

## Microsoft Ignite 2021 Satya Nadella Keynote Transcript

**SATYA NADELLA:** Good morning, and welcome to Ignite. It's great to be with you all today. Looking back there is no question that the past year and a half has been a catalyst for real structural change across every industry from adoption of telehealth and healthcare, digital wallets in financial services, curbside pickup, contactless shopping in retail and much beyond.

The case for digital transformation has never been more urgent. Digital technology is a powerful deflationary force in an inflationary economy. Businesses small and large can improve their productivity as well as the affordability of their products and services by building tech intensity. But you don't come to these events just to hear about what happened or what is happening. You are asking what will happen in the next three, to five, to ten years, and what you need to do to prepare your organization.

How you sell, how you support customers, how you market, how you manufacture, how you connect with your employees, it's all undergoing a sea change. Fundamentally, we're moving from a mobile and cloud era to an era of ubiquitous computing and ambient intelligence, an era which will experience more digitization over the next 10 years than the last 40.

This conference is your opportunity to get a sense of what will happen over the next decade so that you can help your organization navigate this change and emerge stronger. This is both a tremendous opportunity and an enormous responsibility.

So, let's talk about the trends that are transforming every company. It starts with a new world of hybrid work. We are seeing change in how we work, when we work and where our work gets done. More and more people are also asking that very fundamental question, why we work. This leads to two challenges that what we call the hybrid paradox, and the great reshuffle. Seventy percent of the employees want more flexible remote work options, and about the same number also say that they want more in-person connection. Fifty-eight percent of the people who expect to spend most and the least time in the office tell us they plan to do so for the very same reason, more focused work.

More people are changing jobs than ever before. When it comes to hybrid work, there is no standard and flexibility will be key. Productivity and flexibility though are not mutually exclusive. Every organization needs a new digital fabric for collaboration that brings together both digital and physical spaces. They need to strengthen connections between employees and their company's mission, between employees and their managers and empower employees to ensure their own wellbeing and exercise their flexibility without sacrificing any career advancement.

For some time, we've been talking about hybrid work in the abstract, but now it's right at our doorstep, and the world won't be able to scale to this transition without all of you.

The second trend is building a hyper-connected business. A sweeping business process transformation is underway. Over the past year and a half, we talked about how we had to pivot sales, customer service, manufacturing to be remote ready. Going forward, this will just be built in by design.

When it comes to your suppliers, having supply chain resilience will be key. When it comes to your customers, having omnichannel reach and service will be paramount importance. We need that next level of real-time hyperconnectivity between businesses and between consumers and businesses, where data and intelligence flow freely to tackle the challenges of supply and demand.

In fact, by 2025, it's projected that sales and marketing processes will involve more proactive engagements than reactive ones, all the way from customer marketing to supply chain. Going forward, every business process will be collaborative, powered by data and AI, and will bridge the digital and physical worlds.

The third trend is that every business is becoming a digital business, and building your own digital capability will be of paramount importance. This requires that you have the best multi-cloud multi-edge infrastructure. And it requires that you have the best tooling to support fusion teams across the organization while working together to build new solutions.

Computing is becoming distributed and embedded in the real world. And the application models are transforming rapidly to run on the edge with new ambient intelligent capabilities. The percentage of industrial control systems that will include analytics and AI inference capabilities at the edge will increase by six-fold in the next four years. And students and teachers, data analysts and scientists have all seen rapid growth on GitHub.

Going forward, every organization will need a more distributed, more intelligent, more autonomous computing fabric, one that they can use to rapidly build, manage and deploy applications anywhere. And they will need new tools that bring together both pro developers and domain experts.

And the final trend is the need to protect everything with end-to-end security. Cybersecurity is the biggest threat to digital transformation today and it's the No. 1 risk facing every business going forward. If you think about the amount of change during the pandemic that our IT and cyber operations had to go through as every business process became remote, this complexity will only increase.

Cybercrime is also costing economies more than \$6 trillion each year. And that's expected to increase to \$10 trillion by 2025. Every organization needs comprehensive tools across identity, security, compliance, privacy, as well as management. And they need a cross-platform multi-cloud zero-trust architecture.

The Microsoft Cloud was built for this next era, and it's what you're going to hear about over the next few days. The Microsoft Cloud is the only cloud to help you navigate these

converging secular trends. The Microsoft Cloud is the most trusted and comprehensive cloud. The Microsoft Cloud powers every organization's digital capability, while ensuring their independence and sovereignty over it. The Microsoft Cloud is built on trust and security.

The Microsoft Cloud is sustainable, and when we talk about sustainability, it's not just about our carbon footprint of our own datacenters but creating an entirely new business process category to help every organization address this very urgent need. We want to enable you to set and meet your own sustainability goals, providing you with the tools to track your own carbon footprint across all of your operations.

In the years to come, I believe digital capability building around sustainability will be as critical for businesses as, say, CRM for sales and ERP for finances is today. And finally, the Microsoft Cloud offers the best integration across the entirety of the tech stack while offering openness at every layer. This is so important; the Microsoft Cloud helps orchestrate all of your heterogeneous digital investments across every layer of the tech stack.

This week at Ignite, we're introducing more than 90 new services and updates. In our hybrid work keynote, Jared Spataro will talk about our innovation across Microsoft Teams and Microsoft 365. And just like Teams has transformed collaboration and productivity, Microsoft Loop is the next big breakthrough in Microsoft 365.

Loop is a new application for a communications-first and AI-first world. We're composing people's content, comments, chats, reactions and live business process data even, together into a new collaborative canvas. And we are reimagining how anyone can contribute directly in the flow of their work, whether it's from a chat, email, meeting or a document.

During our business applications keynote, Alyssa Taylor will talk about the new Microsoft Customer Experience platform which puts organizations in complete control of their own customer data. Going forward, this will be so key. Every business will need to have autonomy over their data estate and how it's being used in order to enhance their customer relations.

During our app dev and infrastructure keynote, Scott Guthrie will share how we're making it easier for everyone to innovate across hybrid and multi-cloud environments with exciting new capabilities of Azure Arc. Arc is the first of its kind control plane extending Azure security, governance, dev tools and managed Azure services to any infrastructure, whether it's on-premises, multi-cloud or at the edge, and he will share how we are bringing business domain experts together with professional developers to solve problems faster than ever before using Power Platform.

And during our security keynote, Vasu Jakkal will share how we are building end-to-end solutions that span all clouds and all platforms, including for small and medium-sized

businesses, with the new Defender for Business. And there's much, much more, but I want to highlight three emerging areas that cut across all these themes.

Let's start with AI. One thing underlying everything is how large-scale AI models are becoming platforms in their own right, creating that ambient intelligence all around us. This means that we are taking the AI breakthroughs and translating them into platforms for you to build upon. Whether it's deploying intelligent agents to speed up customer service or extracting insights from volumes of unstructured data. We have seen how Fortune 500 are using Azure to power their own very critical workloads. And we are innovating to expand the possibilities of the cloud and what cloud computing can do.

Five years ago, here at Ignite, we shared with you the world's first AI supercomputer, and today we have the most powerful AI supercomputer in the world. Customers are using this infrastructure to address these massive challenges. AMD, for example, used it to design the next generation processor with tens of billions of transistors on each chip. Researchers at Eindhoven University of Technology in the Netherlands have run large-scale simulations on the ANSYS cloud platform, which is hosted on Azure, to better understand how COVID-19 can be spread by aerosol particles in a highly populated area like a stadium.

We also have built the fundamental software capabilities to build and train large scale models. Just a few weeks ago, together with NVIDIA, we announced the Megatron-Turing Natural Language generation model, the largest and most powerful monolithic transformer model, trained to date with 530 billion parameters. It offers unmatched accuracy across a very broad set of natural language tasks. And we've also trained Z-code, a multilingual model that combines several languages so that individual languages can learn from each other with much lower data requirements than ever before.

And you will continue to see us take incredible breakthroughs like these and turn them into new capabilities for our customers, whether it's the speech transcription, speech translation in PowerPoint, or now 100+ languages and dialects we support in Microsoft Translator.

Our partner, OpenAI, has released GPT-3, which is a breakthrough natural language understanding and generation model. Over the past six months, we've taken the power of these models and made them available across our products, giving for example domain experts access to GPT-3 through Power Platform and assisting pro developers with coding through GitHub Copilot powered by OpenAI's Codex. And we are committed to turning the world's most powerful large-scale models ever built into platforms for you to meet the unique needs of your business.

It's why today, we're so excited to announce Azure OpenAI Service, a new Azure cognitive service that brings together the power of GPT-3 with the enterprise capabilities of Azure. Let's go to Trang Le to share what this means in the context of WNBA.

**TRANG LE:** Thanks, Satya!

I'm excited to show you how the new Azure OpenAI Service combines OpenAI's cutting-edge innovation with the power of Azure. Azure OpenAI brings models like GPT-3 and Codex to Azure to help developers and content creators provide engaging experiences. Now, let's take a look at a WNBA playoffs game to showcase how powerful and innovative Azure's OpenAI Service really is.

I'll start in Visual Studio Code with the GitHub Copilot plugin, which is an AI pair programmer, powered by the OpenAI Codex model running on Azure.

Copilot helps developers write code faster by converting natural language comments into actual code. Copilot can synthesize code by intelligently interpreting context across comments and the code itself, allowing developers to focus on high priority tasks.

For some languages, we are already seeing about 30% of all newly written code being suggested by Copilot. And as a developer you can then make the necessary adjustments to this code to make it your own.

Here I resized the video to fit the Surface Duo, then I can add this comment and Copilot will suggest the code to call to the REST endpoint and display the play by play and summaries. You can see how Azure OpenAI and GitHub Copilot helped create this app that shows live gameplay alongside commentary and a play-by-play visual.

Next, let me show you how Azure OpenAI can create some snackable gameplay summaries for fans. The GPT-3 model, trained on over 175 billion parameters, can use its pattern recognition and generative capabilities to transform dense text into simplified summaries.

Real-time commentary of the WNBA playoff game is being created by human announcers. Now, let's see what OpenAI can do when asked to create succinct text summaries from the in-game announcer's play-by-play feed.

OpenAI just produced highly accurate, well-written summaries from real-time game commentary in mere seconds. And with integrated content moderation, content editors are now empowered to select the most appropriate summaries for their audiences, and organizations can be confident that they will be delivering appropriate and trustworthy content.

And finally, the Azure OpenAI Service can also generate sophisticated, original content, assisting content creators to accelerate the production of creative assets.

In this case, it is taking all these gameplay summaries generated for the first quarter and creating a "summary of summaries," to represent how the quarter played out in the form of a blog. Creators can use this to generate blogs, tag lines, statistics and more. When combined with fine tuning capabilities, you can tailor the output to your specific needs.

Azure OpenAI Service adds to the Azure Cognitive Services a set of powerful next-generation AI capabilities.

We can't wait to see what you do with this exciting new service! Back to you Satya!

**SATYA NADELLA:** Thank you so much, Trang. That was just awesome. It's incredible to see the innovation here, and most importantly, how these models are becoming platforms for you to build upon and to transform your business.

The other area that is truly changing is how the entire identity ecosystem is evolving to create a complete new trust fabric that spans organizational boundaries. In the physical world, identity has always been critical to establishing trust and driving commerce. In the digital world, this is even more important.

Think about it. In our interconnected world, we don't just collaborate digitally within our own organization, but with our customers, partners, suppliers. All of the trends I've talked about today so far, whether it's the hybrid work, hyperconnected business, multi-cloud, multi-edge computing or Zero Trust security, requires a boundaryless digital ecosystem where trust between different parties needs to be established in real time.

We're building the identity system of the future, a connective network that enables people, organizations, apps and even smart things to make real-time access decisions. It starts with Azure AD, which now extends beyond securing and managing access to also defining customer journeys and business collaboration with anyone.

This trust fabric is what makes experiences like Teams Connect possible today. With Teams Connect, powered by our identity platform, you can establish seamless, secure and trusted collaboration across organizational boundaries in a matter of minutes instead of days or even weeks. People across multiple companies can easily collaborate as one extended team, chatting, collaborating on files, scheduling meetings with the right access necessary to do their work. This is so critical.

Take customer service swarming, where you have to bring together people across the company and beyond to resolve a ticket; or take supply chain, which is perhaps the most topical thing for any business today. Consider this example of how a manufacturer can use Teams to work across all their partners and suppliers to mitigate a supply chain disruption by collaborating before, during and after a meeting.

A supply planner receives an alert in Dynamics 365 about a potential issue. From the Teams channel, they can inform the team about the alert and kick off a joint risk mitigation effort. The channel is a shared channel that supports multiple external companies, and it's easy to add another person or team from an external company. Now, everyone across these companies can collaborate in a shared collaboration space, conversing, sharing files securely, just as though they were in the same company.

When the third party uploads and shares a file to the channel, the message, which happens to be in Mandarin, can even be translated in-line. All stakeholders can open the document and co-author the brief. The document itself can be secured using Microsoft Information Protection and multi-factor auth. With real-time coauthoring now available on encrypted documents, users can be protected and productive at the same time. They

can even mention colleagues outside of their company to draw their attention to specific tasks.

All of this rich collaboration across teams happens before they even have a meeting, and this all works from one seamless experience without anyone needing to swap tenants. The team can initiate a call directly from a shared channel. During the meeting, the call is recorded so that colleagues who couldn't attend are able to catch up asynchronously and interact with chat. And of course, collaboration powered by Teams is also about what you can do asynchronously after a meeting.

Here, a senior manager views a task assigned in Microsoft Lists directly from Teams, making it easy to manage tasks across external teams. From the chat history, they can replay the recorded meeting to get fully caught up, and they can open the document to add their approval to complete the task. All of this illustrates the power of Teams as a platform that breaks down the barriers between organizations.

And finally, as the digital and physical worlds come together, we are creating an entirely new platform layer, which is the metaverse. We're bringing people, places and things together with the digital world in both the consumer space, as well as in the enterprise.

Take, for example, Dynamics 365 Connected Spaces, which we are announcing this morning. Connected Spaces provides a new perspective on the way people move and interact in physical spaces, whether it's a retail store or a factory, or even how organizations manage health and safety in a hybrid work environment. You can do analytics, you can get real-time insights, you can run simulations, you can automate routine tasks.

And when we talk about the metaverse, we're describing both a new platform and a new application type, similar to how we talked about the web and websites in the early '90s. Across the Microsoft Cloud, from Azure IoT to Azure Digital Twins to Connected Spaces and Microsoft Mesh, we're building the metaverse intrinsic, the metaverse platform for you to build upon. In a sense, the metaverse enables us to embed computing into the real world and to embed the real world into computing, bringing real presence to any digital space.

For years, we've talked about creating this digital representation of the world, but now, we actually have the opportunity to go into that world and participate in it. What's most important is that we are able to bring our humanity with us, and choose how we want to experience this world and who we want to interact with.

I can't overstate how much of a breakthrough this is. It's no longer just looking at a camera view of a factory floor, you can be on the floor. It's no longer just video conferencing with colleagues, you can be with them in the same room. It's no longer just playing a game with friends, you can be in the game with them.

We are taking these platform capabilities and building them into our own first-party applications, like Teams. Features like grid views, Together Mode and Presenter Mode in Teams mark the beginning of bringing 2D immersive experiences to collaboration.

But human presence is the ultimate connection. When you and I can have a meeting where we are all present together without actually being physically present, that's the next big breakthrough. And we are approaching this thoughtfully because we have learned from similar transitions in the past. Mesh for Microsoft Teams will allow you to connect with presence and have a shared immersive experience directly in Teams.

Let me now turn it over to Ellyn Shook and Jason Warnke from Accenture to share how they plan to reimagine work with it.

**ELLYN SHOOK:** Thanks, Satya, and hi, everyone. It's great to be here.

**JASON WARNKE:** Thanks for having us and welcome to Accenture's Nth Floor.

**ELLYN SHOOK:** At Accenture, we have over 624,000 people serving clients in 120 countries. And critical to our ability to work seamlessly together is Microsoft Teams.

We have turned our focus away from spaces and places to creating what we call Omni-connected Experiences where our people can participate, contribute and feel like they belong, regardless of where they're working.

**JASON WARNKE:** So it's been awesome to see Mesh for Microsoft Teams come together to enable those experiences.

**ELLYN SHOOK:** And as Satya said, it's so important to bring the human connection into our digital world. We're using this technology for meetings and learning, team get-togethers, and it's helped us really transform our new joiner experience.

And you'll see I've joined this meeting today using my avatar. We love this new feature, because it gives everyone the flexibility and choice to show up in ways they are most comfortable. And for me, not having to be on camera all day has really helped with my energy and engagement.

**JASON WARNKE:** And even though you're not joining on camera, it feels natural as I can see your facial expressions, gestures and even live reactions.

We've also created an incredible immersive space that's now seamlessly accessible directly through Teams. Why don't we go check it out?

**ELLYN SHOOK:** Here we are, Jason, and your avatar looks awesome.

Something that I really like is how freely you can move around and have face-to-face conversations.

**JASON WARNKE:** That's exactly right. We've held more than a hundred team gatherings in these immersive spaces, where people can connect, learn and collaborate, because they're truly in the same place together.

**ELLYN SHOOK:** The solution has been a game-changer for onboarding, about a hundred thousand people a year. And like many organizations, onboarding has been remote for the past 18 months. So bringing our new hires into this immersive environment fosters immediate and deeper connections. It transcends physical boundaries and helps individuals experience a culture in a very personal way.

Our new hires meet many more people and grow their professional network much faster.

**JASON WARNKE:** In IT we're thrilled how easily we could unlock Mesh's capability through Teams. In fact, we're currently rolling it out on all of our computers, and recently deployed 60,000 VR headsets.

The integration with Microsoft 365 makes everything feel familiar. But on top of that, spatial audio makes everything sound just like it would in person. And I love seeing and hearing our colleagues collaborating and whiteboarding and using this space for productivity.

**ELLYN SHOOK:** This doesn't just feel real, it is real. It's been exciting to see an idea become a reality in such a short time, enabling presence and connection that transcends location, keeps our culture vibrant wherever we're working, and levels the playing field to create equal and inclusive experiences.

**JASON WARNKE:** Thank you all for taking a quick tour with us. And with that, back to you, Satya.

**SATYA NADELLA:** Thanks so much, Ellyn and Jason. I just love seeing how Accenture has been able to recreate the human connection you feel around those serendipitous watercooler-type conversations, and even the design and whiteboarding sessions that you would typically have in person. And of course, these experiences are just incredible when experienced on any VR or AR headsets from Oculus to HoloLens.

The metaverse is not just transforming how we see the world, it's changing how all of us actively participate in it. And we can't wait to see what you build and how you bring people together with this technology.

What we have shown you today is only the beginning. Our economy and our society is undergoing a sea change of digitization across every industry, sector and country. We're emerging into a new era where you and the invaluable work you do will be more necessary than ever, and we are building the Microsoft Cloud to help you accelerate into this new world.

I'm inspired every day by so many examples of people everywhere who have used our platform and tools to transform their businesses, their communities, and in the process, expanded their own career opportunities. You're turning the structural change born of this moment into new opportunity. That's our purpose. It's not about us, it's about your passion, your imagination, your ingenuity and what all of you can do with the technologies we build.

One of my favorite examples is the impact so many people are having with Power Platform. In just the past month, more than 20 million creators have used it to address their own challenges and opportunities, as well as those of their communities and society at large. I want to close by sharing some of their stories.

Thank you all so very much. Have a great rest of Ignite.