A NEW ERA

Satya Nadella stood beside Bill Gates and Steve Ballmer as hundreds of Microsoft employees swarmed around the stage. "This company's had three CEOs. They're all right here," Gates said during the Feb. 5, 2014 event, smiling. He wore a sweater over a button-down shirt, looking grandfatherly.[1]

Ballmer, meanwhile, tucked his hands into his pants pockets as he soaked in the moment. There was no jumping, no rallying, no caffeine and adrenaline-fueled hoots and hollers. He wasn't the center of attention—his successor was.

"This business of ours is an exciting business. And one of the core things we've gotta realize, is that this business doesn't really respect tradition. What it respects is innovation on a go-forward basis," Nadella told the audience. "So it's really our collective challenge that we now need to make Microsoft thrive in a mobile-first and a cloud-first world."[2]

Nadella wasn't talking about Windows or PCs or Word or Excel. He saw two overlooked technologies—mobile and cloud—

as Microsoft's vehicle to sustained success. In his first day as CEO, the 46-year-old Nadella provided a road map for everyone in the company. He reinforced that vision in an interview secretly recorded days earlier featuring Nadella and Microsoft Chief Storyteller Steve Clayton doing a short walk-and-talk interview through a building on Microsoft's campus.

"We did one take on it and we were both really happy with it. The team said, 'Hey, let's just do one more take just to give it another run,'" Clayton said. The interviewer asked Nadella five questions. Nadella suggested one of his first jobs as CEO was to "ruthlessly remove any obstacles that allow us to innovate."

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> " Nadella suggested one of his first jobs as CEO was to "ruthlessly remove any obstacles that allow us to innovate." "That line just really stuck with me," Clayton said.

Nadella got to work updating the company's mission statement, too. Microsoft had grown significantly from the days of a computer on every desk running Microsoft products. The new goal: "to empower every person and every organization on the planet to achieve more."
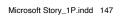
Innovation over Bureaucracy

Nadella had risen through the ranks since joining the company in 1992—first on the Windows NT team, and later an executive for the Online Services Division before serving as president of the Server & Tools Division. He "wanted to work for a company filled with people who believed they were on a mission to change the world," he wrote in his 2017 book, *Hit Refresh*.[3]

He got to work fixing the bureaucracy, internal politics, and infighting that had plagued the company. He wanted to remove the barriers blocking innovation. So he swapped a staid employee meeting with One Week, a series of events "designed to inform employees about, and inspire them to engage in, the company's vision and strategy," the *Seattle Times* reported.[4]

The centerpiece of One Week was a hackathon—a chance for thousands of employees to pitch and collaborate on special projects. The projects ranged from technology for people in wheelchairs to addressing sexism in video games.[5] The initiative gave employees a chance to work across departments as they found creative ways to solve problems. Some of the projects were eventually developed for wider release—new business opportunities borne from collaboration.

A Different Kind of Leader

One of Nadella's strengths is his preternatural calm—he's not known to belittle employees, a la Bill Gates, or jump and yell like Steve Ballmer. He exudes a collected air, unflappable cool. He's prepared and seasoned. No ego. No pretense. No drama. And no arrogance about decades of success, either. "At Microsoft we have this very bad habit of not being able to push our-

selves because we just feel very self-satisfied with the success we've had," he told Bloomberg in 2019. "We're learning how not to look at the past."[6]

A big part of Nadella's strategy boils down to one phrase: "growth mindset." The mentality is at the center of Dr. Carol Dweck's book *Mindset: The New Psychology of Success,* which considers how we limit or bolster our opportunities based on the mindset we embrace. A growth mindset means continuing to learn and build and climb. Nadella stressed the importance of a growth mindset for Microsoft staffers. Any change at Microsoft would come from within its employees.

Mario Juarez, a longtime former Microsoft employee who worked with all three of the company's CEOs, says he was captivated by Nadella's nature, saying he was "different" from other tech leaders. "He was really nice to people. He went out of his way to care about how people were and what their experience was. And he was gentle. Super, super smart guy. And not a pushover at all, but he projects this image of this magnanimous, thoughtful, soulful guy, which is definitely a part of who he is," Juarez said.[7]

Hard Decisions

Nadella's first product unveiling as CEO spoke to his aims and collaborative approach—Office software for Apple's iPad. "This is our first step on the journey of making this treat innovation vector for all of Microsoft," he said.

Nadella wasn't worried about chasing every carrot and going after the hot product—that's how Microsoft failed with Zune and other hot devices. It got distracted by what every other company was doing and missed the bigger picture. Nadella was

focused on the bigger picture, and he needed to make some difficult decisions as he took the company in a different direction than his predecessor. In July 2014, Microsoft laid off 18,000 employees—about 14% of its workforce, and the biggest layoffs in the company's history. Most of the employees had been part of the Nokia acquisition.

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Nadella, in an email to employees, stressed that the changes would keep the company agile. The layoffs also marked a departure from hardware and a pivot away from projects like low-priced Nokia Asha phones, as well as Nokia X phones that used the Android platform. Additional layoffs were announced in July 2015 and May 2016.

The hard choices were necessary in order for Microsoft to refocus. What the company was doing wasn't working anymore. And underperforming Nokia phones weren't going to change those problems. Microsoft wasn't going to win with its own phones—not yet, anyway. It needed to get its apps and pro-

grams running on as many devices as possible, regardless of the brand name and operating system, and stop trying to fight a losing battle.

"Open" for Business

Throughout Microsoft's history, open-source was thought of as the enemy—a threat to the company's proprietary software. Open-source was the focus of Bill Gates' "Open Letter to the Hobby" during the 1970s, and Microsoft's leadership later railed against Linux, especially in the leaked "Halloween documents." Steve Ballmer took the criticisms one step further, calling Linux a "cancer."

Microsoft actually worked with Linux during the second half of Ballmer's tenure—including with its System Center Operations Manager, Hyper-V hypervisor, and Azure cloud service. The company had also worked with the Open Source Initiative under Ballmer. But it had also resisted open-source in other ways. As Microsoft worried about locking customers into contracts to use its software and apps, developers embraced an open-source world that encouraged users to work with and modify code—a collaborative process that allowed for the development of an improved product.

The power of open-source is visible in Google's popular mobile operating system, Android, which is made up of elements available under open source licenses. Working with open-source encouraged developers—and resulted in better products and services. Open-source also helped drive the success of Microsoft rivals such as Google and Amazon. Instead of trying to swim against the open-source current, Microsoft could swim with it—and become a friend, and not a foe, to developers.

Nadella was a driving force in that culture shift, and his mindset was aided by other open-source advocates joining the company. Open-source was a bigger threat when being avoided than embraced. The actual cancer wasn't Linux, per se, it was Microsoft's holier than thou self-exclusion that kept the company from fully embracing its role as industry leader.

"Dogma at Microsoft had long held that the open-source software from Linux was the enemy. We couldn't afford to cling to that attitude any longer. We had to meet the customers where they were and, more importantly, we needed to ensure that we viewed our opportunity not through a rearview mirror, but with a more future-oriented perspective," he wrote in *Hit Refresh*.[8]

Microsoft ♥ Linux?

Microsoft showed its commitment to open-source with initiatives that would have been seen as heretical a generation prior. Azure—Nadella's previous department—best represented Microsoft's new approach. Lots of Azure's code is made up of Linux, and Microsoft began offering open source databases on Azure. To reflect the changing mindset, Windows Azure was renamed Microsoft Azure.

"Our commitment to deliver an enterprise-grade cloud platform for the world's applications is greater than ever," Microsoft Azure GM Steven Martin said in a statement announcing the name change. "Today we support one of the broadest set of operating systems, languages, and services of any public cloud—from Windows, SQL and .NET to Python, Ruby, Node.js, Java, Hadoop, Linux, and Oracle. In today's mobile-first, cloud-first, data-powered world, customers want a public cloud

platform that supports their needs—whatever they may be—and that public cloud is Microsoft Azure."[9]

The same Microsoft that once tried to rule the internet was letting customers know it would support their needs *whatever they may be.* No, Microsoft wasn't open-sourcing its keystone products, but this was different. Company leaders like Scott Hanselman, Rajesh Jha, Scott Guthrie, and Harry Shum were tasked with upholding Microsoft's open source efforts. Without buy-in from key figures, Nadella's goals would fall flat.

Hanselman highlighted the generational stigma surrounding Microsoft in a 2014 blog post, "Microsoft killed my Pappy."[10]

"I think that Microsoft is very aware of perceptions and is actively trying to counter them by *actually being open,*" he wrote. "I'd say we're more concerned than a Google or Apple about how folks perceive us." There was also the 2014 announcement[11] that the .NET Core software framework would be open source, with a cross-platform foundation and stronger ecosystem.

"If you think about it: open source is essentially the ultimate agile development style. Every change is immediately public and (in theory) consumable," Immo Landwerth, Program Manager for .NET, wrote.

Microsoft also launched an open source website[12] devoted to projects—including Visual Studio Code, TypeScript, and .NET. "Whether you're a seasoned open source developer or looking to make your first ever open source contribution Microsoft has many open source projects seeking new contributors. All issues below need your help!"

The messaging was reinforced by Nadella. During a press and analyst briefing in 2015 he appeared before a slide: "Microsoft ♥ Linux."
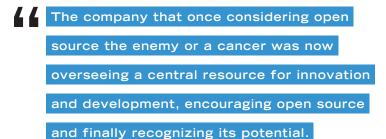
A company blog hammered the point home: "You run workloads on Windows. You run workloads on Linux. You run these

workloads in your on-premises datacenters, hosted at service providers, and in public clouds. You just want it all to work, and to work together regardless of the operating system. We hear you, and understand that your world is heterogeneous. Bottom line, this is a business opportunity for Microsoft to offer heterogeneous support—both Windows and Linux workloads—on-premises and in a public cloud. Microsoft can add real value in a heterogeneous cloud."[13]

Other collaborations reinforced Microsoft's embrace of open-source. In 2016 the company joined the Linux Foundation, an organization that "supports the creation of sustainable open source ecosystems by providing financial and intellectual resources, infrastructure, services, events, and training."[14] One of the foundation's board members is Sarah Novotny, a long-time open source champion and part of the Microsoft Azure Office of the CTO. The following year Microsoft became a premium sponsor of the Open Source Initiative, a corporation devoted to the usage of open source software.

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Microsoft has been partnering with Red Hat, an open source company, since 2015 to bring Red Hat Enterprise Linux to Azure. And Microsoft bought Github, a repository for open source projects, in 2018 for $7.5 billion. The company that

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Taking the "Lead"

As executive vice president and chief financial officer, Amy Hood is one of Microsoft's most visible leaders and among the highest-ranking female executives in the company's history. Hood—who joined Microsoft in 2002 after working at Goldman Sachs—served as CFO of Microsoft's Business Division, helping to guide the transition to Office 365 before being promoted to CFO. The Kentucky native was also involved in some of the company's key acquisitions and, beyond shifting resources to growth areas, has also made inclusion a priority. Through Nadella's urging and deep thought, she uncovered her purpose as CFO: "To help make Microsoft the most successful place it can be."[15]

Nadella considers Hood "our conscience"[16]—a key member of the company's senior leadership team. That team meets each Friday, helping to drive collaboration across the company and ensuring that Microsoft's vision is unified.

"Satya has put together an excellent leadership team [that includes] Amy Hood on the financial side, Brad Smith, president and chief legal officer who thinks about policy and regulation and our role in AI and ethics around AI, Scott Guthrie runs the Cloud and AI group, Judson Althoff runs the Worldwide Commercial Business . . . it's an extremely well-balanced team, a diverse team that brings multiple experience from both inside and outside of the company," said Microsoft Chief Storyteller Steve Clayton.[17]

"The entire senior leadership team gets together every Friday for at least six hours. They operate incredibly well as a team, they make decisions as a team, and that rigor and discipline to meet every Friday and take six hours out of their important schedules has led to a group that is really a classic case of the sum being greater than the individual parts."

In the Clouds

Cloud computing conjures the idea of a fluffy floating mass of water drops, ready to rain on those below, but clouds like Azure or Amazon's AWS don't float—they represent a wide range of computing services. Cloud technology allows companies and governments to carry out their computing needs without buying hardware and software and setting up its own datacenters

Cloud—not Windows—was the biggest driver of Microsoft's future. Nadella cemented that focus in March 2018 by announcing a reorganization: a new Experiences & Devices team led by Rajesh Jha, and a Cloud + AI Platform overseen by Scott Guthrie. Amid the reorganization, Windows and Devices department leader Terry Myerson moved on from the company.

Jha's team was tasked with an important purpose: "to instill a unifying product ethos across our end-user experiences and devices." The reorganization—and de-emphasis of Windows—came with the formation of a committee to tackle ethical issues due to AI advances. No, Windows was not going away. Windows 10 remained the dominant operating system[18] on PCs in 2020. But Windows was not the company's marquee focus anymore.

There were smart financial reasons for shifting more energy behind the cloud. For the first half of the 2020 fiscal year, Microsoft brought in $24.1 billion for its commercial cloud

revenue[19]—cementing Azure as the second-ranked cloud company behind Amazon's AWS, which had a substantial head start. Nadella saw Azure holding a significant purpose: becoming "the world's computer."

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Azure by the Numbers

Azure's strength is in its network. Azure uses more than 100 data centers—giant buildings filled with millions of servers[20]—located in places like Sao Paulo and Marseille, Canberra and Doha.

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By 2020, more than 4,000 companies were using Microsoft Azure, including:

- The Kindai University Aquaculture Research Institute and Toyota Tsusho Corporation collaborated with Microsoft Japan to improve and streamline its system of selecting fingerlings, young fish which have developed scales and working fins. The improvements include an automated process to regulate pump flow—easing the reliance on guesswork from workers.
- Cincinnati Children's Hospital Medical Center developed a mobile app using Microsoft Azure and Azure services that aids families—offering hospital navigation, answers to questions they may have, and entertainment for children.
- Pizza Hut Hong Kong used Azure for its server and database services and launched a new mobile app, allowing for scalability and the opportunity to engage more dynamically with customers.
- Renault Sport Formula One Team uses Microsoft Dynamics 365 for Operations, analyzing data from more than 200 sensors in each car and using that information to pursue competitive advantages and providing input for modifications.
- Azure runs the safety operations for Chevron Corp., analyzing hundreds of terabytes of data from as many as 2,700 wells, while Microsoft's augmented-reality HoloLens headset allows engineers at Chevron offices in Houston to virtually repair equipment located in the Permian Basin. Collected data is used to optimize drilling efficiencies, but the ultimate purpose is to prevent any Deepwater Horizon-scale disasters.

Azure's power tied into Nadella's vision for the company: "We don't want to be the cool company in the tech sector. We want to be the company that makes other people cool," he wrote in *Hit Refresh.* It was a departure from the days of Steve Ballmer, when Microsoft tried to be *cool,* chasing fads and flashy gizmos (such as the ill-fated Zune).

As Nadella became established as CEO, he also brought a new approach to Bill Gates' longstanding mission, "A computer on every desk, and in every home, running Microsoft software." That mission was established during Microsoft's PC days. Microsoft won those PC days, but there were other missions ahead that had nothing to do with physical computers. Nadella helped Microsoft develop a new mission statement and a new path forward: "to empower every person and every organization on the planet to achieve more."

Paul and Bill

Microsoft's founders faced a long, strange, extremely successful journey together. It began in Lakeside's computer room and took them all the way to the top of the tech world, from BASIC to billionaires. Bill Gates and Paul Allen went through peaks and valleys in their friendship. That's bound to happen over the course of nearly half a century.

Even through the times when they weren't on close speaking terms, their mutual admiration could never be debated. That brotherly bond resonated when Allen died in 2018 after his third bout with cancer. He was 65.

Gates reflected glowingly as he discussed Allen at the Forbes Philanthropy Summit in 2019. "I wish Paul had gotten to see all of the good his generosity will do," Gates told the audience.

"He was one of the most thoughtful, brilliant, and curious people I've ever met. He deserved so much more time than he got—although no one can say his wasn't a life well-lived."[21]

Changing Competition

Microsoft's history and evolving focuses are reflected in the company's competitors.

Quartz analyzed 30 years of Microsoft's annual corporate filings, stretching from 1989 to 2018, an exercise that shows how far Microsoft has come.[22] Early competitors included Lotus, Sun Microsystems, and Novell. Recent competitors include Amazon, Google, Salesforce, and Sony.

Three companies were mentioned more than any others: IBM, Apple, and Oracle.

Partnerships

Under Satya Nadella, Microsoft looked to its rivals for strategic partnerships—finding opportunity where it had previously took an isolationist approach. Microsoft made sure Office was available on Google's Android platform and Apple's iPhones, and its apps paired with Facebook, while Amazon ran Bing search on its Fire tablets.

"Partnerships like these can exist, at times uneasily, with competitors in specific product or service categories. We compete vigorously with Amazon in the cloud market; there's no ambiguity about that. But why can't Microsoft and Amazon partner in other areas? For example, Bing powers the search experience on Amazon Fire tablets."[23]

Partnership as a way to innovation—it was the same lesson Microsoft learned under Bill Gates during the 1980s, when the company grew into a superpower in large part because of its alliances with IBM and Apple. Even Microsoft's competition with Google has become friendlier—in 2016 the rivals announced they would stop dropping regulatory complaints about each other. "Our companies compete vigorously, but we want to do so on the merits of our products, not in legal proceedings," the companies said.[24]

Nadella's message about uneasy partnerships was reinforced by Microsoft's plans for two foldable mobile devices set for release in 2020, the Surface Neo Tablet and Surface Duo phone. The devices feature dual screens that open like a book and can be adapted in numerous ways. And they run Google's Android (gasp!) operating system. After failing to stop Android and following the Nokia debacle, Microsoft was ready for another shot in with mobile devices, and in the process further blurring the line between desktop and mobile.

The Next Decade

Under Nadella, the company prepared to continue driving innovation and building on its cloud growth into the 2020s. Microsoft was poised to apply and unlock the power behind its technology and data in new ways. The HoloLens 2, Microsoft's latest mixed reality headset, was released in November 2019, covering a diagonal field of view of 52 degrees (the original had 34) and featuring improved gesture controls. HoloLens 2 presents new opportunities for businesses, especially those focused on repair work—a hands-free way to study the root cause of a problem and interact with others while simultaneously analyzing data.

With Dynamics 365, Microsoft gives businesses opportunities to transform using the strength of its cloud platform, AI, and other offerings. Releases scheduled for 2020 include "hundreds of new features," covering marketing, sales, service, finance and operations, human resources, commerce, and industry platforms.

Back on Top

Microsoft's stock price paralleled its rejuvenation. When Nadella became CEO, shares were selling in the $37 range—that value rose to $43 within his first year. Despite some peaks and valleys, the price rose significantly between 2016 and early 2020—climbing from $50 to $70 to $100 to $125 to $180, tripling in price over the course of four years. In 2018, for the first time since 2002, the company had the top market cap.

Microsoft's market cap in early 2020 was $1.4 trillion—neck and neck with Apple. But the stock price alone wasn't Nadella's end goal. He was interested in uncovering something deeper, trying to answer a fundamental question: *Why does Microsoft exist?*

The question got to the heart of Satya Nadella's aim as CEO. That search took Nadella back to the company's beginnings–past cloud and mobile devices and the Xbox, past Windows and killer apps and MS-DOS, all the way to the Altair BASIC.

"And right there is everything about who we are, which is: we create technology so others can create technology," he said in 2017.[25] "Empowering people and organizations all over the planet to achieve more. Every one of those is a key word for us. It's not about our technology, it's about what other people can do with our technology."

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The message was as clear to Nadella as it was to two child-hood friends studying a magazine on a drab December day some 40-odd years earlier. The future was here—why not do something special with it?