Bloomberg Technology Summit

Special Breakfast Session : Building a Customer-Centric Business With AI & Data

Giles Turner: Okay, morning, morning, morning. Hello, everyone, and welcome to our breakfast briefing, *Building a Customer-Centric Business With AI & Data*. We've got a great lineup of speakers to discuss how companies are using these tools to improve the customer experience and their own businesses. Before we begin, most importantly, I'd like to thank our presenting sponsor IBM for helping bring this discussion to life, real life, which is actually a novel experience. I'm still getting used to it, but it's fantastic to do this in a room here, not on Zoom.

Of course, we're having these conversations over breakfast and I know what it's like, you drop your fork, you think you've driven a bus of cutlery over the Grand Canyon. Don't worry, I want it relaxed, okay? I think these things can be very relaxed. We want you to enjoy yourself and enjoy your breakfast. Lastly, I'd like to welcome Ebru Binboga, Director of Data AI and Automation at IBM Technology in UK and Ireland, to make some opening remarks.

Ebru Binboga: Thank you, Giles.

[applause]

Ebru: Welcome, everyone. I'm very excited to be here with you today. Thanks a lot for taking the time to enjoy this morning with us. We have all witnessed what happened during the pandemic. The adoption of AI and automation has increased dramatically. IBM has launched a global AI index last year, and it was an extensive study. We interviewed more than 7,500 companies, executives, as well as IT, and other business professionals across the globe. The findings were really surprising. While we have seen this increasing adoption rate, 90% of the companies admitted that they are struggling to scale AI. However, the good side is that 72% of these executives thought that they will definitely automate their processes and workflows in the next two to four years. There is work going on and AI is now here, it is not the future.

What are successful companies doing, successful ones who have adopted AI? There are three major areas that we believe, and we call it IBM's three truths for AI success. What are these? First truth is focusing on business challenges, not only having all of the attention and the focus on the technology. How do these companies work? These companies like design thinking. They work with organizations such as IBM consulting or software services to apply garage or client engineering methodologies to co-create. They definitely get better business outcomes, but what we have also observed is that there is improved customer experience as well as employee experience, which is another challenge that many companies are tackling today.

The second part, second truth, foundational AI readiness. We all know that it is important to know where your data resides, who manages your data, and AI can

harness to deliver that data into an insight, right, but what are you going to do with that insight? That insight will not bring any business value if you do not involve humans, if humans do not trust it, and if humans do not work with that data and insight. The key here is engaging your employees, training them. It's not only training the technical team, it is also training and involving the nontechnical people. Why do we need to do that? Because they are bringing always a different perspective. They have this diversity of thought that we might sometimes be missing.

As the third element, third success, third truth for the AI success, it is adopting AI and automation engineering principles. What does it mean? It is basically shifting your DevOp function into AI operations. Embed your operational process, embed AI into your operation processes. Embed AI into your culture, embed AI into your development function. While doing that, again, there is one very key item here, it is monitoring the explainability of AI, monitoring your AI models in terms of fairness.

As I've said, AI is not the future, AI is here, but every single company is on a different journey. IBM has delivered more than 50,000 projects on AI adoption, on automation adoption, and we are ready to be with you wherever you are on your journey. Today we are going to hear from our panelists where they are on their AI data and automation journey to transform their businesses. I'd like to hand it over to Giles, please.

[applause]

Giles: Thank you very much, Ebru, and now I'd like to welcome our panelists to join me for our discussion. We've got Jon Davies, Head of Digital at Three UK, Simi Lindgren, Founder at Yuty and CEO of Yuty, and Emily Prince, CEO at Yield Book and Head of Analytics at London Stock Exchange Group. Right, first of all, I'm going to do a real quick fire intro so you can give a little bit of background about what your job actually is about and how it's AI-focused. I'm going to start with you, Emily.

Emily Prince: Emily Prince, I'm responsible for analytics at LSEG, the London Stock Exchange Group. Being involved in analytics, there was always a curiosity for many decades, I think I can say now. I don't know that we always understood it and how to use it, but I think now you see it very entrenched within all of our teams. It's quite interesting the point earlier about the democratization of technology for us, and AI is actually something that we see across all of our teams, from sales to customer services to product, to, of course, technology. Thank you for having me.

Giles: Simi.

Simi Lindgren: I'm the founder and CEO of Yuty. My name's Simi Lindgren, and we essentially use AI to enable brands and retailers to provide that omnichannel, hyper-personalized, seamless experience to consumers. We also enable consumers to make informed buying decisions around beauty. We leverage AI, specifically machine learning and deep learning, to match people to the right beauty products. We do that with brands and retailers to allow them to drive their sales, their conversions, increase customer lifetime value, retention, increase their average order value, and reduce their customer acquisition cost.

Because right now it's so difficult, especially in the current environment to understand who your consumers are, what they want, what their needs are, and ensure that you're not just marketing to cold customers. Increasing revenue is incredibly important in the current environment.

Jon Davies: Good morning everybody. Jon Davies. I'm the Director of Digital at Three in the UK, a telecommunications company. We've got a variety of applications of AI, some that we touched on already, sales optimization and marketing optimization. That's across our consumer businesses, across our enterprise businesses. As you can imagine, quite a lot of investment in network optimization, making sure that our customers get the right coverage at the right time, as well as a lot of in-house automation and fraud reduction, so many, many users.

Giles: Great. I also should say, if you've got any questions, put your hand up, try and spot you any time, you don't want to wait till the end. If you want to step in and get a question, then please do so. I think I'm going to start with you Simi and ask you the meanest question first because it's early. Let's get it out of the way. You've obviously spent the last years building your company, I'd love to see what your definition of AI is obviously in two minutes if you can. If that's even possible.

Simi: I don't know if that is possible. When I started this journey, AI is so broad and I think everyone has different definitions of what AI is. First days at Oxford, I think we spent hours trying to decide what does AI mean and what is the actual definition, but I think in its simplest form, it's just a simulation of human intelligence by machines. There are different types of, well, two specific types of AI, there's general AI, the ones that they're building, and narrow AI that we interact with every single day; machine learning, deep learning.

A really good example of narrow AI is Netflix in its content recommendations, and general AI, the one that I wish was around was if my son asked for the Paw Patrol theme tune again, that Siri would turn around and say, "No chance, we've heard it fair a few times. [laughter] That would be a great example of general AI. It's not around yet, but hopefully soon, but it's broad.

[laughter]

Giles: Do you think-- I mean, you make an interesting point of what it is. I'm fascinated as well, especially, from my point of view, we get pitched loads of different startups and ideas, and people claiming that things are AI and they can solve any problem. I'm interested in what people's opinion is about the worst example they've come across in their business, about someone coming to you with a pitch about what AI is and how it's going to solve a customer problem, and you think, "No way, that's not AI, doesn't even come close to it." I mean, have you come across some of those examples at all, some horror stories? Obviously, if you can name names, it's fantastic. Let me tell me off, what do you think?

Emily: I can definitely subscribe to that. I think there's been a hype if you want to run some aspects of AI and that AI is the answer to all of our problems, I think, actually, to one of the points made earlier. I don't know that we want it to answer for all problems and I think we are learning this. I think we're learning where we want to apply and where we don't want to apply, and where we need to grow in our

sophistication around some of the provenance from a data perspective, privacy considerations. There's a lot of work to be done in terms of how do we feel about this.

I'll draw an analogy to fire. When humans discovered fire, we had a lot of adverse effects that came with that. It's taken us time to put the right guardrails around using it. I feel very similarly around AI. It has transformed and it's extraordinary what we've actually done in terms of physical climate risk modeling as a result of using AI techniques.

On the other hand, I've seen catastrophic failures from an AI perspective, where it doesn't either have the domain expertise where we've got a group of deep scientists that don't necessarily have the anchoring in the technical problem that is actually an important problem to solve or the considerations around maybe some of the ethical challenges in using it, and it's really important, we get that cross-pollination to make these solutions truly effective.

Giles: Have you come across any horror stories, Jon?

Jon: Horror stories? Probably overstretching what AI would be. I think to Simi's definition, I've seen quite a few examples of probably not narrow AI, more so very slim or slender AI, particularly in the context of the customer service that we deliver. We get millions of customers, a lot of interactions every single month, so a lot of promises about what smart assistance or chatbots can deliver in the level of sophistication associated with those. Quite a lot of due diligence over the years, checking whether or not it can do what it says on the tin, which, in many cases, is a slight elaboration on the truth.

I think, particularly to Emily's point, is what we have found is that there is no scenario where we can see switching off all of that human interaction. There is definitely a need for it. The art is finding the sweet spot which you pivot from that automated experience over to the human experience.

Giles: Have you managed that? You talk about millions of interactions and often there's always talk about error and the strength of the data sets. On a human level, how do you avoid getting to know your customer too well? Because whilst many people are very accepting of interacting with technology, some people when they realize that they might be AI chatbot, get really freaked out about it and hate it even though you're trying to give them something that'll hopefully solve their problem. You must see that at Three, for example. How do you solve that problem about--

Jon: Yes, I've seen that at Three before. What we have experienced is not necessarily that customers like or dislike one or the other. They just want to know who it is that they're conversing with so you've got to be very transparent about the conversation, is it with a bot, or is it with a human being? Trying to dress up a bot many years ago as a human being was not the right thing to do because customers get frustrated and you see that come through the conversations that they have with those assistants is that the tone changes significantly as they move from one to the other.

I think they're probably a little bit more forgiving with the bots but the profanity can creep in quite quickly if they get frustrated, which is clearly a trigger to transition that customer over to a human being.

Giles: Have you seen that Simi, because obviously, you're building something from the ground up to solve a certain problem, which I find fascinating.

Simi: Yes, I think with the chatbot example and the functionality is we're talking about machine learning but natural language processing, really understanding the customer's intent. Sometimes I guess if there's not enough data and the model hasn't been trained on understanding what the customer's trying to say, that can be a really frustrating customer experience. There isn't sometimes enough transparency I think with regards know, really communicating quite clearly this, you're speaking to a bot, or we can transfer you over to a human, and there needs to be some augmented intelligence.

We do that a lot at Yuty. We train our models to understand the various ways someone could ask for a serum or a cleanser, or any other type of beauty product. Ultimately, we're quite transparent about the fact that Yuty hasn't been trained on everything. Thank you so much for being part of that learning journey and we'll transfer you over to a human.

I had a frustrating customer service experience with a bot recently. I started typing. It wasn't profanity. It was very much like this-- The intent is so far away. This isn't natural language processing at its best. When brands are saying that they're using AI, I think sometimes it doesn't have to be algorithmically driven, but I think to be quite transparent about that process just to elevate the customer experience even more. The whole purpose of it is to identify the needs and the concerns and really try and solve the problem. If it's not doing that, then it's not the best experience.

Jon: I think fine tuning is key as well, is with the natural language processing, investing in the conversational assistants alongside that. Certainly, what we found early on in the mobile industry was examples where we would find customers getting put through to bereavement teams because they're phoning in saying, "My phone's died." You see that and you're like, "Okay, that's clearly a traumatic experience for me to pass over to a human being." Tuning that, okay, phone dying is not quite the same as a human.

Giles: Do you get them involved by making them-- How do you make them feel like they're part of the process? Because the more people use it, the better the end result is. How do you get people to feel like we're making this better rather than thinking, I really want a solution, I need to sum up on immediately, and the you don't do it, I'm going to be pretty upset. Simi, do you do that on your application? Do you make people feel like if I keep using this, it's going to get better for me? How do you convince them it's going to work rather than it working from the beginning, which people want?

Simi: We design with the customer in mind and we understand the various different customer personas and we try and figure out all the use cases and very much challenge approach. We are incredibly transparent being a startup, but that this is very much interacting and building your profile will allow you to get more accurate

recommendations. We haven't had a frustrated customer experience. That's seen in our retention rates but I think that comes down to the fact that we've spent so much time in anthropomorphizing Yuty.

We try to humanize Yuty as much as possible to the point where we say actually, where we built that relationship with you, Yuty can make mistakes and I think that's incredibly important. Designing with the customer in mind and understanding the various different personas is incredibly important, especially when you're thinking about collecting data. When you talk about how much data and how we can personalize the experience, when we're collecting that data, whether through surveys or asking someone to take a selfie, it's a lot of personal information that we're asking them to give us; their biometric, their lifestyle, their location, so we understand, their UV, the hard water, everything that goes into their daily lives that we can make those beauty recommendations. I think by taking that amount of data, there has to be an element of trust, so we need to understand how to build and deploy and extract that data so that we can improve the models consistently.

We're also not just leveraging the customer data that's to make real-time recommendations. We're creating synthetic data which allows us to speed up that process of being able to make matches and drive that personalization experience consistently. The reliance there is so much faster than it is most probably in other industries because we create fake data so that when we are making those matches, we have so many different use cases and the same when it comes to the entire process of deploying AI.

Giles: Okay. We've got a chart to pull up here. It wouldn't be Bloomberg if we didn't have a chart, I think, but we can see hopefully, the investment into AI startups in the EMEA region. We're still seeing a lot of spending, but obviously, it's coming down. I've got a question for Emily because I think you're in a really great position working in the London Stock Exchange, to see how people are spending money on AI solutions. What's the latest trends that you've seen both internally but also the people you interact with externally?

Emily: Yes we've really seen a true democratization in a way that's it used to be a skill set that was very rare that you had to buy into in a way to how are you going to address those problems. I think there was a sense of you could go out to market and buy something in and it was going to solve all of the problems. In reality, I think as an industry, we learned that it doesn't quite work like that, so there's a reconciliation with whatever your technology and business is today. There has to be that way of actually integrating and aligning, and frankly, sympathy to maybe some of the challenges that exist within the business today.

I'll say from personal experience we found it to be most effective when we brought all of those teams together. When we said it wasn't just one team who were responsible for innovation with a capital I and everyone else was not responsible for innovation. It was a collective mandate to say, everyone is responsible for this. Then we are really empowering everyone, upskilling as the training, but the democratization and availability made it something where actually, you didn't have to buy in, in the same way.

I'll also say that there's a-- we were speaking about it before this panel, there's a transferability that we've never, I think we've never really seen before, within financial services. I will be self-critical and say that, my career, I've been very now reminded in financial services look left and right in terms of financial services, and what as a community we are doing and learning from each other.

I will say personally that I have been extremely guilty in not looking outside the field and actually looking within healthcare and pharmaceuticals and aerospace. It has been extraordinary, the learnings that we have taken and beauty now, I'll add to the list, the learnings that we have taken from those other industries and it's fascinating the conversations we're having now because we're pulling up examples of use and application of AI in completely orthogonal segments and then finding a real immediate transferability into some of the problems that we are solving within securitized prepayment modeling.

It is extraordinary the reach that some of these things have and because of that, you find a real democratization in terms of your ability to open up the opportunity to a much broader group of people.

Giles: How are you doing that though? I mean, everyone loves a silo, right? How are you managing and what made you decide to think, hold on a minute, I can go talk all to someone in healthcare and they've got a much better idea than someone in finance.

Emily: I think as much as we love a silo, we are also curious by nature. I'll say that in analytics, maybe that is especially so. A lot of the people we hire are not traditional in this, and that was deliberate actually. We started deliberately going outside of financial services and hiring into engineering, hiring into healthcare. We've got a number of doctors on the team now. It is a profile that you wouldn't normally expect within financial services, but we've found that those people have such a different way of thinking but the same underlying skills that allows them to be relevant and applicable where they don't feel that they're alienated.

They now see how they can really contribute in a very immediate way, but they're bringing a perspective that we've never really seen or thought of before. They often come with data sets too. That's one of the amazing things. You think about the role of social analysis within a lot of financial industry modeling. Where do you get the strongest amounts of social data? It's not within the financial services industry, it's outside of it. Often these people are the ones that can do that cross-pollination in really effective ways.

I've had someone join recently who's brought phenomenal insight from NASA, and the power of that satellite imagery data in being able to analyze the quality and maintenance of buildings has driven a much greater effectiveness in the predictability of our models. We see almost in components the use of AI is very localized in terms of solving for very specific problems. As say we've taken away the euphoria said it can solve for everything, it solves for piecemeal piece in ways in which we still retain the auditability and the accountability of these models and the control frankly.

People still have control of the parameters. You still have the specification in a way that you can explain to the regulators why is it doing that. What will happen if this happens? We are gaining insights from really deep loan-level data, for example, that would never otherwise have been possible.

Giles: Simi, I want to ask you a similar question but from a completely different viewpoint. When you were raising money for your startup, what did VCs ask you about user experience? Was that their first question? Were they having intelligent questions about how users are going to interact with what you're trying to raise money for? Or did they care about completely different things like how much money am I going to get back?

Simi: I think firstly, they wanted to know whether what we was building was real I think. The user experience came later on. I think it was because so much of I guess it's been incredible dilution of AI. Lots of beauty brands, say, customers go on a website and they think the quiz is AI-driven. It's not quite similar to when Netflix launched years ago. The content that was being recommended wasn't algorithmically driven. It was getting their head around the fact that we were the first beauty personalization engine that was patented. We have built something proprietary here.

Everything that you see isn't real and we're essentially cornering the market, and that's where that twists on its head. Then the AI and beauty industry, it's increasing by 13% CAGR every single year. It's valued at about 2.7 billion so they could see the potential, which is why we got the backend not just from two VCs but also from Google with regards to what we were building.

Later came the customer experience, the retention status, how quickly can we get this being out there and used and how quickly can we get to a hundred million, which is obviously the unicorn status that we need to get to in the next four years. I think mostly it was around is this something that can essentially allow them to see their return on their investment and then is it good for consumers.

Giles: I was going to talk about the pandemic. It's like Brexit, we can't really avoid it, I'm afraid. I've looked at, in theory, it should have been a dream scenario for customer support AI stories. I tried to find some data to support this and it was a real struggle. I did find a research paper and I've had to print out the title, and it's called *AI Enabled Opportunities and Transformation Challenges for SMEs in a Post-Pandemic Era*. Luckily for you all, I read it so you don't have to and the main takeaway was AI is a great solution for what happened in the pandemic if you already had great data sets and if you already knew what was coming. I was like, well, that's not very useful.

Jon, I've got a question for you. When you were probably at the cold face of this, especially in terms of the amount of customers coming to you doing the pandemic and asking you all questions, what were the missed opportunities and what would you have done differently, and what solution would you have given them if you knew what was coming?

Jon: Well, I think we'd definitely be in better shape if that happens again, which clearly, I hope we don't. I think what it did do is it shone a light on where there was

under-investment, where there were capability gaps, and the tidal wave of demand coming in there certainly highlighted where we needed to scale up effectively. That was across all of our digital interactions because clearly, we became very, very dependent on those channels very, very quickly.

I think, yes, it certainly provided the catalyst for growth because certainly, customers that weren't previously engaging with those particular touch points and channels have stuck with them. I would say the growth that we were predicting on the back of the pandemic hasn't necessarily sustained. It has fallen back because customers naturally are flexing back to human interactions because that's what human beings like, that's what they want. We've definitely seen that as a spur for continued growth in certainly automated interactions. Selfishly, that's provided a very strong platform for internal investment within the business as well.

Giles: Emily, have you seen something similar for you?

Emily: Yes. I agree with what you were saying where if you already have the data and you already have the skill sets, then fantastic, [chuckles] I think the reality for us was actually, we did see a spur of activity through the pandemic but not for the reasons you might expect, more because we saw a huge shift in terms of the workforce and where people were moving. I think it was the moment where a lot of people took, I think for many people, they took a step back and said, "What is it that I'm doing, and is this the right course?" I think a lot of those deep questions were starting to be asked.

I think as a result of that and then the fact that we did have some of these trends running already, and people were starting to see the power in the promise of a lot of what was being created, we saw quite a step-wise shift. Actually, one of the things to support employees actually and boost morale, we actually did a lot of online training programs and used the pandemic as an opportunity to really do a lot of cross-training, introduce different people to different--

We actually find that from a-- I guess I'm going slightly off track, but from a global perspective, it was a great equalizer because we always had a slight tilt either to the US or to the UK. This actually suddenly became a great way for lots of different colleagues across the globe to really interact in a fair way, where you weren't huddled around a spider phone trying to get your point across and jump into a live conversation that was happening in New York, which was all too common in the past.

I think nowadays, we see much greater sharing of information, it's much easier for me personally to cross-pollinate the teams, and as I say, as a result of the training we did through the pandemic, I've got a much better baseline knowledge across many more individuals where they can be much more self-sufficient. For a totally different reason, we saw a much greater uptick, but I could read with the point you either had it or you didn't beforehand and it was a huge advantage if you did.

Giles: Just last of the pandemic, and I think it's and we all spoke about privacy already in different areas, it's really displaced I think fears over privacy, and when I started covering tech in 2017 and one of the first big scoops that we did was the Amazon Echo listening to you and then recording everything you say, then snippets

being passed around employees in different offices of people singing in their bathroom or shouting at their kids to get their shoes on to go to school, or even worse things, right? And at the time, obviously, it was a huge privacy shock.

I think if we did the same story now, especially after pandemic, I think everyone would just give a shrug and not really care because we've got bigger things to worry about. I'm not quite sure the answer about why, but I think, Simi, do you think the lay of the land in your industry now regarding how people and how your consumers worry about privacy, from your point of view, what are you most concerned about and what are your biggest fears about upsetting your customers, about them using your product and you getting it slightly wrong and then worrying about, oh, I'm worried not with the chat side of things, but more worried about I'm going to lose part of my privacy, part of my identity, I'm not quite sure where it's going to go. How do you make them trust you?

Simi: We communicate a lot. We're incredibly transparent at every touch point that a customer has with Yuty. From the moment that they are taking a selfie, we explain the uses of their biometric data, and then at the end, we can have those policies on the site that tell them how their data's going to be used, but are they really going to read it?

I think what we've seen is that most people are really happy to share their data because they know that it'll drive personalization. They'll be recommended products that work for them, they'll be recommended products that they need, the marketing will be relevant because collaborative filtering and that way of recommending products to customers just isn't the way. Just because customer A was recommended X product doesn't mean customer B is going to like X product because they're not carbon copies of one another. I think they're open to having their data used in that specific way if we're transparent about how it's going to be used but privacy is something that we're massively seeing increasing.

Pre-COVID, people most probably were aware of how their data was being used, but as I guess consumers got more savvy and they were thinking during a pandemic, they were reflecting on their values, they were very cognizant of how they wanted brands and retailers and companies to be using their data and how powerful their data was. They were equating their data to gold. Then they were going to corporates and businesses who were going to be transparent about how their data was going to be used and protecting essentially their data.

I think seeing that shift in consumers and them being much savvier than they have been before in the EU aligning, it's gone beyond GDPR, the EU aligning the way that AI and the use of customer data is going to be used. Google's actually changed the way that they actually take, consume customer data and it's not driving their Google Analytics. Anyone who hasn't moved onto Google Analytics' portal, you'll see that soon, so it's something where consumers are much more aware, but they want to understand that their data is being protected, and when it is being used that it's being used to benefit them.

Giles: Do you think the same thing, Jon? Do you think consumers are being more trusting or are they being a bit more aware or a bit more blase?

Jon: I totally agree with Simi's point. I think the transparency is key. In our context is there is an expectation that we use the data, particularly network data, to make the network experience better so that we can see where our customer's using it, how they're traveling, how they're responding. There is an implicit understanding that you will use that for my benefit.

That said, is that we continue to be very transparent about the way that we use that, and very visible in the way that we can allow customers to modify whatever preferences that they've got in a very easy way. We're a regulated industry and I think a relatively cautious as a consequence industry, but nevertheless, there is without a shadow of a doubt, a strong customer expectation that we continue to deliver against that.

Giles: I think we're coming near the end. There was a quick-fire question. Do you think we'll be here in five years' time marching at the same pound discussion? Do you think we're going to be using the term AI even in remotely the same connotation or we've completely moved on? It's just you're on the analytics team, that's what you do. What do you think, Emily?

Emily: I agree. I think it's just going to be analytics and it's just going to be data and it's just going to be healthcare and it is just going to be part of everyday life. I think to the point about privacy, there's going to be acceptance in terms of what appropriate looks like, and hopefully, there's a bit of a catch-up but there's also a settling in terms of acceptability and there's a feeling I think for some people of intrusion at the moment and I think some of it is a perception of intrusion, some of it is real, and making sure that the guard rails are there I think is very critical to normalizing AI. I think until that step happens, we're going to see flare-ups in terms of misuse of AI naturally, I think, and it's really down to the creator and the user of that AI to have the right principles in place to make sure that it is used appropriately. It's very much at that level at the moment we see with some of the customers we interact with, with some of the providers, they are very clear about their expectations of use and others are not. That needs to become something that is much better. There's a much better framework around to make sure that we are not breaching on rights that people feel should be in place.

Giles: Well, you know if you do catch the misuse of AI, you know where to come. Obviously, very interested. Anyone else in that room that applies to, but that draws to the end to our chat. Jon, Simi, and Emily, obviously, thank you very much for your time and fantastic for joining us. Thanks for your insights, obviously. Thank you very much to everyone else for attending, and a huge thanks to our sponsor, IBM, for making this conversation possible.

Obviously, we have a full day of events lined up for the rest of the day and I do hope you all stay around for that. Please say and finish your breakfast and mingle. The summit begins at nine o'clock and we've got an exciting program ahead. Also, thank you very much, everyone, for turning up for a live event. I know obviously, it's a bit of a change, but now we're all used to it, and hopefully, this will continue. Maybe AI will solve some of the problems that we don't.

Emily: We've got a box for your data at the corner.

[laughter]

Giles: Well thank you very much, and thank you very much for our speakers for attending today. Thank you.

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