Transporting Us To A Cooler Future

Event transcript

- Good evening and welcome, everyone. My name is Patrick Reynolds. I'm a director at Waka Kotahi, and I'm Deputy Chair of the City Centre Advisory Board. So I'm very excited to hear what I can learn tonight from these people. It's going to be great. Of course, Auckland Conversations is literally that. We're looking for a conversation amongst these experts, and with you, and we'll come to that later. Tonight's event is part of a wider movement of Aucklander's acting for climate. We're really proud to be hosting this event as part of the Auckland Climate Festival. It's a citywide month full of climate action. And so, thank you for joining us tonight on this beautiful spring day. A little bit of housekeeping. downstairs in the bar area, and you can even ride the lift down, if that is your preference or need. In the unlikely event of an emergency, follow the ushers' instructions and they'll take you to the nearest exit. And finally, we want you to have your mobile phones because we'll be communicating through them later, and I'll get onto that, but please do put them on silent. No embarrassing boomer moments. Now, before we get into the details, I would like to introduce Richard Nahi, the council , who is from Ngati Whatua, who will provide a karakia and a mihi for tonight. Thank you.

- Thank you. Ladies and gentlemen, I'd like to do a karakia to start off our evening, to acknowledge certainly Sky Father Ranginui, and also Papatuanuku. Transport is about the impact on the environment, so we've got to give thanks and to acknowledge the wonderful environment that we do have. I also want to acknowledge in my karakia, the purpose and the reason why we're here tonight, and to welcome and to listen also to our guest speakers on the panel, and also to acknowledge each and every one of you who's here this evening. I'd like to try and sing a waiata now. In our custom, as you know, we would like to sing a waiata after our mihi, and it's called Te Aroha. Te Aroha for the Kaupapa, Te Aroha for Mother Earth, and also for Ranginui.

- Thank you. Okay, format for tonight is, we'll kick off with the big dog, with Dean Kimpton, the CEO of Auckland Transport, who's going to scene set the situation. And then it'll be followed by presentations from Tim Adriaensen, Tiffany Robinson, and Timothy Welch. After this, the speakers will regroup here for a panel discussion and a Q&A, and you have the opportunity to ask some of these questions. This we will only be doing via the Slido app. And of course, you are welcome to hit this up on the socials with #AucklandConversations, or ACF2023. That'll be great. Okay, so Dean, come on up.

- Kia ora, everybody. I'm really pleased to be here tonight to set some scenes for this discussion. It was interesting. I was at the Auckland Council Ordinance Risk Committee the other day, and I thought, we do an annual report on progress, and I thought this would be a deep dive into all those technical risks, which is why you have your CFO there. But they

asked me the most interesting question. I was really pleased for it. What are the things that are worrying you most going forward? And I said there's three. I thought about this question beforehand, not specifically for this audience. The first risk is people. Our people at Auckland Transport, that they're engaged, that we retain them, that they're motivated and they bring awesome results to what they do every single day, but our communities and our customers. So the first one was people. The second one is all around how we fund against our aspirations, because we've got a massive gap between the two. And the third was, and I guess is the symmetry with tonight, was around climate change and resilience. And my proposition to them is that we need to know how to communicate this, because outside of this room tonight, and I'll talk about it a little bit more in my opening notes, our community's got a very different view of what that means to them, and we are not communicating this message well. So on that note, I want to pick up on what is transporting to a cooler future, what does it mean, what do we mean by cool? There's two things here. One is, clearly, we're looking for cooling our climate down, but we're also wanting a transport system that is cool, that is part of an amazing city, an amazing experience for our people in Auckland, but those that visit it, and how they move, and how they connect, the sort of transport system and environment that delivers all those social outcomes, environmental outcomes, economic outcomes, because we're connecting. So transport is essential to us achieving our aspirations as Auckland. But what do our customers, what do the people outside this building think? How do they make their choices around what they want from a transport system? So this is the feedback we get. They want it to be safe and efficient and reliable, they want it to be on time, and they want to get from A to B faster than what they would if they chose another option, and they want it to be affordable. They also want it to be a choice that they can make. They can connect when they want to connect and how they want to connect, and when they need to. That's cool transport in the minds of Aucklander's, about 1.6 million of them. The really interesting thing, and possibility for this room, is when they think about cool transport, I haven't mentioned climate change, I haven't mentioned resilience, I haven't mentioned decarbonizing the system, because that's not how our communities and our customers think. They're making choices that are immediate and in front of them. Not everybody, of course, but many of our customers think that way. So whether we like it or not, the vast majority of our community's making decisions not on the basis of climate change, they're making it on how they will move, whether they can afford to do it, whether they can do it safely, reliably, and quickly. And you might think Auckland's different to other cities across the world. It's not. But we do know that a future transport system has to deliver on those really big outcomes. And I want to share two perspectives and one challenge with us, just to shape up tonight. In Auckland and Auckland Transport, like we have big aspirations. So we have signed up for our Transport Emissions Reduction Programme, otherwise known as TERP. What does that mean? Let me just break it down for you so you've got a view of what the numbers mean, because they're big. Currently, we travel 16 or 18 billion kilometres per year on our roads. TERP, over the next 10 years, expects us to halve that. At the same time, just to be really clear, we will grow another 300,000 people. So the true reduction is not a 50% reduction, it's more than that. It's probably a 60% reduction. One of the tools that we had to help us get there was an increase in public transport, so patronage. We're currently at 80 million passenger trips per year. That's about half of all of New Zealand's passenger transport. By the end of this year, early next year, we want to be at a hundred million. TERP requires us to be at 550 million. With all the investment that we've got coming our way over the next 10 years, we will be doing

outstandingly against international competitors to get to 200 million. Currently, our active mode, so that's those that ride bikes and walk, is less than or about 1% of all movement. TERP requires us to achieve 17% in the same period. I'm just sharpening our focus. If we're going to actually do what we say we're going to do, I need to move on to some of the things that will make a change. So this is all part of the first perspective. That's our challenge. To get there, we're going to have to do the small things superbly, and we are also going to have to think more deeply about how we take our communities through the conversation that's needed if we're ever going to change our behaviour. And my challenge back politically and to civic leadership is that is more than an Auckland transport conversation to have with people about how cities are designed, how neighbourhoods are designed, how roads are designed, how public transport is funded, and how we move. It's a lot bigger conversation. It's a national conversation, it's a regional conversation, it's a neighbourhood, it's a business conversation. My second perspective on this is, not only is there big aspirations, but there are really big constraints. Just to name a few to shape it up. If we're ever going to achieve our goals in cool, we're going to have to address consistency in our strategy. So one of NZ INC is quick to flip flop and change its priorities, and we'll do this and then we'll do that, and we'll have a light rail, and we'll have a harbour crossing, and we'll have a northeastern busway and a northwestern busway, but we might stop those, or maybe we'll put a cycle lane on the harbour bridge or maybe we won't. I went there. But we changed mind. Look at Let's Get Wellington Moving. We past masters at having a strategy and then changing the strategy, tweaking the strategy, putting it into a business case, and then suddenly wondering why nothing happens. So my first challenge is, have a strategy and stick to it, and have the political and civic courage to deliver on it. Second one is, we need to fund it. Until you've funded your strategy, it's just rhetoric. It sits there as an aspiration. It cannot be delivered on. We will need to work across agencies to deliver. There's definitely some work we can do there. But not just agencies in partnership with community groups and other stakeholders and we need to pull in the same direction, but most importantly, we need to change how we talk about this with our communities. Otherwise, I don't believe nothing will change. We do not currently have the social licence to deliver what we're talking about tonight. It's just a couple of things then in terms of challenge back to the speakers, because I'm going to be listening all ears. Whatever we come up with tonight, whatever your questions are, whatever advice we end up with, it's got to make sense to Aucklander's, it's got to make sense to people outside this room, because the truth is always outside the room. And as Auckland Transport, we are committed to thinking through how we deliver on these aspirations. I'm standing here tonight because I'm committed to how we deliver on these aspirations. And one of the challenges I'm working through myself, I haven't landed this yet, but I'm working through myself, is that maybe, one day our suppliers to Auckland Transport need to demonstrate not only their safety credentials, but maybe they need to demonstrate their carbon reduction credentials and their commitment to public transport in active modes, and that's how we choose our suppliers. On that note, I think I've set enough scenes. Over to the speakers. Thank you, Patrick.

- Okay, thank you, Dean. Challenge laid down. Okay, our next speaker is Tim Adriaensen. Tim is Senior Transport Advisor at Auckland Council, and he is passionate for a flourishing transition. And hopefully he will have answers to Dean's question on how to deliver TERP. Okay, Tim, over to you.

- Seeing if this one's working. Wonderful, cool. And we've got some slides up there, that's really good. All right, climate change. Who's excited? Yay! I think one of the things we don't talk about enough when it comes to climate change is the opportunity. It's easy to get bogged down in kind of how scary it is, or how intimidating it is. We can get frustrated, we can get angry. But it also presents a really powerful lever to get moving on some big, important things. Unfortunately, I'm not going to run you through how we deliver the TERP tonight. I'm actually, my job is to kind of get everybody really depressed by running over some of the challenges we face following on from Dean. But I'm going to take us back to a simpler time, if we can click through. Our clicker's working. Great. This is Auckland about a hundred years ago, March, 1922. I really like this picture of Queen Street because it shows us what we once had, and it shows us a little bit of where we might be headed again in the future. The important thing, I think, about this is the most common mode of transport in this photograph, and it's walking. Auckland was a walking city. It was a city that was based around public transport and active modes. We had our beloved tramway system, which really did some hard yards. Dean's thrown out that we're aiming for a stretch target of maybe a hundred million public transport trips. Hopefully within the next 12 months we'll be on track for that, and that would be fantastic. A hundred years ago, well actually a little bit closer to 1940, our tramway system was moving around a hundred million passenger trips per year. So our stretch target today is where we were around 80, 90 years ago. So it's fantastic to remember we did do this in Auckland once upon a time. As Dean mentioned, we're actually not that special, we've been there before. The key points about our transport system at this time is that the increased population density, the need to live close to that transport system in the city centre, meant that everybody was living really tied up to each other. At the time, we had our night soil men that would come round and empty people's toilets with trucks and horses and carts. It wasn't the optimum kind of living conditions. There were some good reasons why people wanted to get away from the city centre. We also connected like a polycentric city model where we have Auckland, our city of villages, where we have all the locations that you can see on our historic tramway map that were nicely connected by those public transport routes. But they weren't quite the dream mode of transport. They averaged about 15, 16 kilometres per hour, and it could easily take 45, 50 minutes to get to the end of one of these lines. Thankfully, somebody invented the motorcar and stuck it on a production line, and at the end of World War II, the cost of car ownership came down a lot. For human beings, this was quite a monumental thing. All of a sudden people could own a car, and it would mean that they could live anywhere that you were connected to a road and also get to any opportunity that you wanted to get to. So basically, the car presented an opportunity for people to get access to the good stuff. This was unprecedented, and it also, it relieved the pressure on those urban centres. You're no longer forced to live so close to everybody else. You can now live anywhere in the region that there was a road, and you could get to all of this stuff you wanted to get to. This gave rise to the dream of suburbia, sometimes called the New Zealand dream. But the suburban dream was in many car-oriented countries around the world. This is a Ford Motor Company ad from 1950 already marketing that the ideal way to live, the way that we all can dream of being, is to have a two-car garage and a car from mom and a car for dad with our little happy nuclear family. And the dream of suburbia, it really promised two things. I think they're quite interesting things for us to consider. The first one was that, by unlocking all of that land around the Auckland region and allowing people to access it, they weren't relying on the

walking and the public transit lines anymore, unlocking abundant land supply meant that everybody could have low cost, high quality housing. The other thing that cars promised was that everybody would have easy access to anything that they wanted to get to. So I'll leave it up to you to judge whether Auckland, 70 years later, whether we've got low cost, high quality housing in abundance, and whether we've got easy access across the region in abundance. But I feel like the dream of suburbia maybe didn't quite deliver what they were promising. It was a popular sales pitch, however. Almost all of the housing that we constructed between 1950 and 2000 was of this sort of a style. It was standalone single units on a piece of property connected to a roading network, and you more or less needed to own a car if you wanted to get to anything. This kind of housing, if you lived here, it was too far to walk to the local shops, or to a centre of activity where you might get good jobs or education, and we now have a lot of housing like this. So constructed outside of walking distance and we matched that. As this was the popular type of housing and this is where people wanted to live, most of our transport investment was thrown towards building more roads. And as those roads filled with cars, we widened them and expanded them, and from 1955 onwards, built ourselves a really big motorway network. This gave rise to the first unforeseen consequence of this kind of suburban dream, and that was car dependency. Here's a photo of Queen Street 49 years after the previous one. The pedestrians have disappeared. The the street is much busier. There was lead in fuel at this time. It probably had an interesting smell going on. It wasn't just the people driving the cars themselves that had become sedentary and kind of become occupied with the cars, but the other users of the road as well were either stuck in traffic or they were forced off the street to make space for the cars. But critically, if you lived in the kind of housing that we were building at the time and depended on the kind of transport network we were constructing at the time, the only way you could get into the city centre, the only way you could get access to the good stuff was by use of a car. So car dependency, the definition, the technical definition is, socially equitable access to opportunity requires the use of a private motor vehicle. That is to say, if you want the same level of opportunity as somebody else, you both need to have cars. The short version is, that's what you need. This is a problem, because not everybody can drive a car. In fact, around one third of us, around one third of Aucklander's, can't, won't or shouldn't operate a car due to age, medical conditions, disability or income. It's a significant portion of the population who are materially disadvantaged by a system where you need to own a car. This is the most seriously unequal thing in our society. The difference in the level of access between people who can drive and people who can't is really, really great, in a bad way. It's a big thing, not a great thing. Car dependency is also a cost burden for low-income households. So even if you can drive but you don't make a lot of money, you kind of have to pay to own and operate that car, and you also have to pay for a space to store that car potentially. We've built a lot of houses that have driveway vehicle crossings, and they have garages, and homeowners need to pay for that. It inflates the cost of housing. That produces something that looks a bit like this. What this chart is showing us is that on the right hand side in the big blue bar, those are the highest income earners and it shows what their households spend on transport. The left hand side and the little blue bar shows us that the lowest income households spend the least on transport. But the important piece is the red line, and this shows us the percentage of household income that people are spending on their transport. So despite the fact that low-income households spend the least on transport, they also spend between 15 to 20% of their take home pay meeting their transport needs. They drive the least, but they pay the most of the money that they have

available. And transport is a really high household cost. It's the third greatest household cost. This is the household economic survey from 2019. And housing and household utilities are also, they're our single greatest cost, but a significant portion of household cost is related to our transport system. Really, transport and land use, two sides of the same coin. We've pursued a model where our housing is very, very expensive. Transport is also very, very expensive. So when we think about if we need more money to fund our transport system, where's it going to come from? We're already kind of squeezing households as much as possible to pay for our transport system because we've opted for a very expensive transport system. We're kind of trying to run a Bentley system on a Toyota Corolla budget. It just doesn't work out. We might need to think about whether or not we're going to run a cheaper system all up. This creates what we call the roads per ratepayer problem. And essentially what we've done, is we've built lots and lots and lots of roads and they don't service all that many people. We've got a very low population density spread over a very large area, and we service every household with its own little bit of road. This means extensive roads per household, but it also means our public transport services need to travel a really long distance. So that means the high ongoing maintenance costs, every square metre of road we build, we need to look after in perpetuity, and we need to pay for that and we need to charge households rates to pay for that. But also, high public transport costs per passenger. When we need to run those to public transport services a really long distance, that results in big operating costs for not many people. Too many roads servicing not enough people is financially unsustainable. We can't actually continue to expand outwards in the way that we have historically because the costs of maintaining and servicing people's households with this kind of financial system simply doesn't stack up over time. There is a solution to this, of course, and I'll throw the first solution out. We need to grow Auckland's population without growing the size of our roading network, and the only way to do that is to use our existing roading network more efficiently and to build taller buildings. So we need to consider that and we need to consider how we're going to get there. Finance isn't the only issue with our current transport system. It also presents a high level of risk. Motor vehicle accidents, crashes cause 300 to 400 fatalities per year. This is disproportionately high per capita compared to our international peers. That's not because we are particularly bad drivers, it's because we drive a lot. The more driving that people do, the more chance there is that they will be involved in some kind of crash. The more likely you are to crash, the more likely it is to result in a death or serious injury. If we want to reduce the number of crashes happening in New Zealand, we might think about reducing the amount of driving. Of course, crashes actually are only a small minority of the harm that our transport system causes. Air pollution from transport is responsible for approximately 2,000 premature deaths each year. And critically, as we've shifted away from active travel modes and towards car use in particular, inactivity has been on the rise. And many people will remember, and older people will remember the bike sheds at school being absolutely full to the brim back in the 60s and 70s. As the size of our cars has increased, as the speed that we like to travel in our cars has increased, and as particularly the volumes of traffic have increased, bikes have been pushed off the road to the point where cycling to school is actually an incredible rarity in Auckland today. This has some very severe impacts. In particular, only 7% of children and young people meet the minimum recommended level of physical activity per day, and this results in approximately, well, over 2,000 premature deaths each year attributable to inactivity caused by the transport system. Slap those all together, the inactivity, the air pollution, and the road crashes, and we get this chart, which I sometimes get questioned about. So I've

even chucked all of the references up there in case anybody's concerned about where it comes from. The reality is, our transport system is the number one cause of premature death in the country. Nothing harms us as much as our transport system. It's actually quite a terrifying statistic. It's really something we need to put a lot of thought into. Is this the kind of world we want to live in? Is this the kind of city we want to raise our kids in? This is a pretty serious problem. And critically, if we were to fully eliminate all of the crashes in the country, if we were to achieve Vision Zero nationwide, transport would still be the leading cause of harm. And this is really important, because we focus a lot on road safety when actually what we're focusing on is crash safety, and they are not the same thing, right? We really need to focus on addressing the air pollution and addressing the inactivity, and the way to do that is with active and shared modes. Finally, what we're here for tonight, driving climate change. This is Auckland's greenhouse gas inventory from 2019. One item really towers above all the rest, and those are emissions from light vehicles, cars and commercial vehicles. That's not all of the transport picture. You'll see it's in there in a few other places. Greenhouse gas emissions from our transport system, they're almost the minority concern when we think about all of the wider impacts of what's happening with our wider transport system. So this is where we are, this is our starting point. Our existing system, it's high cost, it's high risk, it's high carbon, it's inaccessible. If you have a disability that prevents you from driving, you cannot get access to things. If you are a child or you're an older adult who cannot drive, it is very difficult to access opportunities, and this creates a very inequitable outcome. So what are we going to do about it? First and foremost, it's really important to recognise that whether people choose one mode of transport or the other depends on how attractive that mode of transport is, and individuals can't change that. That's a system design issue. The way that we shape our streets, and the way that we allocate space, and the things that we invest in determines how people will choose to move around. We can prevent the harmful outcomes of our transport system by changing our streets. If we change the makeup of our streets to make it very attractive to use active and shared modes and less attractive to use private motor vehicles, then we might end up with a different result. I want to point out we're all in the car here. We're all in the car together and we're all heading towards a common destination, right? And we've got a backseat driver, and they're giving us all sorts of instructions about where to go, but thankfully, they've also agreed to pay for gas. So that's really important, and they're coming along for the ride. Riding shotgun, we've got somebody that's navigating, we've got a navigator. They've said, this is where we need to get to, this is where we're going. By 2030, we need to achieve for Auckland's climate plan, and if we follow this route and take these turns, we'll get there. But critically and importantly is, who's in the driver's seat? In the driver's seat, no matter what we do in the rest of the car, no matter what the backseat driver says, no matter what the navigator plots out, if the driver isn't actually making the turns we need to take and driving us to where we need to be, we're not going to get there. So it's really, really important and we need to recognise, only our transport agencies can ensure that we change our streets in order to prevent the harms that our transport system causes. Kia ora, thank you.

- Thank you, Tim. Essentially really reminding us that this is never only about climate, right? It's a convergence of problems and solutions that do need to be addressed, I think, by everyone, by especially bringing together land use and transport. Okay. Now Tiffany. Tiffany Robinson is a senior transport planner at Arup. She's our only representative from the

private sector tonight. She is an accomplished and results-driven planner and transport specialist with more than 17 years of expertise in active transportation and placemaking, so bringing together land use and transport there, both in the public and private sector. So over to you, Tiffany.

- Ah, Tim, hard act to follow. Geez. All right. So Tim has set the scene really well for how we got here, but I am here to talk to you about where we can actually go. So my presentation is written from the perspective that we're already in 2050, and we've done everything that we need to do to get to our climate goals. Now I want to say the possibilities, and I'm leaning very heavily on possibility, because we cannot get to that 2050 goal if we don't start taking action today. So just keep that in mind as we go through. So back in 2023, we knew that our city's average temperature would be moving up to a 17.2 Celsius in 2050, and now in 2050, we are using fossil fuels. Sorry, we're not. We're not. We are not. We're not doing that. We're done with that. We got past that. We actually recognise that human activities were changing the landscape over time, and we really decided to come together to create a holistic system of change, and that means that whole system thinking. We cannot just do agencies doing this, doing that. Come together through whole systems thinking. So everything is interconnected and interdependent on each other. We realise that we can't have a sustainable and resilient mobility system without actually understanding the role that we play in uplifting the other systems that impact the humans that are using the system. So this holistic approach actually demonstrates manaakitanga for all Aucklander's, and the evolution of identity in place through Te Ao Maori, and truly fostering acceptance and appreciation. So what you're going to see is going to be what that looks like. The theme of this climate festival is . By existing on this land and in this space, we all have taken up the call for kaitiakitanga, guardianship and protection of the environment. We're protecting the land out of respect for where we live, so that means that each one of us needs to take up that call, not just for us, but to be respectful to the ancestors and the future generations that come along. So as residents, we actually have an understanding of where and how the electricity we use in our daily lives is produced, and how much personal emissions we actually emit. So our sense of ownership of the energy that we're using actually regulates how much we use. We agreed that the most important thing for us was to live in an inclusive and healthy city where everyone can thrive. We redesigned it from a feminist and care perspective. And to do this, we actually passed a referendum, which is the adoption of a caring city model, whereby our city agrees to look after our people and surroundings so that we as individuals actually have the bandwidth to look after ourselves and other people. As a caring city, we place people, health, safety, and collective wellbeing at the heart of our decision making. And we put particular emphasis on the value of paid and unpaid work for all. Now by living in the city, as a default, all of our residents agreed to abide by the principles of our caring city manifesto. I came up with the manifesto before he did. All residents agreed to pull off Vision Zero off the roadway and into our hearts. We believe that no one should be killed regardless of how they choose to get around the city, and if people do own a car, they care for those travelling outside of their vehicle. Each resident signs a pledge that says, I care about you getting home and getting around safely, and without experiencing a near miss or being harassed. Another key to cooling our mobility network was transitioning to a circular economy. And this is an economic system based on the reuse and regeneration of materials or products, especially as a means of continuing production in

a sustainable and environmentally friendly way. We're conscious of the emissions that are created during the design stage of the products that we use. We're smart about how we design and we use, or reuse the proper resources to meet our material needs. For our mobility network, we live with the assumption that improved mobility and access for people walking and cycling, and taking public transport, would help us to reduce our greenhouse gas emissions, fuel consumption, and traffic congestion. So by doing this, we adopted a holistic and feminist approach to infrastructure, investing in both physical and sociocultural infrastructure. And so, by increasing our physical infrastructure, like bike lanes, we have chosen to increase bicycle commuting and decrease in personal car use, which has meant less emissions for us, less traffic, less noise. We also focus on the sociocultural infrastructure about the human infrastructure through education and outreach. Our transport agency, Caring Journeys, has adopted inclusive cycling concept into its cycling design standards when designing its cycle infrastructure, and this means that all infrastructure is built with the needs of users of non-standard cycles in mind, and it also means that we have inclusive cycle parking facilities that are accessible, step free, and wide to accommodate all types of non-standard cycles. By adopting neurodiverse transport practises, we've been able to open the doors to freedom and independence to those who were not previously engaged in the system. We've also looked at our paths and bus stops, making sure that they are resilient against the heat island effect through our design choices used to protect people from the elements along their journey. You see here a solar panel bike path that's sitting in the middle of an eight lane highway. We'll never get to that. We're going to take those down. But we really understood that a bus shelter was not enough to keep people protected from the sun while waiting for their bus. We also identified where the hottest bus stops were using our Urban Heat Index tool, and then we prioritise adding cooler, greener elements to the design of those bus stops, as well as adding UV coating and solar panels to capture and redirect the heat. We also looked at our material choices when we're actually looking at our infrastructure. Sure, we want more bikes on the road, but maybe we need to take a look at the production of what the rubber comes into. So what we decided to do, we tested out a few options and material choices, like rubber created from dandelions, and in agreement with , we establish firms that promote sustainable cultivation for rubber. We also looked at material choices for our cycleways, like the Great Valley Trail in Victoria, which is made of recycled rubber and finely crushed glass. We also looked at more echo friendly anti-UV rubber granules to use in the creation of our paths to be able to reduce the influence of ultraviolet radiation from the ozone. Also making sure that we have a clean public transport fleet. I know that some of this is happening today in 2023. But actually, fleshing that a bit more, we actually have a mix of electric vehicles powered by renewable energy. Our zero emission vehicles are fueled by renewable natural gas or hydrogen, and we've also rolled out some battery electric buses and fast charge stations around the region, like this one here. Cycle skyways. So we took this model from Copenhagen. And what we really wanted to do here was really elevating the urban design of our cycleways so that they're seamlessly integrated into the urban fabric of our system, rather than just on the periphery. For our cycle parking, we made sure that we actually have a great mix of what this could be. Underground, above ground, near stations, making sure that they're easily accessible and intelligent for people. 15 minute cities. I feel like I really don't have to tell you how much this is able to truly reduce car dependency, and it really favours other ways of getting around, thereby reducing our capital GHG's emissions and pollution. But we didn't stop there in our urban areas. Really taking a look at what it means to actually integrate the rural areas as

well. Because we do tend to just plan for urban, but rural needs to be looked at as well. Gender, justice and equality. I have to tell you, this is my favourite thing that we've done as a city in 2050. And we did use Barcelona as an example to truly create a gender action plan that ensures that public transport, cycling and walking routes are suited to the needs of all genders. Because if you plan for women, you make it safe and equitable for everyone. And we also created an Auckland Bicycle and Pedestrian Advisory Council. So this is a council that coordinates with our Caring Journeys agency and other local agencies to make sure that people that cycle and walk are at the heart of that. We've also used our gender disaggregated transport data to collect how women travel around the city. And we also are making sure that women are equally represented, both in number and diversity of ethnicity, in our urban and built environment professions, and making sure that they are in influential decision making positions. And also prioritising, making sure that we're actually prioritising space for people to walk and cycle. We identified that this is by far the best way to get people out there. And this is an example of something in Sweden. We turned our car parks into public spaces. Look how nice they are. We don't even need cars anymore. We're just replacing them with places to put our bikes. Looking at our local system is one thing, but also recognising that we need to take a look at how we move our freight around. So we have these autonomous freight vehicles using some AI. They are on a system of grid to get things around, and it really helps to reduce the emissions in the region, and it guarantees exact delivery down to the minute. Much better than New Zealand Postal. Also taking a look, we do still have a port, so still taking a look at how we might be able to intelligently take a look at our shipping as well. So if you want to be a zero hero, don't stop here tonight. You can keep learning and you can apply the knowledge in your own life and your work. This is a quick list of reading for your inspiration. But I have one final note for you. And this, I'm going to read this 'cause I really want this to come down to you. These aspirations are only made possible if we start reducing our emissions now. There is a cost to climate change, and every day that goes by, we are debiting that cost from the accounts of future generations. Tim is going to tell you the things we need to do starting now, but I want to leave you with this story. I was having a conversation with my mother about how she treated me as a child, and one particular thing that I was talking to her about was how she made me use a speed reader machine. And I was like, mom, why did you actually make me do this? Was I having trouble reading? Like why? And she was like, "I don't remember this." And I said, well, I do. And she says, "Well, of course you do. It happened to you." And then she proceeded to give me this incident that has stayed with me, and now I want it to stay with you. She said, "Of course you remember it. It's not the one who on the street who remembers it, it's the one who steps in it." So let's not leave ish on the street for our future generations to step in. We can do better. That's it, thank you.

- Thank you, Tiffany. Okay, now from academia, we have Dr. Timothy Welsh. Dr. Timothy is a co-director of the Future Cities Research Hub up at the University of Auckland, and the the hub is, interestingly, part of the Faculty of Creative Arts and Industries at the University of Auckland, which of course, suggests that the future cities need to be imagined before they can be built. So over to you, Timothy.

- Okay. Well, first of all, not to burst your bubble, but I don't have the answers of how we get to where we need to be in 2050, but I have some ideas of the things we might do that'll push

us towards that direction. And the other thing I'll say is, I'm going to stay on script tonight so I don't run out of time, and for other reasons. So Auckland is a pretty amazing city to me. It's a city of diverse cultures and really boundless potential, if we think about it. But it stands at the precipice of a big change. As we look ahead, the horizon presents both challenges, but also a lot of opportunities for us. The city's heartbeat is kind of growing stronger and faster with an influx of people, which I think is a great thing for our city. It's also got burgeoning job markets and expanding horizons. This growth, while it's promising, it also brings a lot of daunting tasks to ensuring that Auckland remains the livable city that most of us cherish. So if we want, take a minute and imagine a future where our children and their children are walking the same streets that we walk today and ask yourselves, do they experience the same quality of life? Do they have the same joys? Do they have the same comforts that we have right now? And to ensure that this happens, we have to transition or transcend from our current approach, which often feels like we're perennially fighting fires, jumping from one crisis to another. We need in this hour, not to use reactive measures, but proactive, visionary planning. Yeah, we have a plethora of policies, and we have documents and we have guidelines, and they offer us frameworks and suggest pathways, and they provide us some direction. Yet, amidst the sea of paperwork, there's a glaring void, and that is a cohesive, overarching vision. So let's pause in introspect and think about these questions. Who are we as Aucklander's? What is our legacy for the city? What do we envision as our city in the future? The path ahead might seem nebulous now, but therein lies our big opportunity, the opportunities that Tiffany talked about, the opportunities that Tim talked about. Auckland's destiny is malleable and it's waiting for us to shape it. The canvas is vast and it's high time that we start to paint it with our vision. We don't have to do this blindly. We can pull inspiration from a lot of places. In fact, cities around the world seek inspiration from pioneers who have transformed urban landscapes, enhancing quality of life for their residents. One such shining example is the city of Copenhagen. Many of us have heard that, and we've already heard a reference to it now. It's a city that's become synonymous with sustainable urban living, and has become a beacon for environmental consciousness. When we talk about the power of vision bringing monumental change, Copenhagen stands out. The change isn't just about infrastructure or policies. It's about impacting people's everyday lives, elevating quality of the city, and champion the betterment of environment, be that the nature, climate or the broader ecosystem. Today, Copenhagen proudly wears the crown of the world's premier cycling city, one of the world's premier cycling cities. But its accolades don't stop there. The city boast sufficient public transportation system, and contrary to many urban centres, it remains a pleasant place for motorists. The harmonious coexistence of different modes of transportation is no accident. It's a deliberate result of visionary planning. Rewind a few decades and Copenhagen's streets, as you can see in the image here, mirror a lot of what the rest of the world has been experiencing. Like countless cities globally, cars were the king of the road. The hum of engines drowned out the sound of bicycle bells, safe pathways for cyclists and for pedestrians were scarce, and public transport constantly battling traffic congestion was both inefficient and undesirable for the masses. However, the winds of change began to blow when an idea took root. Copenhagen's history has always been intertwined with cycling. Before the automobile era's dominance, bicycles were the heartbeat of the city. Recognising this, city leaders, driven by a combination of nostalgia and forward thinking, decided to rekindle Copenhagen's love affair with bicycles. This wasn't a solitary effort. A vocal and passionate public backed them, demanding the return of the city's cycling routes. The transformation of Copenhagen wasn't an overnight

phenomenon, it was a journey, one that required a clear vision, unwavering commitment, and consistent efforts. The city's metamorphosis began truly in around 2005, so actually not as long ago as we think, when key figures including the Lord Mayor, and I won't butcher the name, you can read from the there, and the city's bicycle mayor, which is unofficial names. A more official title was technical and environmental mayor, but that's much less exciting than bike mayor. They championed the cause of cycling. Their dedication to the vision was evident in their actions. They didn't just make promises, they backed them up with real plans, real visions. They paid for studies that showed the importance of bike cycling, like the 2006 pivotal study that showed that a kilometre of cycle track built on a busy road increased cycling by 20% and decreased car traffic by 10%. They used data like this to drive forward their vision for the city. 2007 also marked another significant milestone for Copenhagen. The announcement that the city would host the UN's 2009 International Climate Conference propelled Copenhagen onto the global stage. Seizing this opportunity, the city sharpened its vision even more, aspiring to emerge as Europe's environmental capital. Ambitious goals were set to achieve complete carbon neutrality by 2025, and to be recognised as the world's cycling capital. The Copenhagen we see today. There you go. Same place a few years forward. The Copenhagen we see today is a testament to the power of vision, leadership, and collective effort. The city leaders not only crafted a vision that they believed in, they championed it, they worked tirelessly to realise it. The result is a city that stands as a global model for sustainable urban living. But Copenhagen isn't alone in its transformation. Another city, Amsterdam, with its iconic canals and rich cultural tapestry, stands as a testament to the transformative power of vision as well. A few decades before Copenhagen embarked on its journey of transformation, Amsterdam faced its own set of challenges. In the 1950s and 1960s, much like its western counterparts, it was grappling with the rapid rise of automobiles. The city's landscape underwent drastic change. Once bustling neighbourhoods where communities thrived and children played in the city, and played in the streets were dissected and overshadowed by large highways that were expanded to meet the needs of automobiles. Roads were broadened and the city became a frenzy of automotive activity. Cycling, which had once been the pride and joy of Amsterdam, was relegated to the sidelines. The consequence of the shift were not limited to the city's aesthetics. The dominance of the car brought one grim reality, and that is, by 1971, the Netherlands witnessed 3,300 traffic deaths in a single year. In a country at the time of a population about 13 million people, that was 25 car deaths per 100,000 people. 400 of those deaths were children alone. This brought about a rise of community activism and outrage. The protests erupted across the city with stop kinder moord, which is essentially stop child murder. It became a rallying cry for people across the city and across the country. A few years later, it culminated in the formation of the Dutch Cyclist Union, and together, these citizen-led initiatives crafted a vision for a safer, more cycle friendly Amsterdam, a vision that extended to other Dutch cities as well. These are some images of the protests that took place over the years. So fast forward today and Amsterdam and Copenhagen proudly wear the title of the world's premier cycling capitals. Their journeys, though distinct in their genesis, one the top down, and the other from the bottom up, have reshaped urban transportation and land use. These movements, born out of vision and determination, not only transformed their respective cities, but they've also inspired many other nations. So what does this have to do with Auckland? Auckland, which many would argue is the sprawling jewel of New Zealand, stands at a pivotal juncture in its history. As we gaze into the future, the roadmap to 2050 is dotted with policies, commitments, and aspiration.

We've actually laid a lot of the groundwork with policies and commitments and aspirations that will take us to where we need to be in 2050. We've pledged as a country to reduce traffic fatalities. We have an emissions reduction plan at the national level that reduces emissions by this timeline. We've aligned ourselves with these global initiatives. We set our sites on introducing cleaner vehicles and more active modes, and more public transportation. The city of Auckland itself has many plans in place. The Unitary Plan, Regional Land Use and Transportation plans, the TERP. All envision greener, more sustainable Auckland. They advocate for slashing transportation emissions, bolstering public transport, and promoting active modes. These documents are the scaffolding upon which we can instruct our future. However, while these policies are crucial, but they're only a skeleton of our evolution. The tales of transformation of Copenhagen and Amsterdam serve as beacons of inspiration for us. They are important in seeing how other cities can chart a path to a greener future, to a more sustainable future, to a future that they want. So to the leaders present here today, I'd pose a challenge. Will you be the torch bearers of Auckland's vision? Will you guide our city and its people towards a brighter, more sustainable future much like the stalwarts of Copenhagen did? And to the wider community, the rest of us, the heart and the soul of Auckland, I extend an invitation. Will you participate in crafting this vision? Will you champion it with the same fervour as the parents and children of Amsterdam who rallied for a safer and more inclusive city? The lessons from Copenhagen and Amsterdam are clear. Vision, whether stemming from the top echelons of leadership or the grassroots level of citizenry, has the power to transform. Auckland has the potential and the resources, and the will, if we give it the space and the time. But to truly realise those aspirations, we must unite and collaborate and coalesce around this shared vision. Thank you.

- Wonderful. Is that on? Is that going? Yeah, wonderful. Wouldn't be a presentation without a technical.

- Does this one work? Yes, it does. Perfect.

- Okay, so I guess that's a challenging set of presentations. Fantastic. And I think it begs, especially perhaps, Tim's last presentation, begs the obvious question that I'd like to first put to Dean, which is. We can start down there and come this way. The example in both of those European cities was, and I think to use the expression top down and bottom up, how can, given that we will accept the need for change, and of course, to improve is to change, so it's not a question of simply maintaining what we keep doing, how can leadership at the top help stimulate the bottom up, as well as make the plans from the top?

- Wow. That's a complex question, isn't it? Look, a few things for me. One is, as Auckland, we need to have that view of what we want to become. We need to play through into that consistently. One of the other big challenges, and I touched on it, is that we have these aspirations, but they're unfunded aspirations, and nor do we quite know how to shift from status quo to that new future. So we've got to dig in a bit harder on that, and that's a leadership challenge, but it's not a big-L leadership challenge, it's a challenge across you three as well, as you stimulate thinking and you give advice, it's a challenge for all of us. One

of the other things that Auckland Transport's been challenged hard on is, the criticism has been, we have not listened to the communities that we serve. Now, that's a really interesting challenge, because some of those communities don't want what you've described today. What that tells me though, is that we've got this social licence to operate, yes, you as an organisation, but not just Auckland Transport, many of us do. So we need to be thinking, and this was my challenge back to all of us, not just what it is that we want to achieve, but why have we got this resistance from so much of our community to what we take as needing to happen? So I do think there is a deep conversation that needs to be had, and it does need to be politically led, and from civic leadership, and from the people in this room. What is it that we want to become and have that conversation? So if it's citizen assemblies, or if it's deliberative forums, or it's all these other tools that we have about how we take change through our communities, I'm up for that. But we need to do that, because you can't get Auckland Transport to come in and drive a change to society and how we spatially plan if the communities that need to go through that process aren't willing to go there. So that's the leadership challenge. It sits with every single one of us.

- Anyone else want to add to the leadership question?

- I would. I think it is also on leadership to be able to carry the calls to make sure that, I don't think that there's whole communities out there that don't want the vision. They might not understand. There might be individuals within the community, but we actually have to bring them on the journey, because we actually, we're all going to be in a very terrible spot if we don't start to pick up the call. So I think it's more so being able to have the conversation in a way that makes sense. I think we do have a bit of a divide in terms of climate illiteracy and how we speak about it. So I think being able to actually tell people why it's important for them to be interested, and the naysayers, bringing them along. Because I think for the most part, the people outside of this room get it, but it's just a matter of, yeah, we all have to just start pulling it together, because we can't just go along and say, I don't want to do it. If we're going to stick our guns and stick our foot down, we need to stick our foot down in those communities that say they don't want it and say, you're going to get it. This is what we have to do. Yeah, that's me.

- I get it, okay? I get what you've said. You should try doing it into saying, whether you like it or not, I'm going to do it to you. Because that's literally why, as an organisation, we had so much challenge. So I'm saying we need to rethink this, because doing it doesn't work and just sets up even a greater polarisation and challenge. But I won't talk anymore on that one. Patrick, I see you want to go to the next question.

- Yeah, I just wanted to expand on that a little bit first.

- Oh, you do?

- Oh, yeah. I mean, I think we have a problem, we have a sort of crisis of expertise. I think a lot of the time, we are asking the wrong questions in consultation, for example. 'Cause we live in an age where people, a section of the community feel very, very strongly that they are entitled to their own facts, which can be problematic. And there are some aspects around transport and city building which require expertise and can be counterintuitive. If I can use an example from a different but aligned area, which is water provision. We don't consult the public and ask them if they would like drinking water separated from sewage. We consult them and ask them if they'd like the water treatment plant here or here. So we shouldn't be asking people whether they want safer streets based on the evidence that we know delivers safer streets. We should be asking them about questions of what sort of trees, where they should be, what colour do you want the cycle lane? Rather than if. I think all of us working in the sector need to own expertise a little more firmly. But I get your. That that can feel, especially to people with very strong views, that can feel like something's been imposed on them, and that is difficult. But the other thing is, of course, we can never get a 100% support for anything. I mean, that's never going to happen. So someone has to make a decision at some point about whether there's sufficient support for something. Now, Timothy, I'd like to just throw this one to you. It's not just people who disagree with climate change or believe there's any need to act, there's also people who are enthusiastic about it but have their own answers, or have different answers than maybe we've heard tonight, and one of them is the sort of not unreasonable view that can't we just electrify all the cars and then just keep living like we are so we don't have to change anything at all?

- Yeah, happy to talk about electric cars and self-driving cars and all that nonsense, all that stuff. But let me just go back real quick to this one idea. The reason I talk about Copenhagen and Amsterdam a lot is because when people go to Copenhagen and Amsterdam and they come back to their city, whatever place that is, whether it's Auckland or somewhere else, they come back inspired, but more than inspired, they come back angry, because they want to know why their city doesn't have all of that stuff. Why don't we have efficient public transportation? Why don't we have safe cycleways? Why can't my child ride their bike down the street without me being terrified that they'll be hit by a car? And so, we had to think, are we a car culture? We're not a car culture, because that doesn't actually exist. We're a culture that has allowed cars to permeate every aspect of our lives. And so, while we've let cars come in and kind of be all of our life and our lifestyle, the only way that we get past that is to push back on this idea that we are a driving society, and we have lots and lots of models to work off of from there. And that kind of takes me to the point of electric cars. There's one thing and one thing only that electric car solves and that's tailpipe emissions. And we know that carbon is terrible, we know that PM2.5 and 10 is really bad for our lungs, but that's the only problem it solves. A bike solves far more of those problems, walking solves far more of those problems, a ride on a bus solves more of those problems than a car. A car still causes congestion, it still causes death and carnage, the stuff we see every year. It still causes lots of money lost in our transportation system. It's still really, really inefficient, and it's still really expensive for every household to own one or two of them as their main mode of transportation. So whether we're talking about a hybrid vehicle or a fully electric vehicle, it's not the path forward, it's not the solution. It's a bridge to get us to somewhere more sustainable. But we can't use that as the reason that we can bury our heads in the sand and forget about all the other things that will take us to a sustainable transportation system.

- Thanks. Timothy, so essentially, we've got to solve all of these problems at once, right? The economic efficiency, the health and safety, and the emissions, right? Okay, now I want to hear from you, Tiffany, I think, as our sole representative from the private sector amongst all these government bureaucrats. What role does the private sector have to play, and particularly in terms of finance and innovative ways of solving Dean's budget problems? Can you come to the rescue?

- The rescue, there's a lot to be rescued. I think that in terms of climate finance in the private sector, you actually touched on it a bit, Dean, really looking at the procurement process where we're actually starting to evaluate things by carbon, how much are we actually saving in a design when it comes to carbon and comparing that. Is your design going to be most carbon efficient? Also, taking a look at the way that we are constructing, the materials that we're using to construct, not just emissions, but also what's embodied. The embodiment of carbon in the materials and the construction and the buildings that we create, there's hidden cost in there. And so, actually teasing that out and being really smart about the things that we're recommending in our designs. We actually have, pretty sure there's a decarbonizing specialist at AT. Having folks like that actually brought up a bit to take a look at designs, making sure that they are truly, truly teasing out how much carbon, what is your return on investment for these designs when it comes to carbon? Is it helping to decrease? Is it helping us to get to our targets? And really identifying that information, I think, will be helpful. And private sector is advice, but you have to take the advice. So, yeah.

- Dean, if you've got any further thoughts on that, or other panellists?

- Ah, sorry. It was on. Oh, look, I'm all in for thinking about how we can decarbonize, no question. And I take that as advice that we do take actually, and I think we push the private sector to go harder on it. We're electrifying all of our fleet, which is awesome. Part of your question was, well how do we finance some of this? Where does the capital come from? I mean, there's lots of sources. I think we'd probably go into a bit of a rabbit hole if I went down that one. But the key thing is that the discussions I've had with those that are looking to lend, particularly outside of Australia and New Zealand and from Europe, their money is following green investment. They want to know that what they're investing in is actually decarbonizing, and is an investment that's consistent with their values as an organisation. So I think that's a really powerful influence. But I think insurance companies will eventually get there the same, and they'll be a big influence on not only what is being built, but where it's being built. And I think these are really big, important corporate leaders that can play into the future that we've had described in 2050 for us here. I agree with what Tim was saying, too, just around tailpipe emissions. Electric cars will deliver us an emission reduction, but it won't give us anything on a VKT reduction. So we do need to look at that.

- Tim, you've been very patient. I want to actually keep pushing this a little bit, because I know there's a school of thought, we could possibly call it the Sierra Club vision out of the states, which is an idea of a carbon neutral suburbia. Detached houses, solar panels, battery,

EV, compost. It's a high cost idea. But remember, we're already ignoring those 36% of people that can't or won't drive. So how can we avoid a future where the decarbonizing drive is split or captured by the already privileged communities, is how can we shape an equitable and faster, and more economically efficient transition?

- That's a really good question, Patrick, thanks. And rare for me to sit silently for a while as well. So you got quite lucky there. I think it cuts to the heart of a few things, in terms of just that critical question on how do we shape an equitable transition in the transport system, and how do we ensure that happens, which is perhaps a little bit separate from the, it's not exactly a tech bro solution, but this kind of idyllic utopia where we all still have our house, our castle that is with our electric robo taxi perhaps ferrying to where we need to go. The critical thing there, I think, is to make sure that we are platforming and paying attention to the voices of those people for whom that system won't work. So in our decision making process, we really need to make sure that we're including children in particular, we're including the disabled community. we're including , we're including women, and we're making sure, is this actually the future that you want that we're working towards? And that's going to be a critical part of developing that social licence as well. If we bring people together and get a cohesive vision that most people agree with. If you ask people in general, what do you want for your community, they'll give you a different answer to what do you want for you. And so, it's really important that we bring wider communities together and we sit them down and we say, what do you want for your community? And we have in that room all of these different people with all of these different needs so they can see face-to-face and discuss face-to-face exactly what the outcomes that we're working towards look like. And we need to make sure then that we get the leadership and the accountability to pin our budgets to those outcomes and to pin our street design to those outcomes so that it can't be skewed later on by louder voices or wealthier voices.

- Yeah, and of course, we have the faster horses problem, don't we? Which comes to vision. Often, if you ask people what they want, they want a slightly better thing than what they've currently got. Transformation is, which means changing everything. It's an easy word to drop, right? We need to transform this, but it's a very big thing, and it can be quite scary in terms of being unimaginable or creating fearful misapprehensions. It strikes me that the way to carry people along is to just make the best choice that they can make be the obvious one. I mean, they do, everyone does want to get quicker and safer and quieter to wherever it is they're going. So let's make that means of doing that the obvious choice and I think people will take it, right?

- Do you want a response to that? There's a risk in saying let's move people more quickly to where they want to go. We're still framing things within kind of existing destinations and existing travel habits. And actually in that, you'll quickly find that it is impossible to deliver what we're talking about. We can't both move people out of cars but also have them making the same trips more quickly. That's not a thing that we have a solution to, or it's impossibly expensive. But what does happen is, is instead of selling a transport vision, this faster horses problem and saying, well, what if you changed your transport mode, the thing we need to sell is a better vision for our city and a better vision for our community. That's what we really

need to get behind, right? So it's not about are you going to get across the city faster with a one seat ride in a tunnelled rail system, for example. It's about would you like to be able to go to your local coffee shop in a really healthy, enjoyable way where you're going to meet your neighbours along the way and you're going to have a vibrant street where the kids are playing and people are safe? And they're two very different systems, but one of them is much faster and cheaper and easier to deliver, and if you propose them both to your community, most people will say, actually I'd like that option. I'd like the option where everybody can move around quite quickly and easily on foot, or by bicycle, or with public transport, over shorter distances and in a vibrant kind of a street environment.

- Yeah. So this brings us back to land use being the other side of the coin, and housing unaffordability and transport poverty are infinitely linked, right? So we need to change. So do we have a situation? I don't know who can answer this. Are our land use policies and our transport policies sufficiently tightly linked? Is decarbonization of the transport sector part of land use planning? Auckland Council has for years now had an overarching vision of the quality compact city, but it also subsidises growth at the fringes. So do we have an alignment between strategy and action?

- It feels like it could be a question for me. I think that what we see here is part of the great debate that we're having, and that is the tension between affordable housing. I'm not defending this, I'm just telling it as it is. Affordable housing and access to affordable housing, transport, jobs, protecting our environment, you see this play out all the time in every decision. And it's not just in Auckland. You can go down the road to the Bay of Plenty and to the Waikato, those same debates are taking place. So I don't think we've quite figured this one out, to be fair, Patrick. But quite clearly, my view, I think it's quite clear that the way that we plan our cities in our regions, the urban centres, the rural environments determines, or needs to be linked to the outcomes we want as a community, in whatever form those are, transport systems are simply in a neighbour of that. And so then, the shape of the street, how the cycleways work, and amongst all of that, where the footpaths go, where the public transport system fits in, that is an enabler of the outcome that we've agreed to. And what I think we've done wrong is we've taken the transport system as the end in its own right, and we've rolled out these roads and we've done this stuff, and we haven't thought about actually the land use, the outcomes perspective deeply enough. So we're left with this position where we're retrofitting. That's expensive and hard, it's disruptive to communities. But the plea is, can we get the future right, which is what you've touched on when you said, have we got the link between outcomes and transport systems in place?

- Yeah, Dean, I think you're spot on with that. And I would just add, I think also, we've taken the people out of it. So we very much, planning for the roads and planning for the housing, but really, bringing the people back into it and how they actually experience those things, placemaking is so important and how people. You have women that feel unsafe using particular systems because it just doesn't feel safe to them. And are we actually planning and designing for those situations where you're like, oh, can I actually make this area a bit better and that it encourages people to use it? So yeah, I think also there's housing, and also

putting it on the developers to be a part of this conversation of how they create a realm that encourages people to actually use active transport as well. Yeah.

- Okay. We have various questions from the room about barriers to cycling, including all the usual ones about hills and weather. I think other cities in the world both have hills and weather. Does anybody wish to discuss, is there anything special about Auckland that means we can't do this?

- In terms of cycling uptake? Well, let's quickly get it. It's a common question, it's a common perception. Is our topography, is our hills, and is our weather a barrier to cycling uptake? And I guess there's the kind of dry statistical answer of, well, we can look at, Auckland had a very wet year this year in particular, but our cycle counters actually are almost back at where they were, where they were during the wet period in 2019. There was not a major reduction in the number of cycle trips taken in the first half of this year, despite being extremely wet. So we have a pretty good idea that yes, it rained a lot, but that didn't put too many people off cycling. It makes a difference of around 10 to 20% if you look season to season. And hills, really e-bikes have just cancelled the hills out. It's a new technology that means they just don't even matter. So we can also look at international examples actually, which are perhaps more interesting. You can look at cities like Oslo or Zurich, or places in Taipei and Taiwan, for example. These are all mountainous cities and they all have much higher cycling modes here than Auckland does. So even traditionally, with an acoustic bicycle, hills are not a big barrier. The barrier is and always will be a lack of safe space to ride a bicycle. It's the one ingredient that you need to become a cycling city. If you create a safe space to ride, regardless of the hills and regardless of the weather, people shift to bicycles. They like to ride, and once they get riding, they don't mind the hills, they don't mind the rain.

- Thank you, Tim. I still want to drill down a little bit on the financing and funding aspect, 'cause I think that this is a critical issue for us. I mean, I just had a very interesting experience with, I got engaged with a company called Solar Zero, who are offering to put solar panels on my roof and give me a battery at no cost, and it took me a little while to work out what their business model was, and it's incredibly clever. They're arbitraging the varying price of electricity. The solar panels are part of it, but really, the thing that makes it work for them and then also gives me a cheaper power bill, is the battery. So they're charging the battery from the grid when this spot price is low and then discharging it when it's high. We have three electric bikes and one electric car to charge, so this is slightly related to transport tangentially. So this is an incredibly clever piece of work. So this is not a government subsidy, this is not the government giving me money to put solar panels on the roof and get a battery. This is entirely the private sector who can both profit from this and help me decarbonize. Are we aware of similar real innovations, technological or finance innovations in the private sector, that we can bring to this field to urban form and transport? How about car share?

- How about road user charging? Like let's just shift it. We've already got something on the table that can take a look at how we actually charge for using roads and then be able to use

that money to actually put it into other investments related to active modes. So that's one lever, and I don't really like to use that as a finance thing. That really is to be used to try to reduce VKT. But there's some opportunities there to help use that there.

- So you're saying that's a demand management tool, principally?

- Absolutely, absolutely.

- Because we haven't really done any demand management, have we? Except for congestion, in a way, is its own form of demand management.

- Yeah. I mean, there's some legislative things that need to be done as well. We don't need to have so many. I think car ownership here is like wild to me. You can tell I'm not from here. But the amount of cars that each person in a household has, I'm from New York, I've not seen that. And so, I think actually going into reducing the number of cars in a household will be very helpful to the cause. But that's legislative things as well. But yeah, I think travel demand management is so important, so important to actually getting us to where we need to be, and we haven't cracked that just yet. Not real levers, at least.

- I was just going to jump on top of the question. I got a couple of comments. First of all, as we've gone through this process of electrifying the bus fleet and the ferry fleet, we're seeing a lot of interesting innovation come out as companies start to work through what the opportunity is. So for longer trips, this is particularly relevant for ferry fleets. If you want great barrier to the city, if Waiheke, Gulf Harbour, Pine Harbour, there's a lot of innovation in that space, which is really interesting, and it's not just about the sort of carbon fibre theory, which they look awesome. It's the battery, it's the charging, it's the whole system. So some really interesting stuff happening there in terms of innovation, to play at your solar equivalent. We're also looking at how we take the road space that we've got under our control as Auckland Transport and think about, well, how do we use that and leverage the opportunity to provide for curbside charging on electric vehicles or electric bikes. So there's some really interesting stuff happening there. Time of use charging or congestion charging, that's going to be a big play. MOT's got draught legislation. So we've got a project specifically targeting that. So there's a range of things all designed around innovation, alternative sources of funding, and how we might use a more true pricing model for how our transport system is used, time of use being one of them.

- Yeah. So congestion charging or pricing, as demand management is, it could be described as the white whale of urban transport in the sense that everyone's pursuing it but it seems to be extremely difficult to get to land. The handful of cities that have it, I mean, the evidence is inarguable, Stockholm, Milan, London, Singapore especially, yet it always seems to be a few years away, doesn't it?

- Well, we can't afford for it to be a few years away. If we're going to leverage the city rail link investment, then we need time of use charging, otherwise we've just spent five billion delivering a public transport system and aren't getting the leverage out of it. So we're very focused on that one. But I feel like this is more than an Auckland Transport discussion.

- Okay, let's see what else we've got here. Remembering the passcode on somebody else's iPad is quite an achievement. Okay, so look, maybe it's time for a quick fire round. I want each of you to say one thing, and this is a no cost thing that we could do in our city or any city in New Zealand that would get us moving in these directions that we've described. We start with you, Tim, and just go down the line.

- What can we do? Everything has a cost, Patrick, nothing's free. Look, if I was starting out on how can we get towards delivering this, I think the work does need to happen internally, both Council, Auckland Transport, Waka Kotahi. It's not a very exciting answer, but it would really be about getting everybody into the room and making sure that everybody is clear on what is required from them in order to deliver on this stuff. Thanks, yeah. And it's internal work, it's internal work for all of our agencies collectively, with cross-party transparency, effectively, like agreeing that we're on the same page and we're going to make this happen. That's where I'd start, and it doesn't cost anything extra.

- Ah, so many things could be said. I think the one thing that comes to mind is kind of going back to that, the way that we talk about climate, really finding a better way to talk about this and really bring people on this journey so that we are all clear on where we're headed if we don't start moving from aspiration into action. And that means that those that are, tends to be a bit of a younger conversation, actually bringing everyone of all ages into the fold about how we talk about this, because it's important for all of us, no matter what age, to really get on board with this. So I would say, yeah, really being able to figure out how we talk about this, get people together to talk about this, and not just leave it to consultation to truly be active, active and real about how we talk about climate and how to solve it together, and I think that's the costless thing that we can do.

- So like deliberate democracy processes?

- That's correct, yeah. Active and deliberate.

- Excuse me. Well, it's not no cost, but we could be more revenue neutral if we weren't so wildly subsidising the cost of vehicle ownership and driving, and giving away so much space on our streets to car storage. The reality is we talked about, you mentioned car sharing and things like that, a personal vehicle spends 95% of its life parked in storage, not used. It's very expensive for people. But while it's driving, it's causing massive amounts of damage to the environment. It's a huge cost to people and to government. And so, if we actually charge closer to the real cost of driving to drivers, sure there would be some pain, but it would bring in a significant amount of revenue in terms of like congestion charging, time of use

charging. Even the city of New York recently passed legislation to allow for congestion charging. So that's the direction we're moving. The revenue that's generated from those types of policies can be used and piled into better cycling infrastructure, public transport, things that are much more equitable for people to move around the city. So there's a cost somewhere, but it's getting put into coming from another source and reducing the cost from that source. So there's some neutrality in that. And so, that's kind of what I would push for, is a better cost system.

- Well, I came in tonight with Tiffany's key message, that we have to change compensation with our communities, but she said that, so I've just reinforced it. But I have a proposition for all the businesses in the room, including the three here, Auckland Council, WSP, no, Arup, Arup, sorry. Oh, did I just say? And? The University of Auckland. I thought it was, but then I had to double check. And any other employers in the room, of which may be WSP is one of them. My proposition to the employers is, I would like you to subsidise your employee transport, whether on the bus, the ferry or the train, or take the equivalent subsidy and put it into supporting the active modes. And if you're willing to do that, I will do a deal with you.

- Dean, that's a great thing. And perhaps you could tell the audience about the real example that you've already got of this, which is Genesis. You can share that story?

- Yeah, sure. So it wasn't an empty promise, it was a promise with intent. What we see is, that as organisations get their head around this and they encourage their employees to move home to the office and back again, as a minimum via public transport or active modes, they're actually improving their own, well, they're reducing their own carbon footprint, which they need to report on, they're reducing their own operating costs because they need to provide less car parks. So there's an immediate cost reduction there. And so, we also provide them a carbon counter. So this is a solution we're working up as part of, and we're offering and trialling with a number of entities, to help encourage the shift from car dependency to being able to use the alternatives. So it's a very practical way for Auckland Transport to support the outcome that we've committed to, which are those emission reduction, VKT reduction targets, and increase in cycling and walking. So that's why I've given you my one very practical no cost, low cost solution.

- Yeah, that's great. And I'm aware of one business that moved from a suburban business park where every employee had a free car park to Wynyard Quarter, and AT worked with this business to come up with a transport plan, which involved AT giving a discount on hop cards, if I remember correctly, and the employer subsidising on top of that, along with the employer, instead of building a hundred car parks expensively under this building, they had secure bike parking and showers and a range of alternatives, and they've gone down to, I think, fewer than 10% of the numbers of car parks they had before, and the staff, there was some bedding in period, but apparently it's landed incredibly well. That's about a year ago now, I think.

- So look, not only by individual, but we're doing it by precinct. So if you think Wynyard Quarter, that's a good example. A number of businesses in there. We measure with them, in partnership with them, what their carbon footprint is, what the public transport active mode component is. So I think there's a lot of opportunities in there, and I'm just saying, if we're going to move the needle, then we've all got to change about how we do it. So, we're up for that. Just looking for more questions from you all. We've got a kind of related one, and this one's for everybody except Dean. You mightn't feel that shortly. So, Tim, Tiffany and Timothy, the three Ts, what three things would you do if you had Dean's power now?

- [Tim] Whose question is that?

- It's from anonymous, actually. It's from anonymous. You know who you are.

- Do you have any power, Dean? What's possible? Actually, Patrick's just reminded me, we've got more Tim's on the stage than women this evening, which is actually, it's a twist of fate, and I want to give a shout out. We initially booked Frith Walker as our MC for the evening and would've aimed for a bit more gender balance, and she was unable to attend, and Nico Elson was going to step in and then unfortunately he wasn't able to attend, and Patrick's come at the last moment to help us out. So I want to give that shout out to Patrick. Thanks for coming along. And highlight the fact that we have more Tim's than women, which little bit uneasy about, but it's where we came to.

- But we're all Ts.

- Exactly.

- So that's awesome.

- There's some beautiful alliteration in the centre at the stage. Dean's power. Yeah, I'd probably be quite sleepless to be honest. Like we're all a bit ruthless. But actually, let me give a little bit of framing. First and foremost, I always work on the basis that if we want Auckland to be a great city, Auckland Transport needs to be a great organisation, and that actually requires us all to support Auckland Transport as much as possible. And I really look forward to working with Auckland Transport as it's developing under Dean's stewardship, effectively. Climate's obviously really important to me, but it's not the only consideration that you're faced with. But for me, it would be assembling a task force effectively, to deliver the change that we need and bring in expertise of people who are confident and capable with doing this. I'd really be looking for a whole team of people that can come up and say, yes, we understand the scale of the challenge, but we also understand how it is possible to get it done, and getting those people and putting them in charge of doing it. I think that's what I'd be focusing on if I was in that position.

- You're supposed to name three.

- Oh, three things, any number.

- It's all good, it's all good. I don't want to name three, so it's fine.

- Whatever you got.

- Oh, let's see. Dean, I would, as a former AT employee, I would love to have a hop card, because you have actually over 15, close to 2,000 employees. I think if each one of them had a hop card, that'd be great. Just encourages people to use public transport more regularly, or even subsidised would be fine. But again, this is just, if I had your power. You don't have to consider this. What else?

- [Patrick] You mean as part of a remuneration package that?

- Absolutely. Because AT employees do not have hop cards that are paid for by AT, just so you know that. We paid for, yeah, yeah.

- Auckland Transport has no car parks available for staff. So you either, you have to figure. So every employee does actually have a hop card.

- Subsidised. So yeah, so maybe you guys, as rate payers, can support AT employees having hop cards that are subsidised. Because that is a lot of employees, and being able to support the systems that we are planning for, I think it would also help for experience understanding what it's like to be on the system.

- Yeah, there's a phrase from the tech world, which is, you should eat your own dog food. It means, if you work in a dog food factory, you should be tasting the dog food. So the argument behind that is not only to have AT, in fact, wider council family, using the system, but also, that's a way of assessing the quality of it constantly by having every staff member out there using it. And I suspect, if one was. Although, I actually happen to know your organisation, like mine, actually has a very high quantity of people that use PT to get to work.

- So that's my wish.

- So there wasn't a question.

- I sample our produce every single day.

- Oh, yeah, I don't know. Personally, I wouldn't want your job, Dean, so thank you for doing it. I mean, being the head of any organisation, something like AT, it's got to be a hard job. So anybody up for that task wins points in my opinion. What I would like to see, and this isn't something AT can do, but I would like to see AT and Auckland Council have more control over what we can do with our own streets and what we can do with our own infrastructure, because that's critical to making decisions that are important to local communities. If we have to wait for a higher body to weigh in on what powers we have over that space, it makes the process very slow, and very laborous, and very difficult. So that's not really something you can do. But if that power came down, I'd love to see that for our local agencies.

- I think we can take the first part of your comment as sympathy for Dean's position.

- That's right.

- Rather than a criticism.

- Hey, I do want to respond to the sympathy. I have got an awesome job, okay? It is extremely challenging, it is most interesting. But the only reason you do a job like this at Auckland Transport is because you believe in the outcome. And I've thought a lot about that before I took it on, and I believe in what Auckland can achieve. I believe I have a far deeper understanding now of the role of Auckland Transport in delivering on that outcome. We have this long-term stewardship role around a transport system that enables people to move as they choose, enables people to make those choices that delivers on all the outcomes we've talked about tonight. That's what I'm up for every single day, that's why I love this job. So I don't need sympathy, but thanks for offering it. Some days I do. But still, having said that, it is an awesome job, high impact, and these are important opportunities.

- I think that's a fantastic place to end this, really good. I'd like to thank, all of you, please, thank our great panellists. And before I ask Richard to come up and to close us and keep us all spiritually safe, I guess just a quick summary is is called for. We've heard about the need for vision, and vision beyond the transport system, because it is merely a means to an end, after all, so a vision for this city. And let's face it, this city should be at the top of that world's greatest city lists. The natural attributes are just extraordinary. It's really what we've done to the place and what we could do that needs to lift its game, and it needs to be a convergent vision that solves all of the problems rather than sort of chops them up and then trades them off against each other. And we need to take the whole community along, or be allowed to be taken along by the community. So we possibly need better, and maybe more complex and more difficult to do processes for engaging with the public. But I'm certainly aware that some processes like deliberative democracies are working. The little trials that are happening, I think, through Auckland University, are proving to be really productive. When people get in the room and get to really discuss the cost and benefits and the trade-offs in a

sophisticated manner, rather than just a sort of yes/no situation, often the public generate fantastic outcomes. So there's quite a lot of hope, and the fact that you're all here is part of that. So thank you very much for coming along. And now I'd like to ask Richard to come up and close us off.

- Ladies and gentlemen, give a wonderful hand for our wonderful MC. As I was sitting on my seat, I was thinking about a karakia, and so I came up with one which I hope you can join me as well, and it acknowledges the climate that we live in. Can everyone repeat after me? I visited a country and I couldn't see the sky, and it was always clouded for the 10 days that I was there. And so, this acknowledgement of acknowledges the beautiful skies that we have here, and to wake up each morning when you open up the curtain and to see and to feel the breath of rangi, of the sky, and what it provides. Can everyone say, ? And so, when you walk on the whenua in the mornings, you feel the real breath and the strength of what the whenua provides. Everyone say, . And that's to feel the breath and the power of the moana, or the sea. And this is acknowledging the importance of the climate that we live in. And the last one that I'm going to say is to acknowledge, , and this is to acknowledge everything that has been created for us to enjoy. So it's wonderful to come here tonight and to hear the wonderful about preserving and protecting our environment, and the importance of that. Kia ora, good night.