

TRANSCRIPT

PENSIONS FOR PURPOSE PODCAST – SERIES 1, EPISODE 5

RENEWABLES AND THE GREEN TRANSITION – WITH CHARLOTTE MOORE, CHARLOTTE O'LEARY AND TOM WILLIAMS

Charlotte Moore: Hello. Welcome to the latest edition of the Pensions for Purpose Podcast. I'm Charlotte Moore and I'll be hosting the podcast today. Joining us from Pensions for Purpose is its Chief Executive, Charlotte O'Leary, and we're also very happy to welcome Community Partner, Downing. Their partner, Tom Williams, will be helping us to explore renewables and the green transition.

So I'm going to kick off today's conversation with a question for Tom. Downing invests around a billion in the UK and the Nordics. Could you give us an idea of the different challenges posed by those geographies and how those countries are doing in terms of the switch to renewables?

Tom Williams: Yeah. Well, look, first of all, thank you very much for having me on. Delighted to be able to join and delighted to be able to try and share some thoughts anyway, I hope you find them interesting.

Yeah, you're absolutely right. We've got about a billion invested in the UK and the Nordics in renewable energy and enabling infrastructure. We kind of think about these things as really a game of two halves.

If you think about the Nordics, then generally they're doing pretty well, actually. And now a lot of this, I think, is by virtue of the benefits of the topography and geography that they have. Norway, for example, has nearly 95% renewable energy production, with the vast, vast majority of that being in hydropower, just because the country has a lot of rainfall, a lot of snow and a lot of very steep terrain, which is very suited to that kind of generation, and that's been going on for hundreds of years.

Sweden, where we have about 35 hydro power projects, is also doing really well, but has some way to go to get to its net-zero carbon economy target, which is to reach that net-zero carbon economy by 2045. Around about 65% of Sweden's generation is hydropower, wind and nuclear, was in 2022. But the majority of that is in nuclear, so it is a low carbon generation technology but perhaps not, perhaps not renewable.

In the UK, actually, we're not doing too badly. We've got about 43% of generation from renewables and about a further 13% from nuclear in 2023. I think the challenge for us, I mean, which maybe we'll talk about a bit later, is just where we go from here, and how perhaps, you know, perhaps over the last few years that hasn't progressed quite in the way that we would have hoped, given the start that we had. But perhaps things are looking a little bit different now, with a change of government and a different emphasis.

Charlotte Moore: And so if you're talking about hydro and to throw out a Hitchhiker's Guide to the Galaxy reference, Slartibartfast was obviously completely responsible for designing the fjords, and on all of that crinkly, nice crinkly coastline in Norway, nothing to do with geology or planets or plate tectonics and obviously that lends itself to hydro. We don't have all of that in the UK. So is it about onshore, offshore wind and solar? Or is there something else that we should be doing that we're not doing? We're a, for example, we're a heavily tidal country. And I know that that's an emerging technology as well.

Tom Williams: Yes, so you're absolutely right there, and I think the great thing about renewables is that there is a technology for your topography and geology and geography. So, in the UK it's much more about wind. We're an island nation. We've got a lot of wind both onshore and offshore. And also, actually, we've got a decent amount of sun. Okay, not quite as much as Portugal, but certainly most of England has sufficient irradiation for us to put in place meaningful amounts of solar.

You're right, in that the one big energy source that we've never really cracked is probably some form of tidal or wave energy. The problem with that is that people have been trying that for a very long time and it's been quite difficult to get the technology to stand up to the ferocity of the sea, whether above it or in it. And so it's never quite got to commercial scale.

So I think that would be a game changer if we can get there. And there are lots and lots of projects ongoing at the moment. There's a lot of government research funding that has been provided to that sector. But I think I think at the moment as we stand, I think we're reliant on the more traditional forms of energy generation, so I think you're going to be looking at solar, wind, hydro, where we can, where we can locate it, although most of the sources, or most of the good places to site hydro, have been taken in Wales and in Scotland, where we've got hills, and obviously nuclear still has a part to play.

Charlotte Moore: And so, Charlotte, what are you seeing from the pension schemes in terms of, I know that we always hear about how pension schemes are interested in investing in renewables. Is there, do they really mind what the technology is, or the country, or does anything go? Do they not care?

Charlotte O'Leary: I think it does and it doesn't matter for different reasons. We all know that pension funds are ultimately looking to fulfil their fiduciary duty and to make a good market-rate risk-adjusted return. You know that's how they provide an income to their members in retirement.

But definitely, you know, we're Pensions for Purpose, we have a lot of asset owner members, so there's an increasing focus on making sure that they are mitigating risks, but also looking at creating positive impact alongside that risk-adjusted return, recognising that's possible to do it. And also looking at place-based impact investing. So looking to invest locally, to address challenges that are social, environmental and economic in nature, and understanding that these things are connected.

And really, I think it's that move that has been really, really important to get institutional investors to take up the space left by government, by public finance that maybe hasn't been going into these technologies that has been needed to scale them. And what they've needed to see is case studies of where this has worked. Who has invested? Where has it worked well? How is it working at scale? And how can they access it?

And the biggest challenge for pension schemes in the UK, unlike the Nordics or the Netherlands, is actually the fact that we have such a long tail of small schemes. We have a long tail of small schemes, we're in a very different kind of pension fund climate in that you've got a lot of defined benefit pension schemes that are mature and going to buy out. You've then got defined contribution schemes that aren't necessarily scaled enough to be doing private investments at the level that we want them to be doing it. And then you've got local government pension schemes that are doing a lot more. So we see a lot happening in the local government pension scheme space. And there's been consolidation there. Really, it's about making sure that they're starting to do and invest in similar technologies and things.

What we have seen is a bit of a sort of scattergun approach around the United Nations sustainable development goals or other things. You know we'll focus on one particular SDG or focus on, and we need to bring that together with understanding what a place needs. You've talked a lot about topography and demographics and those sorts of things, but there are some great examples; so the Shetland Islands, you know, with the ORION Project using a kind of closed loop with hydrogen, they're also using wave technology. They're using a whole raft of different technologies to actually be able to help with education, with electrification, using EV charging points and vehicles. So really taking a holistic view to how we look at energy infrastructure.

And you know, that's actually being invested in by oil and gas companies. It's being invested in by electric companies and also by, you know, by local councils. So we need to look at what good looks like and pension funds need that comfort of knowing that something has happened, it's worked well and it's scalable.

Charlotte Moore: Thanks, Charlotte, that's a good, that's a good answer.

Tom Williams: I just thought there was some really interesting points that, sorry, that were raised there actually. I think the main one, right, which is I think the real change since I've been investing in renewables, I've been doing this since 2010, and the real change is that I feel that there are very, very good risk-adjusted returns that are available for people who are willing to make an impact. And you don't have to compromise on the return or the risk in order to make that impact when you're making your investment. And I think that is a real, real change that's happened over probably the last five or six years, actually. And I think that makes an enormous difference, because then I think you, you move into the mainstream, and that's where pension funds, in my view, should be investing.

You know, there are different pots of capital but taking different risks in the world, and when you need, when you've got something that makes sense from a risk perspective, is commercially proven, and what you need is a lot of capital to then roll that out across the country, across the world, then that's where I feel that pension funds have a real, real role to play. They don't need to take lots and lots of early-stage risk in technologies or countries. They can have other people take those risks and they can come in when it makes sense for them to do so. And that's, that's where I feel we are right now.

Charlotte Moore: So, I mean, building renewables itself, building the things that you need to create the renewable energy, is obviously only one part of the process in creating enough renewable energy for a country. We also need to think about energy storage, and we need to think about electrification, and then we can get on to sort of maybe the bigger issues, other big problems that we need to solve. But let's talk first of all about not just creating the energy but making sure that it's consistent and getting it distributed around the country. Tom, can you talk to us about the best way to solve those issues?

Tom Williams: Yes. So look, you're right. We, we've plucked a lot of the low-hanging fruit and so the task gets progressively harder, in probably two areas. The first is trying to get as much renewables connected to the grid as practically possible, that's challenge number one. And that requires them to be built, so there are some issues around planning and actually getting connected to the grid. It requires the grid to be able to handle it, so it's a grid stability, which is, which is a huge problem, and it requires a lot of storage which sort of helps that, but also deals with the issue of renewables being intermittent. So that's your, that's your first problem.

The second problem is that, that is just one aspect of decarbonisation. Then the other aspects of decarbonisation which you touched on, you know, transport, heating, you know, those are really, really big sectors to crack. And, you know, to give you an example, you know, 38% of the UK's railways are electrified. I saw an article last year saying that only about a hundred miles of railway in the UK are set to be electrified over the three years following, so this year, next year and the year after. That's about 12% of what we need to stay on track to meet our 2050 goals. I mean, you know, these challenges are so enormous in other sectors, you know, we're making great ground in electricity generation. But on the side of consumption, we've got a long, long way to go.

Charlotte Moore: And what about the consistency question? Because I was with Iberdrola not that long ago and they were talking about storage and how you have hydroelectric power, you can kind of shift water, use electricity to shift water up and then release it. And you know, people could do really interesting things to store power, it's not all about lithium batteries. Is that another area that you're looking at? And I mean, we can almost be really medieval about it and use sort of mechanical mechanisms to store powers. Where, how, what are the developments there? Or are we all fixated on batteries?

Tom Williams: Look, you raise a really, really good point. So, first of all, hydropower is a really interesting technology, all of itself, right? So I mean, it's been around for as long as there have been wheels nearly. So it's, from that perspective, it's a very tried and tested technology.

Where you have either pump storage, which I think is what you're talking about, you know, the water flowing down and then you pump it up in the evening traditionally, when the cost of electricity is low, or you have a run of river like our assets in Sweden, where you have lots and lots of reservoirs, where you can control the water levels in the reservoirs, you can achieve the sort of Holy Grail right? The Holy Grail is long-duration storage. Lithium, at the moment, is a short-duration storage technology so it might be, you might get two or four hours. The problem is that with something like wind, it's often not windy, or it's often windy for much longer than two or four hours, it's often windy for days, and just having a duration of a couple of hours doesn't really make a dent in that intermittency.

What you really need is very long duration storage and hydropower has an enormous part to play in that. And actually, you're seeing schemes, very large schemes which Iberdrola may well be part of in the UK, which have been on the shelf for a decade. Now, coming and being made a reality because of this penetration of renewables into the grid, because of the problem of intermittency that it's bringing, because of the problems of grid stability that they're bringing, these schemes then become viable because they're needed. And it's a really interesting dynamic in the market, at the moment.

Charlotte Moore: And, Charlotte, are you seeing, I mean when you're talking to pension schemes that you talked about, tried and, you know, wanting to see something that works. Is it something that works in that whole holistic approach like it's not that I can build a wind farm, and it will produce energy, but I'm also thinking about how I'm going to connect to the grid and what I'm going to do with my, to provide consistency of supply. Do they think in that joined up way or not yet?

Charlotte O'Leary: I think it's moving towards that but I don't think there is that joined up thinking. I mean, and the reality is that in so many areas we haven't had this systems approach. You know, we have had a single asset type approach and that is difficult. It's a bit like, you know, one of the questions I would have for Tom, is that, you know, what is the connection between the sort of constant question that you get about whether you divest, whether you continue to invest in fossil fuel companies, and to what extent do, does engagement with those companies and pushing them constantly on this lead to them then investing, like I mentioned in the Shetland Islands, to see new technology.

So you, the thing is you need to be doing both things. We need investors and, I say this to pension funds all the time, you can't just rely on one strategy, which is risk mitigation, which we do see with a number of schemes. You know, they're given reporting standards and guidelines like the Taskforce for Climate-related Financial Disclosures, and they go to the easiest parts in their portfolio to try and influence those. But that isn't going to get us where we need to get to quickly enough, you need to be looking at where you can have positive impact and where you can mitigate negative impact. And you need to be taking that dual strategy in my view. And I think it's those things that are probably pushing that technology to the fore now.

We are often presented with projects by asset managers, and when I say asset managers that could be asset management firms, or it could be those who are actually managing the assets, who are just saying, "we've got the technology, we know it's proven, we can't get the investment". You know, it's not a case of the solutions don't exist in some cases, it is a case that there isn't the investment, and we do need to highlight that.

And part of that is also dealing with some of the elephants in the room when it comes to things like fiduciary duty, which I mentioned at the start, but also what our role is as universal asset owners. You know, pension funds are unique in that they are universal asset owners and, as they consolidate, they're becoming bigger and bigger. They can't avoid these risks. They can't somehow insulate themselves from those risks, in the same way that insurers can't. So, therefore, they have to invest in this new technology. And so that's why that dual approach is so important.

Charlotte Moore: So, Tom, you touched on there, you know, that part of the problem we obviously have that we haven't talked about, and I don't want to get into too deep a discussion is, you know how we do this for all bits of the economy we met. You know there's a wonderful statistic about how old the UK's housing stock is, it's like 100 years older than the rest of Europe, and that is going to be huge issue about making it compliant.

But let's think also about all the different bits of the system. Not only do we have to provide energy to homes and to factories, but we also have to provide energy to move things around the world. So, can you talk to us about your thinking about how you electrify shipping or even how you electrify aviation? How do you do that? And are you looking at people investing in new technologies there? Is that very nascent still? Or do you think we're making progress on that, Tom?

Tom Williams: Well, I think, actually, that question really ties back into what we've just been talking about. Interestingly enough, actually. So, you know, where do the oil majors have a role to play outside of just simple fossil fuels? Maybe that is in, you know, adjacent spaces like hydrogen, or other forms of, other technologies that you can rely on, electrification as the, as the main, or electricity as the main way of producing that fuel. But then that fuel is consumed in transport, for, as an example say.

So I feel that one of the ways in which you can both approach the issues of transport and also approach the issues of thinking about how one, as a universal asset owner, engages with fossil fuel companies or big oil, it is by working with them on those kinds of technologies. You know, electrification of very, very heavy transport or aviation is really hard. You know, there are projects out there that are happening, that are, they're prototypes, but it seems to me that actually easier solutions are things like hydrogen. And so I would say that is one way of approaching things like transport.

Heat is more difficult. The UK's plan on heat, certainly on domestic heat, is to try and move to more air source heat pumps, which obviously require electricity. Those, I think there are pros and cons for those. I think just simply removing gas boilers from people's homes and requiring them to switch over to air source heat pumps is, you know, is going to be a big challenge and that's allied to the state of our housing stock, because you need to be well insulated, you know, you need to run water at much lower temperatures.

I've got an air source heat pump. I'm living the dream, right? So I've got a, you know, the usual, electric car and I have some solar panels. I've got an air source heat pump and I am surprised by how much energy we consume to heat the house. You know, you don't really even think about these things until they come through in kilowatt hours. So, I do think there's going to be some challenges with the domestic sector particularly. But I think, I think that the biggest thing that we can do at the moment, is looking, is looking as people are, at transport and shipping and seeing if we can move those to alternative fuel sources that don't have to be, you know, big batteries. I'm not sure, I'm not convinced the big batteries are the solution to that.

Charlotte Moore: So I want to pick up now on something sort of Charlotte touched on, and I think the conversation goes here naturally. You mentioned Charlotte about how we have to do both. We have to be influencing the old companies and investing in the new companies, and I talked about the grid and electrification of that. And I think we've now got a new Labour government, they've got a very big majority, so they have the power to do whatever they want. And you talked about us being universal asset owners but we play an important role, and I feel the bit that has been missing is the conversation between the policymakers and the asset owners and the pension schemes. Obviously, we're seeing already that Labour has big ambitions to involve private investors in expanding the UK's infrastructure, but can you talk to me about what plan, how you feel about those plans, what they need to do, where they need to be shaping it. What's, where we need to go?

So I can give you an example, which you may or may not choose to pick up because you might think it's political hot potato, but when we talked about electrification of the grid, I mean, the National Grid is theoretically a private company, but it is effectively a monopoly. I mean, is that a role that government should be picking up and playing? Do they need to be taking the charge and financing that to begin with and then handing it over to private investors, or how does that, how do we work together to achieve these goals, Tom?

Tom Williams: I think the grid is an interesting one. I mean, ultimately, the grid is paid for by us. You know, it goes on to our charges and that's recovered from us when we pay our bill, our electricity bill. So, for me, the argument about whether the government, you know, owns the grid or doesn't own the grid, is really about the efficiency and how it uses its capital, not about, you know, not about funding it. Funding it, you know, funding it comes from the consumer and I don't think the government's going to change that.

Now, do we think that there are lots of challenges facing the grid and that there could have been different policy decisions in the past that would have better prepared or enabled the grid to be better prepared? Yes, and so I think, with the new government, I think there is a feeling in the industry that this has been a really positive start. I think Ed Miliband has had a great first few weeks. I think the way in which he's gone about trying to make a statement about the difference, that of approach has been very refreshing, and I think is providing clear leadership. And that is very, very important for just practicalities.

So we talk about, you know, tripling solar, you know, doubling wind, quadrupling off, offshore wind, isn't it? And so this, to try and get even close to that by 2030, you're going to need projects to get built. And the first thing you need to do is get it through planning. And so the first thing that you need is some quite clear guidance to local planning authorities about what they should and shouldn't consider. At the moment, they refer back to ministerial guidance statements dating back to 2015, which provides, you know, a great deal of latitude for the people to make decisions. And you get quite bogged down and projects either take a very long time to be consented or just, or get refused. And often in ways that are inconsistent with national policy, or stated national policy, and so there's some ambiguity around these statements. And, I think, coming in and providing very clear guidance about what the central government wants, and what it thinks national policy requires, is extremely helpful.

I think then announcing, you know, record funding for clean energy in the CFD round which is just about to take place, so everybody's pre-qualified and bidding goes in actually today, for the CFDs. We're participating in that process, lifting the moratorium on onshore wind, launching GB Energy and the partnership with Crown Estate. And then launching, you know, I think wonderfully named, you know, Mission Control, the Clean Power Mission control for 2030, which I think is such a wonderful way of putting it, I think is enormously positive as well. So I think all of those things are actually pointing in the right direction. There seems to be real support in government for it but below ministerial level. I think, from our perspective, we just hope that this continues, you know? We hope that they can keep going and keep that positivity, and I think they'll see the results that they're looking for.

Charlotte Moore: Charlotte, how do you feel pension schemes are feeling about this? Is there enough joined-up thinking? Is there enough conversations happening? Are you feeling as positive as Tom? Or are you feeling that the pension schemes are feeling as positive as Tom?

Charlotte O'Leary: I think it was, it's been refreshing to see Keir Starmer come in and want to move away from adversarial politics to, you know, collaborative. And the reality is we cannot have, any longer, politicians, businesses, you know, investors thinking that they somehow sit individually from society. You know for some, it's the same thing as what I was saying about the environment, that somehow you can sit in your ivory tower, you can put up all your defences and you're somehow separate from what's going on. We need to look at, you know, this is also a political hot potato. We need, you know, a government that speaks for everybody, you know, and can understand the plights and problems of everybody and aren't willing to get into these, you know the sort of political bear pits that we've seen in the past, which just doesn't help us move forwards.

We've had so many good areas, you know, where we've had, you know, policy move forward. I mentioned place-based impact investing, levelling up. We've also had, you know, the productive finance working group, which is all about getting defined contribution pension schemes to invest more into private investments. And then we had the Mansion House speech, you know, about consolidation. What we seem to struggle with is that when we're making these big systemic changes, we are not necessarily integrating sustainability into that. You know? And one of the biggest things, biggest challenges that we're talking about here, about private and public, is you need alignment. You need companies to align with people, planet and profit, you know. I mean how, how on earth if we're expecting private companies and private finance to take up most of the burden and we're not willing to put taxes up, then you have to have that alignment, and in the past we haven't had that. That's the reality. That's why things, you know, public private partnerships is not, have not necessarily worked out in the way that we would have wanted them to, the NHS is a very good example of that. But we need that to be different going forwards and that's another thing that we say to pension funds. And no, they're not necessarily always looking at this, because they are looking at returns first and foremost, they shouldn't necessarily be doing that, but that is often what is happening.

It's the same thing with companies and investors.: We need to be asking those big questions about, how do the companies align with those other goals that we're trying to set ourselves, not just returns to shareholders. You know, and we need to be asking exactly the same thing of government. How are they prioritising the needs of people? A lot of the things that we've talked about here are brilliant if you earn a huge amount of money. So putting in solar panels, doing air source heat pumps, ground source heat pumps, electric vehicles, but you know the reality is for a family, an electric vehicle is a massive cost and there are very few subsidies now.

There's also very, very little support from the government, for air source heat pumps and ground source heat pumps, if you consider what the total cost, upfront cost is. And then, as you mentioned, Tom, you know through National Grid, consumers are paying, so can we really expect consumers who are suffering from, you know, significant wealth inequality, can they be expected to take on such a huge amount of the burden to transition our economy when it is a systemic risk? And I would say, that's what we've got wrong in the past, and that's what needs to change. And I hope from what is being said, that is understood and is what will be taken forward. But you know, that's certainly what I would be advocating for.

Charlotte Moore: Let's look at the final question. Let's kind of talk about, I think that's a really strong point you've made Charlotte. I like that because it's kind of, it is that holistic, we need to look at this holistic, we keep looking as well. You're talking about systems change, everything keeps being looked at in silos and it just doesn't work when you've got these big, mass macroeconomic problems that affect every single person's society.

But let's talk to us, Tom, about the role that pension schemes can play in this energy transition. What are you seeing their interest in doing? What capital do they want to provide? What are the type of projects they're looking for? What kind of investment? Are they doing, as Charlotte says, wanting to be investing in renewables and being effective stewards at the same time? Is that something you're seeing happening or is, how is it developing?

Tom Williams: Yeah, there's a thing that Charlotte said, because Charlotte's talking about the impact now, right? And the cost now. I think the other thing which is maybe the difference between the pension funds and the insurers, right, who are more directly involved in ensuring some of the risks that are associated with climate change in the medium and long term. I think perhaps, there is also a factor of, if you don't do something today, what's going to be the cost tomorrow? And I think that's got lost a lot in the political debate,

Charlotte Moore: Yeah.

Tom Williams: over the last couple of years.

Charlotte Moore: The perpetual rejigging of the fiscal rules, you know, just putting it off and putting it off, right?

Tom Williams: Yeah. Yeah. And it's all right. Well, you know, there'll be enough that, you know. Don't worry, that this, you know, your insurance cost is going to like double, you know, or that actually some things won't be insurable. So, you know, you may not be able to insure your house, you know, if you're fortunate enough to live in a seaside place, you know, or somewhere by a big river in the future, because you know you, it's just going to be subject to flooding too much. So you know, if you can't insure it, then you can't get a mortgage. You can't get a mortgage, you know. All of these things have massive knock-on effects which I think, I'm not sure people are quite considering today, certainly not long-term investors, and perhaps we could do more of that.

I think some of the disclosure things that are coming in from a regulatory perspective are trying to help that and trying to help people think about that. So TCFD is a really good example that Charlotte used, where, you know, if we look at our funds, we produce a climate change analysis of what could the impact for climate change be on the investments that we hold. So that's one way of kind of thinking about it.

But, coming back to your question, on what can they, what role can they play in the energy transition? I think we've, you know, I mentioned it before. I think that their role is where you have, you know, investments that make sense from a risk and from a reward perspective, and are competitive with other investments that they can make. That can make an impact but that impact is a sort of given. I think it doesn't have to be the be-all and end-all of the investment. I think it has to be something that is a given, which I think is now possible, and then that they invest for the long term.

And they, if you have all of those things lined up and you have a supportive policy environment and a consistent policy environment, then I think they can make very good investments, and they can devote very significant amounts of capital to those investments because they will be investments that are the kind of investments they like to make. And what, I think, that is, you know, long-term, stable cash flows, allowing them to match long-term liabilities with a degree of inflation linkage. And when you bring those together, that's the reason why, you know, back in the early 2000s, we were talking about getting people into infrastructure as an asset class. If I, you know, crikey makes me sound old, but, and I think those, renewables have all of those characteristics, and so I think they are a natural home for this kind of capital. And I think with this kind of capital being long term in nature and patient in nature, they can add a great deal to the space, and that's where I, that's where I think they can play. And I think they, I'm not sure that they necessarily need to play a huge role in the development of the technologies and the commercialisation of the technologies. I think there are other forms of capital that, venture capital, government funding, there are much, much more appropriate forms of capital, I think, to play in that space. And I think they can just pick up and carry the ball once all, once that heavy lifting has been done and when you need scale.

Charlotte Moore: Charlotte, anything to add to that?

Charlotte O'Leary: Yeah I think, you know, pension funds are just so interesting because of who they are there to serve, you know. Often we end up talking about a pension fund as though it's some kind of sort of globular mass, rather than, you know an institution, rather than something that is, you know, put together on behalf of members of society. You know, we're talking about a pension scheme being there to benefit thousands of people, you know, across the country in particular areas, depending on what, which geography we're looking at. And obviously, we're largely focused in the UK. And so pension schemes themselves, with their member profiles, actually have a huge amount of social data. You know, they have data about how those people are saving, you know, how they're contributing to their pensions, you know, who are at most risk, you know, which areas they're living, you know so much interesting data.

But it also means that, because of their governance structure, they're in a really powerful position to be able to influence policymakers. You know, some of the biggest schemes. USS, for example, commissioned, you know, work on climate change scenarios analysis. That's the power of pension schemes, you know. And I think there has maybe been a reticence because of maybe hiding behind fiduciary duty, to put your head above the parapet and say, "Actually we are speaking on behalf of thousands of scheme members that are affected if their income is depleted, but also affected by the world around them", you know. And, you know, they need this technology as much as they need the returns from it, and it's trying to understand that, that holistically. So pension schemes play a really powerful role in being able to influence the policy environment and there are mechanisms for them to be able to do that now, through groups, through collaboration, you know, Pensions for Purpose is just one of those avenues, but there are plenty of other avenues that you can look at as well. You know, UKSIF and Climate Action 100+. There are lots of great organisations we collaborate with, because we recognise you need sustainability integrated.

But the other thing that we need to do is make sure that pension schemes aren't looked at in a vacuum. Pensions schemes are just one player alongside insurers that Tom's mentioned, which are even more important now that we've got DB schemes going to buy out. But you've also got endowments and foundations, you've got development finance institutions, and when you take all of those actors together, and you help them understand the role they play by collaborating with each other, that's so much more effective than just targeting policy at one actor or another. You know, you need to look at the problem you're trying to solve for and then say, "Where is the capital that we need in order to be able to get this to move at scale? How do we need to engage them in order to do that?"

Charlotte Moore: Well, thank you both for your contributions, that's been a truly fascinating discussion and I hope that you, the listener out there, enjoyed that. Tune in for our next episode.