Episode twenty-six

TRANSCRIPT

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Te Waihanga

Thinking Beyond Growth

Infrastructure for a better future

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Please note: the transcript has been edited to make reading as easy as possible.

Introduction: Welcome to Infrastructure for a better future, a series where we have honest conversations about the infrastructure challenges we are facing and how we can build a better Aotearoa. In each episode we talk to experts from here and overseas about what works when it comes to addressing these issues.

Graham Campbell: Welcome to the Infrastructure for a Better Future podcast. My name is Graham Campbell. I'm the Director of Economics and Research at the Commission. The Commission recently released its National Infrastructure Plan, which is our view about what is needed over the next 30 years to ensure infrastructure is meeting the expectations of New Zealanders. It has four key messages. The first is planning and thinking about what we want to build and maintain into the future. The second is putting a focus on maintenance and renewal of existing infrastructure as a priority. The third is improving how we plan and decide what we build for infrastructure. The last one is thinking about reforms to our systems to enable easier building and getting more out of our infrastructure that we currently have.

Our guest today is no stranger to the podcast. I'm joined again by Chuck Marohn all the way from Brainerd, Minnesota. Chuck is the Founder and President of Strong Towns, an American non-profit organisation focused on helping the cities and towns become financially resilient and liveable. He's the author of three books related to local government infrastructure, housing, and transportation. Chuck, welcome back to the podcast.

Chuck Marohn: It is delightful to be here chatting with you again.

Graham Campbell: And welcome back to Wellington. Chuck, for those who haven't heard the first podcast, can you just remind us about your organisation and the type of work that you do?

Chuck Marohn: Sure. Strong Towns is a non-profit organisation. We do advocacy around primarily the financial solvency of cities. Why are cities struggling today to meet their obligations? To provide services? To keep taxes at an acceptable rate? Why are these things so difficult today? When a generation ago even these things weren't nearly as hard. Most of this comes back

to the productivity of the places that we build. We're really good at growing. We're really good at building new infrastructure, building new systems, building new stuff. What we're not as good at is taking care of what we have built and getting a high level of productivity out of them.

We do a lot of writing, podcasting, video, a lot of media around helping spread that understanding. We have increasingly developed tools for communities to use to start to make changes, along with a programme of local conversations – we call them local chapters – people who are coming together in different places to help their place shift direction and change what they're doing. We have over 6,000 members worldwide. Almost all of them are in North America. We have 305, I think at last count, local groups. Most of those are in North America too. Although we have a couple in Europe and a couple in Asia and one in Uganda. I think there are a couple in the formation phase here in New Zealand, which is really cool.

Graham Campbell: Last time you were in New Zealand you gave a keynote address at the Infrastructure Commission's, Infrastructure Symposium. At that point, we had just released the draft National Infrastructure Plan, which contains some of the themes that ended up in the final National Infrastructure Plan. I think one of the reasons why you were on the podcast and why you came and spoke at the Symposium is that some of the messages that you espouse at Strong Towns are similar to what we are thinking about here in New Zealand and in the National Infrastructure Plan. Of those four themes that I talked about at the beginning, which one do you think resonates the most with you in your experience? In the United States and Canada?

Chuck Marohn: Well, okay, let's just say, first of all, the Infrastructure Plan is awesome. I mean, really, you are here in New Zealand, the only country that I have ever seen or experienced who is actually wrestling with the problems of what I would call the post-suburban experiment expansion, right? Like at the end of World War Two we said we're going to use cities to grow. We're going to grow our way out of our problems. At the end of World War Two, we had gone through a global depression, obviously war and conflict. How do we get back up on our feet? We're going to grow. We created these economies that would grow based largely around replicating cities, expanding outward.

You're the first nation that I have seen that has actually said, okay, this approach not only has a lot of negative aspects environmentally, culturally, socially, but financially this is actually bankrupting us. This is actually not helpful. How do we wrestle with that and how do we do something different? So, your Plan is really, I feel like the first credible attempt that I've seen to actually not even ask the questions, but ask them and then address them credibly – like okay here's what we're going to do. Of your four, to me, this idea of how are we going to maintain what we have – it's the one that in North America we don't even want to talk about. We assume that there's a fairy godmother out there that's going to come and wave a magic wand and fix things.

I think when you live on an island in the middle of the South Pacific, it maybe makes you more in touch with reality. Where like, okay, there is no fairy godmother coming, but we have to deal with this. I appreciate the realism. Your Plan even says that in some areas we may have to shrink back our infrastructure. We're not just adding, we're talking about how do we renew things? How do we renew them in a way that gets us more productivity? And then where we can't, where it's just clearly not viable, how do we actually have a conversation about winding some of these things down. I think it can't be overstated how mature of a conversation that is.

Graham Campbell: One of the things that we identified in the National infrastructure Plan is we put forward this idea that maintenance and renewals are going to be a priority for the next 30 years. But in order to make something a priority, you have to have good information and good systems to understand that. One of the things that we've seen across particularly public infrastructure providers, is that the level of information, understanding the condition and how much needs to be set aside for future maintenance and renewals is relatively underdeveloped. What types of things have you seen in your work – good systems that New Zealand public infrastructure providers could look at to start changing the system and making these things a priority.

Chuck Marohn: Yeah. I think it's important to acknowledge that those systems are underdeveloped everywhere. You can go to the most sophisticated city in the US and ask them and they will maybe have some spreadsheets and stuff, but they don't know either. Here I think the cool thing is, we actually look on the back of the envelope, do some calculations, and recognise that we're not close. In other words, if we were to – here's how I explain it to cities: If you want to get the 90-percentile answer to what is our backlog of maintenance, you can get that

with relatively low effort. If you want to get a 95 or a 98 percentile confidence that we know what we're doing, that takes like 50 times the effort. Either way, what you find is that we're not close. Like the amount of revenue we have coming in to maintain our sewer system, the amount of revenue we have coming in to maintain our roadways, the amount of revenue we have coming in to take care of transit. None of these things over the long term are close to what is needed to renew, to maintain, to sustain, to take care of all this stuff.

Graham Campbell: So, would you say this is a funding issue or is this a is this a planning issue about how we give visibility to those issues?

Chuck Marohn: I love the question because I think there when it comes out on the one end, in a political sense, it is generally framed as a funding issue: We need more funding for transit. We need more funding for roadways. We need more funding for utility systems. The reality is however, it's not a funding problem per se. it is actually a productivity problem. We have built, let's just think of a block of street. It has a certain number of connections to the sewer system. A certain number of homes on the roadway, on the sidewalk. How much revenue is generated by those services, by those transactions? When we look at that, and then we compare that to the amount of costs that we have in sustaining, renewing that street and all that infrastructure, what we find is there is generally a massive gap between them. There won't be here in downtown Wellington because you have intense structures and intense buildings and comparatively modest infrastructure investments on the ground. But as soon as we start to get out, I mean, we're looking out the window here at these beautiful hills that you've got with these homes – which is a beautiful place to be, but running a water system up that hill is vastly expensive, let alone a roadway on the side of a mountain, let alone, a sewer system and all this. Those bits of infrastructure are really, really expensive, and you don't have the intensity of development or even the value of development, even though those I'm assuming those are very expensive homes – they're also quite spread out and you don't have the development intensity. And so that relationship between what the public has agreed to renew implicitly by saying we will sustain this as public infrastructure versus what that tax base on that revenue is coming in.

You could say, 'Okay, we'll raise taxes'. You can't close the gap in that way. You can only close the gap by making things more productive. And that means more connections per block, more housing units per block, more usage, more tax base per block. That's what we mean by productivity. And we can go back and look at the way cities would have been built here 100 years ago and you'll see that the infrastructure, the collective investment that we would make as a public in providing these things would not have happened until you had a certain amount of tax base to sustain that. Post-war what we said is the opposite – we are going to build it in order to create the growth. We're now at least a generation and a half, maybe more, beyond where that approach made any fiscal sense, but we just continued to do it because that's what we built the systems to do.

Graham Campbell: I think that's one of the reasons why the Plan puts a strong emphasis on understanding whether the projects being proposed are providing a significant number of benefits to beneficiaries or people or landowners, etc. Under the understanding that the more people that benefit from infrastructure, the more likely they will be willing to pay for it. Or at least the numbers are available to pay for its initial upfront capital cost, but then its long-run cost. What types of ways have you seen across your work for signalling to infrastructure providers that they have that critical mass? One of the things we talk about in the Infrastructure Plan is one way is looking at prices – so can you charge? If you say, for example, it's going to cost this amount to put the waterline in and with the proposed developments are people just back off and say, 'no, no, no, that's too much' that's a sign to you that how you scoped the project, or what you're planning on building might need to be scaled back to align with willingness to pay or demand. Are there other ways that you've seen that have worked? Across, different jurisdictions?

Chuck Marohn: No. I don't want to be dogmatic about it, but like price is the signal in many ways. Let me give you a story. I think this was in Kentucky. There was a bridge that was being put in because the existing bridge was too congested. They were going to build a new bridge, but the new bridge was going to be a toll bridge and it was in theory going to save people 10-15 minutes' worth of time, but you would have to pay a toll to get over it. And they went out and borrowed the money and built the bridge. And I think the toll – I don't even know

what the toll was – it was like a buck. It was not that crazy. When they did the economic analysis to justify this bridge, they said, 'well, the typical person for the amount of time they're spending in congestion, they're losing like $5, $6, $8 worth of time every day'. By being able to pay $1 to save that $8 or $9 worth of time, people will do that a huge amount and it will take traffic off the congested bridge, put it on the toll, and everybody will be better off economically. That was all in theory. In practice when they built it, people will drive way out of their way and take huge amounts of time to avoid paying the toll. Even with the toll a buck or 75 cents – people will not pay it. They avoid it even though it costs them more time. What that suggests is that economists, planners, engineers, project advocates, other people who do these like theoretical studies, I don't want to say that they have motivated reasoning, but I think that they have models that are more generous to the outcome that they want. Like I would like to build this highway, so let me come up with a model that justifies building this highway. I would like to build this transit line, or I would like to build this piece of infrastructure, or I want to build this new bridge. In the US those models have evolved over decades to reinforce the idea that we should build. When we get actual real-world example like this bridge in Kentucky, where they're literally like next to each other and the one cost you 20 minutes of time and the one you can drive over but costs you money, people will take the time option in huge amounts.

Graham Campbell: I want to talk a little bit about prices because when we when we put out the draft National Infrastructure Plan, we had recommendations in the Plan. One of those was to better align transport prices with investment. Because under the current system in New Zealand, transport improvements – so road public transport and even some rail – are paid for with a variety of revenue sources, but primarily taxes on petrol and taxes on diesel fuel based upon how much and what you drive, such as heavy trucks or light vehicles. And over the past 15-20 years there's been a disconnect where the amount of money that, comes into that fund via the tax revenue and the capital investment intentions that are there. So, we recommend bringing those things back in line to better understand the right level of investment. But one of the things that we've been thinking about a lot is the importance of equity. What degree of cross-subsidisation do you think is useful or ideal? For instance, a lot of public transport in this country and around the world does not farebox recovery – the amount that of total cost paid for by the fare on public transport does not cover the cost of operating that service. So how should we be thinking about the cross-subsidisation issues or thinking about a network of infrastructure like land transport?

Chuck Marohn: It's a really good and important question. I think what we have to do is we have to actually separate the two and recognise that without a good price signal, without that price feedback, you won't be able to discern what is going on. The idea that we should keep everything artificially low because that will help from an equity standpoint or we shouldn't try to recover money here or there. I think that what that does is it, it distorts our price signal. Within the infrastructure complex – the planning for and providing and provisioning and executing on contracts and paying people to build – all of that without bad price signals you get, in a sense, what are, let's just call them bureaucratic preferences or political preferences. Like, 'oh, we really need this over here, we really need this over there'. But in the absence of price signals, like how do you even discern that? How do you provide equity within a system like that? I think the equity side needs to be scaled to the individual. You are struggling financially. Here's a subsidy for you. You're having this difficulty over here. Or we want to empower this person or this group or this demographic in a certain way. When we commingle that with the provision of infrastructure, we get bad infrastructure and bad equity. When we don't commingle those things, we can actually do them discretely in a way that will have a greater benefit to all of society.

Graham Campbell: There is an equity case to be made that, for instance, if taxes or charges are higher than they need to be to cover it, demand for an infrastructure project then that has equity implications as well.

Chuck Marohn: Well, can I give you the US example of this? There are a lot of cities – almost every Northern American city has overbuilt their infrastructure – and when confronted with what to do about this, a lot of that has been done on equity grounds. Like this is going to be more equitable, what have you. When we get to the day where we have to make a choice: Here's the pipe we fix, here's the pipe we don't. Here's the neighbourhood we take care of, here's the neighbourhood we walk away from. I can tell

you what neighbourhoods are being abandoned and neglected. And it's not the affluent ones. It's not the well-connected ones. It's not the ones where the people who show up with attorneys at the city council meetings and make their case. It's the ones where people are working two jobs and they are struggling to make ends meet, and their neighbourhood is already neglected and overlooked. We can see that in Jackson, Mississippi it's probably a really good case, even though it in some ways maybe can even be like a stereotype. Jackson, Mississippi – very poor community. The middle of the city, the core of the city is extremely poor, largely African American descendant of slaves in many ways. Those areas struggle because their water is not delivered consistently. They have lots of water main breaks. It puts water out for sometimes days at a time throughout the neighbourhoods. Here's the thing that is strange about that. The city is systematically neglected, the core water infrastructure, yet all of the water infrastructure on the periphery goes through the core. And so, the more affluent places on the periphery have largely been immune because the way systems work like this, there's a lot of redundancy in it. But the core has degraded so much that now the edges are starting to get affected too. And you kind of see that the inequitable way of managing this for years is now like degraded to the point where it's crept into – it's now everybody's problem. Now there's all kinds of issues of like, 'well, oh my gosh, we got to fix this'. I do think that when we commingle these things, like I said, when we, when we try to have an equity agenda along with just maintaining good infrastructure systems. The ultimate effect of that is you get neither.

Graham Campbell: Or less optimal.

Chuck Marohn: You get a system that tends to become more inequitable over time, while it also fails to be good infrastructure over time.

Graham Campbell: It's a really interesting insight. I want to shift gears a little bit and talk about the long-run view of infrastructure that we talk about in the National Infrastructure Plan. One of the key themes that comes out in the Plan is that in a lot of infrastructure sectors and a lot of locations across the country – the sort of macro-level trends mean there will more likely be headwinds to investing more in infrastructure. Things like areas where demographic change, slower population growth, potentially slower productivity growth – so, the ability to pay for more infrastructure – those things are going to become more and more challenging over the next 30 years. One of the 10 priorities we highlight in the Plan is this idea of managing assets to the downside. My question to you is what are the types of things that you are talking about to American and Canadian cities about thinking about managing to the downside on some infrastructure?

Chuck Marohn: This is the hardest conversation of all because we almost have this like the general conquering ground kind of mentality. Where it's like, 'Well we took that hill and we took that hill and we can never like come back from it because if we do, we're acknowledging some kind of defeat'. 'We built this infrastructure system out here where it made more sense. We built this infrastructure out here where we projected a lot of growth, but the growth didn't happen. What do we do now?' I think in the hubris that we as Americans tend to have – there's a certain amount of we can never go back from that. I do think that a more mature conversation and we see it popping up here and there is actually asking a more sophisticated question about what that transition looks like. I wrote a thing in the early days of Strong Towns. Strong Towns started as a blog. It was me writing. One of the things I wrote very early on was this thing called hospice care for small cities. It was something along those lines. I don't know if you have palliative care, what you would call that similar.

Graham Campbell: Yeah. Similar rest home.

Chuck Marohn: Yes. Someone is at the end of life and when we get to the end of life, the idea is we want them to have that end-of-life experience with dignity – not in an undignified way. In the US, we have hospice care. We bring in people to help – they assist the family. They assist the person who is in the process of dying. They bring a level of care, of empathy, of understanding. But what they don't do is try to prolong life. They're really about helping you through the process. I wrote this about small towns because in the US, where this is most acute would be in some of the small towns that used to have a lumber mill or a mine or a like my town had a Potlatch paper mill where we would take lumber and make paper. And now that's done in South Africa somewhere. Our paper mill has been closed for 20 years. That was 5,000 jobs in the city of 13,000. You can imagine like the hit that that was. All right, what do we do in places like this where there is not a future? Tthat is a very hard conversation

to have, because what we have tended to do is we've tended to want to go in and say, 'Alright, we'll remand death for you. Here's a bunch of infrastructure money. Let's try to get a factory to move in here. Let's try to get some job replacement thing.' My argument for a long time has been, let's simplify down to try to actually get things going here and in places where we clearly can't let's have a conversation about what does it mean to preserve the dignity of this place? What does it mean to take the trophies from your high school and put them in a museum so they're not abandoned? What does it mean to document the relationships that people have here? The reasons people existed here. What does it mean to do that?

My first job out of undergrad school was doing infrastructure work in very small cities. It was a really small town of 300 some people that I worked with and was able to get them a $2.6 million grant to upgrade their failing wastewater system. This was a place where their annual budget was like $80,000. It was 25 years ago, so it's obviously going to be more than that now. But it was $80,000. I got them at $2.6 million grant. What that means is that even if somehow their decline stopped and they just grow robustly, everything that I helped them build, they will not be able to maintain. Every part of it would need either an intervention from the state or some other benefactor to come in and maintain because they're they are a ward of the state – incapable of maintaining their own stuff. We did an analysis of the fragility of cities in my state. There's 854 cities and this little town that I worked with ranked 323 in terms of fragility. There were 322 cities that were more financially fragile than them.

Graham Campbell: That's not a good place to be.

Chuck Marohn: No. I know the city is essentially like, 25 years later, they have shrunk in population more, but even more so they bifurcated. The city today has about an equal number of people above 60 as they have people who are below, I want to say it's like 25 or 30. The people who are below 25 or 30 are deeply, deeply struggling. They often wind up in the city because they're trying to get away – get out of the system. The people over 60 are on fixed incomes and also like in a difficult part of life. I look at that as a huge policy failure. We bought them a couple of decades worth of time when we should have done something more compassionate to help that community get to a better place. That sounds extreme, doesn't it?

Graham Campbell: Well, I think one of the challenges is if you're an infrastructure provider, you're advising on infrastructure at a system level, like the Infrastructure Commission does, is that there is a lot of what I call heterogeneity between these towns. There's some towns that are sort of staying afloat, some have slowing population growth and then others that are growing quite fast. Right? When you have systems that rely on sort of consolidated general funding, how do you allocate those things, particularly in the places that are growing? How do you handle those challenges?

Chuck Marohn: I feel like the discerning thing, especially for you and the Commission in the position that you're in, is to actually look at it, proportionately. In the little city that I was just describing, if you've got a budget of $80,000 a year and your infrastructure solution is $2.6 million that does not have credibility long term. I mean, I was a 26- year-old engineer when I did this. I got a big bonus for my company for doing it. The city was really happy. The state was really happy. It was a great engineering project for a consulting firm to be able to do. I think stepping back and looking at it through a policy lens there should have been a lot of red flags that said, 'this is disproportionate to what we're doing and we're really burdening these people long term more than we're helping them'. I feel like that's a little bit of the nuance that we need to get to. It's one thing for a city to say, 'Okay, we're growing. We need assistance with growing or we need some investment here to handle that growth'. If that investment was proportional to where they're at today, if it was something that if it doesn't work out exactly the way they're handling it, it doesn't become a millstone around their neck. It's something they can sustain. I think you have a conversation about that. If they come to you and say, 'We're declining and we need this investment to rescue us, to turn things around, to be able to attract the Tesla factory or whatever we think we're going to get here.' To me, those things have a lot less credibility and especially from a national policy standpoint, do a lot more unintentional damage through good intentions. 'We'll build this for you as a way to get you going in a different direction.'

Graham Campbell: One of the things we see is for nationwide infrastructure providers, for example schools. In New Zealand, the Ministry of Education largely operates and funds schools. You have areas where there are slow or declining student populations, actually large areas of the country where declining student populations and there are small pockets in cities where there is great demand for schools. We sort of highlighted the risk that unless you manage potentially the downside and what you're facing is a growing asset base over time. I'm just curious to hear about like for those that have that sort of challenge, right? What strategies can you take to avoid them?

Chuck Marohn: The strategy is that you don't overcommit. I mean, this is the tension that policymakers, engineers, others who do this work, fall into. We value the efficiency mindset. The idea that, 'Well, if we can do a $1 million project, that's good. If we could do a $10 million project all of a sudden, the price per foot goes down a lot less. We know, air quotes, we're going to need this someday. Let's just like commit to the bigger project. In many ways it will get us higher up on the scoring list. We can project more growth. We can build more momentum.' I think that what we are doing when we do that is we are elevating the objective of efficiency over the objective of resilience.

Everybody listening to this understands the idea of having insurance. We pay an insurance policy on our car, not because we're going to get into a crash, but because we hope we never do and if we do, we want to make sure that we be would taken care of. We have insurance on our homes, not because we think our home is going to burn down, but because if it does happen we want to make sure that we don't suffer disproportionately. I think that when it comes to infrastructure, particularly when we're spending not our own resources, but the resource of another government or another layer of government it's very easy to forgo insurance and to just say, 'Hey, let's build it all. Like, let's build it. Let's do this as efficiently and as bigly as we can. Let's just go do it.' And I think taking it in incremental steps may cost you more holistically if you met every objective along the way. That added cost you should not look at as an inefficiency. You should look at that as insurance. Insurance that you're wrong. Insurance that the market shifts. Insurance that demand changes. And so, we are in a position where as governments, we are pushed continuously to be efficient. But in many ways efficiency is the wrong value for us to have. The opposite of efficiency is not inefficient – it's actually resiliency and redundancy. I think the way to think about it is not putting all your chips in the middle of the table.

Graham Campbell: It's a great insight to close on.

Chuck Marohn: Cool, man.

Graham Campbell: Thanks again for coming by a second time. Best of luck for your rest of your time in Wellington.

Chuck Marohn: Likewise, thanks for having me. My gosh, you guys are our literal world leaders in what you're doing so it's cool to be here in a room with you and chatting about this stuff and seeing, quite frankly, the great work that you all are doing here.

Graham Campbell: Appreciate your kind words. Alright. Thank you very much.

Narrator: Thanks for listening. Find out more about the work Te Waihanga is doing to transform Aotearoa at **tewaihanga.govt.nz**