

THE BROOKINGS INSTITUTION

TRANSPORTATION REFORM: WHAT THE UK CAN TEACH AMERICA

Washington, D.C.

Tuesday, February 19, 2008

BRUCE KATZ  
Vice President and Director  
Brookings Metropolitan Policy Program

SHARON ALPERT  
Program Director  
Surdna Foundation

OLIVER JONES  
Former official  
UK Department for Transport

ANNE CANBY  
President  
Surface Transportation Policy Partnership

JOSHUA SCHANK  
Director of Transportation Research  
Bi-Partisan Policy Center

JANET KAVINOKY  
Executive Director  
Americans for Transportation Mobility  
Coalition

JACK SCHENENDORF  
Commissioner  
National Surface Transportation Policy and  
Revenue Study Commission

ROBERT PUENTES  
Fellow  
Brookings Metropolitan Policy Program

## P R O C E E D I N G S

MR. KATZ: Good morning, everyone. We're going to get started because we have a fairly full agenda. And first of all, I just want to thank everyone for being here. I'm Bruce Katz, and I'm director of the Metropolitan Program at the Brookings Institution.

I just want to make sure that everyone has their little -- I thought this was a whistle when I walked in. And actually, it is one of these jump drives that has the Eddington Report that you will hear quite a bit about -- but also some of our Brookings material.

We have a real treat in store today. Oliver Jones, who really is the primary author of what we consider to be a groundbreaking transportation strategy for the United Kingdom is here to discuss it. This is generally known as the Eddington Transport Study after the former CEO of British Airways, Sir Rod

Eddington, who was asked -- was it by Tony Blair or by Gordon Brown? -- by Gordon Brown, as he was preparing to ascend to the prime ministership, to write a strategy to advise the British Government on really the link between transportation, economic competitiveness, economic productivity, and economic prosperity.

A group of us, some in this room, heard Oliver talk last summer at a summit we pulled together with the generous support of the Rockefeller Foundation. The purpose of that summit was to bring together a group of primarily American transportation experts, practitioners, a scholar or two, I suppose, for a week discussion about how to rethink and remake transportation policy in the United States. And that's part of a broader effort we have here at Brookings, the Blueprint for American Prosperity, to think about where -- you know, wither goes the national government around issues like economic prosperity and sustainability.

When Oliver spoke to us at that summit, it was really a remarkable conversation, both in its strategy clarity and its almost provocative stance. To say these things is really quite surreal, because it shouldn't be that provocative. He insisted that, transportation shouldn't be an end in itself. It really should be a means to achieve broader national priorities, whether that's economic competitiveness or environmental sustainability.

He talked, I think at one point maybe he'll repeat the phrases today, about the need for transportation policy to be evidence based, outcome driven, and performance measured. Well, those are three phrases that probably have been banned from the United States for some period of time.

So when he started using phrases like that, Rob and I looked at each other and said, I think we should have Oliver come to the United States and begin to talk to transportation professionals, other actors and doers, not just in the Washington community but out there in the real world, New York, Chicago, San

Francisco, and Portland, other places where there clearly is a yearning for a remake of national transportation policy.

And everyone in this room knows, I think we're at a very interesting inflection point on transportation and infrastructure. I mean, there really has been sort of this odd confluence of events, whether it's the collapse of the bridge in Minneapolis or the uncertainty about the trust fund -- or more broadly, issues around climate change and the economic situation in the country.

But I think what underlies it is a conversation that I had with a CEO recently that probably many of you have had in similar terms, who asked me pointblank after returning to LaGuardia from Shanghai's Pudong Airport, why does a first class economy have a third class infrastructure.

I think it's that sense that something has gone wrong in this country about transportation infrastructure policy over time that really provides the context and helps frame what we're going to hear.

So, the timing for getting Oliver here obviously works very well for us politically and with these broader national issues. The timing works well for Oliver as well, who's actually left the British Government, got married, and is about to move to Australia to become an investment banker. Well, since the U.S. is somewhat in between Britain and Australia, why not stop on the way over?

What we're going to ask is for Sharon Alpert in a second to come up and introduce Oliver more formally. And after we hear from Oliver, we'll hear from a panel of I think some of the leading thinkers and practitioners on transportation in the U.S. to get their blink responses to what Oliver is talking about. And then, more importantly, we will open this up for a broad conversation.

This is obviously a pretty well informed crowd. We could probably spend a day and a half in this room. But I think we'll have a sufficient time for a back and forth.

Let me welcome Sharon. As many of you know, Sharon has been promoted to be the Program Director for Environment at the Surdna Foundation. This is a family foundation based out of New York City. She will oversee a fairly substantial portfolio, about eight and a half million dollars, that is supporting efforts to stabilize climate change, improve transportation systems, improve patterns of land use, and safeguard the biodiversity of oceans.

Sharon came to Surdna from the Ford Foundation. Before joining Ford, she spent a number of years in the housing environment and energy sector. I think everyone in this room understands that before transportation was sexy again, Surdna really was the sort of stable funder and supporter in this area -- in good years and bad years. They basically stayed with it and provided that really critical support for intellectual thought, for advocacy, and for coalition building in this principle area of domestic policy.

Ms. Sharon Alpert.

(Applause)



MS. ALPERT: Thank you, Bruce. I don't know that we can necessarily declare victory on bringing the sexy back to transportation quite yet, but maybe after this tour we'll have made a little progress.

I'm really delighted to be here today and to be able to support Brookings in this important project and to be able to support this forum, which I know is going to be an extremely exciting forum here in D.C., in my hometown, New York City, Chicago, San Francisco, and Portland. I was one of the lucky people to be involved in the Belaggio Retreat, and it was an eye-opening experience. So, I'm sure you'll all feel the same when we're done with today.

As Bruce mentioned, the Surdna Foundation has had a longstanding commitment to transportation reform. And this really comes from a recognition from our staff and our Board that the prevailing land use and transportation systems across this country are damaging ecosystems, contributing to climate change, depleting our natural resources, and really, really threatening the prosperity of our communities. We

firmly believe that the social, economic, and environmental concerns of our nation are inextricably linked and dependent on the choices that we all make about how we grow.

Our early and sustained investments in transportation reform at the national, local, and metropolitan levels are some of our Board's proudest investments and some of our proudest accomplishments. And it couldn't have happened without many of you in the room and the organizations that you represent. It couldn't have happened with groups like the Surface Transportation Policy Project. I'm so glad to see Anne and maybe Roy here on the panel today.

We also believe, like Bruce echoed, that the timing is ripe again for a fundamental shift from the time we've seen before when we ushered in a sea change, that there's -- and that also that there is a significant amount that our nation can learn about how to usher in that fundamental shift from our colleagues in the UK and Europe and from other industrialized countries.

For many years, America's transportation networks, its international airports, its interstate highways, and its transit systems were the envy of the world. I don't remember those days unfortunately. But as high profile infrastructure failures happen -- bridges collapse, steam pipes in New York burst, ongoing traffic congestion, and rising household expenditures on transportation are just covering the news --, we demonstrate that this can no longer be the case in the U.S.

And as we'll learn from Oliver, it doesn't mean that we should just simply embark on a massive infrastructure-building program, which was the envy of our system in the past, back when we did have a national purpose in transportation. Now, we must understand how to link transportation investments to outcomes, as Bruce was talking about, to economic competitiveness, environmental sustainability, climate change, social equity, and inclusiveness of our communities.

And I think we should settle for nothing less than evidence based, values driven decision making for our transportation system. These are the lessons that I learned from Oliver this summer and from the Eddington Report. And I'm now pleased to introduced Oliver Jones to present this groundbreaking work.

Oliver was a former UK civil servant. He graduated from distinguished Cambridge University in England, started his career with the Department of Trade and Industry and from 2000 to 2003, he worked in 10 Downing Street as an advisor to Prime Minister Blair's policy directorate. He then moved to the UK Treasury, where he led the Eddington team.

For the last year, he has been head of the board support division of the UK Department of Transport, and he is traveling in the U.S. now with his wife, Josie, who I think we all should say a special thanks to, as she has let us share her honeymoon to have Oliver here today. Thank you, Oliver.

(Applause)

MR. JONES: Thanks very much and in particular to Bruce and Sharon for the welcome. When I first read the title, 'What the UK Could Teach America,' I felt slightly daunted. But now I've got to sex up transport policy as well. I feel even more daunted, I guess.

And thanks very much indeed to everyone who's come today. It's a real pleasure to be in Washington and the U.S. and it's also a real honor. The UK Government spends a lot of time trying to actually learn from the U.S., so if I can do a little bit to get you guys thinking and to debate here, then that's great and as I say, a real honor.

I've only got half an hour or so, so I'm going to go quite quickly. The main report is this big, and it would take me longer than half an hour to cover every bit of data and every sort of nuance in the report, so apologies for bits I miss or if it feels a little bit rushed, but we do have time for

questions afterwards. So, if there's any clarification needed, then please do just shout then.

Just a couple of quotes to kick off with, the top one, "The government has decided what its transport policy is for." First, you kind of hope they decided that a long time ago. But secondly, it comes in *The Economist*, which for those of you who read it will know, it isn't a newspaper that's used to praise. This actual quote comes from fairly recently, which was in response to the work that we did in the Department for Transport in responding to Eddington and kind of making it happen in reality.

I think it's fair to say we were rather pleased with that, because it actually encapsulated what Eddington and then the follow up work was all about, which was getting our transport policy in the UK back on track and getting it very clearly focused on big economic policy. So, really just some quotes out there to show you that it's sort of not just us and people who were there last summer who think this is good but that more generally the UK transport

policies are considered to be going in the right direction by a number of commentators.

I just mentioned the two reports. You'll be familiar with the Eddington Report that I held up earlier. Occasionally, I'll talk about a document we published at the DFT about two months ago, which is this document, which was the official response to Eddington. But it was much more than that. It was setting our plans to make Eddington happen in reality.

And the third part of this -- my talk today is going to actually spend a bit of time saying what we've done since Eddington because I hope many of you will agree with what Eddington argues, but delivering it in practice has been my life for the last 14 months. And it's extremely difficult. Delivering these fine words in the right direction is almost more difficult than writing them in the first place.

So, I'm going to cover three things today. A little bit of context to the report because it's quite interesting to think about where the UK was, say, four or five years ago. I'll run through some of

the key findings and recommendations, but I am going to assume some knowledge and Rob said to assume that many people have read this, so that's not going to be as long as perhaps it could be. And at the end, I'm going to talk about what we did afterwards as well, where I think there's lots of interesting stuff going on but also some lessons to be learned about what was right and what was easy and so on.

The concept is very similar to the U.S. We've had extensive modal networks in place for well over 100 years. One big difference, I think, from the U.S. is that there's not currently, and sort of touch wood, a big issue with the kind of management and day-to-day maintenance of the network. We actually had a sort of five-year period where things were equivalent to your events like the bridge collapse and some issues with safety on the railways.

So, the period running up to the report had the UK spending a lot of time getting the day-to-day maintenance of the structure right, so that was considered to be less of an issue. And in a sense,



we'd earned the right to be more strategic because we'd finally done a good job of running the system on a day in day basis well. So, that's perhaps different from where the U.S. is at the moment.

But I'm sure very similar to here, sustained amounts since the 1950s and in particular the last 20 years or so, real step change and increase in the amount that the transport system is being used, things like the average commute being up by 50 percent. That's quite a big figure. And you can see all the lines of growth in mileage and they're all going up.

A few stats, I won't repeat all of them, but one of the big ones is 25 percent of the UK's trade is by value by air, which is a figure that when we first found it was -- we found it extremely surprising. Often, we talk about freight as very important and I'll come out to talk about freight, but we often think that freight really only means coal and trains carrying coal and so on, but air travel is very important for UK's trade.

The result of these kind of growing demands on the network was, surprise, surprise, real problems on the network, both in terms of congestion but also things like reliability, overcrowding, particularly on the railways and on mass transit, and capacity constraints. Our airports are capacity constrained. Anyone who has traveled through Heathrow will know that. But also things like our international ports are capacity constrained. In the lead up to Christmas, they are full and we have the ships queuing down the English Channel.

It was abundantly clear that the current approach to transport was failing users in particular; the business person or the freight user or the commuter or the shopper was being failed by the way we approached the transport system. It was also clear that climate change was rising up the agenda in the UK very, very quickly and that transport, like the U.S., was a major contributor to climate change emissions. So, another big pressing question for the transport sector to deal with.

So, the UK Government resorted to one of its tried and tested ways of getting out of a difficult hole. It punted the things into a long grass for 18 months or so and asked an independent advisor to tell them what they should be doing, which is a fairly common trick that this labor government does, but it's one that actually works incredibly well. And they asked this guy, Sir Rod Eddington, who I think Bruce spoke of his background, to advise them on the links between the transport system and economic growth.

I won't talk through the detail of what the review is too much. It's quite similar in one sense to your national commissions. You -- 12 months long, a small team gives a lot of -- a profile and commitments and so on.

I'll just talk very briefly about a couple of things that were unique about this particular project team which I led, which leads into my next slide about changing paradigms and how you place transport policy.

We were a small team, but only 50 percent of people were from a transport background. I myself came from the UK Treasury, and my background was in economic growth and productivity and so on. Again, as I said, only half of us were transport specialists. We did all the things you'd usually expect us to do. We got around the country. We based it on evidence. There's thousands and thousands of pages of evidence in addition to the report online.

We were advised by eight economists, of which only two were transport economists. Quite deliberately, we went out to accessing labor market economists or international trade economists. And you can see where this is going because we were trying to make this more than just another transport policy report that's very focused on the transport policy sector. And one of the things we did very early on was get Nick Stern, who you'll have heard of in terms of his climate change report as part of that panel as well. So, we bound in the climate change issue with the economic one.

We did this because we, Rod and I and some of the other senior members of the team, wanted to write a really very different report to the usual. For starters, we had a different customer. Our customer was not only the Secretary of Transport but also Gordon Brown, who was then our Chancellor, and Vince Jekkers, the head of the Finance Ministry. This was a report about the economy, not about the transport system.

We set very early on we didn't want to worry too much about modes. We didn't want to get captured by particular modal interests. This was pretty much the first transport report I've seen with no chapter with a modal title. There is no rail chapter. There is no road chapter. There's no air chapter, which is different. It's a different way of approaching things, undoubtedly. And we don't particularly talk about individual projects. We didn't back a particular project or another particular project. What we tried to set up, as I say here, was a kind of

blueprint for future transport decision-making.

That's how we wanted to approach it.

It wasn't saying here's a wish list, you need to do this over the next 20 years, and here's a bill. It was trying to make sure people understood that transport was vital to our nation's future success, but also that we considered decisions in the transport field that were going to contribute to their economic success.

And some of the language that we used was focused on actual goals. But, the transport system exists for some almost higher purpose, economic growth, safety, environmental protection, and so on. That's what you're really trying to achieve. I often say we don't really care about the rail system or the aviation system. What we care about is whether we can trade and whether people can visit family, whether people can get to their healthcare, whatever it might be. Those are things that we actually care about.

And secondly, we put evidence and particularly economic analysis right at the heart of

the decision-making. We used the phrase 'listen to the numbers,' which I guess is slang for being evidence based. But we found it very helpful to use phrases like that, which is you've got to put the economic analysis, the cost benefit ratio, right at the heart of the process.

So, it was a different report. And I think it's not over-claiming it to suggest that it's almost a new paradigm, the way we look at it. We really tried to drive this home, and in my presentation I try and drive it home, because, given people's responses, that's what people find different about this: that it doesn't look and feel like the usual way of talking about transport policy. People have reacted very positively to that. Others have reacted negatively, and they have a valid point, but that's what we try to do and that's why we think it's so different and why we think it provokes interest and thought.

Let me run through the kind of key findings of the report briefly. We started off by going right back to basics and saying to ourselves, well, A, is

transport important for economic success, and B, if it is, how is it? Can we understand that it's not key what it is that transport does for you, but that it creates economic success in your country?

What we concluded was that there were lots of debates about exactly the right figure of how much you should invest and how much a particular level of investment in transport led to increases in growth or productivity. People argued and did lots of long academic studies about what that level should be. No one really agreed what the level should be, but we decided just to bank the fact there was a strong relationship. Everyone found a good, strong relationship. That's almost kind of motherhood and apple pie in terms of understanding the success for economy. Almost all have good functioning transport systems.

But we decided we wanted to spend much more time understanding exactly how it was that transport interacted with the economy so we could understand which bits really mattered in the UK context. And



obviously, those lessons can be learned and used in other contexts, not just the U.S.'s.

And what we discovered is that, firstly, there were periods where step changes in the provision of a transport network as a whole is clearly associated with a few radical improvements in a kind of economic success or the productivity levels in a particular economy.

The advent of the railways, and in most countries the railways arrived before the widespread motorcar, really changed people's horizons. It changed individuals' horizons and it changed business people's horizons. And so, the horizons are what the economy could achieve.

There's a nice story that the railways in the UK led to the creation of the first nationwide football league. Of course, before that, you couldn't have a nationwide football league. It was quite an interesting story. The national newspapers are a creation of the railways because, for the first time, you could feasibly get across the UK in a day.

On the more important economic side, those railways were instrumental in creating the city of London and all of its advantages, which persists today in terms of delivering huge numbers of people from far distance to one place to form the exciting, dynamic agglomeration you've got in the city of London today.

And that is basically true of almost all cities: that the cities are based on their labor force and the productivity of the labor force. And the deeper your labor force, the bigger your labor force, then the more productive your city. And railways in UK and in Europe, particularly, are a vital part of that. So, when railways turned up, there was a real step change in the kind of productivity of a lot of European economies.

Actually, the best example we found was the completion of the U.S. interstate highway network in 1950 that's associated with a step change in the productivity of the U.S. It's because the completion of the network allowed you to do things that you couldn't do before in terms of industrial production

lines and efficiencies and so on. So, as you complete a network, you have a big jump in the kind of economic potential of your country, of your economy.

Unfortunately, and this is particularly true of the UK but is also true in many developed countries, those kind of step changes in connectivity aren't there at the moment. There's not some new technology that's revolutionizing the world we're in. So, we have to look quite close and say, where the networks are pretty well established, what is the nature of the relationship.

We found that, as you might expect, it's a marginal or incremental relationship. But there are still some very big numbers. So, for instance, in the UK, 5 percent reduction in travel time for business travel only was worth 0.2 percent of GDP, which seems quite a small number, but it's not that big a change. And if you think of your growth rate, in the UK the train rate of growth is around two, two and a half percent. That's quite a chunk of your growth rate.

Falling transport costs have been associated with very significant inches increases in GDP. So, these are not big new networks. Incremental improvements do add up to some big numbers. And we'd expect to see the same thing undoubtedly in the U.S.

But it also adds a little bit of caution. The first thing is to say that -- don't always leap to transport as the answer to a particular problem you've got. If you're short of the right skills in your city, perhaps the answer is in your education system and your skills. Perhaps it is in a land use change, which allows more people to live close to where the jobs are. If you want to promote international trade, maybe tariffs are the answer -- reducing tariffs is the answer rather than anything else.

It's also true that there are some bad transport investments. People I'm sure will have heard of the concept of the bridges to nowhere and so on. We have a few in the UK. But in particular, the concept of the two-way road. Quite a lot of transport improvements can suck out economic growth from the far

end of the road. The Spanish have had a series of problems with this with their high speed train network, where a lot of the economic growth has been sucked out of the periphery back towards Madrid because of the new high speed train network, which was put in place in order to spread out economic growth. You need to be careful.

So, we're saying yes, transport really does matter to your future economic success, but be careful. There's good and there's bad. And you should be very careful about it, which again, reinforces your need to listen to the evidence and listen to the numbers.

We're also clear that when we talk about the kind of impact, we're looking at not just sort of traditional economic measures, but the impact of which you can monitor in terms on society, sort of wider welfare and the environment and so on. In all the analysis I present, we factored in all those full range of impacts. We've monitored all the

environmental impacts and social impacts so that we understand what the impact is across the board.

Just a little bit more detail, and I won't sort of talk through all of this. This is a diagram from the report and it's also in your pack. What we're trying to say is exactly what happens when I improve a road or improve a rail journey or whatever it might be. What actually happens within the economy? And there's a long section in the report about this.

Broadly speaking, as a function of first round impacts, which is for lots of people, the journey gets shorter and, therefore, they save time. And that time is valuable, whether you're a business or a commuter or whatever. You can bank those and you can get some very big numbers if you own a busy piece of kit.

But then there's a really interesting set of what economists would simplify a little bit as a second round impact, which is what happens as a result of those changes in terms of a spin-off within the

economy. And I'd like to talk very briefly because of time about the problem to pink circles.

The first one is that through reducing journey times you effectively make your labor market deeper, i.e. bigger. There is lots of evidence, new evidence, which is being led by the LFC actually in London about the impacts of agglomeration on cities. And basically, agglomeration economics is all about the productivity impacts of deep labor markets.

As I said, if you can deepen the labor market through a transport improvement, you directly make your city and your labor force more productive. And that's sort of extreme force and impact of transport, and I'll come back to a concrete example of it in a minute that has directly affected decision-making.

So, not only is it just that there is sort of simple timesaving, but in particular in cities and in clusters, and agglomerations, the kind of words you were used to, then actually you can have a sort of

very, very influential second round impact that matters.

So, it gets you thinking: well, actually is transport's role potentially more important in your cities and in your clusters than it might be elsewhere in the system? Very similar sort of second round effects on international trade because, as people will be familiar with, international trade promotes efficiency and competitiveness and so on. So, you have a kind of second round effect over and above the initial impact to transport.

Again, in the UK, where trade is such an important part of economic success, it got us thinking: well, actually as a second kind of priority, would we want to focus our attention in terms of improving the transport system where it was going to greatly improve the situation on trade because of this kind of important second round benefit? So, two things to note from the kind of basic relationship there.



We then said, well, this is a UK report. We've got to apply this to the realities of the UK system. This is by far and away my favorite map and a favorite chart in the report. What we've done is we've drawn a blue line between any city of more than 100,000 people within 100 kilometers of each other and a red line between 150. It just tries to illustrate how dense some of our cities are.

And what it shows, which is very important, is that the UK is not France or Spain or Italy. And our problems and our economic geography which we're starting with are completely different. A lot of the talk in the UK prior to the report was about wanting to shrink the UK economy. And what we need is we needed more speed. We need more high speed train lines, bringing places like Glasgow closer to London, bringing Manchester closer, whether it's railways or roads, whatever it might be.

And our view was actually that's completely, at a constituted level, completely wrong; that in fact, the problems we see in the UK economy are one of

density of demand, of focus of economic growth in a very small area. And so, we're much more similar to the Netherlands or parts of Northern Germany in that respect. And that's quite different. That was different in the UK.

There's a lot of envious looks at the French TGB network, and what we really needed was \$50 billion of that and slightly that we should have one of those two. And we said no, we shouldn't because we're different. And our economic geography is different. And your transport exists to support that, not in its own right. Our goal is not to have a spanking new transport system, per se.

As I said, the UK's problem is one of density of demand and that's backed up in some of the data. So, this is time of day data. Again, our problems are problems -- frankly one to Russia of the peak times paralleled with peak times on the freight system or the airports, again, Friday nights, Sunday nights, those kind of things. These are peak times.

Our journeys are short -- the people in the UK are not racing around the country doing 200-mile journeys. Actually, quite the opposite, they're doing 5 or 10-mile journeys. And that's where you've got to focus, so it's an issue of demand. The problem is one of demand density.

And again, just -- the red is road congestion and on the right is rail congestion. Red is bad there and sort of blacks and reds are worst here. It's focusing these particular areas around our cities. So, the kind of strategic glance at the UK economy is one that density is the issue. It's backed up in the numbers when you see them on the network.

So, we concluded two things really. Firstly, stop worrying about connectivity and speed but worry about network capacity and performance. And, tracking back to what we understood about how transport interacts with economic growth, focus in particular on transport's potential role in your cities, because that's where the UK economy is so strong and growing, and in terms of supporting

international trade. Again, because that's where the UK economy is strong and where its future lies.

I thought I'd put that up. That's from your census. It's not lights. It's actually population densities. It's not one of those space views. I'm not going to kind of talk to that, but my sense is there are some real similarities in the UK but also some differences. But what I would say is start with your particular economic geography, not with someone else's economic geography or any kind of preconceptions. That was a really important point in our report.

We then said to ourselves well, how do we go about meeting these challenges we've set for ourselves. If we do need to worry about cities, and we do need to worry about performance and capacity, what do we do? The first thing we said is that we needed to get a much better about the way we make decisions. The UK system was -- the best word I can have for it is kind of ad hoc. Projects came up and we, at the Department of Transport, sat there. If it

was a really good idea, we were boxed into a corner and ended up funding it at some point. If it was quite a good idea, we did it a few years later. If it was a really bad idea, we struggled manfully to try and kill it.

There was no strategy. There was no planning, and there was no comparison between different projects and priorities at all. So, we said in pretty blunt terms in the report, you need to do three things. And it sounds incredibly simple, but it's difficult and there were certainly no processes or structures to support this whatsoever in the UK.

Firstly, articulate your objectives really clearly. What is it you're trying to achieve with your transport system? The answer to that is not a better railway system; it's supporting labor market growth in your city, supporting national trade, better access to health services, whatever it might be.

Be very careful about defining your problems. Define your problems, again, in terms of non-transport terms and be precise. If Washington

wants to grow by 700,000 people, our problem is that we've only got capacity in the network to grow by 450,000 people over the next 20 years. We have our problem. How do we solve it? That's the problem, not our rail system looks a bit old or our rail system looks a bit overcrowded. In the new world, we try not to define it like that at all.

Then, very importantly, consider a full range of modes. In the UK people have their favorites. You remember the rail industry, in which case the rail was the right answer. You remember the road lobbying, in which case the road was the right answer. You remember the cycle lobbying, in which case cycling was the right answer. We said to ourselves, well, you need to look at all these things. You need to be -- the phrase we use was modally agnostic. We tried to be as modally agnostic as we can and trying to get away from that.

So, consider the full types of modes but also different types of intervention. Don't leap to

new concrete and new capacity. What about regulatory measures? What about pricing measures?

And lastly, be evidence based and actually listen to the numbers. Use your benefit costs analysis and actually listen to what it's telling you. In the UK, we've got quite a strong history of doing cost benefit analysis. We've got an equally strong history of not really listening to it when it comes to making decisions. You go with what ministers thought was best or what was the prevalent view. Around 15, 10 years ago, we loved light rail systems, so everyone got one of those -- despite the fact that the BCRs weren't too strong.

The second thing we did is we brought together the evidence from about 180 different schemes that were either past schemes or existing schemes that the DFT had funded. And rather than looking at the detail of each one, we put them together in a database and said let's torch the numbers and find if there are any kind of generic lessons that we can just give people, saying what are the kind of things that look

like they work, that look like they offer good kind of value for money, high cost benefit ratio.

A few reflections on that database now. We were very surprised about how high the returns were, and this was after accounting for all the kind of environmental impacts, social impacts, and so on. We got a lot of four, five, six, to one. In my experience in government expenditure, that's as good as it gets. It's way, way ahead of any expenditure on health or education that I've seen in terms of cost benefit ratios. So, pretty high stuff.

Secondly, getting the prices right, in terms of making pricing part of the deal, was absolutely critical. And it's not a point of environmental principle, although it is one. It's a fundamental point of economic principle in terms of making better use of your infrastructure and making poorer use of your infrastructure. You know, if the UK PLC was run like a business, we'd get the most we could possibly get out of our assets by pricing it properly.



We don't do that for the bits of infrastructure that we currently own. And there's no particular justification for that. We're all used to going to the cinema. It's cheaper at 3:00 on a Wednesday afternoon than it is on Saturday night at 8:00. Our mobile phones have tariffs. If we go by the air industry, which is privatized, we're used to the Friday night flight being a lot more expensive than the Wednesday at 6:00 in the morning. You know, there were good reasons for that. The people are trying to make better use of the infrastructure to fix assets that they've got. In the UK at the moment, we don't do that on the railways, and we certainly don't do it on the roads.

We also said the likely answer was a mixture of different policies. A national road pricing scheme, which I know is of interest over here, was modeled. We found benefits of around 25 billion pounds a year in the UK; huge figures. Interesting, one particular figure I put up here because it didn't appear anywhere I could see in the National Commission

report, was that it reduces the case for more road building in the UK by 80 percent.

That is very good if you like the environment, if you like protecting the landscape, but also very good in terms of costs. Because if you're addressing congestion, the case with road building is obviously reduced. So, lots of issues with a big nationwide scheme, but in terms of if you only do one thing to really help your economy and actually hit a lot of other goals in terms of environment, road pricing is the way of doing it.

Better use measures came out very strongly. Targeted measures came out very strongly, and small measures came out very strongly. I'll put some pictures up just to show you. This is national road pricing before and after. Red is bad; not red is good. There is a huge impact on congestion and huge benefits to the economy on the scheme that we modeled.

Small is beautiful. We redefined small in the UK to being less than a billion pounds. That

probably does count as small here, but in the UK, we sort of got a few groans at that point.

But a really interesting correlation between the bottom here, which is the cost of the scheme and the y axis, which is the returns on the scheme, we ran it at cost ratio, very clear relationships, small, getting at those pinch points, getting at better use, those low cost, relatively low cost schemes that release the potential of the existing infrastructure, very, very high returns. That's a very powerful picture, and it's one that's really influenced policy.

Just a point about putting all the environmental benefits in, the third column is one we moved from GDP BCR measure through to a slightly wider welfare measure; for the economists in the room, a sort of full economy, society measure. Things change and public transport gets a little bit better while roads get a little bit worse, but it's not quite what people were expecting. I think once we put that, it's expected for roads suddenly to all collapse and transient measures to boost.

And in some particular cases that happened, but as a generalization the switch is more subtle than you might think. So, this is not somehow in saying listen to the numbers and fax the environmental benefits; this isn't the end of any new roads or anything like that or any new aviation. It's just a more-balanced way of understanding things, and you tend to have a mixture of different modes come out if you were listening to the numbers.

So, it's not quite as radical as some people would like, but we were keen to listen to the numbers. So, you factor in things like climate change and environment and so on, and then you do make some changes -- but it's more at the margin than at the bulk of things.

We also had a section about the system delivering in the UK, that a lot of it is quite parochial, I think, to the UK. The one area I will focus on is this kind of united governance. This is a picture of Birmingham and the thick red is the actual city where the buildings are. The black is the unit

of governance for transport around Birmingham, and the shaded red is what we call a travel to work area, which is where more than 90 percent of people traveling to work have been.

We simply made the point that it didn't work. The current unit of governance didn't work because it wasn't dealing with the functional economic reality of Birmingham now. That unit is 50 years old or whatever it might be, and it just doesn't work. And it wasn't working -- and you need to have governance that sees the totality of people's journeys. It's as simple as that.

You also need to make sure you haven't gotten any kind of slightly false incentives. In the UK, for budgetary reasons, we have a big difference between capital and what you might just call current money. Capital can buy you concrete and things; current money you can spend on subsidies or running bus services and so on.

For various reasons, the UK has been very capital rich but current poor for the last five, ten

years. So lo and behold, our states and local authorities have been constructing lots of new roads and traffic lights and things, when actually what they desperately needed was subsidizing a better bus service or whatever it might have been.

Where there are competing users, say for instance in our highway networks around cities, which are very important for commuting within cities but also very important for haulers doing stuff around the country, who ultimately decides what the future of that road should be and is that in the right place? So, there's some quite interesting questions, I think, about unit of governance and how you govern the system.

There were three other reforms, all of which were very long and sensitive stuff in the UK, but I think they will be less interesting here. One was a move towards bus franchising, particularly in our cities. We've talked a lot about cities being the focus for a lot of our problems, very difficult and expensive to retrofit more roads or more heavy

railing. Buses are a much easier answer, but throughout the UK they weren't providing an answer. And we think having a basically open market for bus services wasn't working.

Make use of a huge amount of money coming from the likes of investors wanting to invest in this sector. A lot of money wants to get into stable infrastructure assets. That must be an opportunity with the UK government and I guess others. Also, the approval process for new projects: it takes up to 15 years in the UK and is absurdly long.

Just a couple of slides just to end to it about kind of what happened next. The report had a very positive reception. Government committed on the day to implementing all recommendations, which is quite rare for a report like that. The Secretariat reacted pretty favorably despite the things we're trying not to do and presenting quite a different report. People who are used to lobbying very hard for a particular mode found it difficult, the new way we were trying to talk.

That's an issue we're trying to run through this because people whose job and whose professional livelihood is to push on modes, you need to be able to expand yourself in terms of this isn't the end of a particular mode, it's just a different way of approaching it.

Some people interpreted it as small is beautiful as this was. We were going to spend much less money on the system, which I could see why people criticized that and were scared and said, look, these are huge problems, you need to spend huge amounts of money to do new things.

The business community very, very strongly supported it. They liked all of the approach but, again, the price is right. In the UK, there is very strong business backing for things like road pricing and so on.

Environmental and nongovernmental organizations were very pleased when we talked to them about road pricing and factoring environmental externalities in, but still disagreed with the fact



that we were saying, well, actually there are circumstances in which we can have more flights coming into Heathrow, and certain things can be built up, so a qualified response.

There was good response in the academic community because of the evidence basis.

Press, and there's some parallels here I gather, focused purely on the support for national road pricing. In the UK, support for national road pricing is very unpopular basically. People perceive it as a new tax on motorists and that's, as here, very, very, unpopular. So unfortunately, on the release day the road-pricing story was picked up a great detail, which was a real shame because there's so much more in the report that in some sense is so much more important. And I told you earlier, there are some clear parallels with recent reports here, I guess, where that particular sort of area upon motoring taxation dominates the press headlines unfairly.

But over the last year, government has been getting its house in order and trying to work out what exactly it means to put all of these nice words and clear kind of directions into practice, publishing their -- as I say, this towards a sustainable transport strategy report a couple of months ago.

Let me just give you a few highlights of what we've done. My main message is that it's quite difficult. As I said right at the beginning, clearly, I buy all this and our ministers bought it and all the people on the board of the DFT and the UK bought it all, but making it a kind of practical reality is a tough job. We sent a few very high profile signals at the beginning; a year ago, our board consisted of a guy who looks after the rail system, a guy who looks after the road system, and a guy who looks after the aviation system.

We got rid of that and said we want someone who's responsible for cities and all the modes in cities, someone who's responsible for international links, and someone who's responsible for what we call

national links or interstate links. That's basically what I call it here, completely changing around the big empires within the Department for Transport in the UK.

We also committed to this new, highly complex five year transport planning process, which was trying to engrain the prints of being goal-based, evidence-based, and so on into the system. So, just a couple of slides on those points. If you start with your goals, whatever they might be, productivity, climate change, safety, security -- and you can have a debate about which those should be -- you go to your city or your international trading link and you say what is my productivity goal.

So, in my cities, it might be labor market growth. And on safety, it might be child safety in cities, whereas if you're international trading link, safety, well, that's maybe something to do with aviation safety and maintaining excellence records. Productivity, it might be a kind of capacity issue or it might be a price issue, whatever it might be. So,

you're not talking about modes; you're talking about places and goals in the way you define your problems. And in the UK, we're doing this this year at the moment. That's just an example of what you kind of might put in that box. And we're basically filling out that box at the moment.

You approach areas differently. I think the corridor approach is one that people in the U.S. will know well and being relatively multi-modal about it, I think is important. But making sure we're being multi-modal but also looking at end-to-end journeys. So, people aren't just using the train when they go from Washington to New York shortly this afternoon, but we're going from half an hour away from the train station to a half an hour the other way; thinking about the whole journey.

How do business users differ from students differ from families going on holiday? What are the different needs on the core, so being a slightly more sophisticated approach to it.

We've also adopted a target for the value for money or the average BCR of our spending. We're debating about what our target is at the moment in kind of a true government style. We say we're going to adopt it, and then we'll debate what it's going to be. But we're thinking in the range of three to one. So, we're basically saying we will not spend money on a project that has a BCR below three to one, that kind of range, which is pretty radical stuff. And the huge amounts of what we spent over the last 10 years are certainly well below three to one.

I want to just put this slide up, the urban networks, which is the left hand side one. I talked a little earlier about agglomeration economics and that being terribly important. People might know that we've recently committed to a rail line called Cross Rail across London. It's BCR unfortunately was about 2.9 to one, but it was before we made this new commitment. But, a whole one of the positives was agglomeration benefits, so it would be 1.9 under the old system, and it's 2.9 now.

This isn't just a technical exercise in putting a few different numbers in. It's genuinely changing; and if you listen to the numbers, and you put everything you can into BCR, you change your decision making basically. So, it's quite important in particular in cities. You see it very strongly in cities, where the agglomeration effects and labor market effects can greatly improve the benefits of taking action.

Just lastly really, we've got a couple of bills that enact some of this stuff into processes in Parliament at the moment. So, we're moving pretty quickly. Has it changed our direction? Undoubtedly, it has. We've made a few big policy announcements over the last year, big reports on the future of the railway system, probably the last report into the future of the railway system interestingly. I don't think we'll do that anymore.

We'll publish a report, a city transport strategy kind of thing, an end to the modal report, very, very focused on kind of small measures and

better use measures, so lots of extra carriages, lots of junction improvements, those kinds of things, lots of things like improving stations that people don't spend 10 minutes getting out of the station in the morning, which you do at the big London terminuses.

So, we've done a big round of studies on active traffic management, which is kind of using electronic systems to manage traffic on motorways, lots more on things like cycling which come out as very, very good. I've talked about Cross Rail as well, but also things like Heathrow. We're going ahead -- Heathrow stacks up for this new BCR -- and pushing ahead with the case for the third runway at Heathrow because it's a key international gateway.

That's it from me. I could go on a lot about how it's changed things, but I want to leave you with that things are changing in terms of the concrete realities of decisions being taken on the ground. So apologies for a slightly whistle stop tour of what we said, but that's it from me.

(Applause)

MR. KATZ: So, we're going to have a panel come up and give us three minutes of blink reactions of what they just saw and to try to tie this discussion of the Eddington Report to the work they're doing in the United States.

So, I think a lot of these folks are known to the audience, but I'll quickly go through. Anne Canby is President of the Surface Transportation Policy Project and one of the leaders in this major transportation reform effort that's going on, Transportation for American, or T for America.

Joshua Schank is Director of Research of the Bi-Partisan Policy Center's National Transportation Policy Project -- you guys probably should have talked about the name there -- a Washington-based effort to develop politically viable policies across the aisle for transportation.

Janet Kavinsky is Director of Transportation Infrastructure at the U.S. Chamber of Commerce and also Executive Director of the Americans for Transportation and Mobility Coalition, a coalition as



many of you know that's working to ensure transportation infrastructure is improved to meet current demands and future needs.

Jack Schenendorf, attorney at Covington and Burling and, more importantly for this conversation, is vice chair of the National Surface Transportation Policy and Revenue Study Commission. Probably everyone in this room has read this commission's report; I mean, bold recommendations for where we head.

Rob Puentes is my conspirator in crime here at the Brookings Institution and is heading up our metro infrastructure initiative.

So, quick blink three minute responses and then, more importantly, we'll open it up for questions. So, I'll start with Anne.

MS. CANBY: Thanks. Thanks, Oliver. Where did you go, Oliver? Oh, there you are. Always good to hear from you. And to Brookings and to Surdna, I assume, for helping put this together. Welcome to all of you.

I'm going to give 8 quick blinks per Bruce's instructions.

One, the idea of putting transportation in a broader context: I think in this country we think about it in the economics, but we have left off the other half of what Oliver talked about, which is the sustainable development part of it. Weaving all of that together, it strikes me as an idea whose time has probably long passed but right on the money.

Acknowledging: we seem to have a trouble in this country sometimes acknowledging the role of transport in our economy. But also, again, weaving that in with the environmental and social focus so that we're really embracing the broader context. And that leads me to think that rethinking the mission, what the mission of transportation is, is an important task for us here in this country to think about, recognizing that the cities and gateways and the interconnections between strikes me as a very important point that we could focus on to major benefit for us.

Focusing on goals and outcomes rather than modes: revolutionary idea, modally agnostic but a very interesting concept that if we could do that in this country would really overhaul how we think about addressing some of our transportation challenges in my view.

The recognition that our problems or challenges are in fact concentrated -- which suggests a very different approach to the program structure, how we distribute the money, who controls those decisions -- I think is all very much in line with where a number of us are thinking about. I mean, it would throw into havoc the whole idea of donor/donee. Are we ready to take that one on, folks?

The approach to policies and decisions: look at the problem before we identify the solution, that would be pretty revolutionary in this country. And honestly look at all modal and non-modal, frankly, other kinds of options that Oliver mentioned would be also a refreshing change in direction.

Pricing the product appropriately to match the objective: again, another idea who may have reached some convincing tipping point in this country.

The governance structures: if you can do all the other things, dealing with the governance structures clearly needs some reform. I would suggest in this country the idea of linking land use and transportation much more integrally.

And what do we do with the MPOs, the metropolitan planning organizations? If metros and cities are clearly the drivers of our economy today, how do we put together a truly functional decision making apparatus at that level?

And finally, the idea that planning, which someone once said to me may be an anti-American idea, should be in fact, real and meaningful and driven by outcomes, which we hold ourselves accountable for. And pulling off those things would be rather major in this country.

And with that, Josh, we'll turn it over to you.

MR. SCHANK: Okay. Well, thanks so much for having me. While I was listening to Oliver, I was thinking, you know, of the expression preaching to the choir, and I was thinking about it in the sense that I feel like I'm the choir asked to comment on the preacher's talk, because so much of the way we've organized what we're doing is based on the Eddington Report.

If I were to go through to explain exactly what our project is doing, you would think that I had just written the project description after hearing Oliver's talk. And I was doing more than I even realized -- how much we were basing what we're doing on the Eddington Report with, some significant differences.

But, my blink reactions are, first of all, I think that Oliver's presentation and the Eddington Report in general brings up a topic of interest to urban -- a definitive interest to urban planners since the dawn of urban planning in this country, which is striking the proper balance between trying to put

perfectly rational planning analysis on policy and coming up with a politically workable system.

Because it's great to think about trying to have performance-based outcomes, and that's a clear goal of what we're trying to do at the Bi-Partisan Policy Center, but the reality of the political situation intervenes, and you don't necessarily want -- nor is it necessarily possible to create -- a perfect benefit cost analysis that tells you exactly what you should be doing in every given case.

And I think it's important to bear in mind that there is a balance there that needs to be achieved. And I was struck by it because of something Anne said, the donor/donee issue. When I went to talk to the Committee on Environment and Public Works about our project and told them we were taking a modally agnostic approach similar to the Eddington, and many of you know, I used to work for the Senator from New York on transportation policy, so when I went in to present this modally agnostic approach, the woman

there running the committee said well, that sounds like something that a donee state would say.

And you know, there are strong political motives behind all the policies we have out there. And as much as we might agree with modally agnostic -- and we're trying to pursue the same concept -- when members of the transit community, for example, hear modally agnostic, a lot of them think whoa, you mean that we are going to screw transit. And that's something that we have to get over if we're going to pursue this this line of thinking.

One thing I was struck by also was the concept of the demand driven system versus the system driving demand because I think, again, I agree with the concept that the money should be targeted where it's most effective. On the other hand, there are long-term development effects of transportation policies that influence how the system operates.

And the bridge to nowhere brings up a good example, right? Because the bridge to nowhere, we can all pretty much agree that that's not a project that's

going to bring great benefits for the cost. But when Ted Stevens was presented with that argument, he said they would have said the same thing about the Golden Gate Bridge. Now, he's wrong. I mean, it's not a fair comparison. But there is a kernel of truth to that, which is that sometimes transportation investments can have strong, long term benefits that are not necessary noticeable and you can't necessarily see them in an economic analysis right up front.

But in general, just to give you a quick rundown, we at the National Transportation Policy Project, which is co-chaired by former Governor Mark Warner, former Congressman Sherwood Bullard, former Congressman Martin Seybo, and former Senator Slade Gordon, have created a project panel that -- one of our panel members is here today, Tom Downs -- composed of many transportation policy experts but also building off of the Eddington concept, we've tried to integrate business and industry and a lot of the players into the process by including CEOs of many different companies who are tangentially or directly



involved in transportation but might not necessarily be involved in the typical transportation policy debate.

And I think that that's going to help us pursue a very similar approach effectively of trying to be mode neutral, trying to use strong economic analysis and benefit cost analysis, and maintaining some level of objectivity in terms of transportation investment and really focusing on the goals of what we're trying to achieve with that investment and not just investing in transportation for its own sake but investing in transportation because we want to improve economic activity, because we want to reduce climate change and energy security problems, and because we want to increase metropolitan area mobility and accessibility, and because we want to increase national connectivity. And those are the goals that we have outlined as we pursue our project.

MS. KAVINOKY: Okay. Well, I have to admit I agree with a lot of what Joshua has said, and I'm going to speak to you more from the perspective of

someone who's got to sell this on Capitol Hill. My role at the Chamber is not only the policy side, but it's the lobbying side of what's going on. And so, when I looked at the Eddington Report, I look at it through that lens in part.

Let me be clear about where the chamber is. We believe that we have to maintain and rebuild what we have and that there's a federal role in that, that we have to find ways to operate existing networks specs, and that's going to add capacity. But also, we need to expand existing capacity.

A couple of points I wanted to make at the outset, I'm glad that Oliver really, I guess, countered these in an indirect way. I've heard some people try to use this as a report to argue for a diminished federal role. We're going to do benefit cost analysis. Only the projects that have the most national benefit are the ones that should get funded, and so this argues for a diminished federal role. And I think that's not at all what this report says.

I've also heard some use it as a set of arguments against different modes. So, I hear from my friends on the road building side that, well, the Eddington Report really is just going after roads because they say things like rail and transit are better or vice versa. And I think what this report argues is we do need everything.

Three quick points. The first point is of agreement. Decision-making does need to be better. We've got to prevent the bridges to nowhere. I think all in all that's damaged the reputation of the transportation sector in the U.S. more than anything else. We do need to achieve more bang for the buck in what we're putting together. And in the ideal, we need to have decisions that solve problems and achieve performance rather than mode.

We know that transportation policy has got to be a part of our economic policy and strategy. And we also know that it's got to be made in the context of the environmental and social goals we have today.

Second, just some cautions. Economics has its limitations. Benefit cost analysis can be gamed by anybody who's trying to achieve an outcome, depending on who's doing the analysis. And I think we've all seen that.

It also might not account for the public good aspect of transportation. And as such, it may not play out in rural areas. And when we're talking about national transportation policy, we have to remember this isn't just about the East Coast. This isn't just about urban areas. It's about rural areas as well.

And finally, if you're going to base things off of evidence, you better have the evidence and better be ready to hold to that. Now, what comes to mind here is something I'm hearing over and over from some of our members about the New York congestion pricing proposal. And as you might expect, I hear a lot from our trucking company members, who've said, you know, nobody has talked to the truckers about this, and we're the ones who have the least choice.

They just tell us don't worry, traffic congestion is going to be less and it's going to be better for you. And I suspect that isn't necessarily always the case.

Final thing, I just want to give the reality check on a couple of things. First, this strikes me very much, if we're going to talk about economics, as a prisoner's dilemma. With a performance based approach, we're going to ask a lot of people to leave their self interest in the door, and we're going to argue that cooperation is going to be much better than competition. You may end up in a situation tactically on Capitol Hill where people say I'm going to cooperate, but really, what I'm going to do is go outside the whole thing and make sure I get mine.

I'd also say don't underestimate Congress. Similarly to Joshua, I heard a congressional staffer say oh yeah, okay, that commission report that Jack Schenendorf worked on, that's all well and good, but how much does my mode get out of this? So, there's definitely not a full understanding of if you're going

to be performance based, are you going to be modally agnostic.

I think the thing we all have to keep in our own minds is the George Bernard Shaw quote, "Whoever proposes robbing Peter to pay Paul can always depend on the support of Paul." And we are going to have to do a really good job of selling this kind of approach and convincing people this isn't about robbing Peter to pay Paul; it's about getting the best outcome for everybody.

MR. SCHENENDORF: Thank you, Janet. I'd like to basically commend Oliver for an excellent report. I thought it was very, very good and will really help spur the debate in the United States as we move forward.

I think I'll just talk a little bit about our commission report and how it kind of compares to what you have done. We reached many of the same conclusions when it comes to the current system and not funding by mode but instead, having a performance driven and outcome based approach.

We recommend basically eliminating all of the current federal programs for funding of transportation and replacing them with 10 performance driven programs. One would be geared around the condition of the existing system, one around metropolitan areas of a million or more, others around connectivity of rural areas and smaller communities, a national freight program, a safety related program.

The only modal program that we have was for high speed passenger rail. It was felt that that was important enough in certain dense corridors that we needed to simply go in those specific corridors and provide for high speed rail.

We think based on our analyses that in the United States, to solve our transportation problems and our other problems that we have of moving population of economic growth, we are going to need all of the above. We need significant improvements in transit systems. We need significant improvement in our freight rail systems, significant improvements in

inner-city passenger rail. And then, even once you do all of that, you need additional highway capacity.

And in all of these cases, you have to operate the system and take care of the current system that we have in a much, much better way. But even if you do that, even if you maximize the use, even if you maximize the pricing on the current system, you still need significant capacity improvements in all of the modes of transportation to solve our problems as you look out 50 years when you look at the increased freight and the increase population that the United States is expecting.

So, we really tried to put together a program that moved toward a modally neutral, moved toward performance based approach and, yet, dealt with all of this and said we really need to move forward on all fronts.

It wasn't a surprise, but the biggest problem we have the in the United States is under investment in our infrastructure over the years. And that's not to say we don't have to change the way we



invest the money, because we do have to change how we invest the money. But we found that the average investment should be somewhere between \$225 billion a year and \$340 billion a year. The difference in that range is pricing. The \$225 billion is with maximum pricing. And today, we're spending \$87 billion a year at all levels of government, so we're spending less than 40 percent of the low amount, even with maximum pricing.

So, it's not a surprise that the system is not keeping up with demand and that the system is aging and deteriorating because we're not investing enough. So, our report basically calls for a significant increase in the investment. We believe that all levels of government, including the federal government, need to be a full partner in dealing with the problem as we go forward and shift, in many respects, to the performance based and outcome driven approach that you're recommending.

And then we recommend a range of financing tools to solve the problem. We don't look to any one

financing tool. We look to the gas tax. We look to a new freight fee. We look to a ticket tax in transit. We look to congestion pricing. We look for public private partnerships. And we look to tolling and say we need to use all of these things, all of these tools to come up with the additional resources that we need as a nation.

And so, I think that, you know, we have a very balanced approach, which sounds similar to where you would come out in yours at the end of the day if you implemented many of the things in the Eddington Report.

MR. PUENTES: Well, I thought it would be easier to go last, but it's actually more difficult because there's a lot of the blink comments from the panelists were similar things to what I had. So, I made minced meat of my notes here.

But I think it's important to point out that some of the motivations behind bringing Oliver here was that we definitely didn't think that this was a U.S. report. We didn't think we'd just cross out the

K in UK and print a S and then we have a U.S. report, but that the structure of this, the way that they thought about the transportation system there and the way that they approach how the government should think differently about it was a message that we really needed to bring back to the U.S. and something to help us move the needle a little bit.

Because again, as Bruce mentioned, we were first struck by the presentation we heard last summer. This is very, very different from the system that we have here in the U.S. So, this is a little apples to oranges. It's a very, very different country. It's much smaller, the size of New Jersey maybe about. I say everything is the size of New Jersey.

But it's not a growing country like the U.S. is growing. We're growing, as Jack mentioned, very, very quickly. Parts of the country are growing very rapidly, very unlike what's going on in the UK. There's a tremendous amount of transportation alternatives. People have choices. We talk about road pricing. We talk about transit. You know, all

those issues play out very, very differently in the UK than they do here in the U.S.

But the first blink that I was struck with was how similar some things are, not just the transportation challenges of traffic congestion and freight and climate change. There are some big things that are very similar, but the policy challenges as well and the politically driven decision making that Oliver kind of laments about and talks about in the report is very similar to what we have here. I don't know if that makes me feel better or worse. But it is kind of started from the same structure. I mean, they got to where they got, I think, because of frustration with the system as it was at the time.

So, those are some of the big messages that I really was interested in bringing out by having Oliver here. And you can see a lot of things in the report. As Oliver mentioned, it's 300 pages or whatever it is. It's a very large thing. So, you can kind of pull any threads together.

But I think there are three key arguments that they make in the report. First is that they do talk about poor targeting and prioritization, largely due to the short term political decisions, which has largely resulted in under investment, as Jack mentioned, in transportation. It's not unlike what we have here in the U.S. where we have invested, but we argue that we have the wrong kind of infrastructure to position us for the 21st century. The simple equation of transportation investments equals economic growth is far too simplistic for the complex nation we have today.

The second thing is that Eddington talked about moving way from new infrastructure investments and talked about rebuilding, first, the existing network. Obviously we need to do a better job of taking care of the system that's in place today. The Minneapolis bridge collapse is just one manifestation of that. But we know, I think, generally in this country, we've all bought into the fact that we need

to invest and rebuild the infrastructure that's in place today.

But more importantly, Eddington talked about the new framing for transportation and the fundamental role that infrastructure plays in sustaining healthy cities and metropolitan areas. And that's really largely absent, I think, from the conversation we have about transportation in the U.S. today.

As Oliver mentioned, there's no section on roads or rails or trains or things like that in the Eddington Report, but I was shocked when you just mentioned that there's now a new person at the DFT in charge of cities or metro areas, whatever the case is. That's, again, very, very different from how we talk about it here.

And you can see how it plays out when you talk about measuring things like agglomeration economies. And it wouldn't be a Brookings event if we didn't mention agglomeration economies at some point. But, we don't mention that. We don't measure that, obviously, very well. And the conversations we have

here in the U.S. about the federal new starts program and some concerns about that, we had the big conversation about the Dulles rail project, completely missing these kinds of benefits that are inherent in an investment like that.

It's a huge investment in rail, and we really need to make sure we capture the range of benefits very well. And the one area where we do it is in new starts and we're missing some of the key pieces there. So, I could go on and on but, again, I just wanted to end by mentioning very quickly that the reason we wanted to put this panel up here to react to Oliver is that I wanted to see if we could get some kind of general acquiescence, I think, that this outcome based, performance measured program does make sense.

I think we kind of did that a little bit, maybe not completely and that there are definitely some disagreements when you start to peel away the onion, things about road pricing, privatization. Some

of the environmental qualifications that Oliver talked about I think are very important.

But I think this is a helpful conversation to help us move the needle forward. As we have this conversation about transportation, we should keep a lot of these big picture things in mind.

MR. KATZ: Oliver, any responses before we open it up?

MR. JONES: Probably just one or two very quick ones. Several speakers mentioned BCR and, if you're going to focus on the numbers so much, you need to be trusting the numbers.

And two points, one of which, I think we see -- I mean, our report moved on a debate about what should and shouldn't be in the kind of cost benefit analysis. And that's always going to be an evolving picture, I think. And that's okay. And we often try and talk about being kind of common language or a common currency rather than kind of the definitive number. If it's 3.8 or 3.7, that's not -- the



decision is, you know, you can compare a bit more easy with BCRs. I think it will evolve.

I think it's crucial that they do reflect what you call a public good. And that's certainly what you're trying to do. And the difference in a BCR and I guess an MPV is to try and capture that -- as much of that as we can, but know that there are difficulties. Certainly, some of the rural aspects and accessibility aspects are not well-measured at the moment.

Just a quick point on road pricing. It surprised me because our trucking industry is really quite supportive of road pricing. It's split slightly, but all the people -- all the sort of big companies who know exactly where their trucks are see an immediate -- know how much it costs them every time their truck gets in a traffic jam, and therefore, strongly support having fewer traffic jams.

Some of the smaller operators who find that bit too difficult to understand object more because they feel it more as just a kind of tax. Well, if

people know what to expect, then our sense was the trucking industry was much happier with responding and having slightly less congested roads was a good thing. So, it's just different view from the industry, which is interesting.

MR. KATZ: The next event we're going to bring over the head of the British truckers association.

Questions? Back here? Yeah, right there. There's a microphone running around.

MR. GUZZETTI: Art Guzzetti from the American Public Transportation Association. I think it makes all the difference in the world the time frame. I didn't hear that addressed specifically, but you know, measuring the benefits over the short haul versus the long haul, I would be one that says we should have a policy that looks at the long haul type return on benefits. Comments?

MR. JONES: Just a quick -- I mean, we do BCRs for a 30 year period. And we're in the middle of a conversation about whether we should do it for 60

years and whether or not that's justifiable to go to 60 years. But in terms of kind of the UK practice, that's how we'll do it.

MR. SCHENENDORF: I think our commission report tried to look out 50 years. That's the system we have put in place today. I mean, one of the things we found was really that one of the problems today is a great deal of complacency. We are basically benefiting from the decisions that our parents and grandparents made in the 1950s to put a system in place that's served this nation very, very well for a long period of time.

And that system is aging. That system is -- we've outgrown it. And what we have to put in place is we have to look out 50 and 60 years and put in place for our children and grandchildren a system that will serve them as well.

MR. KATZ: I've got Scott.

MR. BERNSTEIN: Scott Bernstein, Center for Neighborhood Technology. Oliver, it seemed like productivity was being equated with travel time

savings somewhat in your first few slides and the model that you laid out. A lot of us in this room have been looking at a different definition of benefit, which has to do with cost of living reduction that comes from better transportation choice and so forth.

Is -- does cost of living reduction and cost of business expense -- you know, does business expense reduction directly actually fit into your model? It seems like the high cost of transportation, at least in this country, and for working families, it's approaching or exceeding the cost of shelter in the suburbs, seems to be a real issue. But I don't see quite how it fits into that decision making model.

MR. JONES: That's a good question. That's one of the early slides with three kind of turquoise boxes, and I think what you're trying to say is just sort of the second box, which is kind of direct cost and time savings to families or to businesses. That's the solid bedrock first round effect, which you know

obviously played in terms of reduced costs. That reduces costs of living for families.

So, I think that's kind of first base. And we're talking about the productivity because that's how the economy recycles some of those savings that can make productivity impacts. But that's not to say that the bedrock and the big numbers -- a lot of the big numbers of BCR, are they sort of fundamental to cost and time savings to whoever is using the system at the time.

MR. KATZ: Harriett?

SPEAKER: Harriett (inaudible), District of Columbia Office of Planning. And one of the things that I'm struck by in your presentation, I love the economic focus, but I'd like for the other commentators to speak to this. In some ways in the U.S., it's as if we were England, we were the UK, but only London had any kind of transit whatsoever. And so every other part of the country sort of didn't even know what transit was, didn't ride it, you know, very much at all, and thought it was only if they couldn't

afford an automobile would they ever step on any kind of transit and not necessarily seeing that there are all kinds of economic benefits that come with having a multiplicity of transportation choices in a place.

We're looking very carefully in our region at the impact of the sub prime mortgage crisis and how very differently different places have faired, not just region to region, but also within regions, different jurisdictions and how, if you wanted to make a transit correlation, it seems like it's there to be made. And it's -- so, it's that economic arguments that we're not making any comments about how we could even get Americans to think about fleeing their cars the same way that they did 60 years ago running in the other direction towards them.

MR. KATZ: Thoughts?

SPEAKER: Well, I would just say that -- I mean, we really have adopted the mode neutral approach so we would never say anything like our goal is to move Americans to transit from car. That said, I do think that putting in place a road pricing system like

suggested in the Eddington Report has the dual benefit of accomplishing that goal while accomplishing several other transportation policy goals.

And I think if you frame it in that way, you have a much better chance of actually making it happen. I mean, the approach that we're taking is to say well, how do we maximize the efficiency of our investments and maximize the efficiency of the system? And the more that you have people paying the true cost of what it takes for them to use the system, I think the more you're going to see people shifting to modes that are more sustainable and have those economic benefits. So, it's a question of pricing it properly in the first place.

MR. KATZ: Jack?

MR. SCHENENDORF: I think that we looked at it from the perspective of you need to give people first rate options. Washington Metro is a good example. It's a world class metro system, and people use it. But we need to put world class transit systems in our cities, and people will use them.

I would be very careful -- cautious on the pricing. I mean, I think we -- pricing, I think it plays -- is going to play an important role in the future. But I think we have to be very careful about how we price, what the money is used for. There have been some very disturbing examples in the United States with the Chicago Skyway, with the Indiana toll roads, with what's being purposed on the New Jersey Turnpike, where we're talking about pricing not necessarily related to the cost of using the entity but on just what else the city or state happens to need.

In the state of New Jersey, they're proposing the price on the New Jersey Turnpike in order to pay off the debt of the state of New Jersey. I don't think the users of that road are going to see that as fair or related to the use of the road. So, some of these proposals that are out there for increasing the charges that people pay, if they're not done in a fair way, could undermine the very system that might bring about some significant efficiencies



if it's really related to road use and the cost of road use.

MR. KATZ: Harriett, you've set off something here. I've got Janet and then Anne.

MS. KAVINOKY: Just one quick comment. I think we have to go back to something in one of Oliver's slides, which is transportation is not always the solution to what you're trying to achieve.

So, we've got to do -- if the goal is to reduce traffic congestion, it's how does land use play into that, how do we treat developers who play into that. The other thing I would caution, and I'm hearing this a lot in sort of abstract conversations, is we need to get people to pay the true cost of transportation. Well, be careful if what you're really saying is we need to get people to pay the true cost of driving. If that's what you mean, say it. Because otherwise, you're going to get a backlash that says well, what's good for the goose is good for the gander, so people better start paying the true cost to fly or to take the train or to take transit.

I mean, it's -- and I say that only because we're entering a very political environment. And so, if it's about winning the argument and moving towards solving a problem, which is, for example, traffic congestion, then let's talk about solutions to solve traffic congestion.

MR. KATZ: Anne?

MS. CANBY: Just one point. In the government's response to the Eddington study, they make it very clear on the pricing that they are looking for combining demand management and road pricing and investment in public transport. So, it's not an isolated step on its own. It's really a package approach, which I think is a very important concept as we move forward to think about introducing something as radical as this on a wider scale in the U.S.

MR. KATZ: I've got Chris, then back there, then over here.

MR. LEINBERGER: Chris Leinberger here at Brooking, but also a real estate developer, so I'm

showing my true colors. But I will take the pledge to in fact be mode neutral. I think that's the big takeaway, even though you have to twist my arm.

But, a question on the cost benefit with the Eddington Study is what about the land use impacts of different transportation modes. We in real estate know that transportation drives development and that with 30 percent of the total asset base in first world countries being in privately held real estate, it has a tremendous impact.

How was that factored into one of the two boxes in your model?

MR. JONES: Extremely good question. The quick answer is that currently not particularly well because people -- the experts on this can't agree on estimating what the likely change the kind of value of the land is and to what extent that is additional or just a kind of transfer, what's going to transfer within the economy basically. So, that would have happened kind of elsewhere, so not particularly well

actually is the true answer in kind of BCRs in my view.

The broader answer goes back to a previous question about the importance of land use and understanding that as being crucial. And one of the things that is very noticeable anyway you go is your point, which is if you put something like a mass transit in, the people living around the stations house prices go up and real estate developers get involved.

And one of the things about the UK debate interestingly, and this may be a healthy thing or an unhealthy thing, is much more about how the government can capture the value of the increased land so that it can pay for those kind of benefits. But that's not to negate your first point, which is it's not particularly well understood. My guess is the answer is you just have -- it's quite difficult to strip out where there's a kind of transfer within the economy or is it a kind of genuine benefit that wouldn't otherwise be there.

MR. KATZ: Question?

SPEAKER: (Inaudible).

MR. JONES: It's mostly people are commuting from further away, so it's a kind of distance and people's commutes are longer, which is both -- delays are up but also they're traveling longer, but they are much -- the commutes are much longer.

It presents a number of difficulties. I mean, people's choices of modes switch, so the longer you get, the less well buses and light rail and walking or cycling work and you're into either a kind of car or commuter rail, and that's different. And it's quite difficult to kind of, as you spread out to the major city, it becomes more and more difficult for all of you to be living quite close to a rail station.

So, it does make it more difficult. It gives you a kind of governance problem, which is one of the slides I had, which was radically -- the governance unit doesn't work anymore because basically it's gone. Twenty years ago in the UK, people lived and worked in the city. They lived and worked in what

kind of looked and felt like the city. And now, it's much different.

And so we've seen some of our strongest growth has been in what used to be orbital motorways, which weren't really anything to do with commuters. So, around -- it was the M25 for those of you who've been to London and around London, it's hugely busy with commuters now because economic growth around that zone in which people traveling a very long way around. But, Birmingham has a motorway box, which 20 years ago was an intercity piece of infrastructure. It's now frankly a city piece of infrastructure. And that's -- some of our worst problems are on there precisely because the kind of governance and the equipment hasn't stayed up to date with its radical increase in kind of distances.

One of the things that are interesting is, of course, people are traveling a long way, but it's quite interesting if you go why are they. Part of that is a success story, in particular an increase in things like female participation post having children,

which is you've got two workers. Now one of them changes jobs. Well, they don't want to -- the other one doesn't want to move because the kids are in school or someone else is in a job, and so they feel they have to travel a long way, so huge numbers in those stats between families and how they want to travel.

So, this is a really good thing you're trying to support here, but it poses problems for people who aren't moving as much because there's three or four different reasons to be in a town rather than simply the one sort of male breadwinners there might have been 20 years ago, in which case you could live much closer to jobs. So, it reflects social change as well. And throughout its years, we've just, in every way, we haven't kept up with that in the UK, partly because it's (inaudible). That flexibility has been a very big and quick change in the UK economy.

MR. KATZ: A question over here?

MR. MARING: Gary Maring, Cambridge Systematics. It strikes me that you're way ahead of

us on the economic analysis by your presentation and getting into some of the second order effects like business efficiency and international trade, as well as the urban agglomeration effects. I don't think we're there at all in this country.

You seem pretty confident and you quoted -- you mentioned one benefit cost has gone from 1.9 to 2.9 on the rail system. Are you -- you really have the tolls that are enabling you to do that kind of benefit cost analysis, including the second level economic business as well as the residential agglomeration?

MR. JONES: I think the fair answer to that is the UK community, both kind of public sector and the kind of private sector and academic economists who deal with it, would say that some of the things they feel very confident about. Other things they feel pretty confident about and agglomeration is something -- there's sort of 10 years of history and quite a lot of evidence for it now. And other bits, they feel



much less confident about, some of the kind of trade effects.

And one of the things we had out there was the kind of competition because of our competitive intensity effect. Now, theoretically you'd think that any transport improvement would enhance competition and the competition effect would have a kind of productivity effect. Now, we asked our academic advisors to kind of say what they thought about that, and they kind of came back and said we can't really tell if there's any evidence here, so we said we won't put those kind of numbers in the system, whereas broadly is academic agreement on the kind of agglomeration thing.

So, it's a kind of -- as I say, it's an evolving picture, some of which people understand well now. Sometimes it's for six months and sometimes it's 60 years and others which just kind of ride on the cutting edge. And competition and trade effects are the two areas where we feel we understand it less and, therefore, we put much less emphasis on those numbers

if we do include those numbers in a particular kind of project.

MR. PUENTES: Just quickly, I wanted to point out something that I didn't realize until today until I talked to Oliver, but the benefit cost analysis that they do for all these projects, I thought that they had done it with the Eddington report. But what they had done with the report, and correct me if I'm wrong, is that they just collected the ones that were already done.

So, this wasn't Eddington requiring or the Eddington work requiring that we now do this. This is something they had already done. They just collected the ones that they had done, and that's why you saw the slides of the smallest projects and things like that. So, it was not such a leap to go from where they were to what was in the report.

MR. JONES: The only thing we did was things about some of the agglomeration stuff we added on where the projects were five years old and hadn't included it. So, we added on some of the kind of

extra effects that we thought important, the price for carbon, which until two years ago in the UK wasn't a factor. We added those things on, but once you've got the basic BCR numbers, that's a simple computation.

MR. KATZ: We've got Stewart and then a couple more. Here's another one.

SPEAKER: I wanted to follow up. You mentioned some of the spreading out trend was a socioeconomic phenomenon. I think things Chris Leinberger is looking at, Chris Nelson, who just left, has looked at is the changing demographics in the U.S. Going back the other direction now, more empty nesters, more retirees, more young professionals, and others coming back to cities, towns, walkable places, which brings me sort of putting -- asking Jack a question about his estimates of need and so forth.

Do they account for both these changing demographics, energy prices, as well as the benefits of the land use changes in terms of affecting the overall need for transportation infrastructure and the type of infrastructure we should invest in?

MR. SCHENENDORF: Yeah. We tried to take all of those things into account in our studies, but the gross numbers that we came up with, while I think they're in the ballpark would not actually drive the decision making. The decision making would be driven by the performance based programs that we would have in place that then would generate the investment that was necessary with the costs that were necessary.

We think the numbers that we gave you are in the ballpark for what those will turn out to be. But the performance based planning of these systems to meet the performance targets that were set will certainly take all of these things into account, as well as population growth, economic growth that's anticipated in that area out over a 40, 50 year time frame.

MR. KATZ: A question back here?

MR. GILAND: Good afternoon. Eric Giland, Washington Area Bicyclist Association. I've heard the phrase modally neutral being thrown around a bit. A colleague of mine did a key word search on the

commission's study and found that the word bicycling came out only once. And considering in Washington, DC, some neighborhoods, we do have -- we do see 10 percent of people commuting to work by bike and considering trip distances, 40 percent of trips are less than 2 miles but 80 percent of those are made by car, it seems like there's a lot of opportunity for growth for people to walk and bike to work.

I was wondering what the panelists felt the roles of those two modes were in the future of transportation in the U.S.?

MR. SCHENENDORF: Well, to start with the commission report since you mentioned that, I mean, again, it gets down to the fact that ours is a performance based approach. And I think non-motorized transportation modes and bicycling and those types of transport methods would all be part of the solution.

If you just look at the program that we have for metropolitan areas of a million or more, to reduce congestion by 20 percent by 2025 we would expect that increased bicycling and other non-motorized uses would

be part of the plan that was developed to meet that performance standard and then would be part of what was funded on a cost to complete basis for that metropolitan area, as would a significant increase in transit, as would the intercity passenger rail would be part of that, as would additional highway capacity.

In the modeling that we did, we did not find any model that showed you could solve the problem with one solution, with one mode, with highway capacity regardless of how much you put in it or transit capacity, you needed all of them working together, including the non-motorized in order to make it work. And even then, it's a challenge. It takes an enormous investment in all of those modes.

MR. KATZ: I think everyone is going to get in on this. So, I'll do Josh and Rob and then we'll have Oliver.

MR. SCHANK: When you pose that question, the question is not so much is there a role for bicycles. Everyone agrees there is. The question is what's the national role in promoting a role for

bicycles. And certainly my perspective and the perspective on our project is it's not really for the federal government to tell individual metropolitan areas how to design their plans. It's the role of the government to say these are the performance outcomes that you have to meet, and however you do it, feel free.

You have said very specifically in Washington, there's been a large role that bicycling can play. And if the Washington metropolitan area wants to pursue that as a policy, I think it's the federal government's role to enable them to pursue it. But it's certainly not the federal government's role to go out there and tell Los Angeles or any other metropolitan area, well, bicycling is the way you're going to solve your problem.

MR. KATZ: Anne, did you have a comment?

MS. CANBY: Just quickly, one of the things that struck me in Oliver's report, and also is a fact in the U.S. as well, is the high percentage of trips that are very short in length. And this opens up

tremendous opportunity when you combine that with the performance basis, assuming you get the right performance criteria. Obviously, that's a huge factor. It will automatically lead to a better array of choices. But I think we can be much more explicit than we have been to make it clear that we intend for it to be a broad array of choices.

MR. KATZ: Rob and then Oliver.

MR. PUENTES: That's basically what I was going to say, but when you really do a proper benefit cost analysis, when you have the right metrics going in -- and I think that Oliver had the slide that showed that small is beautiful, that showed where the costs for the projects and the benefits that came out -- the cycling projects score quite well.

So, again, not trying to trump one mode over another, but some of these smaller projects, if we do the right measurements, really can come out very well in these kinds of analytics.

MR. JONES: That was the point I was going to make. I'd say don't be scared of listening to the



numbers. Don't jump to, well, that's one reason we can't play on the BCR gain. I think you can and, in the proper place, it might be the best solution actually. It's great.

MR. KATZ: I've got one back here, then one here.

MR. REPLOGLE: I'm Michael Replogle with Environmental Defense. A question for Oliver and the other panelists, I think the key question about this performance driven investments approach is one that does demand some kind of standards and quality assurance for how you go about measuring against criteria. And we certainly have widespread abuse in this country and in other places of transport models, for example, to torture them long enough and they'll tell you whatever you want.

And so the question I have is, in the UK, do you have a standardized methodology nationally that must be used for project appraisal that then informs a fair process of determination in which you take some of these knock on effects, like induced growth and

land use, that account of non-motorized transport benefits?

And secondly, after applying these to decide about making investments -- that would be a huge step forward -- but do you foresee moving towards performance based contracting and funding that's outcome influenced so that you look back at what you're getting from the system and then make contingent future funding streams to either public or private entities that operate and maintain infrastructure contingent on their delivering on certain performance goals?

MR. JONES: Sort of two parts to that answer. The first is yes, we do. The Department for Transport has a thing called the NATA, which is the new approach for transport appraisal. It's actually about 10 years old, which we are currently doing a formal consultation on the kind of detail of. So, that is the rules by which we expect people to play. And we kind of help because I think the DFT is acknowledged as being the best and knowing the answers

to the questions. And we used the best academic experts to produce it.

So, anyone who is spending, in this case federal money, has to produce things along those lines, and we check it all in-house and say we're happy with it. It's a bit easier because even money that's being spent at the equivalent to the state level, we've given to them because that's the way the current taxation system works. So, it's our money anyway, so we can assist on playing by our rules, which is easier undoubtedly.

We have a much shorter tradition of looking at what actually happened and so on and whether people have performed well. And that's both in what did the project do and what it said in the analysis, I guess. It was an interesting question, and it doesn't always do that. It was good to learn and actually leads back to the kind of BCR and the evidence behind the BCRs.

Whether or not we'd use that to -- I mean, it's difficult at a local authority or state level to change how much money they're getting. But certainly,

what we are saying is that the quality of the money you're bidding for, you have to be bidding for very high BCR projects. Whether we could blame in 10 years time that guys in the northeast would get less money because they made bad decisions 10 years ago, politically, I don't know whether we could do that.

But we can certainly say we can give you less money because you haven't been bidding for projects that are clearly a high BCR, subject to having this centralized control, so that we do believe, the point I made earlier, we do believe in the numbers. We're not just accepting them and so on and we don't torture the numbers big time.

MR. KATZ: Janet?

MS. KAVINOKY: I think, Michael, you hit on something that is a huge issue, which is there's performance measurement and then there's performance management. If you look back over all of the predecessors to the National Commission over 30 years, the vision statements for this country are all very similar. We want a safe system. We want it to be in

the environmental context. We want mobility to be good.

But the differences in a lot of those other reports were, okay, that's great, now, here's what we're going to do. We're going to do highways and we're going to do transit, and we're going to continue business as usual. And I think the danger we have going into the next surface authorization period is we're going to say we need a system that is safe and environmental and blah, blah, blah and now we're going to do the same thing.

Oh, and by the way, we're going to measure performance and we're going to make everybody collect a whole lot of data and we're going to do charts, and it'll be great. But we aren't going to actually tie outcomes in. And, so, moving forward and instituting these kinds of concepts involves not just measuring but actually managing performance.

MR. SCHENENDORF: I think our commission report anticipated that you would first develop the standards in a way that all levels of government and

stakeholders would have a voice in what these standards should be. But then, one of the key aspects was accountability and that you would have to have a system for measuring progress or lack thereof of meeting the performance based goals. And there would be rewards and disincentives for people whether or not they were making progress toward meeting these goals or not and that the significant contribution of federal funding that we have, which would be a significant component of it, would help drive that to ensure that people were actually making progress towards meeting the performance measures.

MR. PUENTES: I was just going to mention quickly that there's a interim step here that we don't mention. Even if we embraced everything that they were talking about, we don't have a lot of the data and the information. I mean, the information available in this nation to make these kinds of decisions is abysmal, quite frankly.

So, even if we wanted to do everything that they were talking about in this report, we have a huge

learning curve that we have to overcome. As Janet mentioned, we're just going to do the same thing and then collect a lot of data.

Maybe perhaps that's an interim step behind getting to something that is more this way, that if we can at least start collecting the data and start doing some of the analytics, maybe as an interim step, then we can get to better decisions down the line. But, we don't even have the ability to do that yet, which is a big issue.

MS. CANBY: Janet, I think, makes a really good point about the lofty policy and then a hollow hole afterwards. We might -- this is radical, but that's okay -- think about the factors by which funding is distributed and embed in those some performance incentives. Why do we distribute money on the basis of how many miles we drive if in fact it's in our national interest to both spread out how we use all of the various forms of transportation?

Why don't we measure how many miles we walk or how many miles we ride a bike or how many miles we

ride transit or how many miles are on freight rail as opposed to road freight, et cetera, et cetera? You could go on and on in terms of a different framing for how money gets distributed after you think about what the program structure itself ought to be.

MR. KATZ: Quick question here.

MR. KASSOFF: Hal Kassoff. Let's assume for a moment we figure out how to come up with the right measurements and we actually can collect the right data. My question is whether in this country we are prepared for the outcome of an outcome driven performance based on a modally agnostic approach, which I compliment. I mean, anyone who's spent their career in rational transport policy and planning has to salute what's been done in the UK.

The question is -- and it really gets to Jack's description of the commission report -- if the results indicate, as they probably would, that we do need high speed rail in this country, we do need to improve our transit systems and maximize their use and provide incentives for bicycling and, in effect,



attract as many people away from single occupant automobiles, if after all of that we implement pricing, there's still a 20 percent, whatever the number is, that says a system that was initially planned 60 years ago does need an expansion of significant, albeit selective capacity, mostly on the existing system, a few along new corridors that didn't exist half a century ago, are we, Michael Refflogle, are we Anne Canby, are we prepared for that outcome for significant expansions in capacity? Or are we looking for a way to fend off what the hard realities of the needs of the highway system are even after all of the other measures are taken, as Jack so eloquently described?

MS. CANBY: All right. Hal, my former colleague and friend, you and I know from our days at ASSHTO that the idea of measuring performance and holding people accountable is not the most welcomed concept. However, my sense is that the public in this country is way ahead of most of the political

operatives and the agency providers in wanting to have a different balance and a different mix.

And it is for the life of me beyond my ability to figure out why they would want to put more money into a system that they perceive as only going to produce more of the same, which they're not very happy with. So, it strikes me that in order to get more resources, we have to present a different picture of what we're going to produce and provide for people.

If we can put that story together right, we'll be able to raise money and it will probably include, as Jack has said, more of everything, different relationships and balances because we have some way under funded parts of our network and some that have been better funded over time, but are in need of huge amounts of investment going forward.

But until we can put together a coherent story that tells something that people are ready to hear, I don't know why they would ever want to support more money for infrastructure.

MR. KATZ: Oliver?

MR. JONES: Two really quick reflections about that. The first is we're lucky in the UK in which there's a very strong aggressive media that support our public drive against this kind of waste. And so, when we do build something that doesn't stack up, we get criticized to no end for it, even if it's in people's local backyard and they want a nice big new shiny bridge, they hate it here because it's money they could have spent on something else locally.

So, we're kind of lucky in that there's no particular political mileage in projects that waste money. I think people think about the millennium dome. I mean companies got stuck for four years because it wasn't a great value for the money. And it cost three cabinet ministers their jobs. I mean there's nothing the Brits hate more than the government wasting their money. So, we're lucky in that.

That said, the picture you painted of how the priorities might well change but you're still producing the same thing, I think is true of the UK as

well. And the UK is very similar in that people like their cars and all the personal freedom and comfort and safety that it offers as well.

And my guess would be, like the U.S., if you asked individuals whether they want to get out of their cars, they'll say no. But if you ask them what the future of the city they live in looked like, they might start giving you quite a different answer to the question. So, you might throw out what are we going to do to sustain your city? Well, I don't like car dominance. I do think we need more.

And the surveys we get are much more like that. So, one of the things we think is sensible is if you start having conversations about what is your city going to look like in 15, 20, 25 years time, instantly you do start talking about things like mass transit options because people don't like living in places dominated by the car. But of course, those are the people that have to get out of their cars. But then you can start feeding into the debate about,

well, actually that's going to mean changing behaviors.

Just to end on that point -- one of the things that Rod used to say when was asked about the kind of road pricing point was, look, I know you don't like road pricing, but you can either pay a lot more tax and have a lot more roads and all the things you don't like about that or you can have a lot more congestion that you sit in each day. And frankly, I can't think of fourth options. I'm telling you these are the best of the three that face you.

And there's not much of an answer to that question. There's no perfect answer on the roads. And if you can start portraying to people and giving them those choices, but also I think talking about changing the way you talk about things, I think it helps to put people like their car or they like their rail system or they like cycling or whatever it is, but if you talk about their city, well, they like their city too and they understand that actually they'd like to be a mixture of things in their city,

then people are more likely to engage in more nuance in sophisticated debate that I guess everyone in this room is trying to get people to.

MR. CAPON: Ross Capon, National Association of Railroad Passengers. I get nervous when Joshua says the feds shouldn't tell Los Angeles you've got to do bicycles, because that gets us back to Anne's point about the devil is in what the performance criteria are. Because if -- I think it's definitely not appropriate for the feds to say it's okay to leave bicycle riders in Los Angeles out in the cold.

Paul Wyrick, a noted conservative and transit activist, and one of Jack's fellow commissioners, 8 years ago told our board that it was a solid conservative value to give people choices. And so, hopefully, the criteria that we look at will give people choices about how to travel.

I think Jack is right that getting the politics of putting in road pricing are going to be very dicey if the overwhelming majority of people that you're pricing don't have a realistic alternative.

So, in a sense, we say democracy is better at giving carrots than sticks. Carrots here would be the transit and probably have to come first in many places before you can do a lot of the road pricing that people would like to do.

Any reaction?

MR. SCHENENDORF: I would just say I agree with everything that you said. I think it's more than just on the road pricing of saying that you've got to provide the alternative first because I think you do. But certainly, you need to price in a way that's related to the use of the facility and that the proceeds go to dealing with the problem on that facility. And again, I get back to the disturbing aspect that some of these deals that have been made recently where the charges have nothing to do with the use of the road and instead go to other purposes. I don't think people will stand for that.

And I think there's a danger of losing all these new financing techniques if the public revolts against them because of the fact that they're paying

what they will view as exorbitant prices to bail out the state of New Jersey and to have the Governor standup there and say that this is acceptable because it's the commercial and out of state people who will be paying it. We in New Jersey won't be paying it. I don't think people will tolerate that.

MR. JONES: I couldn't agree more with that. The cost that they're putting on others in terms of congestion and the environment, there's no wider thing. I think that's really, really important for public acceptability. One of the things Gordon Brown said when we finished up the report was that he supported road pricing quite strongly personally. But he said the surest way we'll kill road pricing in the UK is by presenting it as an actual tax. And we make sure we don't complicate the two. We need to sell road pricing basically on -- this is a UK angle and it may be different here -- the benefits it has to the people who'll use the roads, not as this is a clever way out of a bit of a fiscal hole.



And one of the points he made -- and I agree with this very strongly -- he hasn't made it publicly -- is that, ultimately, the way of getting it off the ground is probably going to be saying we're going to replace fuel taxation, the gas tax, with congestion pricing. Because there is a government proceed from congestion charging that it's just kind of extra money net of the benefit that is worthwhile, so actually saying well, we can reduce the taxation and hugely reduce the level of taxation on the motorist and replace it with a charge which is directly linked with the actual cost of motoring in terms of congestion or environment, whatever it may be.

He wouldn't say that publicly. But I think that that is true. You won't be able to run the debate without basically saying you're going to get rid of taxation. So, I know that it's slightly contradictory. You see what they're trying to get at, which is not have a different type of debate.

MR. KATZ: Josh?

MR. SCHANK: Just to respond a little bit to both what you and Jack said, I think one good way to kill road pricing in this country is to equate it with asset monetization. I think we need to not confuse the two of those. I mean, there's road pricing as a policy lever and then there's road pricing as is been used in asset monetization and sale of assets. And I think those are two different concepts.

But also, to address the bicycle issue, just to clear up. I'm not saying that Los Angeles wouldn't choose to meet their performance standards by using bicycle lanes and perhaps they could do it effectively. But as you said, the devil is in the details and the question is how are you creating those performance standards and are you creating them in a way that allows a metropolitan area like Los Angeles to use bicycling to accomplish their objectives? And that's the key.

But on the other hand, you don't want the federal government stepping in and trying to create a blanket policy for metropolitan areas that goes across

the country because metropolitan areas are very different from each other. And each of them needs to have some flexibility to tailor their transportation solutions individually.

MR. KATZ: Did you have a question? One last question because we told everyone we'd get out by 2:30.

SPEAKER: Sorry. I know I've taken enough fair time already and so, I have the enviable job of just also getting to think nonstop about national transportation policy. I also think about climate change policy. And so, to me, one of the big differences between the Eddington Report is obviously that you factored in a price on carbon.

So, for you, Oliver, my question is can you tell us a little bit about the different prices on carbon that you used and how different projects faired based on that, maybe a little insight into our future, and then for some of our panelists, what you think the nation's dialogue on climate change is going to mean for a national transportation policy.

MR. JONES: We went to our friends at the Department for the Environment and said: what should we use? We thought we'd be uncontroversial. For what it's worth, the central price was 70 pounds per ton of carbon, but all we did was tested out to 140 and 70 was the latest kind of environment assessment value. I think they redid it about six months ago; they went to 90 pounds, I think.

I don't want to get into the way about whether that's right or not, but we use what other government experts are telling us to use. And we just put that across the board.

It does what you'd expect it to do, which is things like aviation expansion. Cars are using more carbon and therefore polluting more. But what it doesn't do is sort of rule out anything that increases carbon. And one of the things we did in the follow up is, by backing carbon trading quite strongly, to say the narrow economic case for expanding Heathrow Airport, which is so big in the UK economy, is the reason to do that. Because the overall economic BCR

is so high, even though you've factored in the price of carbon.

But what it does mean is that something else won't stack up in the system and you won't do that, and that's why you make your carbon saving, which is a really difficult message to get across. But as a question about policy and economics, it stacks up. People will debate, I think, the right price of carbon until the cows come home. And there's a segment of the community that effectively has an unlimited price of carbon. That's not where we are, but it's certainly one person's view.

MR. KATZ: So, are we connecting the dots between transportation and climate?

MR. PUENTES: I think on the federal level, we have a long way to go. No issue has gone from zero to 60 as fast as climate change here, but still, even though it has moved, it's not connected in the transportation conversation yet. This is where, I think, as Josh was mentioning, where metropolitan areas really need to take the lead here. And we do

see some innovations that are bubbling up. And the mayors all across the country are really getting behind climate change and making those connections on the local level, and the metro level, in ways that are just not happening on the federal level yet. Spokane, I think, is just one place that's really making explicit this connection between carbon and transportation in these other investment decisions.

So, listening to what's happening across the country and how that information is going on in the federal level and then having the federal government lead -- I mean, this is a really an area where we have to have a strong federal role as Janet was mentioning.

MS. CANBY: I think we're also at a stage, Rob is right, the connection is not yet totally there, but it's not there in the public's minds either, their transportation behavior and climate. I don't think that there is a huge ground swell from a climate standpoint among the public to stop driving. Maybe places like Portland or California, where they're already way out ahead of the rest of the country, but

I think in some survey work that we have done, there is not a real close connection because most of the discussion in this country has focused on the technologic side of transportation or the fuel side, the vehicle or the fuel, not so much how much we drive.

And clearly, there are efforts underway now to bring that into the climate discussion. We haven't got to the point where it's ready to be brought into the transportation discussion yet, but it clearly has to be part of it. And I think the Eddington Report makes it very clear, that the sustainable development of which climate is a central part has got to be part of any policy going forward.

MR. SCHENENDORF: I think our report basically lays out a framework that is going to meet many of the challenges. I think the performance based programs that we have developed are going to lead to, we believe, the kind of transportation systems that are going to help solve, or be in line with, what we need to do in global warming. I think we are

proposing to increase the market share for freight rail, which is an enormous undertaking.

I had no idea of the difficulty of trying to make that a reality, but that's what our report is premised on. Also, greatly expanding transit, greatly expanding inner-city passenger rail, and really minimizing the amount of additional road construction that one needs, while recognizing that there's still going to be more. But you have to do all of these things. We have 150 million new people coming to the United States in the next 50 years. We have an enormous increase in freight coming. If we don't do all of these things, we will not have one of the leading economies in the world, and we will not have a nation where you can move around. And we don't have a choice.

We've lived off, as I mentioned before, what our parents and grandparents did for us. And if we don't do the same for our children and grandchildren, they're not going to have the same kind of economic growth that we've had in this country and the same



kinds of jobs that people want, the same kind of good paying jobs, and the ability to be mobile, to visit families and do all the other things that you need to do.

So, we need to do all of the above. We do also recommend a substantial increase in funding for research for replacement fuel so we can transition away from carbon-based fuels as quickly as possible.

MR. KATZ: So, we're about to send Rob and Oliver on a road rail and air tour. I don't think there will be any bicycles, but we don't know. But there will probably be a lot of walking, New York, Chicago, San Francisco. And then Oliver was requested to come up to Portland so you can see the Portland model.

I just want to thank Oliver, first and foremost, and the panel.

I've heard this presentation before. I sort of turned to Sharon and I said, the second or third time you hear it you begin to hear even different things. Obviously, what you're beginning to hear is

the sort of undercurrent of how the hell do we manage the politics in this country. It's all politics all the time this year.

But interestingly enough, this may be one of the first political seasons in the United States where candidates for the presidency actually talk about transportation and infrastructure, hopefully in this sort of broader context.

So, thank you very much for enlightening us, and this has been an excellent forum.

\* \* \* \* \*