

05262021 Build KEY Rajesh Jha

**Build 2021**  
**Rajesh Jha**

**NICOLE HERSKOWITZ:** Hi. My name is Nicole Herskowitz, and I'm the business lead for Microsoft Teams. And today, I'm joined by Rajesh Jha and we're going to talk about Microsoft 365 technologies, how work is evolving and the impact that's having on application development.

Hi, Rajesh. How are you doing today?

**RAJESH JHA:** Thank you for having me, Nicole.

**NICOLE HERSKOWITZ:** Well, so much has happened over the last 18 months. It's fundamentally changed the way we work, the way we live, the way we learn. What have you observed? What are your kind of key learnings?

**RAJESH JHA:** Yeah, you know, like we all know, it's been just an amazingly exceptional 12 months. The first, I think as we all know, this is the year where everything moved to the cloud. People think work moved remote, but actually where it moved to was the cloud.

And we saw that firsthand. As you know, we now have over 145 million daily active users of Teams. So we are proud of the fact that we were able to step up and help our customers and our users to really use Teams to do collaboration, stay connected and move forward with Office and Teams.

But you know, Nicole, I think, 2021 is going to be different from both 2020 and 2019. People, employees, I mean, they want flexibility. At the same time, we've got to learn a new way of work, hybrid work. So it's, you know, we have a lot ahead of us.

**NICOLE HERSKOWITZ:** There really are these new realities of hybrid work.

**RAJESH JHA:** Absolutely.

**NICOLE HERSKOWITZ:** So what are you seeing? I mean how is Microsoft, how are our customers, how are our partners, like, building applications? Are they doing anything different that you're seeing?

**RAJESH JHA:** Yeah, you know, I mean, we've talked about that a bunch and we think of it as basically three different eras of application development, if I may. The first era, of course, was GUI, the democratization of computing, moving to graphical user interfaces, Windows, the Mac, Win32 apps.

And then I would say the next big era that changed the way applications got developed was with web and mobile, and that was about being able to work anywhere. The focus was still quite a bit on individual productivity.

And now during the pandemic, what's really come to the fore is team productivity, enabling a group of people to work together. And so, we think this is the era of collaborative apps, where collaboration is at the center, whether it be synchronous in the context of a video meeting, whether it be asynchronous with documents and chat.

And so with Teams, we feel we've got this user interface, the shell for collaborative apps that really is about group productivity, sync and async. So that's how we think about it, really the application developers, both inside of Microsoft and to the ISVs we actually work very closely with, we see the same thing. Collaboration is going to have to be the core of new applications.

**NICOLE HERSKOWITZ:** Interesting, this new concept, collaborative apps, this new app model, and it sounds like Teams plays this really critical role. Can you tell me a little bit more about what is a collaborative app and what is the benefit, like, why should developers care?

**RAJESH JHA:** Yeah, when we started Teams about a couple of years ago, or maybe three years ago now, we did want to focus on putting teams first. Hence the name. And it was about group productivity. But we knew that collaboration was sync and async, sometimes in the context of a document, sometimes a shared dashboard. Sometimes people needed to come together and so collaborate.

At the heart, what is it about? It's not about a single application. It's about the way of work. And Teams is a new way of work. It brings all the app tools. Because if it's platform, it brings meetings modality, chat modality, documents, third party applications, custom built apps all together.

But within collaborative apps are at its core, it's about collaboration, but it doesn't have to just be in Teams. You know, with Office itself, and yesterday, Jeff Teper showed how we are able to bring interactive components, powered by Fluid, right inside of Teams with the same components, can be in other canvases such as Outlook or Office.

So we think collaborative apps is about people, it's about groups, about group productivity. Teams, of course, is custom built for that, but it extends more broadly to the other applications as well.

**NICOLE HERSKOWITZ:** It really sounds like the power of Teams, plus the broader Office applications, really provides this user experience or this layer for exposing these collaborative apps.

**RAJESH JHA:** That's exactly right.

**NICOLE HERSKOWITZ:** Now, there must be more. Like, is the Microsoft Cloud playing a bigger role here? Like, what really are the various technologies that developers can tap into to build these collaborative apps?

**RAJESH JHA:** You just take about any classic application developers stack. We've talked about the user interface right now, the shell, Teams being the shell, and interaction coming in the context of the work that people are doing in the flow. Think of that as the UI layer or the experience layer, whether it be in Teams, whether it be in Office or in some other canvas.

Then the application logic. With Teams, you can plug in your own cloud logic using any PaaS service, whether it's Azure Platform Services or any other cloud platform services. Or you could also reuse the rich platform, the low-code platform that we have with Power Platform, so you can write your logic using any of that method here.

Then at the data tier, we think are the two really important concepts. One is the Microsoft Graph. And the Microsoft Graph is really it's the customer's most important database. It's where people, their relationships, the meetings, the documents, what's shared with whom, what's trending in an organization, that's all captured in the Microsoft Graph.

Now around Microsoft Graph, we've augmented that with some rich services. Yesterday, we talked about the Azure Communication Service that allows the interop of Microsoft Graph powered Teams with any other custom built collaborative app that people go build. Fluid Framework is another service that sits on top of the Microsoft Graph, Search connectors. There's a bunch of stuff in Microsoft Graph.

And then the other database that's really important also for our customer is the Microsoft Dataverse. This is where structured business process schemas live together.

You've got at the highest here, you've got Microsoft Teams and Office, with collaboration at the center. Then you have your business logic, whether it be in Power platform or any Azure PaaS service. And then you've got your databases that you could augment. You could bring your own schemas into these databases, or you could connect your middle tiers to your own databases.

And then, of course, as we also talked about how we build professional developer tools, VS Code and VS and GitHub, are we invested to make these great development environments, to build these kinds of collaborative apps.

**NICOLE HERSKOWITZ:** Wow, that sounds fantastic. And I assume at the core there is also at the bottom a foundational layer with identity, security and all those things.

**RAJESH JHA:** Yes, of course. Yeah, you're right. I mean, in the end of day, customers expect enterprise grade security and compliance and it starts with identity and tying into that all the security and the compliance policies.

And so, I'm very excited about the kind of applications that we've seen our customers starting to build, ISVs starting to build, and how we ourselves are starting to build new applications and people still in Office.

**NICOLE HERSKOWITZ:** So that makes me, you know, I was wondering, is this collaborative apps, like, saying just a concept, are there any real apps? Like, is Microsoft betting into this concept of collaborative apps? Do you have any examples to share?

**RAJESH JHA:** Yeah, let's start with some of the work that we are excited to be doing with ServiceNow. We're doing something similar with Adobe and Workday and many other ISVs. But ServiceNow in Microsoft Teams, you know, what we are doing there is, imagine that you have a service incident, and when a service incident gets created, a connection back to the Microsoft Graph to find the relevant people to come in and work in the context of that incident. And then collaboration again at the core to resolve the service incident.

And so with the APIs, you're able to immediately move into real time, and with Teams meetings extensibility, all the right artifacts of the ServiceNow ticket shows up in the context of the meeting.

The chat captures all the async collaboration, so post-meeting if somebody else were to hop on to that incident, the full context is available, whether you're inside of Teams or whether you're inside of ServiceNow.

So this is what I meant by collaboration with the center. It is less about where the user is. It's about the user being followed with all the relevant artifacts and being connected to their teamwork.

Another interesting one is the Ernst & Young. They have built a bunch of these collaborative applications in Microsoft Teams. They've used Power Platform for their logic. They're using these applications both for internal use, as well as customer facing for the entire lifecycle of the engagement.

And then at Microsoft, we are starting to build our new applications with collaboration at the core. So like, for example, take Microsoft Viva. It's about employee wellness and productivity and knowledge and skills and learning. And we are building this using the Microsoft Team's extensibility, the Graph extensibility, the ability to take all this content, put that into the Microsoft Graph so it shows up in the right place in Microsoft Teams. Super exciting.

**NICOLE HERSKOWITZ:** That's really amazing, exciting to see our ecosystem, whether it's ISVs, line of business apps being created that are these collaborative apps, and even Microsoft.

**RAJESH JHA:** That's right.

**NICOLE HERSKOWITZ:** Thanks for sharing those examples.

And I'm still just thinking, like, why should developers care? Like, what's in it for them? Why Microsoft's kind of stack should they bet on for building these collaborative apps? What's the value proposition for developers?

**RAJESH JHA:** I'm excited about what we can offer developers here, first and foremost, an audience, 145 million engaged daily users in Teams alone. And if you build these collaborative apps, you get to be where the users are.

The second is, when you write these collaborative apps, when you build to Microsoft Teams, you can write once and run on any platform, whether it be on the desktop, on Windows or Mac, whether it be on the web or even on mobile, because Teams, the platform of how it brings different applications and modality is cross platform.

And then finally and ultimately, the opportunity here is the economic opportunity to serve customers in this new evolving world. 2021 is the start of a new way of work, hybrid work, and the only way hybrid work is going to really play out and drive productivity is by putting collaboration at the center and enabling teams to drive the right business outcomes.

**NICOLE HERSKOWITZ:** Rajesh, thank you so much for your time today and thank you, everyone who joined us during this talk, and enjoy the rest of Build.

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