

# Barclays Global Technology Conference

## Company Participants

- Rajesh Jha, Executive Vice President, Experiences & Devices

## Other Participants

- Raimo Lenschow, Barclays

## Presentation

### Raimo Lenschow {BIO 4664646 <GO>}

Hey. Welcome to our next session. I'm really happy, Rajesh. And the one thing when you have a speaker from Microsoft is always like, you're such a big organization, right? And it's a positive thing. You're always like, well done, and it's amazing.

### Rajesh Jha {BIO 20129196 <GO>}

It's a positive thing if big elephants can dance.

### Raimo Lenschow {BIO 4664646 <GO>}

Yes. Maybe to get everyone on the same page, talk a little bit about yourself and your role in Microsoft.

### Rajesh Jha {BIO 20129196 <GO>}

Yeah. I lead the Experience & Devices in Microsoft. So that would have Microsoft 365 Office and Teams, Windows and Surface, and then also our search and our browser efforts.

## Questions And Answers

### Q - Raimo Lenschow {BIO 4664646 <GO>}

(Question And Answer)

And so if you think about the last 12 months, it's been like a crazy journey in terms of new innovation, et cetera, like that. Can you talk a little bit like how did you experience, like how was these last 12 months for you guys -- for you like kind of funding it as well?

**A - Rajesh Jha** {BIO 20129196 <GO>}

Yeah. I mean, first of all, let me just say, as you all know, I mean the last 12 months have been as exciting a time as any.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Yes.

**A - Rajesh Jha** {BIO 20129196 <GO>}

I've been at Microsoft a long time. I came when it was graphical user interfaces, and we thought that was a big deal, internet, mobile. I mean, this last 12 months, I actually think generative AI is as big a technology shift, if not bigger than any or all of them put together. And so for us, in the last 12 months, we got a lot done. When I reflect back, so GPT4 has now been out for -- in production for about in the year. So we -- in Jan, we had APIs and Azure for that with all the safety and trust that our enterprise customers expect.

In February, we took the large model, we put that in our SocialNet browser, because we do think this represented a new way for people to find information to reason over stuff.

In March, we took a step back and we thought about, what about productivity? How would these generative AI, the power of these things affect or impact the way work is done? So in June, we brought a private preview of that for a lot of our enterprise customers. And it's been great to be with them on this journey. November, we launched the Microsoft 365 Copilot.

But when I reflect back, of course, GitHub Copilot was the first one that we went after because it was very clear that we could help the developers be incredibly productive. So we had that. In the last few months, we've also taken a look at how business processes and business workflows can be re-taught in the world of generative AI, where you take systems of engagement and you take natural language and natural language interface and how you bring whether it be a Salesforce's workflows, a service provider's workflows, whether it be a doctor's workflows with the Copilot and those things. We've thought about how to extend the Copilot to allow customers and developers to extend these copilots with specific information.

So a lot's happened, and the thing I'll just tell you is a lot of this technology shift also intersected with the work that we've been doing anyway on Microsoft 365, post-COVID. We've spent a lot of -- we saw a lot of customer engagement intensity in that populated what we call the Microsoft Graph, which represents the customer's most important database, I think, which is the projects, who knows what, in terms of knowledge, people's calendar, email documents, the right permissioning. So this is where the generative AI reasoning engine meets the Microsoft Graph to provide generative AI in the flow of work.

So -- but still it's very early, very, very exciting to see the entire company rally to this.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

And you guys must be thinking a little bit more ahead. Like -- and I just wanted to ask like slightly more bigger picture, like, the thing now, generative AI, what it can do and you have more insight than us. Like, how does it -- how would you think the way we work will change over time, like going forward? Is there like a glimpse that you can give us here?

**A - Rajesh Jha** {BIO 20129196 <GO>}

Yes. I mean, look, I'm not a soothsayer on this stuff, but let me just share what we are already seeing with customers.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Yes.

**A - Rajesh Jha** {BIO 20129196 <GO>}

So when we did the early adopter program in June with the Microsoft 365 Copilot, we had many hundreds of customers jump on the opportunity because they see the same thing. And 100 to 200 of those, we went really deep. They invited Microsoft to go deep with them and analyze the impact on productivity. So we looked at three dimensions of productivity. One is efficiency, just how quickly can you get the job done or how much more can you go do. But if we balance that by taking a look at both quality of work, so it's not just enough if AI assists in doing something quickly, I mean, what is the quality of the output in terms of accuracy, in terms of up-level and the skip-level.

And the third thing I looked at was effort. How much effort, how much grind did we take out? And the results have been really impressive. And we are going to publish all of this in the Work Trend Index I think in the coming days. But about 68% or 72% of people felt it made them more efficient. It improved the quality of work. They felt they had to put less effort in, so they had more time to do what is innately human, which is more creative, more reflective work, more collaboration. And 70% of them would say, of course, the Copilot makes me more or the generative AI makes me more productive. But what's also telling is that more than 55% of people feel that AI makes them more creative. This is today and here and now.

Now you ask the question, how do I see this move forward? I think workflows are going to have to be re-imagined. So today what it does is the Copilot or AI helps you in your existing workflows. But when a lot of the grinding -- and let me just take a step back in the Copilot, our vision of the Copilot is not an autopilot. It works on your agency, it works with your permissions, it works with your context. So today, it's helping you in your existing workflows. So because it's helping everyone, how can entire group's workflows change and be reimaged? And we are starting to see that both in my team and with customers.

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**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Yes.

**A - Rajesh Jha** {BIO 20129196 <GO>}

Just one -- I want to leave you with one thought. So far AI, prior to generative AI, it was as if the human beings did all the work, and the AI was the editor. It would show up in auto-complete, grammar checks, spell checks. But now, it's flipped. The AI is doing the work. They're doing the first draft. They're doing the summarization. And the human beings are now editors. So we've gone from AI being editors to now where it should be, which is the human beings are the editors and the AI is the assistant.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

And Rajesh, do you have any -- like on that reimagining workflows, et cetera, do you have like -- do you have examples to make it slightly more comfortable for us? Like, I hear you, but I don't hear you, you know what I mean.

**A - Rajesh Jha** {BIO 20129196 <GO>}

Yeah, yeah. It's -- so let me give you just a couple of examples, maybe one -- a couple of customer examples, maybe one from my own team. So one of the customers, what they did was -- so when people started using the Copilot, the first thing they tried to figure out, hey, how should we go do this? They asked us, should I distribute a few seats to this across different departments or should we go all in, in one department? Then our -- based on our work with them, we tell them, go in into one function because we find taking a peer group and giving them all Copilot helps reimagine the workflow.

So this customer, what they did was they gave it to their service department. And they're an operational company. And so they had very complicated processes for long running incidents because hundreds of people -- these incidents would be day long. This was a core of what the company does. And then they had very complicated overhead of how -- when people work four-hour shift on the incident and the next crew came in, who was going to transfer the knowledge, how were they going to come up to speed and so on.

So they re-imagined this -- re-imagined the entire workflow in the context of Copilot in the meeting. So when a new person would come in, the Copilot would just summarize. They could just be in, "Hey, can you summarize what happened in the last six months? Which ones apply to this specific function?" So they were able to get rid of a lot of the manual overhead, the human overhead of transferring knowledge between shifts and so on. That was an example of just reimagining the workflow.

We have another drug research company where there's a corpus of a lot of data around this clinical trials and drug research, but that's in a different system. And so -- but what they did was they extended the Copilot. So in the Copilot, people could summarize quickly when they came in, what were the latest findings from the last

week from their colleagues in the context of all the emails that have come in around that, all the chats, the documents, plus what's the message in the record.

In my own team, we saw this super interesting thing. If a product manager wants to go incubate an idea, the process used to be, he or she would come up with an idea in the product management team, she'd go lobby for some resources in the engineering team and design team so they could co-incubate. But now, she just uses the copilot. So this product manager early in career, she had this incubation idea, she just used the Copilot to generate, but she doesn't know coding. She's not the designer. She had an idea. She used the Copilot to create a perfectly workable, mobile app to incubate a bunch of stuff. Got to try a lot of different things, and then, once the idea was just stated, she brought it up to the core teams to actually then go and implement it. And so this has saved, in that specific scenario, months of just time of coordinating people. So I think what you will see is workflows are going to have to reimagine, in addition to augmenting the human ingenuity and creativity and taking the grind out.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Yes. And then -- and maybe I should have started actually, if you think about the Copilot and the productivity gains. And you started on GitHub on the Copilot side.

**A - Rajesh Jha** {BIO 20129196 <GO>}

Yes.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

And now we have like, the first guys using it on the office side. Like what are you seeing in terms of productivity gains and seeing just to work behavior coming out of that one?

**A - Rajesh Jha** {BIO 20129196 <GO>}

So GitHub, it's the -- the first thing, the GitHub Copilot in many ways have blazed the trail for us in the design language. So we spent a lot of time about how does -- how should the AI get instantiated for teams and users in organizations. I mean, it's no secret that the AI can get some things wrong. Now, of course, when you ground it in your information to a RAG pattern or what have you, then you're using it as a reasoning engine, not a fact engine.

But what the GitHub Copilot taught us was a design language of it being a copilot, not an autopilot. It is working on your behalf of making sure that humans were in the loop to actually accept the changes or to commit the actions. And then when we saw the GitHub Copilot land up to 50%, 55% efficiency for developers, the other thing that we did was we created the Copilot stack.

What I mean by the Copilot stack is, so if you take a look at Microsoft 365 Copilot, it's not just a largest model, the most capable model. It's the fact that, that model is grounded with the Microsoft Graph with all your permissions and it's then brought

into a Copilot design language and user experiences that you use. So -- and then they need to be extensible. So this entire thing is what we call the Copilot stack. So all the copilots in Microsoft have been built with the same orchestration, same extensibility, same design language. And we've made this thing available as an Azure service, whether it be Azure AI Studio or for low-code, no-code with the Copilot Studio. So I think in many ways, the GitHub Copilot is blazer trail for us into this one design language.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

And then what are you seeing in terms of the customers that have been working with the copilots and adoption curves there? And I'm telling you where I'm coming from, it's like, look, if the productivity gains, we're hearing is somewhere like 20%, 30%, like 50%. And the people that are working with it are kind of more developers, white-collar workers, they're expensive. So here you think like, hang on, like everyone should be rushing out, getting this. Like what are things on their adoption that we should consider there and like the do you kind of experience so far?

**A - Rajesh Jha** {BIO 20129196 <GO>}

Yes. So, great question. So, it's clear that for the end user, whether it's in the context of creation, summarization, first draft, all of this, the payoff, I mean, this is what we -- I was just talking about and what are you going to see in the Work Trend Index, benefits of 50%, 60%, 70%, in terms of meeting, summarization, follow-up tasks about 80% to 85%. So, it's clear value for the end user.

For now, let's talk the IT admin in enterprises. They're also responsible for security, regulations, compliance, and so on. So one of the things that we've done with the Microsoft 365 Copilot is actually built it to be enterprise-grade. What I mean by that is it understands things like additional access. If IT had a policy in place, which is if Raimo is outside of this zip code and tries to access code for data, for what do not allow that access (inaudible) challenges the authentication, the Copilot understands those policies.

So things like all interactions with the Copilot are discoverable for regulatory reasons or it generates an audit log. So we've done that work. But IT still has to go through the validation process for these things. So one of the pieces of feedback we got from IT early was, hey, we love the notion of Copilot helping in meetings, but we don't want to create a data retention policy where transcripts have to be retained to enable the Copilot. So we did the work so you could now get the Copilot to perform in a meeting without creating a transcript that lasts be on the meeting.

So there is a bunch of IT evaluation and adoption, but we have an adoption guided Microsoft Adoption, microsoft.com for IT, for those reasons. The other one that we hear from customers is, how do I know the ROI? So we built a Copilot dashboard. So they can actually go take a look at the impact of the Copilot. They can join that with their custom data. So you can bring your HR's custom data, you can bring your sales performance custom data and join that with the Copilot data and see what the ROI is. So we've gone and built that too.

And then for the end users, we are having to really teach them a new way to do computing. All of us have grown up keyboard, mouse, white gestures and so on. We are now using prompts. What is a good prompt as a sales person? What's a good prompt in this organization, in the manufacturing context? So we have that now in the Copilot Labs. And the end of the day, the Copilot is going to go through a bit of the adoption cycle of any enterprise because you got to work through risks, you got to work through compliance and procurement and make sure there is auto like. But the time to value for the Copilot, I feel, unlike anything that I've done in the enterprise space in the last 20 years, is much, much, much faster, think of the Microsoft Graph already exists, it's built to be enterprise-grade, and it shows up in the flow of work.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Was that like -- and you mentioned the Microsoft Graph a lot, and actually, I think on our side, we pay not enough attention to that. Was that before and you just got lucky or like how did it play out?

**A - Rajesh Jha** {BIO 20129196 <GO>}

Actually, it's super -- both, I would say. So, here's what happened. If you go back to the Office business, the Office business, when we were on premises, was a bunch of silos. So we didn't understand the user well. We understood the jobs. So with Exchange and Outlook, we understood the mail and calendar and job. With SharePoint and Office, we understood what document management was. With Link at that time, we understood meetings and tele thing. But they were all stuffed pipes.

When we moved to the cloud, we really got to be user-centered. That's what the Microsoft Graph is. We then -- and the reason we were stuffed pipes on-premises was no customer could deploy all our products at the same time. So every silo had to be standalone and be able to exist, even if the other pure silos were different versions. So in the cloud, now we had one data structure of customers. We were doing the job, keeping it up-to-date. So that's what allowed the Graph to get created. Then what COVID did was it accelerated the use of Microsoft 365, with a lot of intensity. The more you use Microsoft 365, the better your Graph is.

Now after COVID, what we have now is tons of customers deeply immersed in Microsoft 365. The Graph is healthy, it is permissioned. And now you get generative AI, you take the Graph, you ground the generative AI into the Graph context.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Yeah.

**A - Rajesh Jha** {BIO 20129196 <GO>}

And you say, bring it to the user experiences that people are using today, and that's what the Microsoft Copilot is. And that's the differentiation of the Microsoft Copilot.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Yeah. And I wanted to shift gear a little bit. Like, what does it mean on the way how you do compute? Like, first, fundamentally, but then also, how do you do it in Microsoft at the moment, because you have so much demand on your side, on the Copilot, et cetera. But then you have all the external demand on Azure. So, like, who's getting the GPU?

**A - Rajesh Jha** {BIO 20129196 <GO>}

Yeah. I mean, first of all, I mean, look, this GPT-4 was built on Azure, and we've been optimizing all layers of the stack for over an year now. That being said, to answer your question, you should think of it a couple of ways. Of course, the customer, when you come to Azure, you can use not just the Frontier models from OpenAI, but you can use models from Hugging Face from Meta. We now have model as a service that we've announced where you can use Mistral's premium models, Coherence model, J's model. So you can use lots of models.

But for the large model that we use in our first party applications in Azure OpenAI API, we've done the work to leverage one implementation and one stack. So it's not that-- so I can optimize the usage of the GPUs across Bing, and Windows, and Office and Dynamics in the Azure OpenAI because we all use the same APIs.

And if the third party is using our APIs, you can -- you come and bring your own model. You can use the plethora of model. But if you use the large model, we are getting the leverage of the fact that we are all using the same API, same endpoint. And then, of course, underneath the cover, we are more clearly with close partnership with NVIDIA, but of course AMD, and we have our own AI-first silicon that we are bringing to the picture.

So you should think about below the waterline on the systems-level work we've been optimizing for a long time for an year. We have silicon-level work. And then above the waterline, when you are hitting the large model, we get to optimize the traffic across all our first parties, and anybody using the Azure OpenAI API.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Okay. Excellent. And then, I have Investor Relations getting a little bit nervous now, but I tried to ask like a number -- not a numbers question, but like more a monetary question. If you think about, you're creating with AI a lot of value for the client. But if you look at your pricing, it's still like, if you look at the \$30 per user, it's still like a very classic model of like, here's a price, I think it was like with GitHub Copilot, it was like \$9. I tell you, I talk to customers and they're like, that's a steal because 20% productivity gains and I'm paying \$9 for a guy that costs me \$150 and I'm getting 20% more out of him, like, give it to me. How do you think about that dynamic going forward? Like, do you have to rethink or re-imagine that?

**A - Rajesh Jha** {BIO 20129196 <GO>}

Well, I mean, let me just say, early days, yes. The thing that we believe is, take a look at Office. Before Office existed, Word was a business application, Excel was a business application. And what we did was we said, now, we want to democratize



this for all the users. And so Microsoft Copilot, GitHub Copilot is about democratization of AI for all the users. So we, basically, said, "Hey, we want to take the core capabilities and what used to be productivity, now AI enhance productivity. I want to take that to all the users."

Just like we've done with Office. In addition to the per user, we have lots of other constructs that we have on top, whether it be E5 construct, whether it be Teams Premium construct. So right now, really the way we are thinking about AI is let's bring it to every information worker, every first line worker, and get to enhance the productivity and then I'm sure there will be lots of opportunities for us to add value and capture value.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Yeah. And since you're kind of working on the Experience side for Microsoft, how will I need to reimagine my UI going forward? Because the classic way, like a good generative AI system should be more interactive, like what's the work that you're doing here?

**A - Rajesh Jha** {BIO 20129196 <GO>}

Super good question. For 35 years, computing hasn't changed in terms of the way, you're on a phone, you swipe. On a PC, or you use a keyboard and mouse, and the operating system does a very basic job of abstracting away the hardware and allowing you to get to an application.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Yes.

**A - Rajesh Jha** {BIO 20129196 <GO>}

That's going to change. And so the way you'll see us integrate the Copilot, for example, in Windows, and we think that the lines between the shell, search, browser, Copilot is going to blur. Because you enable something that understands your intent at a higher level with natural language. It can take a lot of the grunge out for you. The application relationship to the operating system, to the copilot, is going to evolve rapidly, and you'll start to see us do the stuff by bringing the Copilot into Windows. It's going to be very exciting, but I do think it's a new paradigm for user experiences.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Yeah. And that kind of gets me to the other questions around devices. Like you guys were always very good of showing your partners what's possible. Like -- and actually, I remember when your Surface came out, I bought it, I loved it, and it was like, oh, this is cool, and then you kind of -- in a way, you almost forced innovation on your partner side. This, in a way -- this, in a way, like you need to kind of almost reimagine devices, et cetera. I mean, not that you're announcing something with me here now, but where are you in that thinking?

**A - Rajesh Jha** {BIO 20129196 <GO>}

I do think this natural use -- this natural user interface, and these are multimodal, by the way, this isn't just natural language, but speech and video and all of that stuff. I do think our existing hardware form factors are going to evolve to accommodate this. And there will be new form factors.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Yeah. Let's leave it like that.

**A - Rajesh Jha** {BIO 20129196 <GO>}

Let's leave it like that. Yeah.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

I tried. Yeah. Okay. The other thing is like, switching -- shifting gears a little bit back to kind of adoption -- client adoption that we see on the Copilot side, like what's your thinking in terms of the speed of adoption you can support with a given shortage of GPUs, like how do you see that playing out? Do you give like some to every client -- like a limited amount to every client? Is it like one client gets a lot, so you learn a lot more? How do you think that, that will play out in the field?

**A - Rajesh Jha** {BIO 20129196 <GO>}

Yeah. Open for business now with customers on Copilot. It's really like the earlier conversation I was having with, where the customers are going through their evaluation of the security policies, governance, procurement, and so on. I feel confident in our ability to optimize across all our first-party usage and third-party usage. And we have been at this for a while. We know how to go optimize capacity.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Okay. Yeah. So there wouldn't be like -- so if Barclays says, like we are -- I think we're a big Teams shop for you guys. If we say we want Copilot for everyone, it's not going to be like, no, you could, in theory.

**A - Rajesh Jha** {BIO 20129196 <GO>}

Yeah. I'm happy to sign you up right after this.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Yeah. It's on me, yeah.

**A - Rajesh Jha** {BIO 20129196 <GO>}

I want to talk to your IT team and tell them how we're enterprise-grade and who we are.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Yeah, yeah, yeah. I mean -- and the last question for me is like, how do I think about you guys working as partners? Because, one is like a very Microsoft-centric view, but on the other hand, like, it's not just you, there's like a whole broader world out there. Like, how are you seeing that evolving for you guys in terms of working with our people, bringing other people into the equation going forward?

**A - Rajesh Jha** {BIO 20129196 <GO>}

Super good question. I mean -- and again, back from the days that Bill used to run the company, I mean I remember being in the meetings with him, he would take incredible pride that for every dollar that Microsoft would create, we would create \$3 through the ecosystem. So, we are really a platform company, and not just at the Azure layer, but even at the M365 layer.

And so already with Teams, we have more than 2,000 ISVs and countless other line-of-business applications that extend Teams. And you will see the platform sensibility, I talked about it in Build and in Ignite and in this coming year Build, we'll talk about how developers, both line-of-business developers inside of organizations as well as ISVs can augment the Copilot with their custom logic and their inner activity, because now all -- productivity is still human in all its various forms. We're not going to build all the most interesting applications.

And so, we want the Copilot -- Microsoft 365 Copilot is a platform and that is, we are working. And I don't know if you had a chance to take a look, Raimo, at our Ignite probably three weeks ago, we showed lots and lots of customers and partners actually extending the Microsoft Copilot.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Yes. I think -- yes, that's -- I mean, the conference was really exciting. Like, it's really nice to see all the innovation coming out of there. So, I guess, hey, it's 58 seconds and I am German, so I have to be on time.

**A - Rajesh Jha** {BIO 20129196 <GO>}

Nice job.

**Q - Raimo Lenschow** {BIO 4664646 <GO>}

Thanks for joining. Thank you. I really enjoyed our conversation.

**A - Rajesh Jha** {BIO 20129196 <GO>}

Thank you, Raimo. Thank you very much. Thank you, everyone.

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