Satya Nadella: The Future of Work with AI Thursday, March 16, 2023

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SATYA NADELLA: Welcome, and thank you for joining us. We are here today to talk about something that's very fundamental to the human experience: The way we work. And more specifically, the way we work with computers.

In fact, we have been on this continuous journey towards human-computer symbiosis for several decades. Starting with Vannevar Bush's vision that he outlined in his seminal 1945 essay *As We May Think*, Bush envisioned a futuristic device called "memex" that would collect knowledge, make it easy for humans to retrieve that knowledge with "exceeding speed and flexibility". It's fascinating to see that someone postulated, even back then, so vividly what an intuitive relationship between humans and computing could be.

Since then, there have been several moments that have brought us closer to that vision. In 1968, Douglas Engelbart's "mother of all demos" showed the remarkable potential of graphical user interface, including things like multiple windows, pointing and clicking with a mouse, word processing that was full screen, hypertext, video conferencing, to just name a few.

Later, the team at Xerox PARC made computing personal and practical with the Alto that ushered in the personal computing era. Then of course, came the web, the browser, and then the iPhone. Each of these seminal moments has brought us one step closer to a more symbiotic relationship between humans and computing.

Today, we are at the start of a new era of computing and another step on this journey. Over the past few months, powerful new foundation models, together with accessible natural language interface, has ushered in an exciting new phase of AI.

This next generation of AI is fundamentally different from the AI, in fact, that we've grown accustomed to around us. For years, AI has, in fact, powered online experiences, ranging from search to social media, working behind the scenes to serve up recommendations for us or about us: From what we watch, to what websites we visit, to what we buy. That version of AI has become so second nature in our digital lives that we often don't even realize or recognize it. You could say we've been using AI on autopilot.

And now, this next generation of AI, we're moving from autopilot to copilot. We're already starting to see what these new Copilots can unlock – for software developers; for business processes like sales, marketing, and customer service; and for millions of people synthesizing information in powerful new ways, through multi-turn, conversational search.

As we build this next generation of AI, we made a conscious design choice to put human agency both at a premium and at the center of the product. For the first time, we have the access to AI that is as empowering as it is powerful.

Of course, with this empowerment comes greater human responsibility. Just as an individual can be aided by AI, AI can be influenced – positively or negatively – by the person using it. As we move into this new era, all of us who build AI, deploy AI, use AI, have a collective obligation to do so responsibly.

Fundamentally, AI must evolve, in alignment with social, cultural, and legal norms in a democratic society. And as we make progress, both vigorous debate and scrutiny will both continue to be super important.

As we look ahead, we believe this next generation of AI will unlock a new wave of productivity growth, with powerful Copilots designed to remove the drudgery from our daily tasks and jobs, freeing us to rediscover the joy of creation.

Up to now, we have envisioned a future of computing as an extension of human intellect and human action. Today is the start of the next step in this journey, with powerful foundation models and capable copilots accessible via the most universal interface: natural language. This will radically transform how computers help us think, plan, and act.

Just as we can't imagine computing today without a keyboard, mouse, or multitouch, going forward, we won't be able to imagine computing without copilots and natural language prompts that intuitively help us with continuation, summarization, chain of thought reasoning, reviewing, modifying, and acting.

That's what we are excited to show you today. And with that, I'll hand it off to Jared to share our Copilot for work.

JARED SPATARO: Thank you.

As Satya said, we're at the start of a new era of computing. Before we look ahead, I want to spend a moment reflecting on work and what it means to all of us. From an early age, we're asked, "What do you want to be when you grow up?" Our answer is a reflection of what excites us and the value that we seek to bring to the world.

Even at a young age, we know work is meant to be more than just a job. Nurses are called to care for people, scientists to make a new discovery, artists to create something brand new. At its best, work not only feeds our families, it feeds our souls.

But today, the reality often falls short of that promise. We spend too much time consumed by the drudgery of work – on tasks that zap our time, creativity, and energy. We become separated from the soul of our work. At times, the very tools that should make us productive seem to get in the way. We are meant for so much more. To reconnect to the soul of our work, we don't just need a better way of doing the same things; we need a whole new way of working.

And so today, we're embarking on a journey to help every person around the world rediscover the soul of work. Introducing Microsoft 365 Copilot, your Copilot for work. Copilot combines the power of large language models with your data in the Microsoft Graph and the Microsoft 365 apps to turn your words into the most powerful productivity tool on the planet.

Copilot is integrated into Microsoft 365 in two ways. First, it works alongside you, embedded in the apps millions of people use every day: Word, Excel, PowerPoint, Outlook, Teams, and more. Second, we're introducing an entirely new experience, Business Chat – that works across all of your data and apps, your documents, emails, calendar, chats, meetings, and contacts – to do things that you've never been able to do before.

And Copilot is built on Microsoft's comprehensive approach to security, compliance, privacy, and responsible AI, so you know it's enterprise ready.

Using just your own words, you can put Copilot to work, gathering information in real time from across your data and apps to unleash creativity, unlock productivity, and uplevel skills. Now, you can be more creative in Word, more analytical in Excel, more expressive in PowerPoint, and more productive in Outlook, and even more collaborative in Teams.

Let's take a look.

(Vision Video Segment.)

JARED SPATARO: That's just a glimpse of what Copilot can do. For the next 20 minutes, we're going to show you how Copilot is a whole new way of working. You'll see a new interaction model between people and computers. Sometimes, Copilot will get it right. Other times, it will be usefully wrong, giving you an idea that's not perfect, but still gives you a head start.

But seeing is believing. Let's go to Sumit to show you how Copilot will unleash creativity and take the drudgery out of work for everyone.

SUMIT CHAUHAN: Thank you, Jared.

For more than two decades, I've had the privilege to work on our core productivity apps: Word, Excel, PowerPoint and Outlook. In fact, my first line of code at the company was in Excel. And I'm so excited to show you how Microsoft 365 Copilot is coming to life in the products millions of people use and rely on every day.

What if the tools could learn how you work, rather than the other way around? Copilot unlocks all the richness of these apps through natural language.

Let's start with a real life example, like a high school graduation. My daughter recently graduated from high school, so this is really top of mind for me. Let's say I want to throw her an amazing graduation party. To start, I need to send an invitation to family and friends.

So, let's put Copilot to work. With a few simple prompts, Copilot understands everything it needs to know to generate a great first draft of the invitation. It's even able to pull in details about the venue from an email I received last week.

Now, I have a draft invite that includes the basic information. I can edit this, I can ask my guests to share funny stories, and give them a link where they can upload photos.

Now, I think this first draft is a little wordy, so let's make it more concise.

With that done, this is my opportunity to create a loving, and let's be honest, a little embarrassing slideshow to celebrate the occasion.

I kick things off with Copilot providing a little information to get started. I add some details about my daughter. I can also change the style, so it creates something fun and festive. And Copilot goes to work, finding the right words and searching my OneDrive for the best photos.

In seconds, Copilot generates a beautiful presentation, with memories, accomplishments, and advice for the future. I can add my own personal touches to it and Copilot will be at my side.

Now, let's look at this slide. I'm really happy with the design, but Copilot didn't quite have what it needed, so I'm going to rework the text. I can then ask Copilot to make it more concise and add images. OK, now that looks great.

On this next slide, there's a part that Copilot didn't quite get right, so I'll rewrite it, so that it sounds a little bit more like me. I also want to use a different image here, so I'll just tell Copilot what I want, and Copilot will find it. I can add transitions between the slides, which I always forget, so that when I play the presentation, it looks really polished. OK, I like how that turned out.

Now, I don't know about you, but PowerPoint animations have never been my strong suit. I love that I can do this on my own. The average person uses less than 10% of what PowerPoint can do. Copilot unlocks the other 90%.

Now, on to party planning. I'll start with a few details about the event and once again, Copilot goes to work with a simple prompt. It creates pages for everything I need to think about to plan this party.

Let's say I want to put this plan in a simple to do list. Boom, done.

I'm thinking about what I want to say to my daughter on her big day. Copilot can get me started on a speech. I'm not sure how long I want it to be, but let's start with three minutes. I know I want to tell her how proud I am, acknowledge how hard she's worked, how inspired I am by her volunteer efforts, and what a wonderful leader she is. Here's a great first draft.

Now, here's an important thing about Copilot. At this point, I decide whether to keep this draft, modify it, or discard it completely. This is a big change in how people interact with software.

OK, so this looks pretty good, but let's add some of the funny stories I collected from friends and family. Let's give it a minute. I can make these stories more playful and add more, but I actually want to make them a bit shorter. Let's get to the punchline, right? There. Much better.

Now, this looks pretty good, but I really want to add my own personal touch, so I am going to edit it. You can see that throughout the writing process, I'm always in control.

Now, I want to quickly format it to make sure I nail the delivery, and Copilot automatically adjusts the spacing, making it easier for me to read, and adds speaker cues to help me improve my delivery.

Let's shift gears into business mode. You saw how Copilot saves me time as a working mom, but the real power of Copilot is in how it unleashes creativity at work. Imagine you're leading a team at a global manufacturing company, and you want to create a rock-solid customer proposal and you don't have time for writer's block. Let's see how Copilot can use your customer notes in OneNote, as well as another internal document. Copilot quickly creates a first draft.

Now, you probably want this to look like your previous proposals. Copilot can give you a draft in the format you typically use. It inserts product images and pulls in relevant visuals from other files. You can even include a short summary at the top of the document. And Copilot can make suggestions to strengthen the proposal, like adding an FAQ, which it will generate for you.

Now, remember, you're not going to send this off to a customer without a thorough review, but Copilot still saved you tons of time in the process.

It's time to get ready for your customer pitch meeting. Now, everyone has had a moment when they wish they could turn their proposal into a customer-ready presentation, without having to start from scratch.

Well, guess what? Now, you can. Copilot can turn your Word document into a PowerPoint presentation. Now, you have a professional looking presentation that you can hone and polish. This is truly amazing. Using just your words, Copilot translates Word into PowerPoint and PowerPoint into Word.

Now, let's add a slide and give Copilot some quick instructions. There it goes, ready for you to review.

Now, this slide is a little bit wordy. Let's ask Copilot to make it more visual. And check this out. Copilot can even animate the slide. It gives it a professional design treatment in a single click.

But it doesn't stop there. Copilot can even generate speaker notes. I am serious – speaker notes. It's not only a timesaver; it's helping me be a better presenter and close this deal.

Let's jump into Copilot in Excel. Copilot puts all the rich capabilities of Excel at your fingertips. Say you need to analyze this quarter's sales results. You start by asking Copilot to analyze the data and give you three key trends. Within seconds, you've got what you need.

But you want to drill in. You ask Copilot a follow-up question about one of the trends. Copilot creates a new sheet. This new sheet creates a sandbox to play in, to better understand what's going on, without modifying the data in the original sheet. This is a great example of how Copilot uplevels your skills, showing you how to break down the problem step by step. You ask Copilot to visualize what contributed to the decline in sales growth this period. Copilot adds a little color to make the problem jump off the page.

Now, you want to dig deeper and ask a follow-up question. Copilot not only answers your question; it creates a simple model of the scenario. And it even asks you if you want to learn more about what it did, with a step-by-step breakdown.

Finally, you can ask it to create a graph of your projected model. Copilot turned a sea of data into clear insights and actions.

Let me show you how Copilot can help you tackle your email. We all struggle with the pull of the inbox. Sometimes, it keeps us from focusing on our most important work. But at the same time, you do have important emails to respond to.

Copilot separates the signal from the noise and gives you hours of time back. Copilot can help you triage your inbox, highlighting the most important emails to prioritize.

And Copilot also helps you on the go in Outlook Mobile. It can summarize long email threads. You can draft a reply using data from an Excel file and Copilot will generate a reply for you. You can edit it. You can make it more concise. You can even change the writing style or add more context. Now, all that's left to do is review the proposed response and hit 'Send'. Copilot is a productivity game changer.

JARED SPATARO: Let me take a moment to explain what you just saw. To build Copilot, we didn't just connect ChatGPT to Microsoft 365. Microsoft 365 Copilot is powered by what we call the Copilot System, a sophisticated processing and orchestration engine. It harnesses the power of three foundational technologies: the Microsoft 365 apps – that's Word, Excel, PowerPoint, Outlook, Teams and more; the Microsoft Graph – that's all your content and context, your emails, files, meetings, chats, and calendar; and a large language model, or LLM, a creative engine capable of parsing and producing human-readable text, all accessible through natural language.

It starts with a prompt from you in an app. Copilot preprocesses the prompt through an approach called grounding. Put simply, grounding improves the quality of the prompt, so you get answers that are relevant and actionable.

One of the most important parts of grounding is making a call to the Microsoft Graph to retrieve your business content and context. Copilot combines this user data from the Graph with other inputs to improve the prompt. It then sends that modified prompt to the LLM.

You may be familiar with what an LLM can do based on your experience with ChatGPT, or Bing Chat. Copilot takes the response from the LLM and post-processes it. This post-processing includes additional grounding calls to the Graph, Responsible AI checks, security, compliance and privacy reviews, and command generation. Finally, Copilot sends a response to the user and commands back to the apps.

Copilot iteratively processes and orchestrates these sophisticated services to produce a result that feels like magic. It's a system that combines the power of large language models with your data and apps.

Think about it. That's tens of thousands of commands in the Microsoft 365 apps, trillions of signals in the Microsoft Graph, and billions of parameters in the LLM. For the first time in human history, you can command all of this power using just your own words. It will transform work as we know it.

We've shown you how the Copilot System uses AI to supercharge personal productivity. Now, let's see what happens when you bring Copilot to all your business processes. To do that, let me hand it over to Charles.

CHARLES LAMANNA: Thanks, Jared.

Imagine you lead a sales team. Your No. 1 job is to build customer relationships and close deals, but you're distracted by bookkeeping, note-taking and other drudgery. Copilot lightens the load by improving collaboration and automating tasks in your sales workflow. Copilot understands what it means to be a seller, and it can even help if life gets in the way. Let's check it out.

It looks like you have a dentist appointment that conflicts with your weekly business review. What if you could do both? With Copilot, you can follow a meeting and catch up to see what you missed, even if you can't attend. You'll get a notification in Teams when the recap is ready, and you can see the content that was shared, detailed notes, and any action items.

You see there was some discussion about your customer. You can ask Copilot specific questions to get more context and it provides a detailed response. You can ask questions like why a certain decision was made or what other options were considered. And it provides citations with a snapshot of the transcript. It's a huge time saver.

So, that was pretty cool, but the real magic of Copilot happens during a live meeting. Here, you're in a meeting with your team. You can ask Copilot to summarize what's happened so far. You can see who said what, what points were made. Copilot is really capturing the spirit of the discussion.

As the meeting progresses, you can check on where people stand. You can even ask Copilot what questions are unresolved. It is just incredible to see this happen in real time.

Teams has changed collaboration forever, but it can also be hard to keep up with all those chats. Copilot can help you stay on top of it all by summarizing Teams chats, so you know what you missed.

Here you were asked for an update on the customer and Copilot can help there, too. You can simply ask Copilot to create a summary of all the customer conversations. It produces an overview with citations, so that you can verify, refine, and post.

You just received an invitation to brainstorm in a Loop workspace. You may not have heard of Loop. Loop is a multiplayer collaboration canvas with Copilot as an AI peer to your team, along with everyone else. Let's try it out.

Here the team is collaborating in real time on product offers and pricing, adding notes and action items to keep everyone on track and up to date.

You can ask Copilot to pull data from Excel on the top-selling products by category. And within seconds, it's processing the information.

Another member of your team jumps in and adds a column. And anyone can prompt Copilot to build on each other's ideas. Everything is captured in prompt history.

Now, you can close out the action item and get ready to meet with the customer. And for that, you turn to Viva Sales. Viva Sales brings all your key sales processes and data to Microsoft 365 and Copilot. It lets you focus on connecting with your customer and closing the deal. And it works with your existing CRM, like Microsoft Dynamics 365 or Salesforce.

As the sales meeting starts, you quickly use Copilot in Viva Sales to scan CRM data to get the latest, including an account overview, recent engagements with the customer, and their key areas of focus – all the information you need to have a productive conversation. When your customer asks how your product compares to one of your competitors, Copilot gives you a suggestion from your sales materials.

As the meeting ends, Copilot recaps the call to clearly outline next steps. These meeting details are saved right back to your CRM.

Afterwards, you are ready to follow up on the meeting and send a proposal. With the simple click of a button, Copilot gets you started. You can make any adjustments and include additional details before sending. And when the customer accepts your offer, Copilot and Viva Sales automatically suggests an update to CRM to close the opportunity as one.

At work, we all have unique and sometimes tedious tasks we wish could be automated, and at Microsoft, we have incredible workflow and automation tools, but they are not always accessible to everyone.

Copilot unlocks all of that. Everyone, not just developers, can now automate the repetitive work with Power Automate. You've made the pitch. You've won the business. Now, you need to deliver and be there for your customer. You want to be notified whenever there's an urgent support issue for your accounts, and you want to create a collaborative space for the account team to solve the issue together. With Copilot in Power Automate, you can automate both these things in minutes using your own words.

As you review the suggested flow, it's looking good. With a little more direction, Copilot can write a summary of the problem, post that summary in the appropriate Teams channel, and tag the right colleagues to resolve the issue. This now gets seamlessly added to my workflow, getting it just the way I want it.

Here, you can see it in action, with your posts in a Teams channel and the full team ready to jump in and resolve a delayed delivery for your customer. This is an amazing time saver for every customer from now on, and you built it in just a few minutes.

Through Copilot, Power Automate is now an essential part of work for everyone, just like Excel, PowerPoint, and Outlook. You can see how Copilot is a game changer for business processes, not just for sellers, but every other line of business – marketing, finance, customer service and more.

Back to you, Jared.

JARED SPATARO: So far, you've seen how the Copilot System harnesses the power of large language models, the Microsoft Graph, and your apps to completely reimagine knowledge work. You've seen how Copilot works for you when it's embedded in your apps: Word, Excel, PowerPoint, Outlook, Teams, and more. Now, I want to show you an entirely new standalone experience: Business Chat.

You can access Business Chat from Microsoft365.com, Bing, or right in Teams. Business Chat works across all your emails, files, meetings, chats, documents, calendar, and more, to turn all your data into knowledge. It's your knowledge navigator.

First up, let's see how it can catch you up before a client meeting.

Akosua, show us how.

AKOSUA BOADI-AGYEMANG: Let's say you're preparing for a client meeting. You start by asking yourself, "Where are my notes and what did we last discuss? What decisions were made? What are the open action items? Did the team deliver?" Tracking down all these details and files can feel like a full-time job. Copilot does the sleuthing for you.

So you start by asking Copilot to summarize all your recent customer interactions, meetings, content you've shared, any issues, and deliverables. Copilot works across your calendar, emails, chats, documents, and meetings to find all the pertinent information.

Now you've got a concise summary, complete with citations and sources. You can hover over names, quotes, and verify information, or even find out more.

Now, you know product lead times are likely to come up. So you ask Copilot to prepare all those details for you. Now it's pulling together information from various sources. And within seconds, Copilot synthesizes everything you need, so you can feel prepared.

Now, let's imagine you're working on your business strategy. You know you need to pull together a bunch of information and it could take you hours to find it all. Copilot brings together everything you need: the numbers, the emails with the commentary about the numbers, the additional context from Teams chats, and reasons across all your structured and unstructured data to create connections and insights in a whole new way.

First, you ask Copilot to pull up quarterly projections and identify related risks. Copilot gives you key data points and flags potential issues.

Now, you ask Copilot to generate a SWOT analysis based on all this information. Copilot will categorize the strengths, weaknesses, opportunities, threats in a single view so you can see what to prioritize.

You notice one of the items is incorrect, so you jump right in and change it. Ask Copilot to turn this SWOT analysis into a new slide for your upcoming executive review. Now, it's creating and adding that slide. It gives you a preview, so you can have confidence that the change was made and you can refine it in PowerPoint.

You've had a busy day and need to update your team on some big developments. Copilot can ensure critical information keeps flowing. You start by requesting a summary of two meetings from earlier on in the day. Copilot combs through your meeting transcripts and generates a draft that updates the team on critical decisions to keep everyone moving forward.

Copilot provides citations to show you where the information came from. You can hover over them to get even more detail.

You spot some key information that Copilot missed. You think it's important to share that with the team, so you ask Copilot to go ahead and add it. It scans through the meeting transcripts and regenerates the response to include all the extra detail.

With your meeting recap ready, it's time to share. You jump to the Teams channel where you can refine and post. Now that's business at the speed of AI.

Back to you, Jared.

JARED SPATARO: Thanks, Akosua.

This new era of computing will usher in a whole new way of working, but we feel a profound sense of responsibility to get it right, working closely with our customers. Let me hand it over to Jaime and Jon for more.

JAIME TEEVAN: Thanks, Jared.

So, Jon, let's talk a little about the art and science underlying Copilot.

JON FRIEDMAN: We crafted every detail. We obsessed over every interaction and designed Copilot as a connected system. And we used it while we were creating it.

JAIME TEEVAN: I remember it had some really great ideas about how AI could make meetings better. But while large language models are brilliantly creative, they're also fallible. That's why grounding the LLM in data is so important.

JON FRIEDMAN: And we not only built grounding into the system, we also built verification into the experience. We added citations and introduced forms of friction to encourage back-and-forth collaboration, and included feedback mechanisms so people could let us know when we get it wrong.

Our goal is to give people agency. To help people get started, Copilot suggests good prompts. If you don't like what it does, there's the 'Try again' button. You always have the option to use, adjust, discard, or undo. You saw that in the demos today.

JAIME TEEVAN: I've studied AI for decades, and I feel this huge sense of responsibility with this powerful new tool. We have a responsibility to get it into people's hands, and to do so in the right way.

Security, compliance, Responsible AI, they're not afterthoughts. They're a foundational part of the Copilot System. It's one of the reasons that we're starting with a small number of customers. And when the system gets things wrong or has biases or is misused, we have mitigations in place.

Every Copilot feature has passed privacy checks. It's been red-teamed by experts and is monitored in real time. And we're tackling the long-term implications and novel risks like jailbreaks. We're going to make mistakes, but when we do, we'll address them quickly.

JON FRIEDMAN: Great design is born from iteration. It's a pursuit of always striving to make better. As a designer, Copilot is the most dynamic material I have ever worked with. It has the power to adapt to you and uplevel your work.

JAIME TEEVAN: And as a scientist, I love how it's expanding our understanding of what people can do. And we can't wait to see what you do with it.

JARED SPATARO: Everyone deserves to find meaning and joy in their work. Today, you've seen how Microsoft 365 Copilot can reconnect us to the soul of our work. Copilot lets you

harness the power of large language models with your data in the Microsoft Graph and the richness of the Microsoft 365 apps to unleash creativity, unlock productivity, and uplevel skills.

And we're just getting started. We're deeply committed to listening, learning, and adapting with speed to help create a brighter future of work for everyone with AI.

Thank you.

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