

Transport Research Foundation Fellowship Lecture
TRF005

Public or private? Meeting growing transport needs in an age of austerity

Joint lecture of the Institution of Civil Engineers
and the Transport Research Foundation

Professor Stephen Glaister CBE FICE
RAC Foundation and Imperial College London





Public or private? Meeting growing transport needs in an age of austerity

Professor Stephen Glaister CBE FICE
Director of the RAC Foundation and Emeritus Professor
of Transport and Infrastructure at Imperial College London

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Transport Research Foundation

Crowthorne House

Nine Mile Ride

Wokingham

Berkshire RG40 3GA

United Kingdom

Tel: +44 (0) 1344 773131

Fax: +44 (0) 1344 770356

Email: enquiries@trl.co.uk

www.transportresearchfoundation.co.uk

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IHS

Willoughby Road

Bracknell RG12 8FB

United Kingdom

Tel: +44 (0) 1344 328038

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Stephen Glaister CBE FICE FTRF FCGI

RAC Foundation and Imperial College London

Stephen Glaister is Director of the RAC Foundation and Emeritus Professor of Transport and Infrastructure at Imperial College London. He was a member of the Board of Transport for London 2000 to 2008 and a non-executive director of London Regional Transport from 1984 until 1993. In 2009 he became Partnership Director of Tube Lines.

He was a member of the Steering Group for the Department for Transport's 2004 National Road Pricing Feasibility Study and is a member of the "Friends" group advising Sir Rod Eddington on his Transport Study. He was a member of the External Challenge Group for High Speed 2 (HS2).

Between 1993 and spring 2001 he was an economic advisor to the Rail Regulator. He was a member of the Government's first Advisory Committee on Trunk Road Assessment and he has been Specialist Advisor to the Parliamentary Select Committee on Transport and an advisor to the Commission for Integrated Transport. He has published widely on transport policy and also on regulation in the telecommunications, water and gas industries. He is the principal author of a series of three recent studies into national road pricing for the Independent Transport Commission and a co-author of the RAC Foundation study on road investment and pricing strategy for the next 35 years.

Abstract

We have a new government but, Stephen Glaister asserts, transport did not receive much attention during the election campaign. Everybody wants and expects the economy to recover. Few dispute that demographic and social changes will further increase the demands on an already-congested road and railway system. In this annual ICE TRF lecture Glaister asks: 'what should the new government do?'

During the election campaign all the main parties had advocated High Speed Rail networks and improvements to the existing rail services. Glaister asserts that policies on roads have been overshadowed and yet road users account for nine out of every ten passengers by distance and carry a similar proportion of freight. At a time when it seems inevitable that there will be significant cuts in national and local public expenditures, Glaister finds it unclear how plans for rail would be paid for and suggests that nobody has a coherent strategy for investment and how the strategic road transport networks will be financed.

Glaister asks several key questions, the answers to which he feels will lead to an overhaul of attitude to transport policy, and investment in our road and rail networks. What are the transport needs and how should the new government tackle them? What should be the balance between public transport and private transport? How are the funds to be raised to make good our historical underinvestment in capacity and maintenance of our transport infrastructure? Where should we be investing to meet future needs for mobility and the environment? And could administrative and governance reform offer a way for the private individual to fund the level of service that they want and the nation needs?

Professor Paul Jowitt, President of ICE

It is my great pleasure to welcome all of you to the Institution of Civil Engineers this evening for the joint lecture between the ICE and the Transport Research Foundation, and an especially warm welcome to our speaker, Professor Stephen Glaister. I am delighted that so many of you are here, not only in this room but also listening online. The lecture could not have been presaged any better by the press release from the RAC Foundation this morning, so Stephen has got a lot to live up to since he is extensively quoted in it.

I would now like to introduce to you Dr Sue Sharland, President of the TRF Fellowship, although I am sure many of you already know her. Sue is Chief Executive of TRL, a position she has held since 2001. Her first degree is in mathematics from Cambridge and she also has a PhD in material science from Imperial College, London. So she has travelled rather extensively in that academic career, which is only appropriate for somebody involved so closely in transport.

Dr Sue Sharland, President of the TRF Fellowship

The subject of tonight's lecture is, I hope you will agree, rather important and very timely. The Government may have changed but the transport need has not, and in particular the relationship between transport and economic recovery and carbon reduction remain in special focus. Clearly, there is less public money available now, which brings into focus questions such as who is going to pay, and for what? What are the priorities?

With such a challenging subject, I am absolutely delighted to introduce our speaker, Stephen Glaister, to you to tackle these critical questions at this very important time. Stephen is the Director of the RAC Foundation, and as we have heard, has been very prominent today in the release of the Foundations's report. He is also Emeritus Professor of Transport and Infrastructure at Imperial College London and has held a host of advisory roles over his career for organisations such as Transport for London, the Department for Transport, and the Rail Regulator. He has published very widely on transport policy, and also on regulation in the telecoms, water and gas industry. He is the principal author of a series of three recent studies on road pricing for the Independent Transport Commission, and co-author of the RAC Foundation study on road investment and pricing strategy, Roads and Reality. With that let me hand straight over to Stephen to give us tonight's lecture.

Professor Stephen Glaister

Introduction

It is a great privilege to speak in such a distinguished building to such a distinguished audience. What I would like to do this evening is two things: state what I see as a series of problems that we face, and then offer one or two suggestions as to how we might approach them. The problems I hope are actually not very contentious. I do feel that both the previous Government and this Government have completely failed to face up to, or to articulate, the problems, and that is part of the difficulty we face; there is a lot of failure to look at the facts. I want to give you my version of the facts.

I emphasise that I will make some suggestions at the end but they are not fully worked out. It is a big subject and if a government in the future wanted to pick up one of our suggestions it would be a large piece of research to put it into a practical proposition. I very much hope that that would be the next step, because unless a government is willing to take that step I really do not know where we are going to go with what is a major social problem.

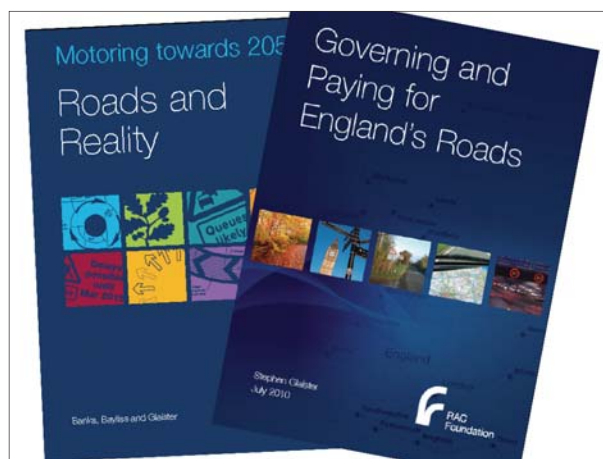


Figure 1

I am speaking to the document on the right in Figure 1 which is published today and I hope you all either have one or will get one before you leave. It is actually a follow-up of a document we published two and a half years ago, the one on the left, Roads and Reality, that contains a view about the nation's need for strategic roads up until 2041. It includes as an option a full-blown road user charging scheme with the associated investment. I am not tonight going to be dealing in such detail with what a road user charging scheme might look like, but if you are interested it is in that earlier document, available on our website.

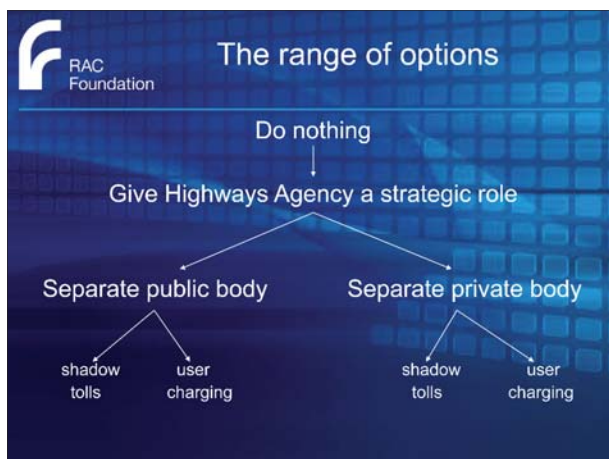


Figure 2

Towards the end of the lecture I will talk about this diagram (Figure 2). I do not expect you to read it now, but my argument is leading up to a decision tree, if you like, about what the options are and how we might find a helpful way of dealing with the problems. Personally, I am inclined to go for the approach in the bottom right hand corner, which is some kind of private body with user charging, but I will give you the reasons why that is and others may want to end up somewhere else. And the last thing I will do, having been through the arguments, is to relate these proposals to the White Paper that the Government published a few days ago, setting out its rules of the game in the current spending review (Figure 3).

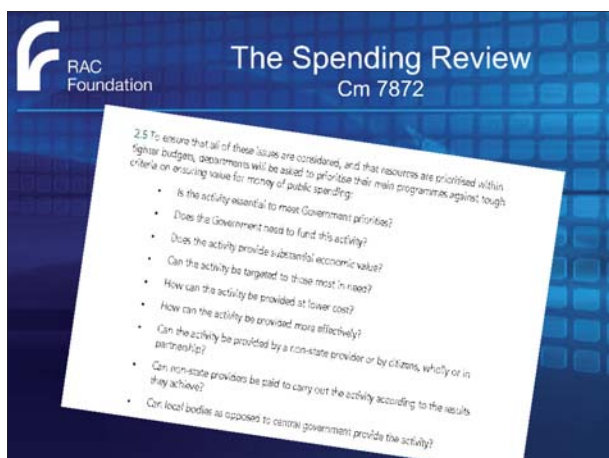


Figure 3

There are nine criteria there and I will come back to argue that the proposals I want to put on the table actually score really rather well against at least seven of the nine, and possibly eight of the nine. So if the Government is serious about these criteria, they should be serious about listening to the arguments I am going to put forward.



Figure 4

A couple of preliminaries: I am about trying to find more capacity in the road network. That might mean more physical works, wider roads, even new lines of route. But it does not necessarily mean that. As you will well know, there are many ways of getting more capacity out of the existing network: things like spending more resource with the police in clearing up incidents; having more traffic officers quickly available; spending more money on roadworks; signalling has been proven to be extremely effective in producing carbon reductions, faster, better throughput and greater safety. These are equally within the frame of the word capacity (Figure 4). It is not necessarily about building a great deal more physical infrastructure, but what it is definitely about is more money. We have got to find some more money to fund the new capacity: it may be capital, it may be revenue, but that is the fundamental difficulty.

Tonight I am going to spend almost all the time talking about the strategic road network. There are a lot of problems on the local road network, maybe even more than on the strategic road network, but I have got less to say about them tonight. Also, the issue is not just about charging. The press of course pick up two things: tolls on motorways and privatisation. Those are two of the issues but it is not just about them. For me it is really about a Government developing a long term strategy for the road network in some form or another, and having a body accountable to own it; that is the missing link in all of this.

The problems

I think we have got five problems to face. The first is congestion and unreliability.

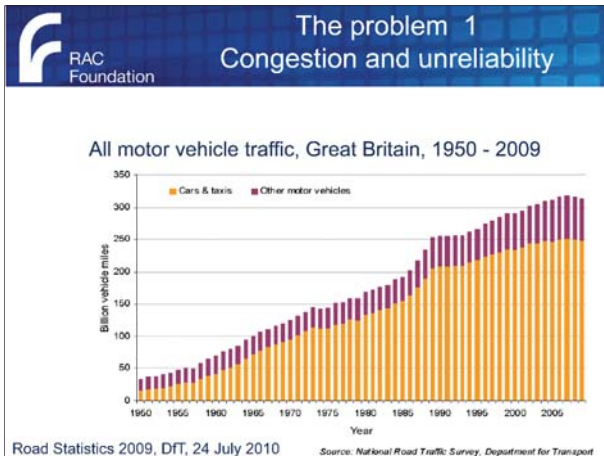


Figure 5

This diagram (Figure 5) no doubt is familiar to you, but it is a quite extraordinary documentation of I think one of the biggest social changes since the war in this country. It shows what has been happening to traffic since the 1950s. The orange colour relates to private cars, the purple colour is commercial vehicles. As you see, we have had the extraordinary growth that we are all familiar with. It might be argued that distance travelled by private vehicles has levelled off in the last few years, but that has been more than compensated by the growth in, particularly, vans; but it is all traffic.

It would be hard to deny that, in the round, it is a straight line. There are some deviations from the straight line which are pretty clearly to do with the state of the economy. What cannot be seen in this is transport policy, unless you look very carefully. There is the big recession in the early seventies, the Big Bang in the late eighties, the recession in the early nineties, and just recently the decline in traffic to do with the current recession. That is the history of traffic on our roads.

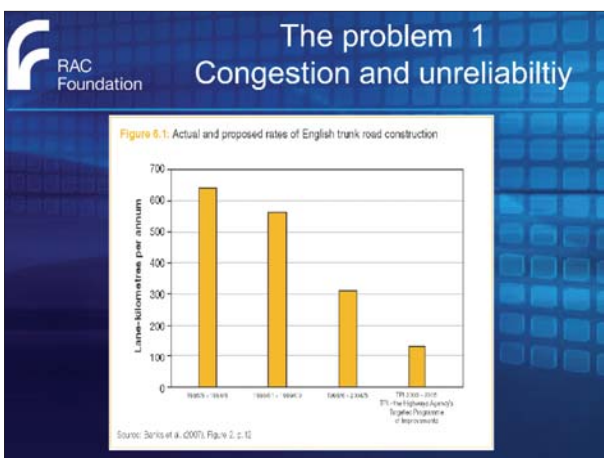


Figure 6

Meanwhile, as this audience will be very familiar, we have stopped building capacity to meet the demand. Figure 6 shows the rate at which we have been opening new road capacity; in the mid-1980s it was in the order of magnitude of 600 lane kilometres a year, but as can be seen it has since declined. At the far right of the diagram is the “Targeted Programme of Improvements”, which I guess, in as far as they have not already been built, are very much in abeyance at the moment. Not surprisingly, the increasing demand and inadequate capacity to meet that demand have resulted in congestion, and particularly unreliability and unpredictability of journey times.



Figure 7

That was recognised by Sir Rod Eddington in his very good review which everybody has now forgotten about, but it really is worth going back to consider it. It was independent, thorough, and very well supported by the Civil Service in the Treasury and the Department of Transport. It was good diagnosis of the problem, accepted by the Government of the day and then forgotten. Eddington’s conclusion was that we are well connected, but lack of capacity on crucial links in the network were at that time damaging productivity and competitiveness (Figure 7). He then laid out the stall for either more investment in road capacity, or less road investment and road pricing. If you recall, he said, road pricing was the most productive single thing you could do in addressing the problem. The first problem then is that as we stand here today the roads are not adequate to deal with the needs of the economy.

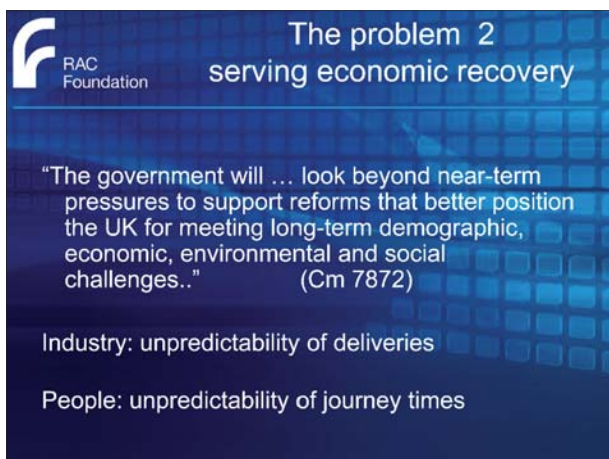


Figure 8

The second problem (Figure 8) is that the Government quite rightly is absolutely determined that there will be an economic recovery. It has to have it to deal with the deficit. There is a quote in the figure from the White Paper published just the other day, being very clear that we have to deal with the demographic and economic needs. I think we know from history that, as night follows day, if the economy recovers traffic will recover too; that is what is shown in Figure 5.

If the Government wants the economy to recover it ought to be worrying about how to provide the capacity to meet the needs. Industrialists in the Midlands, who are trying to move steel around, will tell you bitterly that with the unpredictability of deliveries and personal journey times they simply cannot do their business properly today with just-in-time deliveries and all of that, never mind what will happen as the economy recovers.

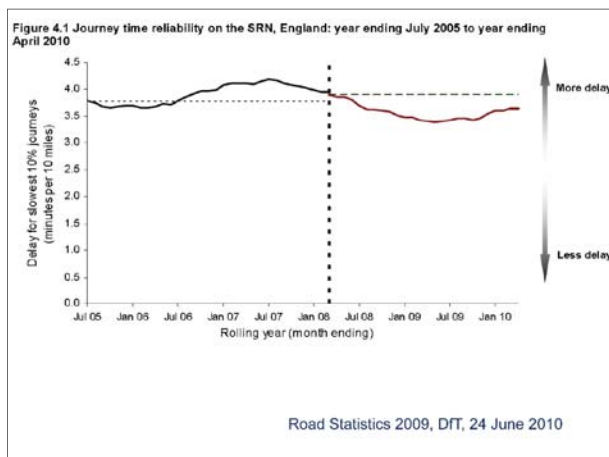


Figure 9

How are we going to deal with providing for the economic recovery? Figure 9 shows the official Public Service Agreement (PSA) measure of the reliability of the strategic road network. I believe that that target now has been abandoned, but the measure is still published. It shows that the reliability of the network got slightly worse in mid 2007, it then got better during the emergence of the UK recession, but now it is getting worse again. We are already seeing the performance of the road network in general declining, and this will continue unless somehow we find more road capacity.

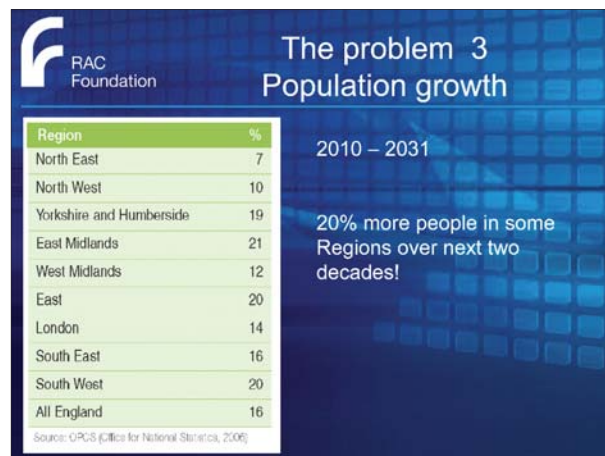


Figure 10

The third problem, which no-one is facing up to, is population growth (Figure 10). The OPCS (Office of Population, Censuses and Surveys) reckons that in some parts of the country in the next two decades we will have 20 percent more people. This due to is people living longer, higher fertility, and some inward migration from other parts of the country. As shown in the Figure, the East Midlands and Yorkshire and Humberside will have 20 percent more population, as will the South West which has a road network that is completely inadequate now.

This will mean more demands on all the infrastructure; more schools, more hospitals of course, but in particular more demand for movement. It means housing estates appearing all over the place and people needing to serve those estates in their daily lives. It is not something that will easily be dealt with by public transport, certainly not by long distance rail. We have to worry about the effect of this population growth on the demands of the local road network.

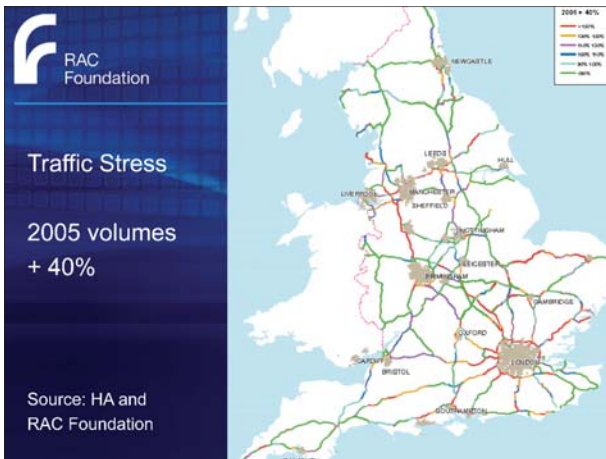


Figure 11

The official national traffic forecasts show 33 percent more traffic by 2025. Our study, Roads and Reality took that a bit further, we were looking at over 40 percent by 2041 which is consistent with the 2025 forecast. It is very simple arithmetic - more people, economic growth, more traffic.

Figure 11 shows a Highways Agency map of “stress” on the strategic road network, adding 40 percent to the traffic on the existing road network. There is a lot of red and orange on the map: red means that the traffic level is 150 percent of capacity. At 100 percent you might expect the roads to run smoothly most of the time. I do not need to articulate the implication of something like this in twenty or thirty years’ time, but it will be unpleasant. It is no surprise - officials know the picture. It is the politicians who do not seem to have wanted to understand it.

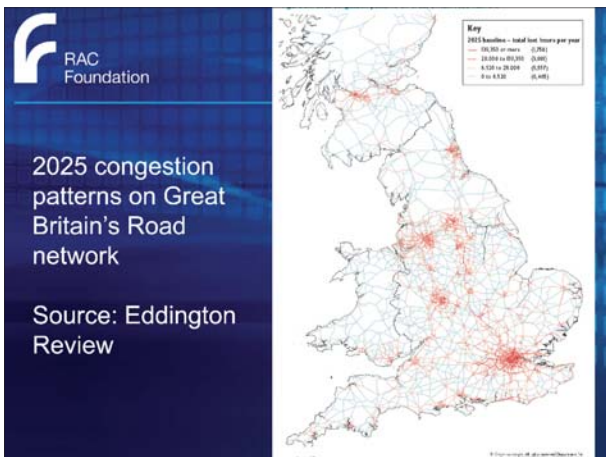


Figure 12

Figure 12 is a similar map from the Eddington review just to remind us that it is not just the strategic road network where the problems lie. The congestion is all over the place, particularly London and the big urban places. That is why I said that although I am dealing with the strategic road network there are many other problems, particularly congestion, on the urban network which I do not have much to say about tonight.

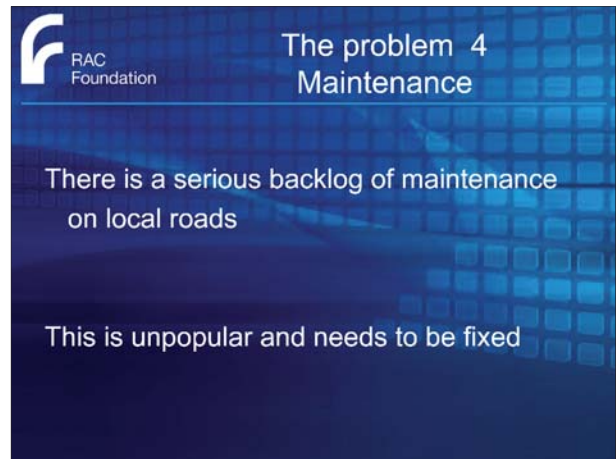


Figure 13

I will pass through the next issue (Figure 13) very quickly, but I have to mention it. There is a very serious problem, as this institution knows very well, with maintenance, particularly of the local road network. There is a backlog, and from an engineering point of view if it is not tackled now it will have to be done later at greater cost. There are estimates around of £9bn worth of backlog. I do not know whether those are right but something has to be done to sort that out; more money.

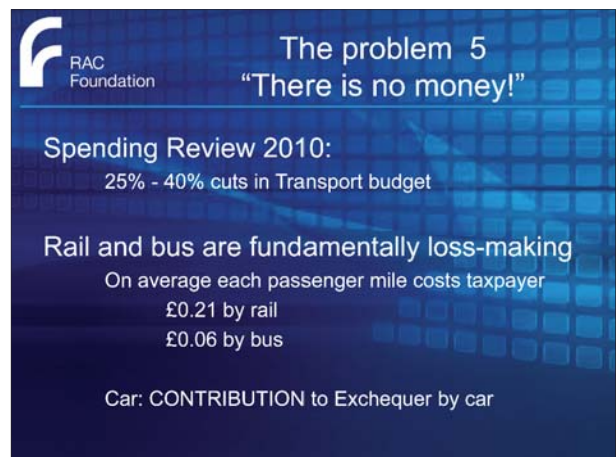


Figure 14

This is the last problem (Figure 14): there is no money. How are we going to deal with the demands for more road capacity which will require more money when there is none? Here I draw a distinction between public transport and the road network. This is not in some way to denigrate public transport, we are all in the same difficulty. But the point is that there is a difference which helps us with the situation regarding road - and it is not a criticism, it is just a fact - in that fundamentally public transport is loss making while the road network is, you might say, profit making and could be made more so. We need more money and that creates the germ of an idea to solve our problem which is not available to public transport.

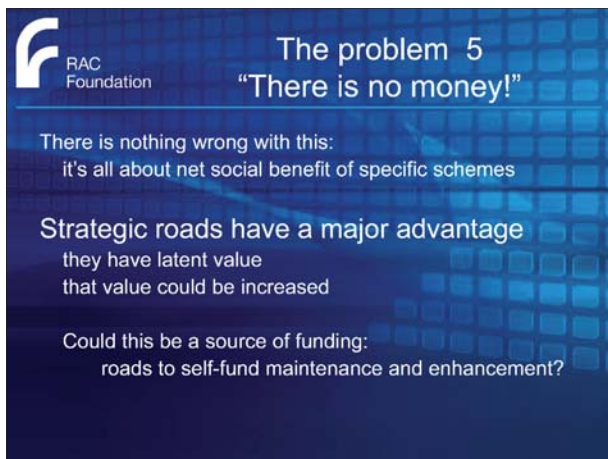


Figure 15

I think the general public does not understand the magnitude of the subsidy going into the railways: on average around 21 pence per passenger mile. Put another way, the subsidy is about £100 per head of population per year, and there is of course substantial new investment in the settlement for the railways, which may or may not be delivered. But for motoring it is the other way about. There is a positive contribution to the Exchequer, and that is a crucial point. The question though is the one at the bottom in Figure 15: can we capture some of the latent value in the road network? Yes, I think we can. Can we increase that latent value? Yes, I think we can. There is a way to address the problem I have outlined.

The myths

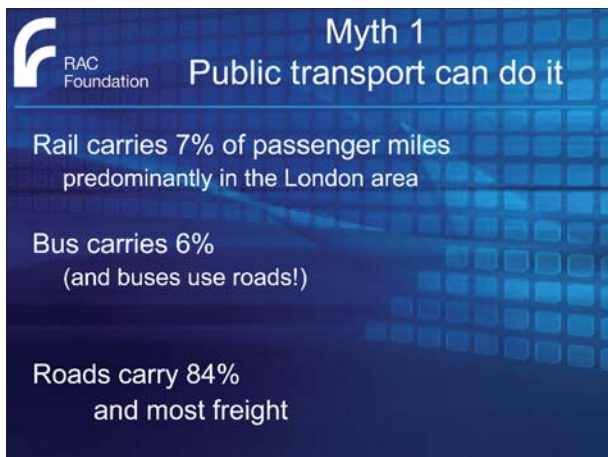


Figure 16

Those are the problems. I am now going to quickly go through the myths. I do not have time to address these in detail but David Bayliss has done an excellent paper for the Foundation which gives more information. Every time you talk to the general public about this subject somebody trots out one of these myths and I would urge you to ask the question about whether the assertions are actually true or not.

My first myth is that "the thing to do is to just spend lots of money on public transport". But there is no money and even if there were public transport simply cannot do the trick. People do not understand how rare railways are. There are not many outside London. Nationally (including London), they only carry seven percent of the total passenger miles so even doubling the size of the railway really would not make that much difference, and there is not any money to do that with anyway.

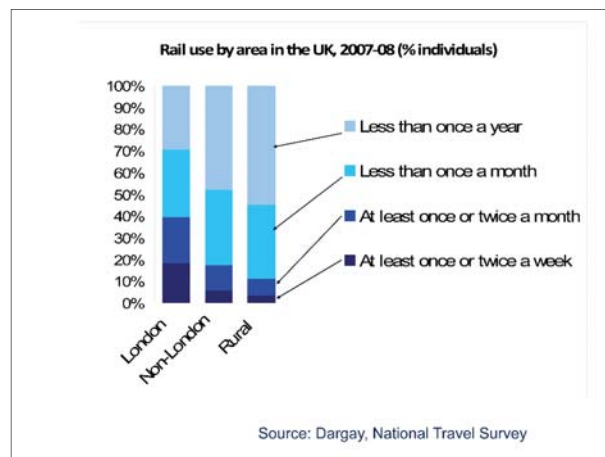


Figure 17

Figure 17 shows some new data we have commissioned about the frequency of use of railways. The middle bar of the diagram shows that 85 percent of the population outside London use the railways less than once a month, many less than once a year. There are a few people who are regular users but they are really in the minority. Railways are useful in the right places, but they are not the solution to our problem.

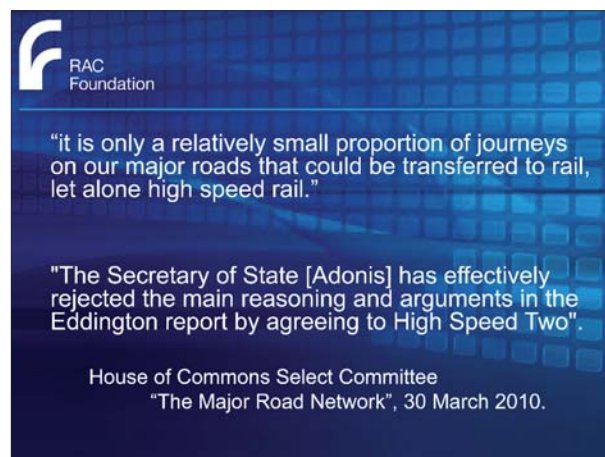


Figure 18

That was helpfully confirmed by the House of Commons Transport Select Committee report looking at the strategic road network and published just before the election. It quite correctly concluded that in practice it is not possible to transfer many of the road trips to rail, and in particular not to high speed rail (Figure 18). The idea that high speed railways, whatever their merits, will somehow help the road traffic problem I have described is just nonsense. The reason is that trip lengths are so different; car trips are short, high speed rail trips by definition are very long. That is carefully researched and set out in detail in the HS2 report. The HS2 report shows that, as far as one can show these things, building a high speed rail line from London to Birmingham would make almost no difference to the traffic on the M1; I think one percent is the figure quoted in that report, less than one year's growth. They are simply different markets. The previous Government was trying to present high speed rail as its solution to the road traffic problem; it is not. High speed rail is about capacity on the existing railway, it is about faster speeds on the existing railway; it is not about carbon reduction, and when the facts are looked at it is not about road congestion.

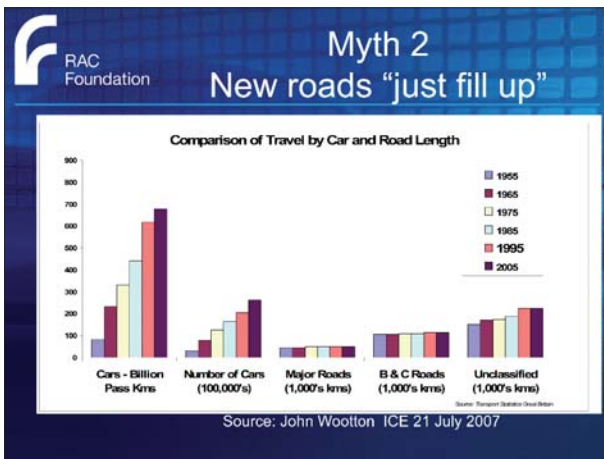


Figure 19

My next myth is that "it is not worth building any new roads because they just fill up". How often do you hear that? This is a subtle argument that needs treating carefully. Just to make the headline point, Figure 19 is a slide that John Wootton presented on a previous occasion in this room which I think tells the story very nicely. Look what has happened between 1955 and 2005 to traffic and to the numbers of cars; then look what has happened to the amount of road space. The argument that it is new roads which are generating the new traffic is difficult to sustain from this evidence. What is actually happening is that traffic is growing in any case, the road capacity provided is not adequate to fulfil the need and therefore if a new road is provided it does fill up very quickly. That is not to say the new capacity is valueless, as there are more people moving at less cost (Figure 20). There are of course some issues which need dealing with concerning disadvantage to third parties on the neighbouring network, but that has been discussed at length by Eddington and others. By the way, if there is proper pricing in place, that is all taken care of. We have got to get over this simple fallacy that there is no point in building roads because they just fill up.

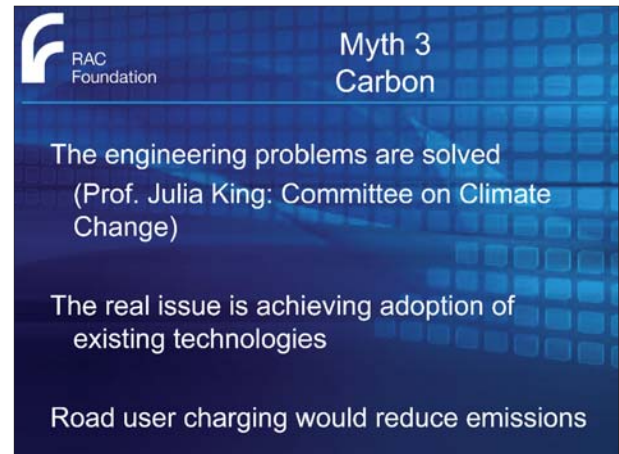


Figure 20

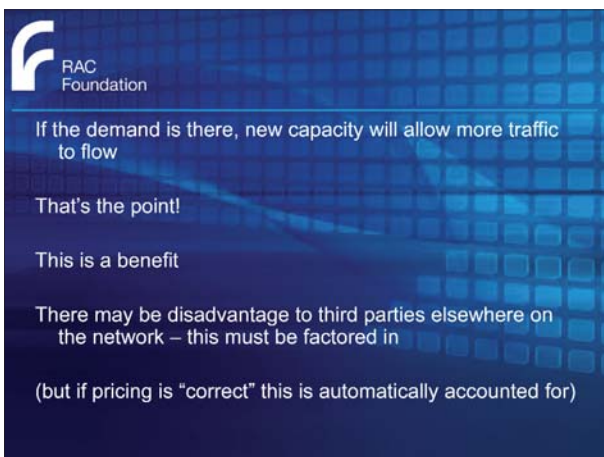


Figure 20

My next myth is: "you can not do anything on building new road capacity or providing new road capacity because we have got a problem with carbon, so it is all to do with reducing car travel". Well, that is just not right. I believe that due to some really very good work by the Committee on Climate Change, and in particular Professor Julia King, the engineering problems on carbon so far as motor vehicles are concerned are solved; we know what to do (Figure 21). What we need to do, certainly in the near future, is to get the user to adopt existing internal combustion engine technologies. Universal use of electric cars is still a long way off, but what we can do is get enormous benefits on carbon emissions through the existing technologies.

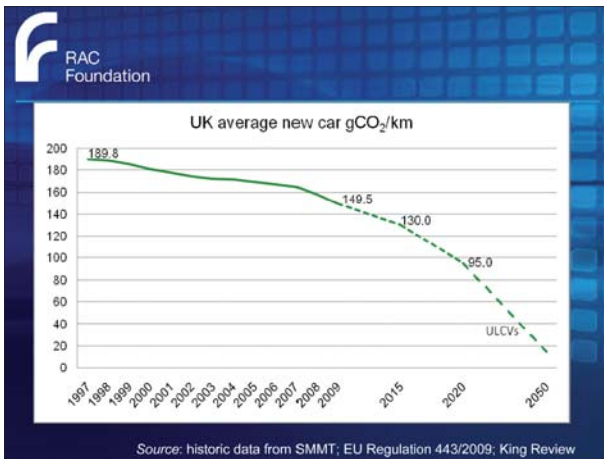


Figure 22

This graph (Figure 22), which may be familiar, shows that point. This is what the technology will deliver over the next few years.

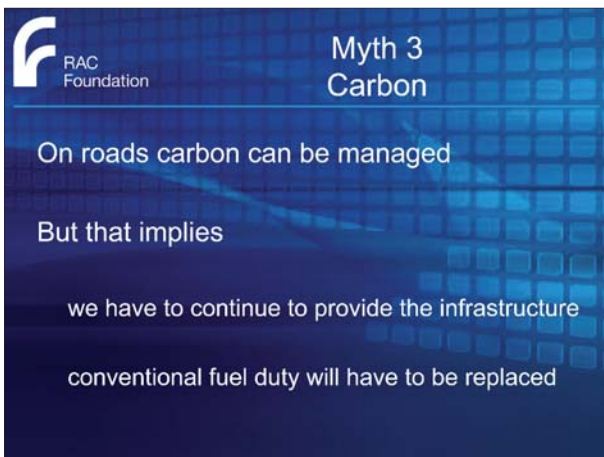


Figure 23

If that is right, there are two consequences (Figure 23). One is that we still have to provide the infrastructure for these vehicles to run on - electric vehicles need road space as well. The second consequence, which has not been articulated very carefully, is that if cars are consuming much less fuel, they are going to be paying much less fuel duty. The Treasury therefore ought to be, and I believe is, very concerned about the reduction in fuel duty because of the improvement in efficiency of vehicles, which is after all Government policy. Something is going to have to happen in any case in the way we charge for our roads.

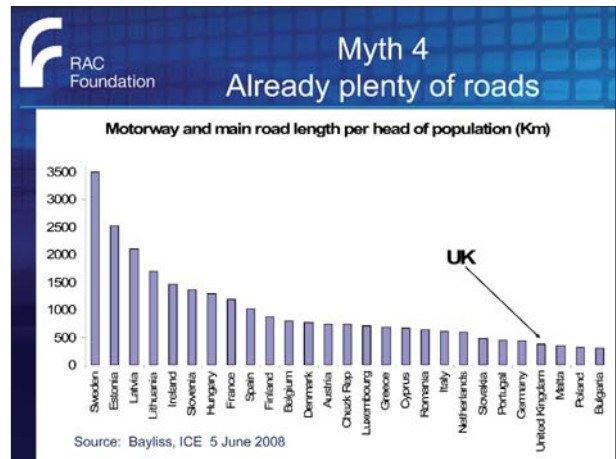


Figure 24

My fourth myth is: “we have already got plenty of roads”. Figure 24 shows a chart that was presented by David Bayliss in a previous lecture in this room. The point I recall here is that the amount of movement per head of population is not that different in this country from many others. The amount of road space, as can be seen, is very different. We are not well-provided for with road space by international standards. In other words, our roads are used much more intensively than in almost any other part of the world. So the idea that the country will be covered with concrete is not right. Lord Adonis, when promoting high speed rail would often say, ‘everywhere else has got high speed railways, we need to learn from what they do in Europe’. I would make the same point about roads. If it is good for these other parts of the world, why is it not good for us?

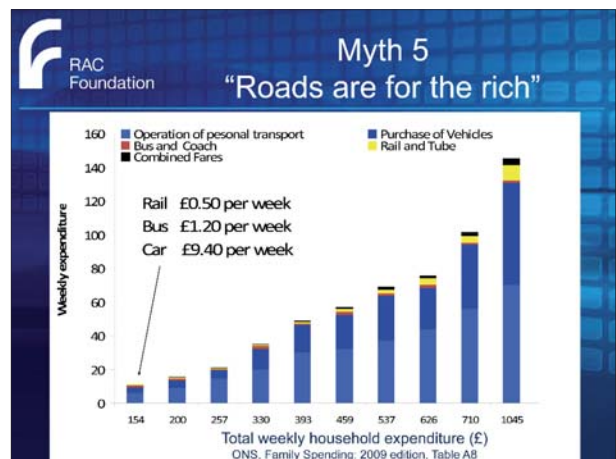


Figure 25

Myth 5 is that “that the roads are for the rich, and by implication, public transport is for the poor”. Well, Figure 25 is a chart showing expenditure by households, divided into ten equal groups: ten deciles. I have highlighted the poorest one tenth of the population, showing spending of 50 pence a week on rail, £1.20 on bus, and £9.40 on motoring. If I am allowed to generalise, in terms of spending, poor people use roads, rich people use public transport.

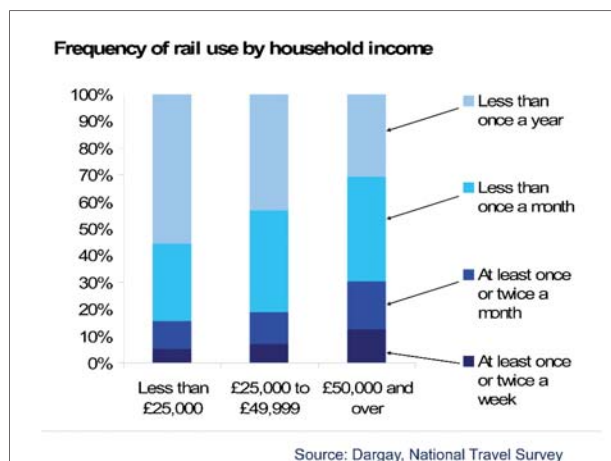


Figure 26

Looking at frequency of use, Figure 26 shows the same data as in Figure 17 broken down by income. The same point is apparent; the poorer people at the left hand side of the diagram are much less likely to be frequent users of rail. The heavy users of rail are those with higher incomes, which includes those commuting to central London. Therefore if you are concerned about social inclusion and poverty, people getting to their jobs, carrying out their everyday lives, you need to worry about the service that the road network is offering them.

Those are some of the myths, and I think we have to keep on making the arguments to the politicians that those myths do not let them off the hook in solving the problems I have described.

What to do?

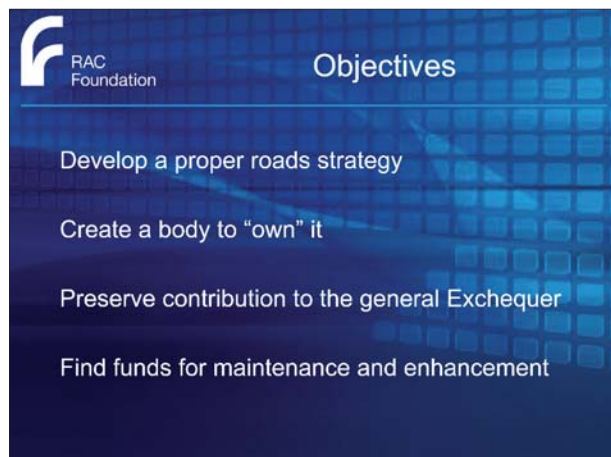


Figure 27

So what should we do? I have set out some high level objectives in Figure 27. As I mentioned before, for me the most important one is a properly researched and articulated long term roads strategy. We have one for railways - not long term enough but there is one. We have one for aviation, we have one for power. For those we have a forum: something we could debate. There is not one for roads, except, "well, let us stop any new provision"!

Secondly, once it is there a body is needed to own it, to develop it, to promote it within government. We do not have that either. It is not a criticism of the Highways Agency, it is not their job to develop strategy or promote roads, it is their job to manage the road network according to a given specification. In my view, the whole business of arguing what is right for the road network is simply missing within our government at the moment.

The next point is that I entirely accept that road taxation makes an unavoidable and a very valuable contribution to the Exchequer, and that must be preserved. Colleagues in the roads lobby will be saying that road users are paying far too much, that we must reduce taxation or increase spending on roads, that it is not fair. Well, that may or may not be a good point but it is completely unrealistic in the current climate. So my objective is to preserve the contribution to the General Exchequer, the difference between £47bn in and £10bn out (approximately). But having said that we have to find some new money for better maintenance and enhancement of the network.



Figure 28

I believe we will not solve this problem unless we change the governance (Figure 28). It has continued for decades; our governance of the national road network has failed - it has led to the situation that I have already described. I have already made the point about responsibility, but that point is strengthened if we come to the conclusion that we need to start charging for use of the road at point of use; in other words, some form of road user charging. That kind of reform cannot be introduced in the current regime where the money goes into the Exchequer because people of course will not trust it: they will just see it as an additional tax, and quite rightly so.

If we are going to have road charging and we have to set up a deal which we can sell to the general public, we have to change the governance of those charges to create a body that is accountable for the money, and can be seen to deliver on the promise that is involved in that deal.

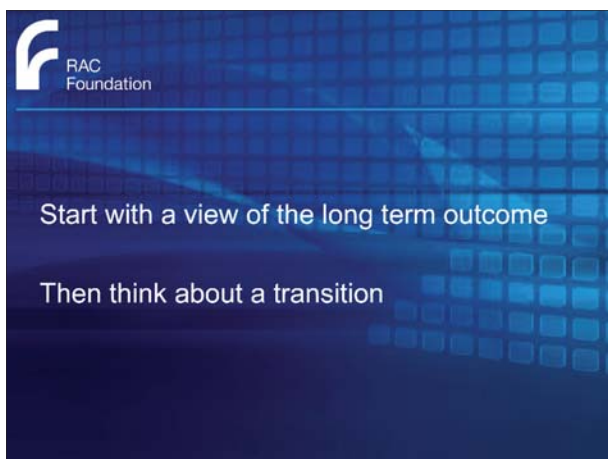


Figure 29

I think the logic is that we need to agree somehow about where we want to get to with the governance and the charging regime, and when we have decided that, to work out how to make the transition from where we are now to there (Figure 29).



Figure 30

The first step will be a debate about what we mean by “the strategic road network”. There has to be something out there which at the end of the day national Government should take responsibility for. We have a strategic rail network, a strategic power distribution network, but great uncertainty and lack of clarity about what should be the strategic road network.

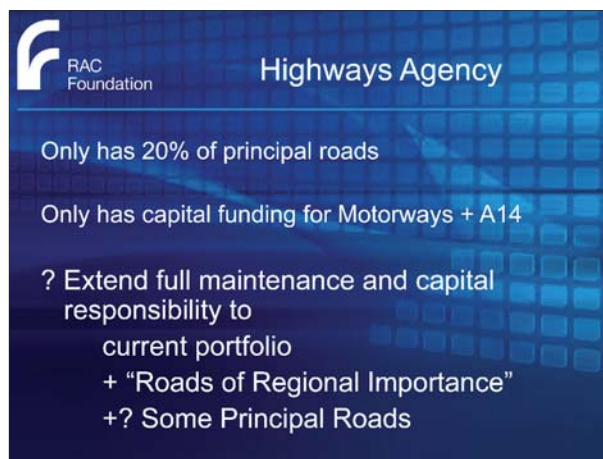


Figure 31

We have the Highways Agency, a department, or subdepartment if you like, of the Department for Transport. The Highways Agency portfolio only has about 20 percent of what you might call principal roads (Figure 31). It only has direct capital funding responsibility for the motorways and the A14; the other capital funding for the Highways Agency is currently with the Regional Development Authorities (RDAs). And as perhaps we might want to discuss later on, there is a lot of uncertainty about the future for those bodies: that needs resolving.

I do not have, because it is not possible for me to do it, a definitive statement about what I would regard as the strategic road network; that needs debating. But I have put in Figure 31 a suggestion that it might include the Highways Agency’s portfolio as it exists but with full capital responsibility for the whole thing, and added to it some or all the “Roads of Regional Importance”, which are currently under the control of the RDAs, and also some of the principal roads, currently under control of local authorities. It is whatever it is that the nation needs to function properly; roads to the ports, roads to the airports, all the things that Eddington looked at. We have to agree what it is that should stay with local authorities in some form or another, and what should stay with a nationally accountable body.

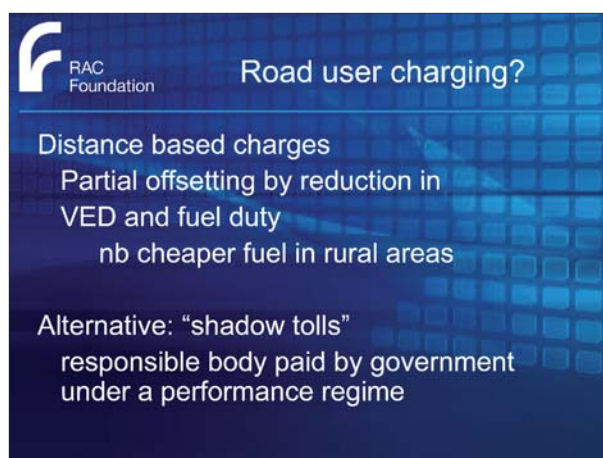


Figure 32

The next step in the argument is the debate about how this is going to be charged for. There are two main alternatives (Figure 32). We could create a new body as I have described and greatly extend the system of shadow tolls. They exist already – they are where a private provider receives a fee for providing and maintaining the road and that fee depends on the amount of traffic that flows: but it is invisible to the user - hence the “shadow” dimension. It is a form of payment directly from the Department for Transport and hence from the Treasury, it is public money that is given with a fiscal incentive to perform. That could be greatly extended, indeed it could in principle be extended to the whole of this new portfolio of roads I have mentioned.

The other way to go would be to have distance based charges: road user charging. As I will say in a moment there is a strong case for doing that, but be very clear that the proposition is that road user charging is introduced at the same time as offsetting those charges by reducing fuel duty and reducing or eliminating the tax disc, the VED. It is only in that way that the general public can be offered a genuine package where they might see that they are, in some circumstances, better off. Rural areas would be better off under this regime as they would be paying less for their fuel. As it happens this would help the Government with the objective they mentioned the other day, of making fuel cheaper in rural areas.

Those are the two charging alternatives. We can talk about the detail of how they might be implemented, but that is not the point. Others in the room may help me on this, but I am convinced that we could do it, technically. How much it would cost is for discussion, and that is an important matter. But the real issue is how we put together a deal which the general public would accept.



Figure 33

The reason I am attracted by road user charging, and this is set out at length in the *Roads and Reality* document, is that it achieves lots of good things (Figure 33). It allows demand to be managed by location, by time of day; it mitigates the traffic growth. That is why Sir Rod Eddington thought it was such a good idea; it reduces the need to invest. It can be used to generate a new cash flow which is what we want to do. Importantly, it would create a relationship between users of the road network and the providers. In all other utilities a customer pays a charge for a quality of service which is adjudicated by an independent regulator. If you do not like what you are getting you can complain against measured qualities of service. On the railways, the internet will show you measures of service performance – a great step forward in public administration. That is completely missing on the road network. There is no way to tell how a particular bit of road is doing, and there is no mechanism or saying to government that “this is not good enough in relation to what I am paying”.

Finally, because a new cash flow might be generated I do believe it would be possible to set up a body that could borrow on the markets independently of the public sector borrowing requirement. A competent body could be created with enough income to sort out its capital problems. That is important because this is a very big, capital intensive infrastructure industry and any such enterprise needs to be able to borrow.

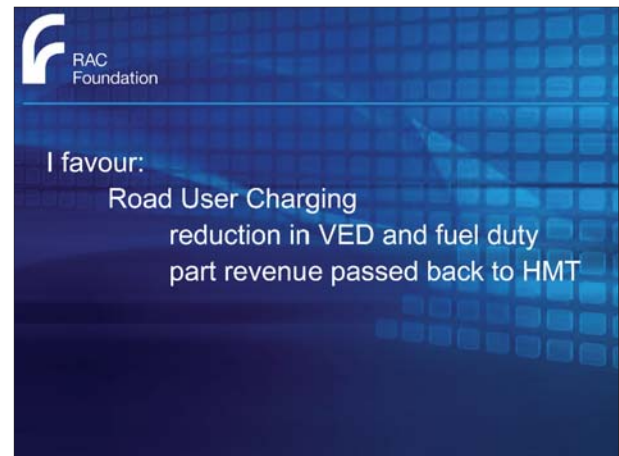


Figure 34

Figure 34 shows my favoured recipe but it is not the only one on the table. What we would be doing would be collecting money but passing a large part of it back to the Treasury to fulfil Treasury requirements for income. But it is, as it were, going through the books of an organisation that is accountable for it.



Figure 35

The other choice to make is about the governance (Figure 35). As I have hinted, one governance arrangement would be a privatised, regulated utility. I think the best analogy is the water industry: the water industry used to be in the public sector with all the problems we have with the roads, and with no charging domestic consumers at the point of use. Now we have an industry that is privately provided with significant efficiency gain, maybe not perfect but with significant gain, independently regulated with just phenomenal capital investment over the last few decades, providing us with good quality water and a way of checking that there is a reasonable relationship between what is paid for and the cost of producing it.

Crucially, if that was done for the road network, a very substantial capital sale value would be created. The amount of that depends on the deal, of course, and how much of the network would be privatised, but we may be talking, I believe, of hundreds of billions of pounds of cash, upfront. It might be thought that for all sorts of reasons the current Government would find that very attractive, and it has shown itself quite willing to talk about it in other contexts. They have put the Dartford Crossing on the market, High Speed 1 on the market, National Air Traffic Services on the market. So there is some family silver being sold, but they have not yet talked about selling the big piece.

The alternative would be a public body, a public benefit corporation, which is a familiar idea in the United States where a lot of infrastructure is provided by public benefit corporations. I think the United States inherited the idea of a public trust from us originally; the Port of New York Authority was modelled on the Port of London Authority, which still exists as a public trust, and we still have some trust ports and some trust airports. Now the advantage of that is it avoids the 'privatisation' word, which of course upsets a lot of people. The disadvantage is it provides no sale value, and it might be argued that the commercial incentives are weaker. It could be done that way I believe and it is an option which should be considered. The point is that it is separate; it has its own governance. It has trustees who can be held by law that they have done what they are supposed to do: the accounts are properly kept, and members of the public can see where the money has gone and that any promises that were made have been delivered on. This is not the situation at the moment.



Figure 36

Figure 36 shows some of the advantages of the regulated utility. It has its own income stream. There is independent public interest regulation, which is crucial. A duty to meet the needs of users which is common in the other regulated industries. The regulator has a duty to ensure the industry can finance its functions, which is a code for saying the regulator protects investors in the long term and that the capital that is required to run the business in an economic and efficient way is available from private investors because they can get a reasonable rate of return in the light of the risks. There would be monitoring of performance of the network, which we have a bit of but nowhere near enough. I would suggest that probably, if this route was followed, there should be some kind of regional structure so that one part of the network could be benchmarked against another. We know how to do this as we have done it with the water industry.



Figure 37

There are problems with all of this and I have not time to go into them but perhaps they could be picked up in discussion. A big issue of course is the interface with the local authorities. First of all, what happens to the money? Money collected on the major road network will be collected from domestic users. Do we divvy that money up in some way? Probably yes. There will be boundary problems. We are familiar with that though - it happens in railways, it happens in gas, it is always a problem. I think it might be more of a problem with roads than with those utilities and we do need to face up to that issue.

Secondly, if there are real tolls on the roads there would be concern about diversion onto the local network, and that is a really difficult issue. It might be concluded that implies necessarily there has to be universal road charging as proposed by Eddington, and before it in the Road Pricing Feasibility Study that Alistair Darling had as policy at one stage. It might be though that there could, as a transition, be something which is not quite so universal.

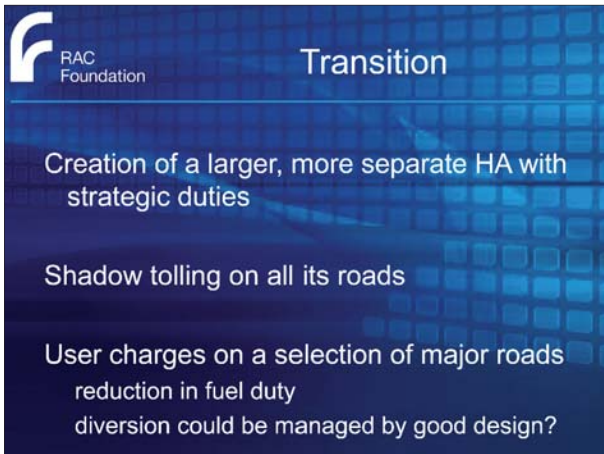


Figure 38

Here is a transition (Figure 38). Having decided where we want to get to, what do we do next? Well, first of all, we have a proper review and check all the numbers. Then under any regime a more separate Highways Agency could be created with strategic duties to carry out the function that I have described, and that Network Rail has, of planning and promoting the road network within Government. There might be, as I have mentioned, shadow tolling on the Highways Agency's whole portfolio. Then there might be user charges on a selection of the portfolio, with tolling being introduced on one or two motorways. Diversion would have to be thought about; I notice that in France and Italy, where of course this is commonplace, often there is no toll on the Autostrada or the Autoroute near a big city. I presume that is to avoid diverting traffic onto the local network. I know our geography is different and it might not be possible to do that but I think it bears examination.

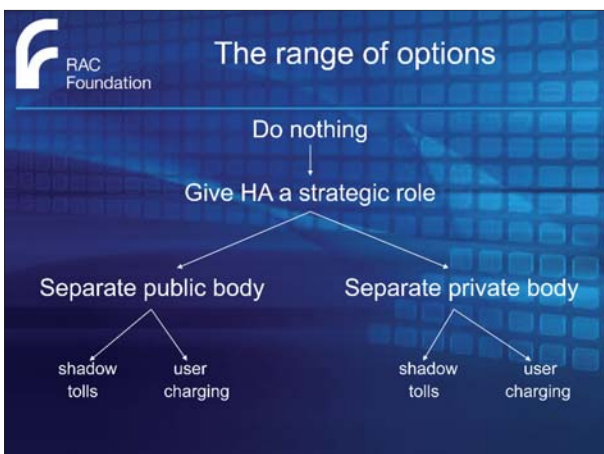


Figure 39

This is the diagram (Figure 39) that I promised at the beginning to summarise the chain of argument. At the moment we are doing nothing. That is the Government policy: just to stop; put heads in the sand; do not acknowledge the population growth and cut large chunks out of the investment programme. As I have said, as a first step I would want to see the Highways Agency with a more strategic role. Then there is the decision about whether to go public or private. In either case, there is a decision about whether there is going to be user charging in some form or shadow tolls. I have indicated clearly my preferences for the far right hand side of the diagram for all sorts of reasons, but other people will choose, perhaps, user charging and a public body. But to repeat, if we need more money to invest in the network to provide more capacity we have to have some new charges, we cannot escape from that because there is no money from other sources.

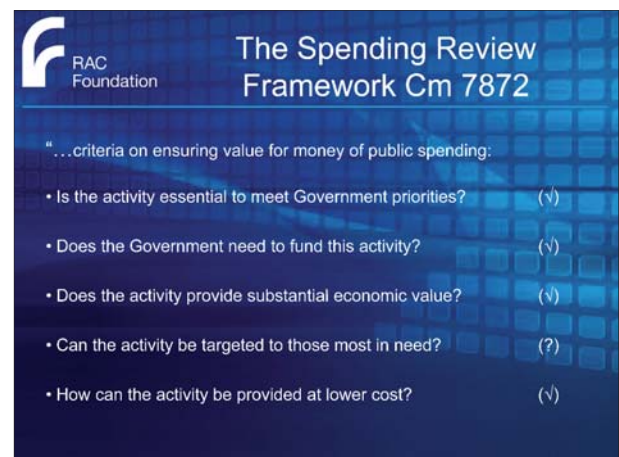


Figure 40

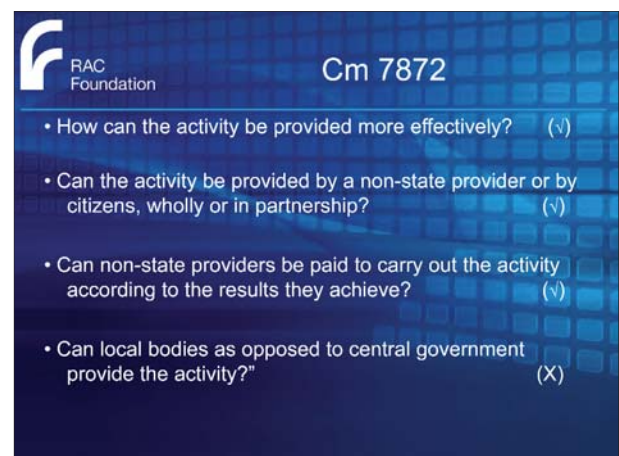


Figure 41

Finally, do we meet the criteria set out by the Government in the Spending Review document? Figures 40 and 41 shows the tests the Government intends to apply. I think that either of the two models meet quite a lot of these tests satisfactorily: that is what the ticks in the Figures mean. Is the activity essential to meet Government priorities? Absolutely, they have to have a good functioning network for the recovery. Does the Government need to fund this activity? No, it does not. It does at the moment, it does not need to: I have indicated how we might take it off their hands. Does the activity provide substantial economic value? I take that for granted. Can it be targeted at those most in need? I have waived on that a bit, but perhaps it is not the most central issue. I think there are a lot of benefits for poor people in a user charging changing the system, especially if fuel duty can be reduced. Can the activity be provided at lower cost? Well, there are people who claim the Highways Agency's job could be done more efficiently. I just do not know whether that is true, but certainly there could be more commercial incentives. If it is anything like what happened in the other privatised utilities it would stand to give a gain there - the electricity industry does its job with half as many employees as it used to have.

Can the activity be provided more effectively? I believe so. Non-state provider? Definitely. Can non-state providers be paid to carry out the activity? I have outlined exactly how that could be. The one test that would absolutely fail, because we are talking about the national strategic road network, is regarding local bodies providing the activity because it is fundamentally not about local bodies but about a national body. This is why we have to persuade the Government to stand up and recognise their responsibilities on this matter.

Conclusion

In summary, I have outlined some options, a decision tree as it were. I have outlined a problem to solve. I have suggested that in the spending review we could offer the Government something which meets almost all their criteria, and you would hope they would take it seriously. Sadly, within days of taking office, Philip Hammond, the Secretary of State, ruled out road charging, or indeed preparing for it within the life of this Parliament. I hope that we can persuade the Secretary of State and his colleagues, and particularly Treasury colleagues, that the prize here is so big and it is so essential to have something done about it, that this decision needs to be revisited really quite soon. The prospect of sitting on our hands whilst congestion gets worse and worse, and the potholes get worse, is not, I would have thought, politically an attractive one.

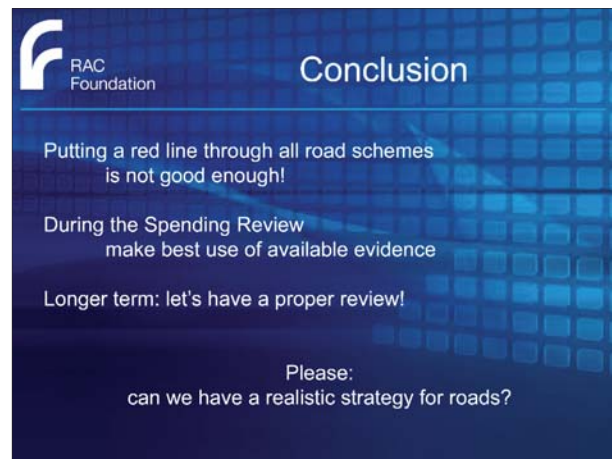


Figure 42

Here is my conclusion (Figure 42). It is just not good enough to put a red line through all the road schemes as is tending to happen at the moment. We have to have a reasoned argument about what is the best way of spending the rather little public money there is. During the spending review I do appeal to everybody in the business and the politicians to use the information we have available, imperfect though it is, to guide us. I have heard the Secretary of State say in public that he recognises it is essential to use, in his words, 'rigorous cost benefit analysis' in helping us make those decisions. I agree with that. We are world-class in analysing the benefits from public transport and road schemes; we should use that information. We should not throw it away because it is not perfect. We can have debates about how to improve it but that is not going to happen in the short run, there just is not time. In the long term let us have a proper review of appraisal. But what I want more than anything else is a realistic, meaningful strategy for our road network.

Thank you.

Discussion

Question

We have been entertained by a very clear and pragmatic presentation on this road strategy, and I would congratulate Stephen Glaister on his lecture tonight. My point is can there be a road strategy without a transportation strategy? I think engineers have known from the beginning of time that railways could never significantly replace roads in transport. We know from Buchanan about fifty or sixty years ago that we could never build enough roads to cater for unrestricted demand. I think the only transportation strategy we have had over the years has been that we have a demand constrained by congestion. The danger of that is of course that as better facilities are built so the amount of traffic on the roads increases. I think overall that does lead to a reduction in journey speeds.

I think to make things politically acceptable there have got to be carrots as well as sticks. Road pricing certainly is a stick and engineers think it can be very effective, but, of course, it still introduces choice by pricing which a fair government might blanch at, and it certainly does not lead to votes. So what can we do to provide the carrot? In London, with some control of the transport network, we now have a very good system, compared with a few years ago, where we can plan our public transport journeys using buses as well as trains with a fair expectation that we will arrive on time and not be left standing in the rain for an hour at a time. I have lived in Turkey and when I want to make a long journey there I phone up the bus company and they arrange for their bus to stop near to my home. When I then arrive at the transportation interchange where I am going I get a courtesy bus provided free to take me to my ultimate destination. Now alright, it sounds very good but in practice it is not quite as perfect as that.

There does not seem to be any initiative in this country to have an integrated public transport system. In the long run we are all getting older, old age is coming up on us, we do not all want to travel by car. In Turkey the bus companies are private and they have very low fares, and they still seem to make a profit. So I wonder if there is any way in which the Government should be spurred into looking into this business of an integrated nationwide transportation network using modern technology, computer planning and so on, so that there is a real alternative to having to go by car and pay road user charges or whatever.

Stephen Glaister

There are quite a lot of questions in there. Turning to the first one, you asked can there be a road strategy without a transport strategy? Clearly there has got to be both. Can there be a transport strategy without a road strategy? No there cannot, but that is what we have got. Nobody is looking at the road strategy. Integrated public transport classically very often means more money, which is exactly what has happened in London.

London did enormously well out of Central Government for the first eight or nine years of its existence. That is going to stop: and watch what happens. Already the infrastructure improvements that were promised have stopped happening; the Piccadilly Line upgrade has stopped; the Northern Line upgrade has greatly slowed down. The crucial point I am trying to get at is that the issue is not about integration as such, it is about finding the resources to pay for it. Public transport is inherently labour intensive and therefore will always be very expensive to provide. That does not mean to say it is a bad thing, it just means it has to be provided in the places where it has a high enough intensity of use to make it the right way to go. As I have tried to argue, given the way that our lives are lived these days, even if Government was able to find a great deal more money for the public transport, which might be a perfectly fine thing to do, it would not make much difference to the congestion problem. But in any case they have not got the money.

You comment about the way that we have provided over the years for the growth in traffic. We used to be accused of predict and provide, as if that was a bad thing, and I understood the point. To just provide whatever is asked for is expensive and not very sensible. What we actually did, and we are still doing, was to predict but not provide. These predictions have been on the wall for years and years and we have been not facing up to the need to do something about them. As I have argued, what I would do about it is to start charging properly, so that people pay the true cost of the journeys they make. When that is done more than enough revenue will be generated to pay for road infrastructure in the right places - not everywhere of course, but in the right places.

Fairness has to be analysed very carefully, and it is not easy. Whether a charging system is more fair or less fair than the current charging system depends crucially on what happens to the money. Do not assume that a system of road charging will be more unfair than the current system. Poor people use roads; it is quite wrong to think that poor people living in rural areas do not deserve good roads.

Paul Jowitt

There's an implication in what you were saying there, Stephen, that road user charging was about generating revenue to be spent on roads. I just wondered whether you had any thoughts about whether or not road user charging also had a role in demand management, and possibly being spent on other things that were not necessarily to do with roads?

Stephen Glaister

Absolutely right. When Ken Livingston introduced the congestion charge scheme in Central London and, by the way, I think that still stands as a fantastic success, he was desperate never to be heard saying, 'it is about raising money' rather than 'it is about managing congestion'. Actually the truth is, it does both. A correctly designed road pricing scheme both raises money and manages the congestion by managing the demand. And that is its great virtue. Think of it this way, it is a way of taxing which has positive benefits, unlike most other ways of taxing which have disadvantages. That is the essence of my point, that the road network has value which could be greatly increased by pricing it more sensibly, getting people to think about whether they really need to travel in the peak or whether they could not take the advantage of a cheaper trip out of the peak so that the infrastructure is used much more efficiently. We know what happens in other areas: if there is no have proper pricing, the activity is rationed by queuing and that is never efficient.

Question

I do not disagree with a lot of what Stephen has said, and particularly about the need for a proper national strategy for roads, but I do not accept the dichotomy that it is either big new roads and large scale extra capacity, or public transport. I think there has to be both. There has to be a road strategy, but it does not need big roads.

Can I though just ask two questions? Firstly, you talked about carbon and you quoted the Committee on Climate Change. If you look at their first report last year and their more recent report, their preferred extended scenarios actually say yes, you can have electric vehicles and indeed other sorts of vehicles, but there also has to be no more traffic growth. You did not mention that and I just wondered whether you accepted it?

Secondly, you talked about long term objectives and I wondered whether your objective was for us to be like, say, Switzerland, where something like 50 or 60 percent of the journeys by the population are made on public transport, or cities like Vienna where something over 70 percent are made on non-car modes. Or whether you are taking us in the direction of Los Angeles and California where something like only ten percent are made by non-car modes? It seems to me that there is a choice there, and by focusing on predicting as if we are extrapolating from the past and there is only one path to the future, you are possibly neglecting the choice.

Stephen Glaister

To take the first point of course it is not about big schemes versus small schemes, it is about the right schemes. The fact that a road scheme is a big scheme and a large capital investment does not mean to say it is not a good scheme. What has to be looked at is the rate of return per pound spent and demonstrate that it is good value for money. It is true that there are a lot of very small schemes which are also very good value for money. The idea that the A14 investment would be struck out because it is a big one, without asking what the benefits of that are, is to me not the way forward. That was my point about analysing all of this, to use the equipment we have to get the best rate of return out of the very limited funds we have. Whether that falls in favour of road schemes or public transport schemes, I cannot say until we have done the sums.

All the way through my theme is that we should price things properly. The way to deal with carbon in my view is to price carbon properly, although there is a debate to be had about the appropriate price for the carbon. However, there is an argument, and David Bayliss has been doing some calculations on our behalf which we will be publishing quite soon, that suggests that the portfolio of costs imposed on society by the road network, including the genuine carbon costs, is not far away from what they pay in total, which is quite an interesting conclusion. I would say that when we did the Roads and Reality work we found that a proper national road pricing scheme, together with investment and infrastructure to go with it, would reduce carbon emissions by ten percent because there is more efficient use of the network. There is nothing worse than having lots of traffic stuck in traffic jams, belching out carbon. By the way, I think the Climate Change Committee accepted that result and it is in the report they published last September.

The key to it is to model it properly, to do the sums to find which things will save carbon at a reasonable cost and to get the carbon prices correct.

On the dichotomy between Switzerland and LA, I just think that is a false dichotomy. I am dealing with the world as I find it, the British context, and trying to make the world look better, to recognise that a lot of people rely and will continue to rely on the motorcar, particularly people like the elderly, for their quality of life.

Question

My question is perhaps a little bit more practical and perhaps something that affects most of us in the room when we get stuck in traffic jams on the motorway network. In your presentation you did not really mention anything about the amount of freight now on our roads. We have seen in recent years a massive increase in lorries and large freight, particularly from Europe and Eastern European countries, and clearly that will continue to grow until something is done about it. Those lorries travel on our roads at no cost, and I wondered if you had a view on that.

Stephen Glaister

You are right that I did not say a lot about freight, but it does represent a significant proportion of the traffic on the major road network. It is very heavily charged by fuel duty because of course a heavy lorry burns an awful lot of fuel. It is Government policy to have lorry road user charging; I am not quite clear why but I think it is to do with equalising the rates of duty between the UK and the Continent. It is an interesting thought that this may be a way into a more general charging system. I think that on its own it does not actually make a lot of sense. But freight is absolutely part of this story and, as I mentioned, any manufacturing industry in areas where the congestion is bad really hurts because of unreliability and because of having drivers stuck in traffic doing nothing.

Question

People living outside larger cities, particularly in between the city and the country, usually have a wider gap between the density of services available to them and their consumer expectations. This explains the commuting phenomena and the peripheral traffic, both ever increasing. By introducing user charges, would the Government not be encouraging people to move to the city and leave suburbia? How could this be taken into account in the pricing strategy?

Stephen Glaister

The point about land use is a good one which all our analysis is deficient on. Proper full blown congestion charging would fundamentally affect land use patterns. At the moment congestion is under-priced and so we have too much congestion; we have people travelling too far in congested conditions, and I think that implies urban sprawl. To go back to a previous point, arguably Los Angeles is the way it is because gas was too cheap. It is all about providing the right financial incentives, both on land use planning and on direct transport grounds. Analysing that however is desperately difficult; technically it is very hard to predict the full effects of charging on land use patterns and indeed on land values. I do think we need to do more work on that. It does not mean to say that we stop and do nothing for another thirty years, but that we think carefully and move at least in the right direction.

Question

I am glad that Stephen has mentioned the Government's position on heavy goods vehicles, because it was my understanding that that was to be considered as a candidate for a charging regime. Also I think there is not a ruling out of trialling of new types of capacity and new links, which gives me some sort of comfort because there is no doubt that the strategic network is the most valuable component of our movement system.

Trying to find a route map, if you like, through the transition process that Stephen described takes us into questions about if there is to be a more universal charging system, then how does the local versus the regional and the national pricing mechanism actually operate? There are different circumstances. You mentioned the French situation, which is valid. There are also other ways of introducing charges, like in London, and also perhaps a more universal parking levy approach which will enable new monies to be attracted and spent locally. I am concerned about the shadow tolling principle, Stephen, because that is surely just mortgaging and is not actually providing new sources of funding.

Stephen Glaister

The theory is, and I think the practice demonstrates it, that shadow tolling does provide commercial incentives on the provider to worry about whole life costing, because they have got to be responsible for the thing for thirty years or whatever. Rather than have a cheap, nasty initial investment which fails, they will do the right thing, to do the work efficiently, having due regard to the interruption of service. There are real benefits from shadow tolling, but I fully accept it is a halfway house. Perhaps it is a step towards a fuller solution. A shadow toll contract can be sold on as part of a concession eventually, and fundamentally we know how it works.

Question

First of all, Stephen, thank you very much for encapsulating the problem very effectively. You put forward two structures for a future system, the public benefit corporation and full privatisation. There is a middle road which has many advantages which is the concession; it keeps the assets in public ownership in the long term, and it avoids some of the connotations of privatisation. It provides the possibility of phased development because a series of concessions can be let over time, it does not all have to be done in one big bang. It has the advantage that when an operator is not working effectively, rather than using the regulator to issue penalties it can actually be replaced. We have DBFO schemes which effectively run on that model already, so we know how it works. I wonder why you have not included that as an option?

Stephen Glaister

No particular reason, it is another good suggestion. I think that is essentially what happens in France: a long term concession for the Autoroutes, a private company with a long term contract, and, yes, some competition, and crucially a regulated obligation to improve the road network as part of the terms of concession. That works well as far as I know. Absolutely, why not follow that model as long as we are confident that we can write the contract sensibly and in a way that we can enforce? We have got bad experiences: I am thinking particularly of the London Underground PPP which was a complete disaster because it was silly to try and write a contract to achieve what was wanted in that context. But yes, I am with you and I think it is something we should look at.

Susan Sharland

Thank you, Stephen, for an absolutely stimulating lecture. You have eloquently outlined the problems, tackled some of the myths and highlighted the need to change the way we think about things, not just about reduced Government funding, but about more fuel efficient vehicles leading to reductions in fuel duty. Again, you very eloquently outlined a range of possible solutions, from the shadow tolls through to the full distance based charging, and discussed the important implementation factors such as public acceptability, the governance options, and interface issues. I am pleased to see you have also made a very strong case for using available evidence for decision making, and where further investigation can help with this. And then at the end, you have neatly brought us back to how these arguments fit within the current and very timely spending review criteria. On behalf of all of us I would like to thank you for an excellent lecture this evening.

Public or private? Meeting growing transport needs in an age of austerity



We have a new government but, Stephen Glaister asserts, transport did not receive much attention during the election campaign. Everybody wants and expects the economy to recover. Few dispute that demographic and social changes will further increase the demands on an already-congested road and railway system. In this annual ICE TRF lecture Glaister asks: 'what should the new government do?'

During the election campaign all the main parties had advocated High Speed Rail networks and improvements to the existing rail services. Glaister asserts that policies on roads have been overshadowed and yet road users account for nine out of every ten passengers by distance and carry a similar proportion of freight. At a time when it seems inevitable that there will be significant cuts in national and local public expenditures, Glaister finds it unclear how plans for rail would be paid for and suggests that nobody has a coherent strategy for investment and how the strategic road transport networks will be financed.

Glaister asks several key questions, the answers to which he feels will lead to an overhaul of attitude to transport policy, and investment in our road and rail networks. What are the transport needs and how should the new government tackle them? What should be the balance between public transport and private transport? How are the funds to be raised to make good our historical underinvestment in capacity and maintenance of our transport infrastructure? Where should we be investing to meet future needs for mobility and the environment? And could administrative and governance reform offer a way for the private individual to fund the level of service that they want and the nation needs?

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TRF

Crowthorne House, Nine Mile Ride
Wokingham, Berkshire RG40 3GA
United Kingdom

T: +44 (0) 1344 773131
F: +44 (0) 1344 770356
E: enquiries@trl.co.uk
W: www.trl.co.uk

Published by



IHS

Willoughby Road, Bracknell
Berkshire RG12 8FB
United Kingdom

T: +44 (0) 1344 328038
F: +44 (0) 1344 328005
E: trl@ihs.com
W: http://emeastore.ihs.com

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