INFRASTRUCTURE & CONSTRUCTION: THE UNTAPPED DIGITAL POTENTIAL

WALK IN THE CLOUD
AUDIO TRANSCRIPT

Speakers:
Huda As'ad, Managing Director, Infrastructure and Capital Projects Lead, Industry X, UKI

Huda As'ad Bio:
Huda leads Accenture's UKI Capital Projects and Infrastructure Practice and is passionate about ensuring critical infrastructure maximises benefits for people, supports the planet and keeps it safe for future generations.

Her 20 year career experience to date has included government, having worked at the Infrastructure and Projects Authority (IPA) which reports to both Cabinet Office and HM Treasury, where she co-authored the Construction Playbook which sets out key policies and guidance for how major public works projects and programmes are assessed, procured and delivered to include innovation and deliver sustainability. Prior to that, Huda worked for a Big Four consultancy where she was recruited to deliver work on critical national infrastructure programmes such as the London 2012 Olympics, Network Rail, National Grid, Thames Tideway Tunnel and others. Huda's purpose is to encourage the use of technology and digitisation to support a sustainable, inclusive, diverse and productive infrastructure and construction sector.

She is a Chartered Civil Engineer.'

Intro: Walk in the Cloud.

Ellen: When I mention the UK in the same breath as infrastructure and large capital projects, your reaction is probably not positive. What is our problem? And more importantly, what do we do about it? That's our topic today, on Walk in the Cloud. I'm your host, Ellen Bencard, and today we're joined by someone uniquely positioned to take on our topic. Welcome, Huda As'ad.

Huda: Thank you very much.

Ellen: Huda, you work for Accenture, but you are far from the typical management consultant. Can you give me the highlights of your career journey?

Huda: OK. Thank you for that. Far from a typical management consultant. So, I'm a chartered civil engineer. I grew up in this industry. I mean, I really grew up in this industry. My dad and most of the men in my family are engineers. I mean, six uncles. So, I grew up with the language. I started my career working for the UK's largest contractor, as a site-based engineer because I

wanted to be at the coalface, I wanted to see it and feel it and smell it. And then after a few years I got chartered and then I realised there was something fundamentally broken in the system, because life on site is really difficult, challenging continuously, and I thought: Someone made decisions two years ago, that are affecting me today and I couldn't figure out how to intervene, so I went and I joined a big four management consultancy who actually recruited me for London 2012 Olympics.

Ellen: Ok.

Huda: So I spent 6 1/2 years working embedded in London 2012 for the London Delivery Authority, assuring the programme for cost and schedule. I was the classic poacher turned gamekeeper. On the Friday I was covered in concrete from my construction job, on the Monday I was trying to find the monies that were spent in different places of the programme. I was privileged. I got to work on some of the most important national infrastructure projects in the UK, setting up processes for improvement, setting up governance, being really sort of mindful and informed, and how I was changing these things, because I could see where they would land when you got to construction. And I was happily sitting there doing, giving a lot of advice, and then one day I was invited to apply for a role in the Cabinet Office. So I joined the infrastructure and projects authority, which is the part of government that reports to the Cabinet Office and Treasury. And I was the head of infrastructure performance, which actually just meant trying to increase productivity, make things better. You know, the easy stuff. So I figured there's a lot of things we could do to try and move the dial. There's loads of things we could do. I was trying to focus on the most important things, and for me, they were: how we bought capital projects and infrastructure; and then how we delivered it with technology. And I thought those two things would dramatically change the dial, and having spoken about those things for a long time and published policies, like the construction playbook and others, all relevant to this, I was then approached to join Accenture. And Accenture being the home of digital felt like a really good fit.

Ellen: You've ticked all of the credibility boxes. So let's now dig into this problem and I don't think I'm being provocative when I talk about us having an infrastructure problem in the UK. From HS2 to our housing stock to everybody anticipating the number of tyres that they're going to blow on unfixed potholes this winter, we seem to have a problem with building stuff. Talk to me more about what you've seen. Why are we not better at this?

Huda: It's very funny actually, Ellen, because the world outside the UK sees us as leading on infrastructure and in civil engineering and construction. And that's because when we do things well, we are brilliant and when we are not doing them well, we are pretty rubbish. And I think that's probably a fair and balanced view.

Ellen: The Olympics being a brilliant example.

Huda: Absolutely. And there's lots of brilliant examples that kind of depend on when you look at them, look brilliant. So, Heathrow T5 at one point didn't look brilliant and is now a brilliant infrastructure programme. Crossrail, which became the Elizabeth line, looked not so brilliant for a while. And now, actually...

Ellen: And is now everybody's favourite line.

Huda: Exactly! So I think there's a few things, there's a few fundamental challenges in the industry that we need to address. And then we also need to think about how we put infrastructure in the context of the rest of the built environment. The reality is 95.555% of everything that we need to get built in this country is already built. We're tinkering with less than 5%. So, the reason why sometimes we feel infrastructure doesn't work very well is because of all the competing agendas that kind of get interwoven in the political narrative. And sometimes the political narrative is supremely helpful because it motivates people, moves the masses, gets us to a good place, and sometimes it's a bit of a distraction. I think there's a balance to be had to where we can be really good versus not so good.

Ellen: So let's talk digital, because if there's something that doesn't come to my mind when I think about construction and infrastructure, it's digital. Isn't this the most manual industry on the

planet? How can digital help?

Huda: Isn't it? The word digital, I love and hate in equal measure. When I was in government, we used to talk about digital and I felt like sometimes we were talking about it like it was in buckets. You know, we were buying buckets of digital. We need to move away from that, really. And I'm probably part of the problem in that respect, when I was there. Digitization, and technology, is so important to this sector because it has the lowest uptake of digital technology of any other sector. We are lower than agriculture. Farmers use more tech than construction workers. That's something. The second thing is we have so many big world challenges, such as the average age of people in the industry is around 55 years old; ptake of people going into the industry between the ages of 19 to 24 is around 11% and decreasing; in less than 10 years, we will have nobody building. And we need to build all this stuff very important for our energy transition, very important to getting to net zero, fundamental for how we live our lives. So technology is one of the main levers that will change a lot of this, because whereas I was happy running around construction sites covered in concrete and sort of getting down with the tying of steel and things, that's actually not appealing to very many people and it doesn't have to be like that. The way we built today is comparable to the way that things were built in Roman times. And I talk about... obviously there are pockets of brilliant stuff that happens in the industry, but it's not consistent and it's not the norm. There's a lot of digitization we could do when we try and look at how, how we build and what we build.

Ellen: So, in the planning processes.

Huda: Let's agree on the outcome. What is it that we're trying to achieve when we build the thing? Then how do we design it and plan for it, for the optimum way of getting there and that is almost definitely not the way we've always built things.

Ellen: Solving the problem before you come up with the tactic.

Huda: 100% If you don't know what it's going to look like when you've built it, there's no point even starting. And then using all the technologies that we currently have, there is nothing new or rocket science. These are technologies we've been using in manufacturing, in factories, we've been using them in so many different other sectors, we just haven't really pulled them into construction and infrastructure before, not in earnest. And I think when we change how we build things, that suddenly makes it a lot more exciting, a lot more appealing, a lot more diverse. We will access this huge pool of people who actually want to do cool and important, and value adding things and are not interested in being covered in concrete. Ellen: And give me some examples of the way those jobs change. If I were a 17-year-old, thinking about what I want to do with my life, what are some of the cool new jobs that I might be able to get into?

Huda: A 17-year-old when I was 17, would look at construction and think of it as either sitting in an office with a pen drawing stuff, which might appeal or not. Or being on a construction site shouting at a demographic of people who are, you know, statistically, mostly men, mostly white and mostly middle-aged, and most of whom do not necessarily have a very varied vocabulary, shall we say, right? And that might not be very appealing.

Ellen: Yeah.

Huda: So, nowadays, actually, or in the future when my son grows up, when he's 17, I envisage a world where construction infrastructure looks a lot more like gaming, a lot more like a tech role. Because when we move into a more manufacturing mindset, a more technology and digital led mindset, we will make these jobs a lot more about sitting in a clean workplace and inclusive workplace. You know, you never see somebody in a wheelchair working on a construction site. But in an office, or in a factory setting, in a more manufacturing led space, actually, that's completely feasible. Suddenly, it looks a bit more like gaming. It looks a bit more like simulation. It looks a bit more like understanding how to think of things like circular economy, it looks a little bit more like it's got a better impact on sustainability. It just looks totally different and that's where we need to get to. It needs to look totally different.

Ellen: And let's dive into diversity a little more because, you know, I think you're so right. Everybody thinks of the whole industry as being overwhelmingly male. And as you say, older. You've painted the picture of how the new digital industry might appeal. How does it change when more diversity comes in? What's the impact on the industry?

Huda: Well, there are lots of statistics and theories that completely validate the need for diversity in any sector. So, this is a sector that, as you said, is predominantly male and is also predominantly, frankly, white and by creating the dynamic and changing the look of the people, you bring a very different set of thinking principles, a different set of experiences to the room. So, for example, when you are designing something as a tall man, it might look a bit differently when you're somebody who's designing something as a not so tall female. So just simple things like this. We have design codes that say: We should be inclusive in how we design. But the applicability of this sometimes doesn't really resonate if everybody looks the same around the table.

Ellen: And this is the way that applies to wheelchairs and less abled people as well. And we are getting better at that though, aren't we? I mean, we're sitting in an office that's just been redesigned and it's gorgeous. Huda: It is. It's a beautiful office and we are getting better, but we are in positions of privilege. It doesn't look like this everywhere in the UK. Does it? Ellen: True. Let's think about those of us who use this infrastructure. If we have a digital, diverse industry, what's the impact on those of us who live on this small island?

Huda: Well, I can tell you that the research says that if you include transportation in the built environment, infrastructure and construction contribute circa 80% of carbon emissions on this planet.

Ellen: Wow. Huda: That's a huge number. And we also know statistically, and I've seen it myself, that on construction sites, building in a traditional manner, we waste more than 30% of all materials.

Ellen: 30%.

Huda: 30%. Steel and concrete. I mean, these are huge figures. So, by moving to a more diverse, mindfully structured, digitally led industry, we will reduce the impact on our planet, the negative impact on our planet just as soon as we stop building most things in the traditional way. I'm not saying that the digitised or digitally LED ways or the manufactured ways are the only way we need to build. We will always have space and the need to build something traditionally. But the reality is it can't be the norm or the default. And when I say reducing waste, I mean, I'm talking about how we impact the carbon footprint of the homes that we have, the way we get to work, the way we get to our jobs, the way we get to our schools and how we shop. It impacts everything. Infrastructure is such a fundamental enabler of all the things we do in our lives.

Ellen: You've given us a lot to think about today. Thank you very much for joining me.

Huda: My pleasure.

Ellen: You have given me hope in the future.

Huda: Thank you for having me.

Ellen: Listeners, if that has piqued your interest, you might also be interested in Accenture's report on the manufacturing industry, where you will see a lot of parallels. Just search Accenture Resiliency in the Making. And we hope to have you back here again.

Huda: Thank you.

Outro: Walk in the Cloud.