

Transcript

Title: Steering our cities towards 'zero' - Hype, hope or reality?

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Hussein Dia

All right. Good morning, everyone. If we can get back, thank you. So welcome to this panel where we will be exploring the changing landscape of urban mobility, the challenges facing our cities, and the opportunities and emerging trends, if you like, that are set to shape the future directions of urban transport.

So I'm Hussein Dia, and I am a professor of future urban mobility at Swinburne. And I'll be moderating this discussion today. With me today, we are delighted to have a panel with a diverse background and also views on the topic that we will be discussing.

Nicholas Gruen, CEO Lateral Economics. Patricia Lavieri, lecturer in transport at the University of Melbourne. John Hopkins to my left. John is with us. He's a theme leader in the future urban mobility program in the Smart Cities Research Institute. And Mark Burry, professor of urban futures and director of the Smart Cities Research Institute.

So welcome. And thank you for making the time to be on the panel this morning. So the way we will run this is I will start by providing a short introduction and then ask our panellists to respond and share their insights and views about the topic. And then we will open it up for questions from the participants.

So the topic we're going to be talking about today is the one on the screen. And essentially, our cities are facing a large number of challenges when it comes to transport. For example, traffic accidents, pollution, congestion, and our high dependence on private vehicles. So our topic is around this proposition on the screen and the triple zero vision that has been advocated in many circles in recent times and whether it is actually a lot of hype or hope or, in fact, we are already making some progress towards achieving this.

So if we look at the challenges, the first one is traffic accidents. So around the world, we lose 1.2 million people to traffic accidents every year. Just to put this in perspective, this is around 3,000 people every day around the world. To put it in perspective, this is 15 aircrafts, each with 200 passengers on board, falling out of the sky and killing everyone on board. And this is every single day.

Clearly, we don't accept this in air traffic. And it is shocking that it still continues on our roads today as we speak. And this is where a lot of hype or maybe potential or promise with technologies like autonomous vehicles, where we actually don't have a driver.

70% to 90% of the accidents on our roads today are due to human error. Driven by artificial intelligence, which might have its own limitations, these autonomous vehicles will actually not do some of the silly things people do-- you know, drink and drive, text behind the wheel, and even play Pokemon GO. So is that potential, or is it actually a lot of hype?

The second is emissions. So in Australia, transport is the third largest source of greenhouse gases, accounting for around 17% of emissions. Private cars account for around half of all our transport emissions. And the transport sector is one of the strongest factors in emissions growth in Australia. Australia, unfortunately, is ranked number 20 out of 25 of the largest energy using countries for transport energy.

And the final one is about car ownership and our reliance on private vehicles, if you like. Most of the transport problems we face in our cities today are actually deeply rooted in the transport policies and planning that gave priority over the past 50 years for more private vehicles and building more roads.

So during the last 50 years, cities around the world, not only Australia, witnessed rapid urban growth, which led to urban sprawl and also high demand for private vehicles. And the solution that was usually prescribed to cities is build more roads, which we all know has resulted in a range of unintended and harmful environmental, social, and economic consequences.

So there, we have a few opportunities. There is currently renewed thinking about how we deliver mobility and access to jobs and economic opportunities. Some of it has been partly recognizing that past practices are wrong. And part of it may be the role of advanced technologies in making travel easy, as well.

The narrative, even, is changing. People are no longer talking about transport. They're talking about mobility and accessibility. Rather than focusing on building new infrastructure, we are now relying more on demand management and understanding people's needs for travel and then seeing how we deliver these.

And also, there is increasing focus on the social aspects of transport, making sure that the benefits flow across all segments of society. But I think one of the biggest trends in recent years has been the threat to car ownership. And this has been mainly facilitated by technology, because we have car sharing and ride sharing. I know many families, and maybe you do, who are now reluctant to buy the second family car and relying on just the one car and then Uber and other methods to get around.

The recent draft of the city of Melbourne, the 30-year transport strategy, is an example in the right direction. It recognizes integrated land use planning, investment in dense and human-scale cities, transit-oriented, pedestrian-oriented cities and so forth, of course, in addition to public transport and active transport.

So in that context and looking over the next decade, the 2020s are expected to be a decade of transformation, if you like, for urban mobility. In the technology side, there are at least six forces, including self driving, the Internet of Things, mobile computing, shared economy, et cetera. Each of these trends are significant on its own. But the convergence of their disruptive forces is what will introduce values.

At the same time, we are seeing this renewed thinking in policies-- the densification, et cetera-- which, when converged with the technology, could actually provide more benefits. But questions remain. Not everyone is going to be excited by this vision or what I have presented. Many would be even sceptical that we are at the edge of a transformation, if you like.

Others will still want to drive even if we say we have other options. Not everyone is likely to share a ride or carpool. And many might argue that, why are we doing all of this? Just invest in public transport and active transport, and this could actually deliver similar outcomes.

So how do we engage our communities in meaningful discussions and conversations to better explore the impacts of some of the things we are seeing around? How can we best avoid the unintended consequences of some of the solutions that are being proposed? And what kind of future do we want in a highly automated world?

And how do we prepare for this coming transformation? Will mobility be offered as a subscription service? This is what we call mobility as a service.

And if autonomous vehicles do arrive and they deliver on their promise to eliminate 90% of the crashes, would we be still allowed to drive in the future given that we are, humans, the main source of crashes? And will personal ownership of cars decline, giving way to Uber-style fleets of operated shared vehicles?

So now I would like to turn to our panel and ask them to help us navigate this landscape. And I would like to start with Nicholas, if I may. And how do you see this landscape, urban mobility? And in particular, your thoughts on, how do we engage our communities in that meaningful discussion so that they are part of the decision making? As we saw now, many are sceptics about maybe approaching our elected officials. Your views on this would be appreciated.

Nicholas Gruen

OK. Well, let me just give you a sort of a scatter of views. This is a really hard problem. Many economists are in love with markets because of how brilliantly they solve certain problems. And leaving cities aside, markets are best placed to solve greenhouse problems, because we can jig them with a carbon tax or something similar. And then everyone can make whatever contribution they want to make.

So that is an extremely efficient and smart way to deal with the problem if you can get the public part of the system, which is the government, and us, as voters, to not kid themselves, which turns out to be very hard. All of the alternatives to that, which we see around us all the time when people get-- with this idea that we're all going to, in some kind of sense, uniformly lower our carbon footprint, I want to suggest to you are disastrous. They won't work.

They appeal to marketers, because they make it all about us, like us as an individual. And it's not about me or you. It's about 7 billion people and how they deal with the biggest global public good problem we've ever seen.

So that's a bit of a wrap for markets and for, where it is possible, having a global target or a global objective and then letting every individual work out where they fit. And if they want to emit a lot of carbon, that's fine, because they're paying a lot of money to do that. And that will help run schools and so on and so forth.

Now, if that sounds like a strangely utopian view of markets to you, particularly in view of what I said in the last session about data, it certainly is with regard to cities. Because cities are made of the need for shared decision making and shared assets over all kinds of different scales. And that's why you need a lot more than markets to run a city.

But my response to this list of kind of nice, cool things that we want in our cities is to say that what we need, apart from my need for this fly to go away-- what we need, I think, as a kind of a very general proposition is that we need decisions made at the global level-- let's say, as far as global is concerned for the purposes here, at the level of Australia or even Melbourne. And then you need decisions made at much more local levels-- not just a local council area but whoever's running this park and so on.

And then you need individual people to make decisions about how seriously they want to take their particular agenda, because we've all got limited bandwidth. If I'm looking for some continuity with the comments I made in the last session about data, it's that, that the new thing we need to economize on is our capacity for attention. We have to decide where we're going to put it.

And we've certainly decided we're not putting it into reading seven pages of terms and conditions on data. And we need to be able to make our own decisions within a responsible, larger, nested set of frameworks on greenhouse and those kinds of decisions. And so we need to try to attend to the health of those different nested layers of decision making about shared assets, if that doesn't sound too abstract.

Hussein Dia

OK. Thank you for that. Patricia, what do you think? Is this a lot of hype? Or are we actually onto something here?

Patricia Lavieri

Hello. OK. I think we still have a long way to go. It might be a lot of hype. But, well, I want to bring a little bit my perspective as a transport engineer that also tries to be a transport planner and educator.

I was recently put challenged to develop this course at an undergraduate level for the University of Melbourne called smart transportation. And at the end of the day, it is smart mobility. And I was like, OK, what are we going to put in this course? And of course, some fundamentals of transport engineering.

But then the main discussion was, OK, what modern mobility really is, and what is out there written in the literature? And what is the discussion around us? And it was not surprising but amazing to see how it's a very technology-oriented, maybe a technological fix perspective that technology is going to solve all our problems.

And it's going to make roads more-- it's going to increase capacity that, in the end of the day, is similar to just building more roads. So it's a lot of things that are being sold to us, in the end of the days, many times by us engineers that is, OK, we're going to install sensors. We're going to have real-time data that is going to make everything a lot more efficient.

And then all the solutions are brought. And instead of us stopping and thinking, OK, what are really the transport problems that we want to solve-- for example, my perspective is we want to maximize accessibility and in an equitable manner, right? But if you are just selling the solutions to government or even to us citizens that nobody really knows what the solutions are really bringing, you're just saying that they are data driven and they make things more efficient.

This is maybe not really bringing what we want, right? And it's also reducing the discussion, because it's putting all the weight on the technology. So this is one perspective.

And what I always wanted to bring is that smart mobility is way beyond technology. And we need to go back to travel demand management, so managing our demand and really thinking, what is maximizing accessibility and not just feeling marvelled by technology and data, let's say?

And just a second, short point. Regarding this zero car ownership idea, we think about transport. Then we think about congestion, because that's what a-- and this was a recurring discussion with the students. When I tell them to think about a transport problem, everybody thinks about congestion, right?

So then we think about transport. You think about congestion. You think about cars. And then you think about car ownership.

And my question is, is car ownership really the problem? Or the problem is trying to use cars to commute in dense areas, right? Should we really aim at extinguishing car ownership? Or should we just plan more efficient use of a true multi-modal environment?

And even mobility as a service is sold as this multi-modal solution that you are consuming transport as a service, so you have an account. And then you just hire wherever you want. But that also brings other problems. That brings reliability problems. You are not 100% sure that the vehicle is going to be there when you need or whatever.

And maybe in certain solutions, it's not the ideal perspective. So I think it's very important to keep a plural perspective and not think that extinguishing cars is really an objective.

When we think about autonomous vehicles, car ownership is a little bit more worrisome. Because we assume that once people are not driving anymore, they are going to be able to use their time more productively and effectively in their cars. So maybe people would be willing to spend more time in their cars. And therefore, they could actually drive a lot more.

And that is actually one of the reasons why we academics have actually been pushing towards shared autonomous vehicles, because that could be a way of controlling what we call people's value of travel time, so then avoiding that certain groups just use their cars a lot, while other groups that maybe don't own the cars or cannot access won't drive as much or will continue to not have accessibility. So in a shared environment, maybe you could subsidize and help these people.

But still, probably thinking only about sharing is not a solution. And when you think about sharing, too, the regulation comes into play a lot. Because for example, what we observe nowadays with Uber in all big cities-- and some of them are already doing something about it, but others are still not-- is that Uber is not increasing access in areas that have poor accessibility. Uber is acting where, I mean, it has profit interests, right?

So it is offering their service in central areas where the demand is and where maybe you already have public transport and where active transport is actually a very good solution. So they are actually competing with other modes and grabbing this demand. Even shared rides, UberPool operates in the central areas.

So I mean, of course, the idea of shared vehicles can be awesome. But it will need to be very well regulated so that it is actually increasing accessibility and not competing with other modes that are more effective in very dense areas.

Hussein Dia

Thank you so much. John, you recently wrote an article for the conversation which I know attracted a lot of media attention. You wrote about an often forgotten congestion-busting solution. Can you tell us a little bit about that?

John Hopkins

Thanks, Hussein. And continuing on from Patricia's point about congestion, as well, we did some research into congestion. Obviously, congestion is a big issue in many cities around the world. And we had a look at what was happening and what was being done in different countries.

And it came to our attention that the main way to tackle congestion is to establish that it exists and then build more infrastructure to accommodate it. And we thought, well, is this really the only way? So we started to think more about why we have congestion.

And, obviously, the peak period's Monday to Friday. During those windows, I'm sure we've all experienced. And this is not just on the roads but also peak times on public transport, as well.

So we started to look at that and dig into the history behind it. And this kind of Monday to Friday, two days off for the weekend pattern of working has been around over 100 years or so. It was originally designed around the Jewish calendar. And it was Ford that kind of brought it in.

And here we are 190 years later, and we're still kind of using that. It's still the norm. So we decided to kind look at how people are working and look at how flexible people are in terms of the way they work, and flexibility being either the number of hours that they work, the pattern of hours that they work, or where they actually perform their work.

And it was quite interesting. So we did a survey of a few hundred people in Melbourne. And in terms of the pattern that they worked in, pretty much everybody worked in the Monday to Friday, particularly office workers-- Monday to Friday, 9:00 to 5:00. Hardly anybody worked on Saturday or Sunday. And there's obviously exceptions to that in retail.

In terms of time, almost everybody worked full-time jobs. So there weren't too many part-time or job share people that were part of our survey. But the most interesting part for us was the flexibility part in terms of where people do work.

Obviously, this calendar we talk about dates back to when we would travel to work to do work, because that's where the tools of work were. So whether it's a factory, whether it's a press shop or even an office, that's where the computer was. We didn't have one at home. We didn't have a printer at home. We physically had to be there to do our job.

OK. So that's obviously changed. We've all got devices in our pockets, in our bags, where we can do a lot of stuff now. So we were interested in finding out the nature of people's roles, what they did, and how much travel was actually really needed to enable them to actually do that.

And we found that, already, round about 2/3 or so of Melbourne office workers do work remotely to a certain extent but only a very minor extent. So on average, usually about one day a week, whereas the vast majority of them indicate that the roles that they have, it could be anywhere between about 50% and 80% of their job tasks could actually be done anywhere. So they could be done at home or in a cafe near where they live.

So a lot of the travel that they actually did was unnecessary travel. So we wanted to challenge that. On top of that, the average commute was an hour each way. So that's two hours per day per person. So we wanted to dig into that a little bit more and say, why are there only 60-odd percent doing it? And why are the ones who were doing it or were allowed to do it were only doing it once a week?

And it seems to, again, come back to the attitude of the organization and, even more so, the attitude of the line manager. So you may have a culture within an organization that has a policy for remote work. And we can look in other places in the world that are way ahead of Australia, places like Finland, for instance. Even the UK are ahead of us in terms of policy. But we're not too bad. We're kind of just behind that. We're in the chasing pack.

And it's becoming more acceptable for this to be done. So the days where you're actually measured in terms of being present as part of you doing your job-- in other ways, if you're not there, you're not working-- they're hopefully long gone. But there's a tail still around of an old-fashioned mentality that still believes that.

So in terms of looking at zero accidents, zero emissions, zero car ownership, I'd probably throw congestion in there as a big part of this, too. And there's obviously no one solution. And I'm not suggesting for one minute we should stop building roads and bridges and investing in infrastructure. And public transport is very, very important. But I think we should also be looking at questioning why we're moving in the first place. And is it actually that necessary?

Hussein Dia

Your research, what did you find the impact of flexible working could have on congestion?

John Hopkins

Obviously, we did some basic modelling around it. And what we found was it had a similar impact to when the schools are on holiday in terms of road users. So it would be noticeable, definitely.

And another important part of the research was attitudes of workers towards it. And there was a very positive attitude towards working remotely, particularly from those who had done it. So the ones who hadn't done it wanted to do it. And the ones who have already done it and experienced that wanted to do more of it. So there's certainly an appetite up to a certain point.

So we're not saying that everybody should go and work remotely all of the time. That's totally different. But if it was, say, three days a fortnight-- is that a one day a week or four days a fortnight? It would obviously have a big impact.

Hussein Dia

Thank you so much for that. Mark, how does all of this sit within urban futures? And are we actually very big on vision and not so good on progress towards such vision?

Mark Burry

The vision thing-- so I'm reading a book at the moment by Robert Gordon called *The Rise and Fall of American Growth*. I don't know if anybody's read it, but it's just fantastic. It gives an account of all the changes from 1870 through to 1970 in America.

But he says that what was happening in America mostly happened there first and then affected the rest of us. I've only got to 1940, because it's in two parts. He goes from 1870 to 1940. And I think he's saying that, actually, anything big that's going to happen to society, like flying for the first time, like mechanical transport or mobility for the first time, happened in that period. And there's nothing left, really, to happen beyond that.

We can think about teleporting and hyper this or whatever. But I think the next part, I'm predicting, is-- I haven't read it-- it's been about coping or improving. It talks about telecommunications. It's just a fascinating account.

Of course, you understand why the city is the way it is. It's because of the effect of these innovations. So one of the big points that's made early in the book is that, isn't it odd that we got interurban transport sorted out with steam trains and steam ships a century before we ever got urban mobility sorted out, which is basically the 1920s? So up until the 1920s, you could get from city to city in a

train. But then you had to do the last-- not the last mile, but the last whole city thing in a horse-drawn vehicle or on a horse.

So the relevance of this is I'm trending towards, why worry? Because he talks about cable cars. And I thought cable cars were just in Wellington and San Francisco.

[INAUDIBLE]

No, those aren't cable cars. They may have done, but--

Oh, I'm talking about cable trains [INAUDIBLE].

What I'm talking about is cable cars, which are cars that are drawn by a cable.

Yeah, that was [INAUDIBLE].

Yeah. So apparently, for 15 years, they were all the rage. You had steam engines that were pulling sort of steam-- there would be steam engines located around the city, and they would pull cars along by cables. So there'd be no traction on the vehicle. That's actually another book I've read is on what happened in factories when power was no longer needed to be belt driven from a central drive. You could actually have the motor.

But the point was that in 15 years, all that infrastructure became obsolete. So I'm now thinking about [INAUDIBLE], who taught us urban design in the mid '70s. And it was at the time they were debating about whether to build an orbital road around London, the M25, because of the fact that it was going to clobber a whole lot of fields.

And the general feel was that it was a good thing. And then soon enough, they built it. They had to make it bigger, as all these things are. He said it's all pointless, because all that happens is whatever you do will always be, within a year, 10% overcapacity.

I'm not sure. He's died recently, so I cannot ask. But I think one of the messages he had was, why worry? Because it'll sort itself out. If you can't get around easily enough, you'll find something else to do or another way to cope.

With the technological innovation, which country has legislated for cruise control? I don't think any country. It's just happened. We've now got cars that routinely have cruise control.

I strongly suspect that if we are going towards autonomous vehicles, they will happen through osmosis. I think if we legislate for it, it will be for some nefarious purpose. It will be somebody wanting to make some money somewhere by legislating, not just over a pattern of years.

But my last point is we can watch this space. Because in Barcelona, there's the superblock. And it's a simple flick of a switch. It's got no technology at all. It's just simply, why do we give roads' priority to cars? Why do we do that?

It's just, we have done it. Robert Gordon will explain it's because of the evolution of technology. These things sort of happen not by design. They just emerge.

But you have to design a solution. In Barcelona, it's, why not make every third road the thoroughfare for traffic and then limit the speeds down to 10 kilometres an hour for the other two roads? So you get this kind of what's called in architecture a tartan grid, where you've got two different widths, one for-- In this case, it's bandwidth, one for fast cars, and the at rest is for slow cars.



Being Barcelona, they're very pragmatic. So they realize that 10 kilometres was just too slow. So it's 20 kilometres an hour. And the first superblock was a great success, I gather. So they're now doing others.

And the idea is the whole city will convert. 20 kilometres an hour means that it's a real pain in the ass to drive your car down it, especially when people are wandering in the middle of the street. Because you can now do that, because you're unlikely to be run over.

So a taxi, whereas you might have thought, well, I'm in a taxi. It's not doing a lot of environmental harm. I'll just go to the centre of the superblock. You don't. It's actually quicker to get out at the edge where the cars are and walk 1 and 1/2 blocks maximum into the centre.

Now, my final point is Grattan Street. So Grattan Street's being closed to allow for this. I mean, I'm sure China could have built this-- over a weekend or something.

But we have Grattan Street closed so long that the good thing is we'll be used to not having Grattan Street as a thoroughfare. I predict Grattan Street will reopen when it's obvious that it shouldn't. You've got university on two sides of the street. People got used to not using it.

So I think it's a technology. It's political. That's my answer to this. And I think, with a will of the people getting a voice, we will find a way to beat congestion. We don't have to build extra infrastructure.

[DING]

Hussein Dia

Excellent. I think we have maybe five minutes. Or no? No, we don't. That's it.

We don't?

Maybe one question from the audience.

We started a bit late, yeah. I think we'll take maybe one or two questions. Any burning comments, questions? No?

Audience Member 1

Just on the Grattan Street closure, some advice or some conversations have been around the fact that, with the tunnel and the implications on the tunnel, the Grattan Street needs to be reopened to accommodate the flows.

There's a conversation here about impacts on a local area that are actually happening a distance away and what consideration has been made in the planning of those big infrastructure projects of the impacts that are not directly related. And so how do we manage that? Especially, as you said, it is potentially political. It is potentially around funding and the planning associated with that.

So I think the point is that we probably all agree that it should stay closed. However, the argument has been that the impact of something that is a distance away that doesn't affect or doesn't impact directly, engage directly with the inner city is forcing a change.

Mark Burry

My standard answer, this is the short termism of our political system. Because if it wasn't for that, somebody would have had a long-term view. They would have said, how do we want Melbourne to be

in 2050? And That would include, how do we want it to be around the university precinct? What is a university going to be like in 2050, anyway? Who's going to be using it, and how?

And so it shouldn't have been a surprise. It should have been a plan, like, let's close it. That's going to be great, because we need to close all our roads to cars eventually, I hope. We'll all be getting around on our electric bicycles or our scooters. Barcelona is amazing now. It's like every second person seems to be on an electric scooter.

Audience Member 1

And then I suppose the question is probably less transport. But how do you make a plan stick so that it isn't flipped regularly? Because otherwise, there is no point in plans.

Mark Burry

Benign despotism.

Hussein Dia

I think we're just a little bit over time. So I would like to thank the panel for making the time to be with us today. And thank you, as well, for your patience and for your participation. Thank you.

[APPLAUSE]

