo bikes have become a solution without knowing what it's for."

Commenting on e-scooters, another said: "They have a role but when you look at mileage and so on in relation to carbon, a lot of those effects can be quite small."

Share modelling methodologies

It has been suggested that the UK needs to reduce car use by 25-30% by 2030 in order to achieve its carbon reduction targets. However, one contributor argued that there is little consensus on this issue, because the modelling methodologies are not open for scrutiny.

"I'm not sure there is a consensus that we need to have a major reduction in travel. That's not the Department for Transport view in their decarbonisation plan. They aim to decarbonise mainly through technology and they have done modelling using the National Transport Model and other transport models to that effect, but they have not published the detail."

"So, we've got a conflict between models, between the kind of model used by the Climate Change Committee and the energy modellers, which is looking at energy and carbon emissions and then looking at energy as a sub-sector; and then the department's modelling approach, based specifically on transport models."

"What I think we need to do is to move towards a consensus here with modellers sharing their methodologies, and maybe by using their models on common scenarios so we can see how these models differ."

"I think it's important, because it seems to me quite hard for governments to say 'you must make huge changes to travel behaviour because we have these models that say to do that is necessary in order to achieve net zero by 2050'. The models aren't validated. You can't validate models out to that timescale. There's a lot of uncertainty about the parameters that are chosen and the relationships."

"So, I think models of different complexions should need to work together, as happens for energy modelling generally within the UK, where the academics and government use the same modelling framework, as happens internationally on modelling climate change itself, which is a very collaborative exercise.2

"People in the transport sector who model the requirements that generate the need to make big behavioural changes really ought to talk more together, to see if we can get a coherent consensus view."

ENDS