

CONNECTED PLACES

MASTER SCRIPT

EPISODE 61: SIR JOHN ARMITT

INTRODUCTION

[theme intro]

Intro clips

Sir John Armit:

We all have to constantly remind ourselves, whatever we're doing, that we're doing it for the customer and that we need to think about what are the customer's needs, what are the citizens needs. But equally, of course, in that conversation, we've got to bind that citizen in to feeling that they own this, that they have a say in this.

We need to break down that, uh, sort of they and us into a greater sort of community of understanding what is more right for tomorrow than today.

INTRO:

Welcome to Connected Places; a podcast about the future of our towns and cities, and how we live and travel in them.

I'm Ivor Wells, the producer of Connected Places, which is brought to you by the Connected Places Catapult.

We're the UK's innovation accelerator for cities, transport and places.

We help to connect businesses and public sector leaders to cutting-edge research and new technologies that can spark innovation and grow new markets.

Music bed

Ivor Wells:

Well, I think it's fair to say that we're hearing a lot these days about our national infrastructure, that underlying

framework of physical, digital and natural systems that support our modern way of life. From roads and railways and energy networks, all the way through to our rivers and waterways. And we're thinking about our infrastructure a lot because it's facing some big challenges, not least our changing climate and the commitment to decarbonise our economy.

But also the question of who pays for it, who benefits from it. And then there are all the opportunities that new technologies and innovations are bringing with them to improve the way that we design and build and operate our infrastructure. So in this episode, we're delighted to have on the show someone who spends A lot of time thinking about all of this.

Sir John Armit is the chair of the UK's National Infrastructure Commission. Now, 10 years ago, Sir John published an independent review looking at long term infrastructure planning in the UK, and the recommendations of what was called the Armit Review resulted in the creation of the National Infrastructure Commission in 2015.

Now they're an executive agency of the treasury and the commission's job is to provide the UK government with impartial expert advice on major long term infrastructure challenges from transport and energy to flooding and waste management as well as digital and data and protecting the environment amongst many other things.

Now, later this month, the Commission will publish its second National Infrastructure Assessment. The last one was published five years ago, back in 2018. This year's assessment is going to be focusing on three big strategic priorities. Firstly, reaching net zero by 2050. Secondly, reducing environmental impacts and adapting to a changing climate, and thirdly, supporting levelling up and creating sustainable economic growth across all regions of the UK.

Now, Sir John has a vast amount of experience in this space. He's chaired the Olympic Delivery Authority, he was Chief Executive of Network Rail, and he's the past president of the Institution of Civil Engineers, among many other roles that he's had over the years. Now, Sir John and his team recently visited the catapult, and while he was with us, he kindly agreed to sit down for an interview with the chair of the catapult, Professor Greg Clark.

Here's Greg, speaking to Sir John.

[STING]

Professor Greg Clark:

It's great to have you here, John. And before we move on to any of the questions about the National Infrastructure Commission, can we just reflect a little bit on this stellar career? Because it seems to me it's had more than one angle to it. How do you describe your career and what it enables you to bring to the roles you now have?

Sir John Armitt:

I've always described it as simply being in the right place at the right time. There was never a plan. What has been fascinating though is spending that sort of first half of my working career essentially in contracting and then moving over into the sort of the hinterland between government and the private sector and becoming a client in the public sector.

But at the same time, retaining a foot all the time back in the private sector. And to me, that is the fascinating thing. It's this interface between public and private, without which nothing happens.

Professor Greg Clark:

And I imagine that you then bring to everything you do now, a healthy respect for both sides. But where have you ended up in understanding how that relationship does or doesn't work?

Sir John Armitt:

I have a very clear view that. At the end of the day, the person of most importance and who actually drives everything is the client, whether it's private sector or public sector. He has to have a vision, he has to understand what he values, he can't value everything because you can't have everything, but he has to make those very clear.

And that enables everybody else within his own team or within the supply sides to actually engage with that. But that consistency of vision, that consistency of values, the client pays, the client actually has the end word. Well, I think we

all understand that, but I don't think clients always understand the level of power and influence which they can have over the industry as a consequence of that.

Professor Greg Clark:

It's a very interesting point, John, and of course we talk glibly about intelligent clients, but actually creating an intelligent client is interesting. Let's move on, if we may, to the National Infrastructure Commission, because many of the listeners to this podcast are not from the UK, although they may know about this innovation for which you are responsible.

Tell us what the National Infrastructure Commission is, if you don't mind, John, and give us a sense of how it works with government or for government and what is it really seeking to achieve?

Sir John Armitt:

Well, there's a slight contradiction. We are an agency of treasury, and I would say that is the most important government department to be an agency of in this respect.

At the same time, we are regarded as independent. Now, can you be independent and an agency of government? Well, that's our challenge. Our job is to provide expert advice to the government on economic infrastructure, so we don't touch social buildings, we don't touch housing. So the core economic infrastructure of transport, energy, waste, flood, water supply, and digital.

And to, every five years, look ahead thirty years and say what are the key infrastructure challenges and what are the requirements of the nation to ensure economic growth, to ensure that we meet our net zero obligations, which we have as a nation, and to generally improve the quality of people's lives.

Professor Greg Clark:

It's a fascinating mandate, John, and I suppose right at the heart of this is the idea that somebody needs to look beyond the current political cycle or the current administration and think about what the nation needs sort of independently of the politics. Is that how it actually works?

Sir John Armitt:

Well, that's how we try and ensure it works but at the end of the day, of course, you are reporting to politicians and we try and keep the different political parties on side and understanding what we're doing so that, as far as possible, we can get a consensus around what these challenges are and what the possible solutions would be.

But inevitably, different parties will have a slightly different take on that. If we can agree what it is we're trying to achieve, then that's half the battle. I think 80 percent of the recommendations we've made have actually been accepted by government. And it's not only those ones we make every five years, but we've probably done another 20 separate reports on particular aspects of infrastructure with their own recommendations.

The challenge for government is to actually turn the acceptance of those recommendations into real delivery. And of course that's not so easy.

Professor Greg Clark:

No, much harder to actually make the things happen than to agree they'd be worthwhile.

Here at the Connected Places Catapult, we obviously have a, you know, a narrow perspective on infrastructure. We recognise it's important, but we try to play to the role of innovation and infrastructure in order to optimise the infrastructure that the country already has by crowding in innovation and small businesses and others. What's your view about the role of innovation and infrastructure in the UK? Are we good at innovation? Should we be doing it differently, better?

Sir John Armitt:

When I had to make my president's speech when I was first appointed president of the Institution of Civil Engineers, I essentially said to my colleagues that the industry was still largely operating in the 19th century. That we were way behind other sectors, that we had not developed new materials in the way that other sectors had.

We were still basically doing everything with cement and steel. And that was the real challenge for the industry was how could we actually bring ourselves into the modern world and find different ways to doing things. Now that's, to be fair, I think, slightly glib or easy to say, it's not so easy

to do, particularly when so much of what we do has to actually be physically robust and that people like tradition.

So, for example, the houses which we build today still look pretty much like the houses we built in the 1930s, and that's what everybody's comfortable with. And of course, we've seen what can happen with innovation where, in fact, if you don't fully understand what you're doing with modern materials or the way you're putting those modern materials together, then you can have some very unfortunate circumstances. And Grenfell, of course, would be one example of that.

So I think it's a constant challenge for the industry. And again, I come back to the only people who can really drive this and lead this and demand this actually are the clients. Yes, as an innovative designer or supplier, you can put things in front of the client and say, wouldn't you like to try this?

But what you really want is for the client to be thinking about what he can, how he can see a different product at the end of the day and a more environmentally friendly product. Particularly, of course, and how do we remove embedded carbon from what we design is probably the biggest challenge that actually the industry faces because the two big polluters are cement manufacturer and steel manufacturer.

And if that's what we're dependent on, but we wanted to cut that back. And yes, you've got, how do you make it? And do you put carbon capture storage on the end of your cement plant? And do you use hydrogen to fire your steel plant? Whatever it might be, just sort of modifying those two fundamental materials to my mind, can't be enough. We've got to be looking for other materials and other ways in which we put things together.

Professor Greg Clark:

Well, thank you, John. You're already coming on to my next question, which is very kind of you. So, when we think about the national infrastructure picture in the UK, or indeed any country now, climate change, global warming, resilience, adaptation are very big agendas everywhere.

How do they feature in your thinking at the National Infrastructure Commission about the future of the UK and its infrastructure needs and what we do with what we've got as well as what we need?

Sir John Armit:

It's at the centre of what we do. And of course we've seen so many instances where resilience has not been good enough.

The really complex thing, of course, is the interaction of that resilience across the different sectors. You know, at the end of the day, we are becoming an electrified world. Electricity is the core infrastructure. Nothing else works. You can't pump your water without electricity. You can't have your telecom systems without electricity.

You can't heat anything without electricity. So that is the core infrastructure. But how that interdependency works with the others and how, as we've seen that, you know, you can quite quickly have a flood situation which takes out a substation and the next minute you've cut half a million people off from their electricity supply.

And of course, the difficulty again is what is the expectation? What resilience level are you designing for? I thought, what happened recently in Greece where a year's rainfall fell in 12 hours, it's very difficult to design for that. So do you design for that or do you say, well, that is such an extreme event that we won't design for that.

But you do have to decide what you're going to design for. And that I think is the role of government at the end of the day to say what level of resilience it expects from the different sectors. And so that regulators and the supply side can then work together to deliver that level of resilience. But it can't be perfect. We need to decide what they are, and I think that's a critical role for government.

Professor Greg Clark:

Now, you're making a very big point, John, about the interdependence of different kinds of infrastructure. The interdependence of the flood infrastructure with the power networks, and those with heat, and then again, of course, now with travel and transport and everything else.

Are we well equipped to deal with those interdependencies? And are there other things that are needed to really enable us to do that intelligently?

Sir John Armitt:

We have the potential to be a lot better connected and the development of the management and the use of data, the way in which the whole in broadband networks are operating provides the ability for people to understand what's going on in different sectors.

And if we can bring that together and artificial intelligence, of course, is potentially going to provide even more resource to that pulling together of what is going on over there compared with what's going over here. And do they need to understand one another? The opportunity is enormous. I think one of the big challenges of it, of course, is that in a privatised infrastructure world, you've got different investment criteria. You've got companies with individual programs of what they can or cannot do over the next five years, the next 10 years, and they're not all going to be in a parallel path.

They're not all going to be going at the same speed. And so how you pull that together is extremely difficult. And again, I think it's a role where government can influence that through the regulator and for the regulator to then work with the companies to agree what is going to be the level of investment in particular aspects, which is going to enable that interconnectivity to be more effective.

Professor Greg Clark:

And I guess then you need multiple regulators to be working with each other as well?

Sir John Armitt:

Well, yes, and that's a recommendation we made in one of our other reports not so long ago, which was that the regulators needed to have that coming together, if you like, in a coordinated way where they understood one another and could recognise where they could help one another within their individual sectors.

Professor Greg Clark:

Now in the UK, infrastructure and indeed engineering and real estate and so much more has been a big growth and export sector over many years and British companies have done well in international markets. We're very interested at the catapult in thinking about what more can we do to help British

businesses thrive and grow in the infrastructure sector for those that can trade to trade.

Have you particular insights about what we need to do to enable. British businesses, as it were, to be right at the forefront of this global infrastructure revolution that's going on.

Sir John Armitt:

Well, I think we have to decide which businesses. And it's unlikely to be the contractors. There are more SMEs than there are large companies.

The SMEs probably employ about 90 percent of the people in work. So, they are a vital ingredient. They're the ones who are trying to juggle 35 balls at once with a small team. And therefore, more than anything else, I think what they want is a belief and an understanding that policy isn't going to change next week.

And that what they're planning and basing their business on today isn't going to be sort of thrown out the window in a few weeks time because government suddenly announces a contradictory policy to the one that they've had. And this is a constant theme of ours as the NIC is to say to government, look, what we really need across the whole sector, SMEs as well as big companies, as well, of course, as investors is that certainty, policy can never be totally certain, but consistency of policy, at least for an investable period, so that you know what you're investing against in policy terms.

So you know that it's going to be pretty consistent for the next five, 10, 15 years. And that's why it's important that we try and get that sort of agreement about broad policy across the parties. So that when the next party comes in, they don't throw out everything that the last party did simply because they, you know, they want to be different, but they do actually believe that that sort of general line of policy, which is being followed in a particular sector is the right one that enables not only the investor at the top end to be saying, yes, I'll put some money into this.

It enables the SME guy to be saying, right, I'm going to put some money into sort of developing that new material because I know that's going to be required in five years and the government isn't going to reverse it.

Professor Greg Clark:

So you're saying, I think, John, that it's not just crucial to the big investors. It's not just crucial to those who are going to develop the big sites close to the new infrastructure hubs. It's actually essential for the small businesses that want to invest in their own innovation to understand that the policy landscape is going to be, as you say, stable and consistent for them.

Sir John Armitt:

It's vital for them, and it's actually also vital for us as individuals, because we make purchasing decisions off what we think is going to be coming along and happening, and we don't want to go out and buy a new heating system in the belief that that is going to be absolutely the key requirement of the government in five years time, only to discover they then changed their mind, and it's no longer a key requirement, in which case that will really upset people who've put their money into something different.

So it affects us all. And I come back to my general point, which is that at the end of the day, all of this is for the citizen. I went into civil engineering originally on the rather sort of, you might call it sort of, corny phrase of harnessing the resources of nature for the benefit of mankind.

And that's what inspired me into the, into what I do. Nowadays, of course, harnessing the resources of nature is a bit of a two edged sword. And so, we have to do that in a sustainable way.

Ivor Wells:

We'll be right back

[STING]

Ivor Wells:

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And you can also now sign up to our free podcast newsletter to be kept up to date about new episodes and other related news.

We've also got a growing library of past episodes which delve into the world of railways, aviation, the maritime economy, and the future of our neighbourhoods and city centres.

over the past couple of years, we've been really lucky to have had on the show leaders, thinkers, and storytellers. at the forefront of some of that change.

Like the BBC's former Science Editor and veteran journalist, David Shukman.

[David Shukman quote]

I got into reporting on the environment a little bit by accident, and actually a bit cynically. My instinctive reaction was, can things be that bad? That then began a great series of trips to these amazing locations and actually the penny dropped. We are trashing the planet.

Ivor Wells:

We've met Carolina Tortora, the real-life rocket scientist at the National Grid ESO who's working on digitising Britain's entire energy system.

[Carolina Tortora]

I got a little kid, he thinks I'm saving the world. Right, so that's why you do it. I do it because I come home and I spend a ridiculous amount of hours on the phone discussing with people the best way forward to decarbonise the system because that fulfills me. And I want to be able to give that to some of these kids as well.

Ivor Wells:

There's Cllr Susan Aitken, who's leading the City of Glasgow on one of the boldest urban net zero transitions in the country.

[Cllr Susan Aitken]

This time we have to do it right. We are going to spend tens of hundreds of billions of pounds on delivering this transition across the UK. We need to make sure that every pound we spend delivers multiple benefits for the environment, for our citizens. We're addressing inequalities, for the futures of our children and young people and for the planet.

Ivor Wells:

And we've heard from Britain's most recognisable rail historian, broadcaster and former MP, Michael Portillo.

[Michael Portillo quote]

I've traveled on six trains in the last three days and half of them were late. And I would say that's a fairly typical experience. So I think one of the great struggles in future is how we get greater reliability. That's what I think is the missing piece in Britain.

Ivor Wells:

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[Interview - part 2]

Professor Greg Clark:

I want to come on to the issue of procurement because you've been on both sides of this fence and you spoke earlier very compellingly about the importance of the client and how the client needs to get that right. We often think about this as perhaps being smarter spending or innovation led procurement.

What do you think we need to do in the UK to make the investment that we are making into infrastructure go further through the procurement process? Are there some obvious lessons?

Sir John Armitt:

I think procurement is in a sense a relatively easy lever to pull where the client can be demanding, recognize that in being demanding that may well cost a bit more, but within the competitive tensions which take place, all the supply side is wanting to know really is what do you want?

And if the client is quite clear about what he wants and if he's demanding about what he wants and he wants something better than what he got last time or if he wants some new innovation or he wants particular elements of the local community to have the opportunity to work. He wants a particular level of SMEs to have the opportunity to get engaged.

He can demand all those things. And he can sit down with the major companies and say, right, how are we going to do this? It's no good him asking for all of that and all it does is diminish the margin of those companies. So there needs to be an understanding of the risk and how that's going to be paid for.

But the client has that opportunity through the procurement system. You see it just with simple things like I want so many percentage of apprentices to be employed in the project, or I want to see so many local companies being given at least the opportunity to bid, may not win, but at least give those local companies, because as we say so often, particularly with the larger schemes, they can have enormous impact on a local community and provide real uplift, real opportunity from which those companies can then go on and do things elsewhere. But the guy who has the opportunity to lead that and drive that to my mind is the client.

Professor Greg Clark:

Fascinating. And we know, of course, that you had a superb experience of this with the London Olympic Games, for example, where you developed a whole new platform there. I want to come on to the issue of city and regional and local leadership, John, because you spend a lot of time consulting stakeholders all over the country and you've worked for many years with the great cities of the United Kingdom.

What are your reflections on the role of local leadership in infrastructure provision? How important are subnational bodies in how you see it at the city level or the regional level? And

do we need to do anything that will equip them to better help the country meet its infrastructure imperative.

Sir John Armitt:

I think we need to start with saying, who is all this for?

And it's for the citizen. It's for the individual. Local radio is trusted far more than national radio. Local newspapers are trusted far more than the big national broadsheet papers and I think they, the object lesson in that is that at the end of the day, the opportunity is there for local politicians to deliver, for local politicians to be accountable because that's who people locally see.

You know, the national politician is the thing on the television screen that they probably switch off more than switch on. Whereas their local politician is the guy they might meet next week walking down the high street. So I think what we have to do is to provide an environment in which local politicians have the ability to, yes, make promises, it's what they're going to do in their community, but then have the ability to deliver that through having sufficient financial resource and the ability to obviously put in place the powers that are necessary for things to get planning consent and so on.

So I think the, and we've said this a number of times as the NIC, there has to be within the United Kingdom more devolution to a local level, the right level of funding, not for the next year, but for the next five years and the five years after that, so that people make long term plans. And that gives all of us, I think, as citizens, the opportunity to see that this can actually be done.

It can happen in my place because it's all about place. It's all about neighborhood. It's all about your community. And if you can see it happening as a consequence of these longer term plans, then you'll start to believe in it and you'll start to give the opportunity and not necessarily all be, you know, nimbus and say, look, I don't want that happening near me, because if you can see that actually what does happen has long term benefit and you can participate in the decision making around that, then I think that can only be for the good.

Professor Greg Clark:

Thank you for saying that as well John because of course you can imagine at the Connected Places Catapult We really agree with those remarks.

I want to come on in a minute to talk about the future but before that I'm very struck by what you just said about the citizen and what the citizen needs and who this is for and this is a question that's just come to my mind. How well do you think that the British citizen understands the challenge of infrastructure?

And is there more we can do to help the women and men of the UK to understand why they do get or don't get what they might want? Is there something about an intelligent citizen in the infrastructure space?

Sir John Armit:

Clearly the citizen actually experiences our infrastructure first hand. So in that sense, they understand it.

Interestingly, when, as the Commission, we've done roundtables with groups of citizens and residents, and you say to them, what do you think of when you think of infrastructure? Number one is roads. That's the thing that you think of first. What's the second thing? Well, bloody potholes in roads is number two.

And then you say, well, what about water? What about, oh yeah, of course there is water and so on. And gradually in the space of half an hour, you can open up the whole pot of different infrastructure. And then what I find fascinating is that over, say, a couple of days, the word which comes through time and time again is, is it fair?

And if I've got to pay a bit more in order to give somebody who lives on the outskirts equal access to broadband or whatever it might be, then, well, yeah, it's not really, it's, it's unfair, isn't it, if they can't access it. So if that means that those of us living in the centre of town are going to pay a little bit more, then yeah, okay, that's fair.

So, I think you are actually working in a sense with the grain, with the opportunity to actually get people to understand the challenges and recognize, big question, of course, or big challenge always is, look, you don't get anything for nothing. And the more reliability we want, the

more consistent, the more resilient a system we want, then it's going to cost a bit more.

You know, if we don't want to have to walk down the street with plastic buckets because there's a hosepipe ban, then, well, in that case, or there's a drought, then we've got to invest to make sure that the probability of that drought is significantly reduced. That might well mean, or will mean, probably you've got to pay a bit more for your water.

And this, in a sense, is where the democracy and the politics comes in. Well, at the end of the day, it's your decision as a citizen. Am I prepared to pay a bit more, either in general taxation or as a consumer, to get that quality of service that I want? Now, the key thing then, from the supply side, is not to let them down.

So the bargain, if you like, is between the supplier and the infrastructure provider to actually make sure that he is providing that reliable consistent quality of service for which then people feel yes Okay, I don't mind paying because I knew I am getting something which I want and which I need

Professor Greg Clark:

There's something very significant in what you're saying here John, which if I've understood correctly, you're saying actually yes Infrastructure is perhaps the best example.

We have of something. That's a shared amenity or resource and people do understand that when you're sharing something, you're investing in it together, and everybody needs to benefit, but some people might need to pay more for everyone to benefit. And I think you're saying that on the whole, the British public understand that, and they want good infrastructure, and they're willing to pay for it overall.

Is that fair?

Sir John Armitt:

I think that's fair. I mean, clearly, we're coming into the affordability question here, and I think we always have to recognize that there are those in society who cannot afford, and therefore we need to take care of them, and we need to help them pay for what they need. Equally, there are people who, if they're using excess volumes of whatever it is that we

might need, then well, sorry guys, you're gonna have to pay for all for it.

You know, if you've got three swimming pools in your five acres of land or whatever it might be, and you're insisting on filling them up and you're insisting on doing all these other things with water, well accept that beyond a margin level, the price is going to go up because I think the whole question of utilizing infrastructure is that if you want to use more of it, then accept that you're going to have to pay more. Don't expect to necessarily get the same basic rate for it either, as you just use more and more. It's quite worrying at the moment that our use of water has not gone down in the last year, it's gone up.

We've gone from 140 litres on average to 150 litres on average, complete reverse of what we're trying to achieve. And a lot of this is so behavioral. So how do you change those behaviors? Do you only change those behaviors by meters? Because when I play through a meter, I can see what I'm using, I can see what I'm paying.

Now a number of people are hostile to that. But you've got to make sure that it doesn't penalise the person with the large family, and just satisfies and makes it cheaper for the sort of retired couple with two people. So these are all challenges, but I don't see as they're impossible challenges, if they're addressed in an open way, and in what at the end of the day people perceive as being a fair way.

Professor Greg Clark:

John, I'm going to ask you to look ahead, if I may, and there's two parts to this question. I'm keen to know what you think are going to be the big infrastructure themes or plays or decisions over the next 10 to 15 years, let's say. And then I really want to ask you What you hope will have been the impact or the legacy of the National Infrastructure Commission as well?

Slightly different questions, and we're not suggesting that the National Infrastructure Commission won't be here in 15 years time. But what do you think its legacy, its impact will have been? But firstly, where do you think we're headed? What are the big issues that are on your horizon?

Sir John Armitt:

Well, I think the big challenge is that we want more infrastructure.

We will almost certainly use more of our natural resources, but we need to do that in a way where in fact we are managing the challenge of climate change and we're reducing, not increasing, our carbon footprint as we do that. So reducing our carbon footprint is the number one challenge, I would argue.

And electrification, therefore, I think is the overall theme that we're going to see playing out across all the different sectors, particularly industry, transport and our domestic world. Politically, the decarbonization of heat within our domestic communities is the biggest challenge because we're wanting people to deal with their individual homes in a different way to which they've been used to for the last 50 years.

It will result in some inconvenience. It may well result in initially some extra cost because we've got to put in a capital investment, but then over the longer term, the running costs are going to be lower. So, we're moving into a more capital intensive world rather than what we've had, a primarily operational cost world with fossil fuels.

Then of course we have to find ways to make sensible and valuable use of the new kid on the block data. If we're going to have it coming out of our ears, we're going to have so much of it. How do we sensibly use that? How do we use that in a way which can actually enable, particularly different infrastructure sectors, to understand one another and to understand the value that they can create from one another's data to a certain extent, be willing to share that data with one another in order to deliver a better service.

So I think the new technologies are there to provide opportunities, but fundamentally we need to reduce our carbon footprint. We need to use natural resources as much as we can, not just build gray infrastructure all the time, but build green infrastructure.

We just have to work our way through how we make them affordable, how we, in fact, can influence people's behaviours to realize that these are the right behaviours to sort of adopt for their own benefit and for their children and grandchildren. And the danger is that human nature being what it is, you step away from some of these tough decisions,

whereas what we're saying to the government at the moment is, look, don't try and get perfection all the time.

Let's make sure that we get pace over perfection. And equally, let's make sure that we get some really big decisions, which are going to be really valuable for these challenges for the next 20 years.

Professor Greg Clark:

Thank you, John. And if you come to the second part of the question, the long-term impact of the National Infrastructure Commission, what would you hope that it will be seen to have been?

Sir John Armit:

I think what I hope it will seem to have been is being the convener of political and public opinion. So that we've got a coming together of understanding within the customer. And I think we all have to constantly remind ourselves, whatever we're doing, that we're doing it for the customer. And we need to think about what are the customer's needs? What are the citizens needs?

But equally, of course, in that conversation, we've got to bind that citizen into feeling that they own this, that they have a say in this, and that what we finish up with is as much their responsibility as them over there, the 'they'. We need to break down that, sort of 'they' and 'us' into a greater sort of community of understanding what is more right for tomorrow than today.

I think we focus so much on today, we need to be more focused on tomorrow and feel that responsibility for tomorrow and the opportunity that we have to make today becomes all the more exciting, of course, and challenging in, in delivering that better tomorrow.

Professor Greg Clark:

Sir John Armit, Chairman of the National Infrastructure Commission, thank you very much.

Sir John Armit:

Thank you.

[STING]

Ivor Wells:

Well, that's all we have time for in this episode but if you'd like to know more about the work of the National Infrastructure Commission there are links in the shownotes to this episode.

And before you go, I also want to mention that registration for the Catapult's first ever Connected Places Summit is now open.

It's going to be a two-day event from 20-21 March next year, in central London, and we're delighted that Sir John Armitt will be one of our keynote speakers too.

Across both days we'll be featuring interactive content, live project showcases, inspiring thought leadership and opportunities to really connect with peers from technology, transport, mobility, cities, academia, and Government.

Registration has just gone live and there are discounts for early birds, so do put 20-21 March 2024 in your diary now, and check out the link in the shownotes to register.

The theme music on this episode is by Phill Ward Music.

I'm Ivor Wells, this is Connected Places.

Thanks for listening.