Speaker 1:

Hello, everyone. And good to see you. Welcome back to think big act now. Absolutely delighted to see you again. Douglas. Good day. How are you firstly?

Speaker 2:

I'm very grand, the sun is shining. Bank holiday weekend was superb, so I'm very keen to have this conversation today. Thank you very much.

Speaker 1:

So am I and AWS are our guests today as in Tom Allen and Dr. Andrew Jones. Gentlemen, welcome aboard. Thank you for joining us. Absolutely delighted to see you. Could you just sort of start us off? Couldn't tell us what you both do. Just so we can make sure we've got the right people in the room.

Speaker 3:

Shall I go first? So, hi. So I'm Tom Allen. So I lead the NHS focus team in UK healthcare, organization, AWS, Amazon web services.

Speaker 1:

What does that actually mean in practice?

Speaker 3:

So Amazon web services is the cloud computing arm of Amazon. The healthcare team sits in an organization that focuses on public sector organizations, our healthcare team in Amazon - AWS has three sort of focus areas. One is around genomics and research. Uh, one is around health tech. So companies that build technology for healthcare on AWS - Amazon web services. Um, and then I lead the team that focuses on supporting NHS organizations, adopt cloud, and innovate on AWS.

Speaker 1:

Brilliant. Thank you. That helps me, that's better. Got it. Thank you. Andrew?

Speaker 4:

Yeah, so I'm Andrew. Um, I'm the head of clinical innovation at AWS. I'm a doctor by background. I was GP for about 15 years, but I've really been in health tech for around 15 years as well. And I've been really working with doctors and patients and, um, leaders in health IT, clinical leaders, particularly in health IT. And how do we solve, you know, some of the mission challenges of healthcare, how you improve patient experience, how you improve clinical outcomes, how you improve the efficiency and productivity of clinicians using technology. And so my role really at AWS is to help organizations, healthcare organizations, use AWS to its full extent and, and have an impact on some of those, those big, big mission objectives of healthcare.

Speaker 1:

So is that bringing us a clinical perspective, so my clinical director will go and guide us when we're working with a trust on, well think about it like this, or wrestle with it like that, because this will give you a better answer. Is that what you're doing just on a bigger scale than I might see?

Speaker 4:

Yeah it is very similar. I mean it's almost identical, I think my real role is a translator. So it's translating the fundamental challenges that we experience in healthcare, and communicating that in a way that makes it easy to understand, or easier to understand, what the path to a technology solution which might help influence that particular challenge. And then it's an aspect of me trying to help explain benefits of cloud to frontline clinicians and CCIOs, and CMIOs. Because its relatively new and of courseexpectations of technology are very different now than they ever were and I think we'll talk about that a little bit as we go through.

Speaker 1:

And what brought you nto digital health initially. Why that transition from, from GP land, I guess?

Speaker 4:

Yeah. Yeah. Well, I mean, I've always loved technology from a very young age and got into medicine, but I've been using a lot of other technology solutions, you know, at university and suddenly the internet came along and you could do so many more things. It was quite a shock when I started working in a hospital to rec realize that lack of technology supporting important processes. And one thing I always remember is filling out forms, blood forms for patients onnutrition being given through their arm rather than, because they couldn't feed. And there were about nine forms that you had to fill in for a week's worth of blood tests. And it just seemed crazy to me and I retrained. I did a master's in artificial intelligence and then the national program for it came along and I got much more deeply involved in developing health IT solutions. But I still love medicines and I still have a very strong interest in the clinical aspect, but how can we really improve the outcomes of patients using technology?

Speaker 1:

You, in your role, as opposed to being one-on-one through your role, you can impact on thousands, millions of people by the work you do. That's the really interesting bit, isn't it? As opposed to, yes, I can have a very personal interaction with you, Mrs. Whoever in my surgery, you can now impact such a wider group of people.

Speaker 4:

It's a really good point. I mean, that is one of the things about being a doctor is you have a scale of one, you could only see one patient at a time, do one operation at a time. And you're right - with technology in general. And hopefully in my role too we can have a potential impact on many, many, many more patients. And that's the beauty of technologies and particularly technologies on cloud is they scale so much better. We've seen so many examples of, over COVID, one of our partners, they developed a system which allowed doctors to monitor patients at home. So creating virtual wards so that patients who were experiencing symptoms of COVID, they could monitor them at home. And so one doctor could look after hundreds of patients using a dashboarding system and they could monitor their oxygen

saturations, their blood pressure, their pulse, and one doctor could do a hundred patients rather than one at a time. And that is the amazing impact of some of these technologies.

Speaker 1:

Yeah. And I think that mostly brings us to the nub of this, what you two have seen over the last 12 months or so that has really struck you in terms of the scale speed of change or interventions have made the biggest difference. What struck the pair of you? Say Tom, what's what struck you in particular over the last 12 months? What have you seen happening?

Speaker 3:

Sandra and I were talking about it before that necessity is not, you know, it's not just the mother of invention, I think is the mother of adoption. I mean, some of the tools that we've seen adopted at scale have been around for years, and it's really, it's the, the fact that this has been sort of the removal of the alternative of the business as usual approach has meant that that's, that now is the way do things. So if I think of what about one of the partners attend anywhere who provides platform for consultations in secondary care? I mean, I was speaking to a chairman of a trust that talked about trying to implement something similar for remote consultations prior to COVID and had a real backlash from the clinical community.

Speaker 3:

And he now has a clinic that actually asked him why we weren't doing this before. And that fact that they've been forced into this situation means they've adopted it. And actually it's not as scary as it was. It made the might've thought it wasn't actually it's not the silver bullet that's gonna solve all problems. So II would say that the fact that, that removal, it used to be obviously with the removal of the business as usual approach has meant that people have had to adopt things. And actually it's been, in many instances, really successful.

Speaker 2:

No that's a great point there, Tom. I'm just very keen to talk about the company and the event, which obviously was COVID that removed one of the biggest barriers that we have, and this new way of working coupled by expectations from surface user experience. We know it's something that is very, very high on the agenda now. And sometimes so I guess those and the political drive is there as well. So you've got all of these factors coming to bear to address some of the problems. And as a clinician myself, we always want to know why wasn't this done before. Um, so I was very happy to talk to Andrew Jones, his journey, cause I guess that, that resonates a lot with me, but in terms of the last 12 months, as we have been working at pace, and there's a quote I had on the other day, actually on the train, it was, you cannot be neutral on a moving line and the end, it just feels like you were going so fast ahead with technology sometimes before we can even praise it, you know? UCan you just talk through, both of you the last 12 months and I'm keen to find out about the attend anywhere, track and trace. How, how has it been involved in that as well?

Speaker 4:

I think it's a great point, Douglas. I think what people had to get used to was was it changing expectations? For many of us who've been working in health, in the NHS, for a number of years, we expect solutions to take years, you know, maybe a couple of years to procure or to build. And what we saw was that actually we were being asked to develop a new solution from scratch, some of them were

being developed within days and no more than weeks for most of them. So for example, Amazon and AWS were asked to support with the PCR testing program. So the home testing program and one of the ideas was Amazon would deliver home testing kits to people's doors so that they didn't have to leave house because we were in lockdown at that time.

Speaker 4:

But we needed a digital platform upon which people could request those tests. Um, now that digital platform took five days over a weekend, a long weekend to stand up. So we went from nothing to having a fully functioning platform integrated with Amazon, and all the logistics being put behind that within five days. Um, you know, and the test and trace, that was another great example, you know, that was developed from scratch completely new technology, no similar application like that in place, you know, in this country, at that time, it was built within 12 weeks, you know, on the cloud and people were allowed to not only go fast, but also try things. And if they didn't work there wasn't a huge investment. You only may have put two or three days into seeing if something had worked and then you could try something else, you know, if you needed to. So that change in expectations from the people who are asking us to help them develop and build things completely changed over the period.

Speaker 1:

What are the lessons from that then? What is it that you've learned - the NHS has learned? Do you think from that? What stands out?

Speaker 3:

I think there's something around just get on with it. Just start because you can, it's right. As you go along and you can, it doesn't have to be, you know, you don't have to have the final answer from the start before you get going, you can work that out and change direction and pivot as you, as you progress. And I think there's a number of we can, well, listen, there was a number of projects that we were witness to, or part of that, you know, that really embraced that approach and, and just start and modify as you move as the world changes or - it might not be quite right, and I think we started to see some more of that as, just as a way of working and accepting that more agile approach.

Speaker 2:

Yeah. That's a good word. So, Andrew, um, go ahead.

Speaker 4:

I was just going to say, I think one of the other things that we noticed, which had changed was because of the pandemic, people were focusing on the real problem that needed to be solved. So often we start in the middle of the journey, we say, oh, we need an app. Or we need an EPR or we need an HIE. And we start from that point. Whereas what we noticed in the pandemic was we're starting from the real problem. I need to get a test to people's homes. I need to monitor people without bringing them into hospital. You know, I need to get people information from lots of disparate sources to this point of decision-making and by starting at that real root problem and working backwards from that problem to the solution, I think we saw some remarkable improvements in the outcomes.

Speaker 2:

So, and in terms of this is truly transformational in terms of what you're talking about, um, working for problem, provide a digital solution to that. Um, Dr. Andrew, you talked about your journey from paper record to electronic, that transformation. Are you seeing that new capabilities are been found or discovered through some of the adoption of your new solutions that will never fathom in the business case?

Speaker 3:

Yeah, there's great example, but I'm probably going to get the numbers slightly wrong, but, um, and I think it comes back to fact that it created this, um, this environment where people had to experiment and try things. So, um, there is, I think there's that in, um, in Hampshire, I think it was home. She was, um, one of our partners, um, worked with Hampshire, social care department of the council to set up a vulnerable person monitoring service and really what that was, was using cloud, uh, cloud-based contact center technology. So telephony solutions to make outbound calls to thousands of vulnerable people in their homes using chat bot technology to basically check up on them. Here is a kind of experimenting with telephony solutions and chatbots to make thousands of outbound calls, I think is a really interesting example.

Speaker 2:

I think so to, go on Richard

Speaker 1:

I was just picking up on your point about, uh, Andrew about you're not starting in the middle. I want an app or whatever, but starting with, what do we want to achieve? What's making me smile, I guess, is that when we do scoping, that's what we asked for every time. That's actually what we're all trying to do. Aren't we particularly on this side, but it does have, it's amazing how often it gets lost in this predetermined solution that people want, but actually that's what good scoping is about ultimately, isn't it? It's, what's the problem we're trying to solve?

Speaker 4:

And we actually have a process, um, AWS and Amazon to try and force that thinking. So, and it's called the working backwards method. Um, and, and really you do have to say, right, who is the customer or the patient or clinician, what is their problem? You know, what is the fundamental challenge that they are trying to solve and how can we make that better? And then the first document we write is a, what we call a PR FAQ. Now that is a press release and it's a single page. And it describes exactly the press release that we will release at the end of the development. So it says today AWS will release this service, which does these things, and this is why we built it. And this is what our customers said about it. And so you focus immediately on what your outcome is going to be, and then you start scoping and then you start building and all of those sorts of things.

Speaker 1:

So I'm conscious of time running away from us and we haven't got long left. So at a practical level, if you were engaging with a trust tomorrow, wrestling, the, like the backlog and all the things they're wrestling with, what would be the one or two areas that you would encourage them to adopt or things to think about the things to do that would just get stuff, moving backlog shifted? What, what would be top of your list? What were the things you grasp at?

Speaker 3:

There's a few things, someone said to me recently, if everything's a priority, then nothing's a priority. So there things, obviously something about prioritizing and what are the real priorities? I think there's also, as we often look at when we are working with organizations of what are they, what are people doing that they don't need to be doing? You know, one of these areas that your admin is always one it's how do you help people operate? The phrase often gets, use, operate at the top of their license. So do the things that they are qualified to do, and then be able to offload other stuff to other people. And at some point, some of those things you can offload to technology, you can offload to be automated in some, in some way. I think there's that.

Speaker 3:

I think there's also for me, where are opportunities to scale things quickly? So we talked before about an example of just using simple, like telephony, um, technology again, do you need, do you need a person to be making phone calls? Maybe, maybe not, but those are certain areas you'd look at. So I think it's probably something around prioritizing. Absolutely. It's something around, what can you, you know, what can you offload and automate to free people up? There's also early workforce is that sort of rate limiting factor in terms of how you, how much you can, um, you can have throughput, yeah, I think certainly it's certainly those would be the areas,

Speaker 1:

False things and global issue. Isn't it, we such a desperate shortage that we have, the model we've got at the moment will not exist in the future because we can't, we can't manage it. Can we? Yeah. Yeah. We can't, we can't operate that way. So Andrew, I stopped you. What would you, what, what comes top of the list for you then?

Speaker 4:

I think some of that automation is really important. I mean, 50% of clinical time is taken up with administration. And a lot of that can be automated and there's lots of ways in which we can do that. I mean, another great example, you know, along the lines that Tom was talking about, you know, we have one partner who developed a Facebook messenger integrated chat box, what they've done is they developed this Facebook outreach program for breast cancer screening, because of course, women between the ages of 45 and 60, are now the Facebook generation. And so actually engaging people through that, it can, you know, remove some of the inequalities of access to care. And that really improved their uptake of breast cancer screening by about 13%.

Speaker 4:

But the Facebook generation, they want answers to their questions twenty four seven. Now, if you phone up the unit, the breast cancer screening unit, and you are say, well, when's my appointment. How long will it take, what do I need to bring? And when will I get my results? You know, that takes up clinical time, um, and clinical time, which is best spent with patients in the unit. Um, so this Facebook messenger chatbot using lax, which is the cloud version of Alexa that allowed P the, the, the, these users to ask questions to the chat bot, the chat bot would give them the answers. If there was a question they couldn't answer, it would be referred on to a clinician, but saved an enormous amount of time for clinicians. So they could focus on that as Tom says, you know, the higher value care, um, you know, providing care for the patients actually on the unit. Yeah.

Speaker 3:

I know you've probably heard this before, but, you know, when you're looking at workforce and resources, there's somebody involved in care. But he's very vested in the delivery of that care that quite often, isn't, he's very passive in the delivery of that care and that's the patient. And actually, what can you do to, to put parents or the patients having to give them greater control over what care they're getting as well, and involve them more in that process. I think that's a really good example of where that was.

Speaker 2:

That's an excellent point because there's nothing more empowering than the empowered patient, right? That's the untapped resource that you have sitting, side-by-side, don't enter Jones. You wouldn't know that when a patient can come to the table with some level of knowledge and understanding of what they want and know where they can tap into some of those resources is super, super indeed. Absolutely. Right.

Speaker 4:

Yeah. And I think increasingly people want to self care and they want to have that control. They want to be able to order their own medications, order their own appointments, shifted appointment without spending 20 minutes waiting on the phone. You know, these are these things that we got used to in every other aspect of our lives and citizens as patients and they're demanding the same kind of centricity around them.

Speaker 3:

And again, it doesn't have to be the silver bullet. It doesn't have to be perfect and solvable problems, but if it puts a 10% dent in the problem that's 10% you didn't have yesterday. So I think probably that, going back to the question of what you advise trusts to do, and you know, it's about again, it comes back to, it doesn't need to be perfect. Doesn't need to be the enemy of good healthcare is a bit more challenging than doing your banking because you people die or get very sick and it impacts the quality of life. So there are other risks that aren't necessarily present in other sectors, but they can be managed and being pragmatic and thoughtful in your approach. You can navigate and mitigate a lot of those. Thank you.

Speaker 1 (20:44):

I'm afraid I'm going to have to call this to an end. Thank you, both Tom and Andrew, for what you've contributed this morning. Thank you very much for your time. Great. Thank you. We won't keep you any longer, but thank you so much, gents. Really good. Bye. Bye