Six innovative leaders debate the future of getting billions

Dale Moser

Michael Replogle

Christopher Lee

How to Keep th

of people, and an infinite amount of stuff, from here to there

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Fix This/ Transportation

Keeping people and goods moving safely and efficiently–whether by land, sea, or air–is one of the great challenges of the modern age. Complications include aging infrastructure, sprawling cities, shrinking budgets, and the predictable unpredictability of human behavior. To find out how to fix transportation for the 21st century, *Bloomberg Businessweek* Chairman Norman Pearlstine gathered an all-star cast. Their conversation has been condensed and edited.

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Michael Replogle
Global policy director and founder of the Institute for Transportation and Development Policy

Dennis W. Archer
Former mayor of Detroit and co-chair of the National Transportation Policy Project

Christopher H. Lee
Founder and managing partner of Highstar Capital

Balaji Prabhakar
Professor at Stanford University

O.P. Agarwal
Senior urban transport specialist at the World Bank

Dale Moser
President and chief operating officer of Coach USA

In 2008 a quarter of U.S. scheduled flights were delayed. Traffic congestion cost the European Union more than 1 percent of gross domestic product. Less than half of all container vessels arrive in port on schedule. And 20 percent of CO_2 emissions are the byproduct of transportation. How did we get into this mess, and how bad is it?

REPLOGLE: People today often view traffic as they view the weather, something we can't do anything about. I think we're about to come to a point where we start to manage our transportation the same way we manage our electric utilities. That can be transformative for our economy and good for our environment and give people a wider array of travel choices. But that transition–from our current unmanaged transportation system where we have free roads, free parking, and we pay for it by waiting in queues all the time and suffering delays, to a system where we have to pay but we get higher performance–it's difficult.

Dale, you've been running a company that challenges the presumption that the only way people will get from city to city is by car. How big a business can this be, and how important a contribution can it make to dealing with our infrastructure issues?

MOSER: Six years ago when we came up with the concept of intercity bus

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Moser

service, express service, I would have said that trying to get Americans out of their automobile was going to be a challenge. But we've found it to be just the opposite. We supply all the capital, and we run it on infrastructure that already exists: our highways. We've brought 13 million people out of their automobiles and into the bus. And the technology on our buses is giving off 10 times less CO_2 than the average automobile. Those are all federal statistics. So in the short distance, the four- to eight-hour trip, the bus is a viable alternative in North America.

Does it suggest that spending on rail is misplaced?
MOSER: Why not give one-tenth of that money to the intercity bus companies that are out there for more capital, and I'll invest in increasing the routes and still continue to make it affordable for people to move.

Why have public-private partnerships been so tough to do in the U.S.?
LEE: Everywhere else in the world the era of public-private partnerships has been around since the '80s. I mean you can't fly to London and go through a publicly owned airport. Every time I go to Shanghai I'm terrified for the future of my kids, because the infrastructure there is just incredible. People are dying to invest money in infrastructure in the U.S. We need $2 trillion to $3 trillion to upgrade our infrastructure. [But] we've run up an environment where people in the U.S. think it's for free. "It's my God-given right to go on a bridge and not pay for it."
ARCHER: The National Transportation Policy Project agrees that it's important

to have a public-private partnership. On the other hand, I would say that when you talk about how we take things for granted and think things are free, go to Europe or the Caribbean Islands or Asia and fill up your tank of gas, and find how much you're paying per gallon vs. what we pay here. I mean the gasoline tax as it was envisioned and created was to help pay for the infrastructure. It no longer pays for it. It's underfunded.
REPLOGLE: There's a tremendous opportunity to operate what we have more effectively. We have a huge publicly owned infrastructure asset in our roads, our public transportation systems, our ports, our airports, which in many cases are poorly performing and draining taxpayer dollars. There's an important role for engaging in public-private partnerships that manage those systems for higher performance to deliver better value for customers. The crucial thing is that transportation is part of a system; all too often we do these public-private partnerships and transport these one-off projects on a particular road or a particular bridge, and then we lose the capability to manage the system effectively. The public sector has an important role to play in setting the goals for our transportation system and then engaging the private sector to help achieve those goals. Places like Colombia and Singapore and Stockholm and the U.K. and Canada all provide examples of this kind of approach.

Are there things being done beyond public-private outside the U.S. that we can learn from?
AGARWAL: What we have been doing over the years in many parts of the developing world is providing infrastructure to catch up with demand. The time has come when we need to start looking at managing this demand. And a number of things that different cities around the world have done would really be lessons for others. One is when you have a certain bit of infrastructure: It provides the same capacity throughout the day, yet when we use it we have peaks and off-peaks. What can we do to try and smooth this so that off-peaks are better used and peaks are less used? Michael said it has to be a system as a whole, and it's very important that

the system is conceptualized and used as one single system.
PRABHAKAR: But this peak and off-peak sort of phenomenon is almost unique to road transportation. My area of research is in computer networks. We view congestion as a given—it's going to happen. Congestion is an 80-20 type problem. In other words, if you get rid of 20 percent of the load, then the congestion measures will drop down potentially 80 percent. The question is: Which 20 percent is going to yield the road at the peak time? Somebody may value time more and somebody may value money more, and there's a trade that's set up. Scheduling people is just a nightmare. If you look at urban mobility, it really is all of us going from the same place in the morning to the same other place in the office and then the reverse commute in the evening. So it's really like a market. It's a question of trying to incentivize people to just give up the road one day of the week in the peak time. So you take an off-peak trip once a week, and somebody else takes another day.
REPLOGLE: One of the places I've learned the most from is Singapore, which has increased its public transport mode share from about a third to about two thirds and reduced the amount of car traffic in its central city area by more than half. It's done that at the same time incomes have increased more than tenfold and car ownership has risen more than 300 percent. The price of the congestion charge is not in the hands of politicians but of the technocrats who administer the system to deliver performance for the customer. And so motorists who have to pay more to drive than we do in America don't

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Prabhakar

spend a lot of time stuck in traffic; they get where they want to go quickly. And people in Singapore have a world-class public transport system in which the majority of trips are made on buses that operate on surface streets and don't get stuck in traffic because the traffic is managed. To me that's a high-performance transport system.

Singapore is also 5 million people. It's a relatively small petri dish. But I understand they also are quite good at predicting traffic, and that they've invested heavily in the technology to do it.

REPLOGLE: That's right—and they're working with IBM and a number of other technology providers to anticipate traffic before it happens. So they can manage it, they have real-time incident management; if there's a crash somewhere, they'll have a tow truck out there prepositioned to clear that quickly; they use a whole toolbox of techniques. They also use the revenues from their car-charging systems to help provide world-class public transport and to ensure affordable housing close to public transport. So they integrate the urban design and planning with transportation. You really need all of those pieces brought together if you're to have an effective public transport system that works for everyone.

PRABHAKAR: We are actually launching by Dec. 15 a public transit loyalty program in Singapore. It's fashioned after a frequent-flier program. This is for 20,000 participants. The goal is to try and make people more loyal to the public transit system, but also to take off-peak trips: You get 10 credits for a 10 kilometer trip in the peak time; in the off-

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Replogle

peak time you get 30 credits. So by doing this you're sort of signaling to people, please use the off-peak trains and buses because they're running at 20 percent or so occupancy, whereas on peak it's the opposite.

Are there significant differences between the loyalty programs that you see as part of public transportation's future and congestion pricing? Does one affect behavior differently than the other?

PRABHAKAR: People perceive anything that pays them as more friendly. If you have a congestion-charging scheme, you can't exempt anybody. I mean, just aside from the issue on fairness it defeats the purpose. With incentive mechanisms you start with 10,000 people or 100,000 people, just inviting them to participate, and then see how the behavior shifts and then scale it up.

When do we get to a point where the environment becomes a constraint on industrial growth?

REPLOGLE: I think we're seeing now in developing countries the externality costs of transportation, the air pollution, the traffic accident costs, the public health, the congestion costs, and the like. When you tally all those up, they're in some cases amounting to as much as 10 percent of gross domestic product related to just these external costs, and they're disproportionately borne by low- and middle-income people. We're already seeing 1.3 million people a year dying in traffic accidents worldwide and probably even more dying from air pollution related to traffic. Those numbers are going up across the world. I think this becomes more and more of a salient political issue that needs to be addressed by looking at how to better organize cities to manage traffic and cut pollution. There's a new paradigm that's emerged in the last few years to deal with this whole area of sustainable transportation.

MOSER: The whole key of what we're talking about here is change. We're going to have to change our expectations as a society and as a culture. And that needs to be led and driven, and then everybody needs to get on board with it. That's the big challenge. But it can be done.

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Archer

Chris, you have a perspective that's a bit different from the rest of the panel in that you deal with ports, you deal with airports, and one cost that shows no signs of abating is security. Can technology play any role here?

LEE: Technology is playing a very important part in improving the security of our ports. We have these new smart cards called TWIC cards which embed data about who holds the card, because clearly a big job that we have is keeping the bad guys out of our ports. That's probably one of the greatest public-private partnerships there is, because the Coast Guard is responsible for security of the ship until it gets to the berth, and the Homeland Security Dept. is responsible for the security of all our ports. Our job as the private owner is to man the perimeter fence and keep the bad guys from getting out. Every container that comes into a U.S. port is checked for radioactivity, and technology's helping us. Because up until recently kitty litter has radioactivity in it, so kitty litter and all sorts of things would set off these nuclear bomb scares.

ARCHER: Could you imagine what the American populace would learn if only Congress would begin to have hearings on transportation and come up with legislation that would allow us to be as progressive as other countries? Once they address this issue, I am absolutely convinced that we will be miles ahead given all of the interest that's been expressed here. Ⓑ

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