
DOING THE OPPOSITE



PROPTech CONNECT

Episode One: Dr Aleksandra Przydrozna

Jeff Dewing:

Hi and welcome to Doing the Opposite: Business Disruptors the podcast where you get to meet incredible leaders who have swum against the tide, thrown out the rulebook and changed the way their sector does business for good.

I'm Jeff Dewing and I'm the Founder and Chief Exec of Cloud, a business where we thrive on taking risk so our clients don't have to.

This episode marks the start of a new mini-series of Doing the Opposite, in collaboration with PropTech Connect, Europe's largest PropTech event, which hosts more than 6,000 global leaders across the real estate sector.

Today, you're going to meet Dr Aleksandra Przydrozna, Head of Retrofit at MACE, the global consultancy and construction firm that delivers property and infrastructure projects worldwide. Aleksandra is passionate about the implementation of net zero carbon technologies and innovations with different sectors that she has been passionate about energy efficiency throughout her professional career.

Alexandra, welcome.

Dr Aleksandra Przydrozna:

Pleasure to meet you, Jeff.

Jeff Dewing:

Listen, you've had an interesting journey, right From Poland to Cambridge to leading a multidisciplinary retrofit team at MACE, who I know very, very well, by the way. Can you sort of take us back to the moment where you realised that you wanted to be, like me, an engineer?

Dr Aleksandra Przydrozna:

Definitely. So like it has been a very interesting journey and you would be surprised to know that, prior to deciding to become an engineer, I had a huge passion and I still have a huge passion for the art and for dancing.

So there was this moment where I thought that maybe I will become a ballet dancer, maybe I will become an actress! So I had a number of different opportunities where I was younger

and, as a result, I was actually skipping quite a lot of school and my physics teacher in high school he wouldn't have it that I'm just going and passing the exams. So he made me go and attend extracurricular classes after school and this is the first moment I started doing experiments and actually seeing that. It is fascinating. It's like problem solving and all of a sudden you're learning one skill that can be translated into so many different areas and you can see that immediate impact. And I just thought you know what I still will love art. I still will have that. But I just want to go and explore that because it just seems like something that you can make a true impact.

Jeff Dewing:

Music to my ears and it's very, very similar to the way in which I got involved in engineering, but that's for another day. So listen, but what sparked your desire to come to the UK?

Dr Aleksandra Przydrozna:

So I was really again, from the early stages in my academic career I was very fortunate academic career. I was very fortunate. So in Poland when you join University of Technology you are already exposed to academics that are very much embedded in industry. So it already gave me quite a good hands-on experience. And when I was finishing my first degree I realised that actually a lot of the concepts, a lot of technologies I've already kind of like had a really good vision of and I could have a very comfortable career in Poland.

But then I just thought to myself is this the limit of my ambitions, or should I start looking at different technologies, different places?

And I realised that what was not very well developed in Poland at that time were all the passive solutions. For example, you had big HVAC systems, primarily mechanical systems. There were already some really good examples of heat recovery, but not a lot has been spoken about the natural ventilation, how those systems can be turned into hybrid, and I just thought 'this actually sounds like the next level, like future,' and I thought why not explore that and why not try to go into the deep end and do a PhD? So I've researched the institutions, I contacted my soon-to-be supervisor and I got in in, so it took me seven hours of interviews, but I got through and, funnily enough, I started my PhD even before I completed my master's degree, so I was doing two degrees at the same time, which I don't recommend, by the way!

Jeff Dewing:

This is where we sort of start to try and dig a bit deeper, because the real estate industry is not known for fast change. It's painful. So, in your view, how do you think your approach is going to be positively disruptive?

Dr Aleksandra Przydrozna:

So I think, just like already, I can see that positive impact and I agree with you that, like construction is quite well known for being sluggish when it comes to implementation of different processes. There are still a number of problem areas, but at the same time, this is one of the reasons I find it so exciting to look at bridging the gap between, for example, academia and industry.

One of the reasons why I left academia was because the rate of change and implementation was so slow and I was - again from early stages in my career, very fortunate because the clients that I was working with and for they were aware of my research background and my

first project out of academia was the Rottigarod building in Cambridge, where the client knew me from my academic days. They knew that the research was very much around convective air flows, looking at energy efficiency of heating. They said, 'actually, could you test your theories, could you test the results of your research and then implement it into the heating solutions', which I've done.

And since - this is the attitude that I've embraced with the clients and at first it was primarily MEP packages, but then, since I joined MACE, I have been incredibly lucky to be able to start looking at the multidisciplinary aspect.

So, particularly when you look at retrofitting, being able to look at both facade, like building envelope as a whole, then like, look at the interplay with building services and like realising what are the opportunities to do things differently.

And whilst I do this from that multidisciplinary, with the multidisciplinary hat on and also sustainability hat on because I'm part of the responsible business or sustainability team I'm very much around being pragmatic when you select the solutions. So what works in practice, right? Because it's one thing and, like again, I believe that our industry is notorious for doing so it's one thing to set up extremely ambitious targets, for example, around embodied carbon, around operational carbon, but you need to be also very realistic because if you are starting from the moment and from that point and threshold, like setting KPIs that are unachievable, this is when you are losing credibility with the clients, this is when you are losing your teams.

So I'm very much, from day one, it's around being very pragmatic. Let's understand sustainability aspirations but then understand the program and also commercial and ensure that there's that long-term understanding

Jeff Dewing:

I'm listening to you attentively because, obviously, being in construction myself for the last 40-odd years is that we come forward with these great ideas innovation, sustainability, ESG and all the various things that we know have to be implemented and need to be implemented. Yet the first barrier you come across normally not always, but normally is 'can you do it cheaper'? It's about getting people to realise that short-termism is dead. You've got to look at the long-term future, and I guess the thing that we've got to be better at, is being able to evidence that the long-term future will bring value, and all the time, we sort of simply promise it but we can't evidence it. Then you've got a sceptical client, and I think that's one of the problems that I certainly see. You can build incredible buildings, right, you can. You can build net zero buildings, you can have the most advanced BMS systems, you can have incredible ahus, you have incredible heat recovery. You can do all this stuff, but it needs maintaining. It needs the people to understand how it's supposed to operate rather than going into this incredible building three months later to see everything switched to hand. What is going on?

So, for me, my philosophy on all of this is irrespective of how good we can be and how clever we can be and how innovative we can be, unless we can engage the occupiers to take part in driving the same thing. So, in other words, if the occupiers can see the basic insight, not the technicality they don't want to see bar graphs and KPIs and all that nonsense, they just want to say 'what do I do to do the right thing'? And if you can give them insight to do something, take an action, and then they get the instant gratification, then suddenly you're

engaging the occupier, not just the FM managers or the building managers or the building directors. And I think that's the piece we've failed to achieve. We keep putting these special people in control and this is fancy BMS look at all the lovely graphics and then within six months none of it's working anyway because they just bypass everything because someone complained it was too good. So it's a real, it's been a real challenge for 20, 30 years. I think that's the piece we've got to overcome.

You heard me talk about cost just now. When a lot of the clients say, well, hang on a minute, it's about cost, it's about budget, it's about how do I get the best price, how do I get the cheapest price. Because that's what tends to drive, certainly in the UK's culture, how do you convince the stakeholders who may see a net zero as a cost as opposed to an investment? How do you address that?

Dr Aleksandra Przydrozna:

It's a good one to think about from the early days because it is a journey with the clients. So it's never on the day one they will ask you oh, we want net zero, we want to do this all singing and dancing, please just cost it. It's more around that education and what I call behavioural change in those client organizations and the way we are approaching that is, first of all, let's allow the client to like deep into that journey through, like looking at the optimisation piece. So long term, if you are optimizing your operation like what does it mean? Like what does it mean for your utility bills? What does it mean for your carbon footprint? Let's understand what is your baseline and what's the art of possible. By having that minimal capital investment and quite often already looking at the optimisation piece, the clients are able to get 20 to 30% reduction in their utility bills.

OK. Of course it depends, like on the makeup, what is the breakdown between gas and electricity, but like we are talking about, like you know, average! So already that kind of that kind of is a big light bulb moment. Hang on a second like it's an interesting conversation, and then you start talking about light and deep retrofit and, again, very much looking at the return on investment on the measures and showing, like 'this is how your building performs at the moment' and like at the moment the building already might be stranded, which is already at the risk of being devalued as a result of failing to meet energy efficiency and carbon metrics, but, for example, it might happen in 10 years time. Right? So like different clients, different portfolios, when they understand the exposure to risk, this is when you start like showing them different sets of and packages of work and then they understand 'okay, so that measure will never, there will never be a return on investment on that particular fabric measure. But on that MEP measure, I have five years return on investment'.

Jeff Dewing:

So it's clearly all education yes.

Dr Aleksandra Przydrozna:

And then what you like them to start doing is just looking at that long-term monitoring and forecasting of both energy use and carbon. And once they have that and once they understand how much it helps them in their day, in their out operation, it's just a matter of time.

Jeff Dewing:

And that's the beginning, I guess, of the journey. That's the whole point. We've got to bring them on the journey, and I think life is about sort of curiosity, deep understanding, and once

you get a client's attention, where they're now talking to you about a potential new build, retrofit, whatever the case may be they start to enjoy the conversation and love the conversation and then they start to take part and then they become engaged and I think that's the key taking on that journey but, more importantly, a journey that they believe they need to go on. And I think it is horses for courses. One size doesn't fit all, as we all know. But for me it's also about how do we go that next stage and engage everybody, not just the building managers.

You mentioned retrofit a number of times. I mean, you know, I'm also aware that when you get to a certain situation, I mean how many buildings must you have come across, like me, where you walk in and you go, 'it's 31 degrees outside, the air conditioning's on, but so are the radiators' and the energy wastage out of, just basic, basic challenges like that is unbelievable. But coming on to the question I was going to ask you. I mean, how do you? What does success look like in a retrofit, beyond just hitting carbon reduction numbers?

Dr Aleksandra Przydrozna:

For me, effectively successful retrofit means that you are not only thinking about replacing boilers with air source heat pumps. It's more bringing the asset, the building or group of buildings, and making them future ready. So it's truly understanding what is the exposure to climate risk? What would the best in class the design and refitting of that building look like so that we don't have to go back there before 2050? I'm sure that you've seen a lot of statistics around retrofitting the fact that we need to triple our retrofitting action if we want to hit 2050. And that's why it just seems a waste of everyone's like time and money to do those. Just a number of steps forward, a few back.

Jeff Dewing:

Of course, of course,

Dr Aleksandra Przydrozna:

And I guess, and like at the moment with the level of data that we have available, the amount of modeling and archetypes, we really do understand what good looks like. And I just feel like, as an industry, we are notorious for being so pessimistic about oh, we still have the performance gap. We started talking about performance gap 20 years ago. We still talk about a performance gap today. Rather than thinking let's invest a little bit more upfront so that we have those models of that building ready and our digital twins that we have of those buildings can then subsequently be translated into what I would call cognitive twins. So, starting using AI, starting using machine learning and also making that data available, because, as you said, it should not be just big players, just big developers, you know, just big developers, big real estate owners, like everyone, should have access to that data. So why are we not making it?

Jeff Dewing:

yeah, well, I think one of the things that um drove me to become the sponsor of PropTech Europe this year was because every PropTech I've been to is particularly PropTech Connect last year - all I heard, well, I took a team of 15 and we debriefed at the end and I said 'what's the common thread? What's the common thing that we all saw today? What are the last two days? What would we say? That was what's the one thing that jumps out', and almost all of us said the same thing at the same time, and that is we've just heard everybody talking about the problems. There was not a single discussion about a solution, and the only thing

that people were talking about in the vein of solutions was we need more data points. We need more data points. I go no, you don't, you need less.

The problem that we've got and I used to love the saying years and years ago when we started to move into the digital age and everyone said, 'oh, data is the new oil'. And I like to sit and say data is worthless, it has no value at all. The insight is the new oil. What is it telling us? Right? And you can have a billion data points, but we're all conditioned to think we need to look at these data points and do our own analysis. No, you don't. You let AI and machine learning and deep learning do that. You just want the insight. Tell me what to do and I'll do it. Then, when I do it and I see the benefit of it, I go 'wow, I'll do more of that'.

And that's how you engage people and that's what's missing in in, in my view, in property, in the property world, in the technology world, because we've got so many dots scattered, none of us have learned how to join the dots, and I think that's that, for me, is the key. And it's and it's a journey we're all going to go on, and I think, like everything I'll have to say if you want to go fast, go alone. If you want to go far, go together. How do we collaborate? That's the million dollar question. There's a lot of companies and people that are frightened of, but hopefully we're going to break that. We're going to break those barriers down.

So, listen, you've gone from a massive team of just you to so a team of 12, you're obviously growing and you're getting taken seriously and you're making a difference, clearly. So what is your leadership philosophy in the multidisciplinary environment?

Dr Aleksandra Przydrozna:

At the moment in terms of the update. So, whilst the multidisciplinary team is the team of 12, actually in my current role I'm very much looking after a cohort of over 100 of sustainability people in terms of looking for those big opportunities.

And I think that one of my key leadership philosophies is definitely invest in young talent and look for effectively, not only leading by example, because you know you need to believe what you're preaching, but at the same time, it's a team sport. It's not about um, like being individual with those ideas, it's ensuring that you are already nurturing the next generation of leaders in that space. So that has been, from day one, a very important agenda for myself, both from the perspective of looking after engineers. So what I do at MACE as well, I'm looking after the chartership scheme, ensuring that the next generation of chartered engineers is being nourished and developed. I'm myself a mentor, but also like looking after the whole program. But also whenever I work with and collaborate with teams on projects, and also like a little bit like thinking about the competencies, thinking about their growth, but also thinking selfishly around 'what is the next exciting thing that we should be researching'? I'm setting small internal projects that the teams are working on and then there is an opportunity for them to get a wider exposure. Opportunity for them to get a wider exposure. So, going to the conferences. Also internal learnings, because, again, if we're not thinking about fast upskilling of the next generation, we won't get where we want to by 2050.

Jeff Dewing:

It's one of the key ingredients of engagement. Everybody, bar no one on the planet, wants mastery. Everybody wants to get better at what they do, and if you can nourish that opportunity through research projects, education, training, then that's one of the biggest ingredients of engagement. So you're absolutely right.

When it comes to PropTech. What is the elephant in the room? What aren't people talking about enough?

Dr Aleksandra Przydrozna:

That's a really good question. I think that the point around the solutions as opposed to problem is definitely the one that I would support you on, but I think that it's also going one step further. I think that what we should be much more open about is thinking about 'how can we use technologies, like different platforms that are already like used in different sectors, in order to support what we are doing, like here, in order to ensure that we are starting, like integrating different players to make much more interesting business cases for retrofitting'? Because at the moment, I just don't think that there is enough of that integration going on. There is too many players and there is a number of frustrations around funding not being available for certain sectors. And when we start looking and developing interesting combined solutions, this is where we can start pushing ahead and scaling up retrofit.

Jeff Dewing:

So the bit I see and that's one of the reasons that drives me and drives what I do in my business, and that is that there is incredible technology out there, there's tons of it, there is so much of it and it's just causing chaos, because it is, it's burning people's time. They think 'is it a good thing, is it a bad thing'? What we're missing is an ecosystem that everybody joins, and I think when we can crack that, that will be the incredible journey of joining the dots, and I think that's the piece we need to break down, and I'm very excited and passionate about the fact that I think we're there. It just needs that final little push over the line to get people to say look, 'be humble, have humility, let's work together, let's not try and protect our little environments, let's make ourselves a powerhouse by joining forces'. And I think that's where the industry gains, the market gains and then all the players gain, because everybody is part of the ecosystem, and hopefully that's what we're going to achieve at this year's PropTech. We'll have to wait and see.

Jeff Dewing:

Okay, listen. Last question - what one piece of advice would you give an executive or an entrepreneur who sees a new way of approaching their business but is nervous to become a disruptor? What would be your advice?

Dr Aleksandra Przydrozna:

I think that my advice is never be afraid to do a thing for the first time or be that person that is the early implementer of a given technology or idea, because at the moment we are living in a very exciting time where, effectively, the money and funding for those solutions is out there. So don't be afraid that you can't scale it up and from my experience in many different ventures that I've done, I've never regretted taking those risks. Some of them are paying off, others not as much, but I definitely I sometimes have those moments where I've just realised actually I already have been bold, but I wish I've dialed it up.

Jeff Dewing:

Wow! You reached for the stars. You wish you'd reach for the moon. There you go. Well, it's interesting because I do a lot of keynotes, but some of the stuff I connect with people, people. I say there's two regrets in the world, two types of regret. You have the regret of something you did that you wish you didn't do, and that's okay. We all suffered it and we've

all made mistakes, so that's all okay. But the worst regret is regretting what you didn't do and when you go through life and you see opportunities and you have no fear of failure.

Failure should be a positive word because, at the end of the day, failure is a learning moment. If we didn't fail, we would never learn. When you've got all these incredible doctors and academia and scientists trying to cure cancer, do they go home every day and say 'we failed, we didn't cure cancer'? Of course they don't, because it's the learning journey, right, and you've got to realise if you don't fail, you don't learn.

So have no fear. If you're passionate and you believe it's going to solve somebody else's problem, then bloody well, go for it!

Aleksandra it's been wonderful talking to you today. I can't wait to see you and meet you at PropTech, where I'm sure we'll have a quick catch up and a coffee, and I'd like to thank you very much for sharing your story and taking time to speak with us today.

Dr Aleksandra Przydrozna:

It has been a pleasure, Jeff, and definitely looking forward to continuing the conversation and hopefully we will continue joining the dots together!

Jeff Dewing:

Well done, fantastic, thanks, very much.

A big thanks to Aleksandra for taking the time to talk to me today. An academia that's moved into engineering. It's a mix you don't normally get and what's lovely is seeing the academia that she's clearly done through her PhDs and is now physically getting her hands dirty on air handling units and you know it's music to my ears.

And, of course, people will take her very, very seriously because of her incredible, incredible academia and her drive, not just around the solutions, but her drive about leadership and people and the next generation. You know I love the fact that she's still there driving, you know, the sustainable, long-term play of our industry.

Anyway, if you would like to know more about the work we're doing here at Cloud, visit our website at cloudfmgroup.com or you can follow us on LinkedIn. All the links are in the show notes of this episode. You can also find out more about the podcast and my guests at jeffdewing.co.uk/podcast.

A big thanks to my team, Nichola Crawshaw at Cloud, and to my production team at What Goes On Media. Hope to speak to you all soon.