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Cloud Workers Are Key To Disruption Preparedness

Drive Productivity, Business Continuity, And
Growth By Empowering Cloud Workers

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Executive Summary

When a global pandemic spread in early 2020, many enterprises were forced to support an entirely remote workforce (perhaps for the first time) while needing to maintain the data security of their companies and customers. At the time of publication, we are months into widespread lockdowns. Firms that can support their workers — no matter when, where, or on what device they choose to do their work — are better positioned to ensure business continuity in this challenging environment.

In January 2020, Google commissioned Forrester Consulting to refresh 2018 research evaluating workforce cloud technology trends. Forrester surveyed 969 enterprise IT decision makers and 1,356 global information workers. This pre-pandemic data snapshot reveals firms' preparedness for global disruption. Those that evolved significantly based on trends set by their workforce — which has fundamentally changed how workers access information, collaborate with colleagues, and serve customers — were more adaptable to sudden and dramatic increases in remote work.

This trend is not new. Two years ago, Forrester identified a subset of information workers dubbed "cloud workers" who are ahead of the curve in demanding deeper flexibility around when, where, and how to serve customers. Cloud workers increasingly rely on their browsers to access cloud-based business apps for their jobs, and they expect access to the tools they need to get their jobs done anytime, anywhere, and on any device. In today's remote working environment, supporting cloud workers — and empowering new ones — is more critical than ever.

KEY FINDINGS (PRE-SHELTER-IN-PLACE):

- › **Cloud workers form the vanguard of productive employees.** In 2018, Forrester found that 26% of information workers were cloud workers. In January 2020, 37% of information workers were cloud workers.¹ Cloud workers are power browser users and they spend three-quarters of their device time either in a browser or a virtual meeting. Some of this time is used for better collaboration: Cloud workers spend 72% more time than other information workers in virtual meetings and collaborating with their colleagues to get their jobs done. Based on their consistent presence in the workforce over the last two years and IT's commitment to more flexible working, cloud workers are here to stay. And that's increasing productivity, employee experience (EX), and business results.
- › **Firms have made incremental progress in supporting cloud workers, but they have more work to do.** Four out of five decision makers reported that their organizations have clear goals to migrate most workloads to the cloud. But not every organization has moved to a cloud-first strategy, and their employees are not yet fully equipped with cloud solutions. The productivity issues that surfaced two years ago have not been solved. Workers and decision makers worry about technology glitches impacting productivity.
- › **Firms that significantly evolved based on cloud-based end user computing trends indicated better disruption preparedness.** These leading firms are 1.5 times more likely to prioritize better support for employee mobility/flexibility of work locations in the next 12 months. They are more likely to mandate a browser for their workforce and prioritize endpoint security and employee experience.

Modern, On-The-Go Workers Gravitate To Cloud And Demand Better Experience

WORKERS USE CLOUD TECHNOLOGY TO GET THE JOB DONE

Today's information workers demand deeper flexibility around when, where, and how to serve their customers. To do that, an increasing number are turning to cloud technologies to deliver the information, files, and applications that empower them to do their jobs. In surveying enterprise IT decision makers and information workers, Forrester found that:

- **More than one-third of information workers are highly collaborative cloud workers.** In 2018, Forrester found that 26% of information workers were cloud workers. That means they use a laptop or tablet for work, use cloud apps daily, and spend significant time during the workday completing tasks in a browser. In January 2020, 37% of information workers were cloud workers (see Figure 1).² Cloud workers are power browser users, and they spend an average of three-quarters of their device time either in a browser or in a virtual meeting that potentially uses a browser-based application (see Figure 2). Some of this time is used for better collaboration: Cloud workers spend 72% more time than other information workers in virtual meetings and 13% more time in meetings overall.
- **True mobility is now table stakes.** More than two-thirds of information workers said they find it very important to be able to access their work files and applications anywhere and on any device (see Figure 3). The nature and type of mobility also continues to expand, with virtually all information workers using their laptops, tablets, smartphones, or wearable devices for work purposes while commuting, traveling, or working at home. That's an increase from 94% of information workers two years ago.

Figure 1



More than one in three (37%) information workers are cloud workers.

Cloud workers:

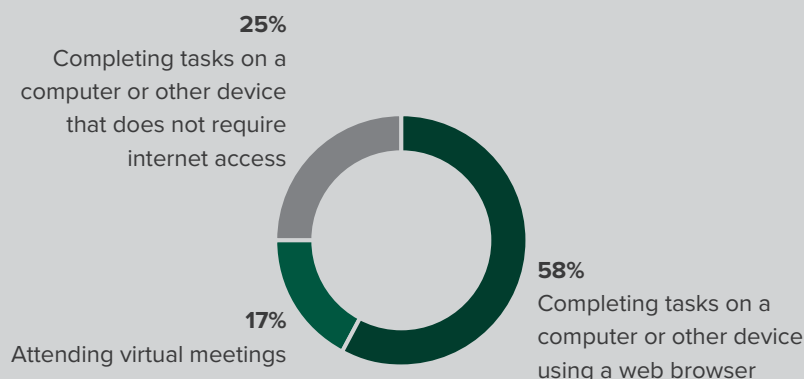
1. Use a laptop and/or tablet for work.
2. Use cloud apps daily.
3. Spend at least 37.5% of the day (about 3/8 hours) completing tasks in a browser or attending virtual meetings.

Base: 1,356 global enterprise information workers who use cloud applications at least weekly for work

Source: A commissioned study conducted by Forrester Consulting on behalf of Google, January 2020

Figure 2

"During a typical day in your current role, what percentage of your time do you spend doing the following activities today?" (Showing mean percentage.)



Base: 502 global enterprise cloud workers

Source: A commissioned study conducted by Forrester Consulting on behalf of Google, January 2020

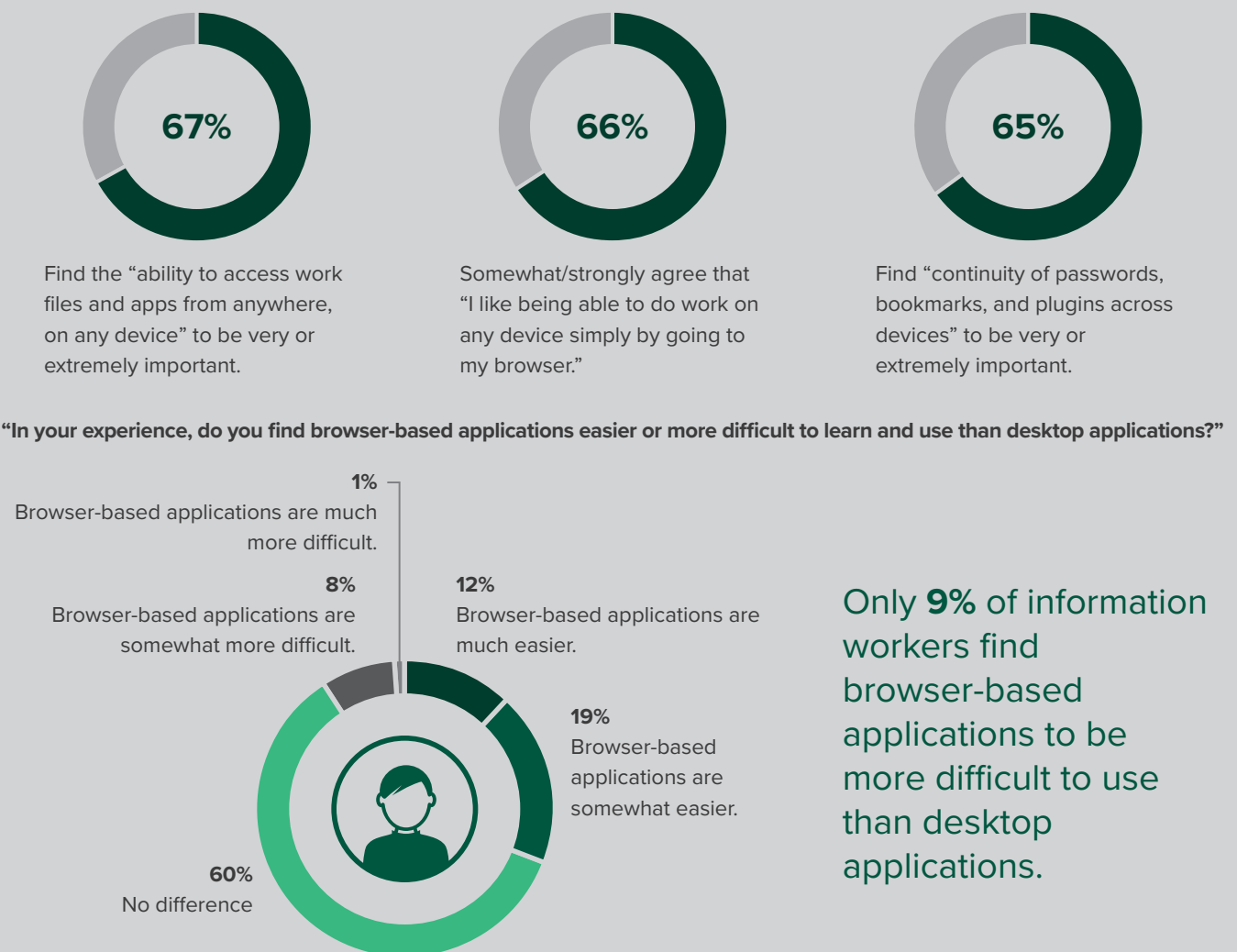


Cloud workers spend 75% of their device time in a browser or virtual meetings.

➤ **Information workers rely on their browsers to get work done.** The need to be “always on” leads workers to leverage browser-based technology (see Figure 3). About two-thirds of information workers (66%) like being able to do their work on any device by using their browsers. A similar amount (65%) value continuity of experience across devices, which browser-based work supports. Workers also find working in a browser to be an easy experience: Only 9% of information workers believe browser-based applications are more difficult to use than desktop applications. Eleven percent of information workers are ahead of the curve, spending 100% of their device time working in a browser or attending virtual meetings.

Figure 3

Information Worker Device Needs And Preferences



Base: 1,356 global enterprise information workers who use cloud applications at least weekly
Source: A commissioned study conducted by Forrester Consulting on behalf of Google, January 2020

BOOST EMPLOYEE EXPERIENCE WITH A FOCUS ON DEVICE PRODUCTIVITY, SECURITY, AND PRIVACY

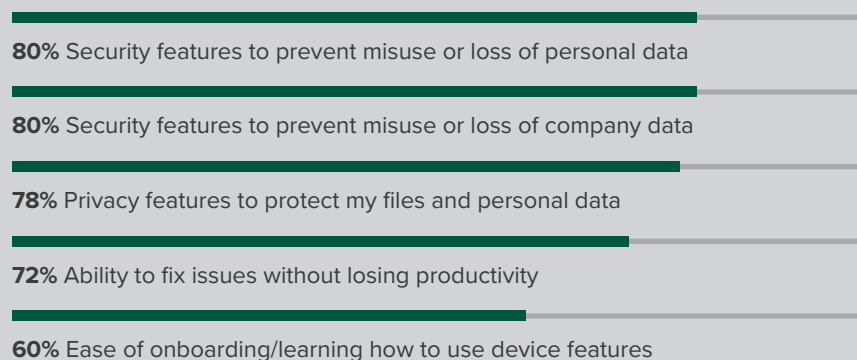
Technology satisfaction is a critical foundation for employee engagement, and providing employees with the technology they need for their day-to-day is a simple but often overlooked element of increasing the overall engagement.³ Technology hiccups are more than a minor annoyance. They impair information workers' abilities to get their jobs done, erode employee experience (EX), and ultimately trickle down to customer experience (CX). For professional devices, information workers are concerned about (see Figure 4):

- › **Productivity.** Information workers rely heavily on their work devices to complete tasks for their jobs, and potential glitches or time lost to troubleshooting has a major impact on productivity. Seventy-two percent of information workers indicated that the ability to fix issues without losing productivity is very or extremely important in the devices they use for work purposes.
- › **Security.** While security has long been a major focus for enterprise IT decision makers, information workers are similarly tuned in to security imperatives from their organizations. A whopping eight out of 10 information workers view security features to prevent misuse or loss of company data as critical in their work devices.
- › **Privacy.** Information workers are interested in security features not only to protect company data, but also to protect their own data. Eighty percent of workers view privacy features to protect personal files and data as critical to their work devices. A similar proportion are concerned about preventing misuse or loss of personal data.

Designing an IT strategy that delivers across these three priorities will improve both employee experience and customer experience. Unhindered by technology glitches or privacy concerns, satisfied employees are more likely to provide an experience that customers will remember in a positive light.⁴ In addition, engaging employees as part of overall security strategies will help protect company and customer data, which increases customer trust.

Figure 4

"In thinking about the device(s) you use for work purposes, how important are the following capabilities?"
(Showing sum of "extremely important" and "very important.")



Base: 1,356 global enterprise information workers who use cloud applications at least weekly
Source: A commissioned study conducted by Forrester Consulting on behalf of Google, January 2020

As Workers Move To Cloud, IT Scrambles To Adjust Workforce Tech Strategy

FIRMS HAVE MADE INCREMENTAL PROGRESS IN THE LAST TWO YEARS

With workers (and especially cloud workers) leading the way, enterprise IT decision makers (ITDMs) have had to adjust their strategies. Changes in IT strategy is the largest area of positive growth from Forrester's 2018 study, and this progress was clear even before information workers were largely required to work from home. ITDMs are recognizing that workers need technology that supports their productivity both at and away from the office. In surveying enterprise IT decision makers and information workers, Forrester found that (see Figure 5):

- › **Employers are increasingly catering to cloud workers with cloud-native devices.** Cloud-native device usage is growing both across firms and employee populations within those firms. As IT decision makers look to support employee productivity when workers spend a huge amount of their day in a browser, the number of firms that have implemented and are expanding cloud-based computers has increased 83% from two years ago. Of firms that use cloud-based computers, the proportion of the workforce that is being considered for or has been deployed on cloud-based computers has increased 11%. Additionally, according to IT managers and directors, about one in four employees uses cloud-native devices.
- › **As employee productivity becomes a top priority, investments in cloud apps grow.** IT priorities have shifted dramatically in the last two years. While cost reduction was a top priority in 2018, it is no longer top of mind and has dropped six places in the priority rankings. Meanwhile, employee productivity has overtaken cost control. Accompanying that move is a significant expansion of cloud-based applications to support employees as top priorities. For 69% of decision makers, this expansion is a high or critical priority over the next 12 months.
- › **Employers are providing increased employee choice.** When it comes to firms' approaches to providing company-owned devices to their employees, the number of employers that take a one-size-fits-all approach and assign the standard device to every user has decreased by half in the last two years. This flexible approach enables firms to better determine which classes of employees can most benefit from cloud-native devices.
- › **Cloud is not just for IT workloads: Broader employee populations will benefit.** Seventy-eight percent of IT decision makers aim to provide all employees with cloud-based access to business applications within the next two years. A similar proportion say virtualization can fill gaps in cloud deployment to help employees get access to legacy applications they might need.



The number of firms and the number of employees within firms using cloud-based computers is on the rise.



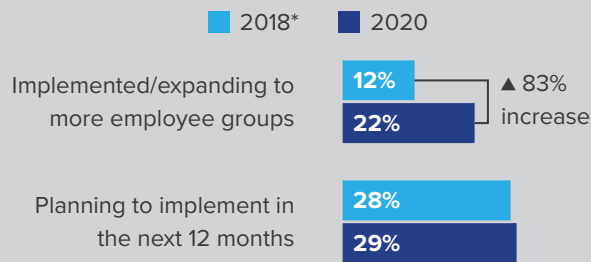
ITDMs are increasingly focused on employee productivity as a high or critical priority.



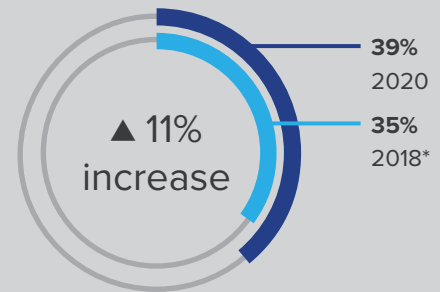
The number of firms taking a one-size-fits-all device approach has dropped by **half**.

Figure 5

“Which of the following represents your organization’s current adoption or willingness to adopt cloud-based computers for your workforce?”



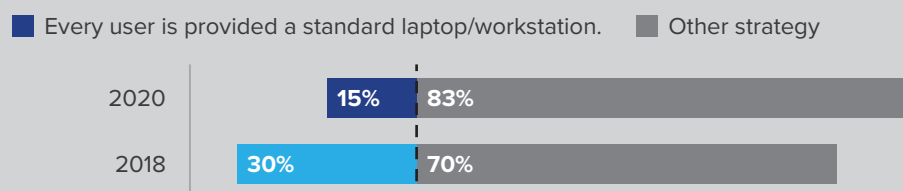
“For approximately what proportion of your workforce are you considering or have you deployed cloud-based computers?”



“To what extent is your IT organization prioritizing the following initiatives over the next 12 months?”
(Showing rank by sum of “critical priority” and “high priority.”)

PRIORITY		2020 RANK	2018 RANK*
▲2	Invest in technologies that improve employee productivity	1	3
	Improve endpoint security	2	2
▲5	Expand our use of cloud-based applications for employees	3	8
	Increase our use of cloud infrastructure and platforms	4	4
	Invest in technologies that improve customer experience	5	N/A
	Invest in technologies that improve collaboration	6	6
▼6	Reduce costs	7	1
▼3	Better leverage data and insights for business decisions	8	5
	Invest in technologies that improve employee experience	9	N/A
▼1	Upgrade/replace legacy systems	10	9

“Which of the following best reflects your firm’s/company’s current approach to selecting company-owned laptops/workstations for the workforce?”



Base: 969 Enterprise technology decision makers who oversee workforce devices and cloud applications
Source: A commissioned study conducted by Forrester Consulting on behalf of Google, January 2020

*Base: 1,060 enterprise technology decision makers in nine countries who oversee workforce devices and cloud applications
*Source: A commissioned study conducted by Forrester Consulting on behalf of Google, February 2018

BUT WORK REMAINS FOR FIRMS THAT WANT TO REALIZE THE FULL BENEFITS OF CLOUD INVESTMENTS

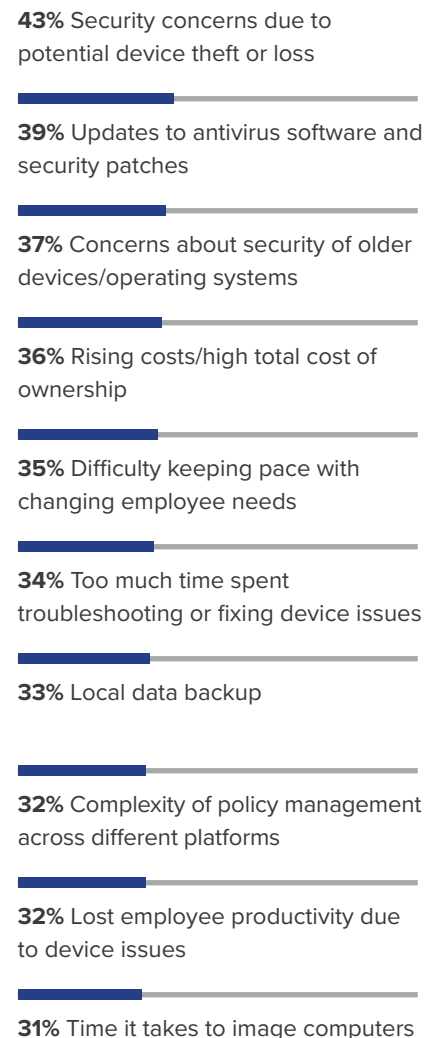
For many firms, the transition to cloud is still about back-end IT infrastructure without associated upgrades in business applications and endpoint user technology. With many firms accelerating their cloud migrations, IT decision makers must develop a workforce strategy that alleviates challenges in productivity and security. When Forrester looked at cloud trends and the potential benefits available to employees, we found that:

- › **Firms prioritize cloud and increasing public cloud usage, but endpoint devices and business applications lag behind.** Public cloud usage is set to overtake on-premises within the next two years (see Figure 6). Eighty-five percent of firms either have cloud-first strategies or are prioritizing cloud while still using on-premises solutions for select use cases. The growth of cloud-first strategies is even more dramatic: The number of firms that use cloud solutions to support most or all of their business needs has increased 58% in the last two years. However, firms still have work to do to shift their business applications and endpoint devices. IT decision makers indicated that only 58% of their organizations' work applications can be accessed via a browser. Eight in 10 ITDMs said their organizations have migrated some applications, but work remains to be done.
- › **Technology hiccups are responsible for productivity losses.** Information workers rely heavily on their work devices to complete tasks for their jobs, and potential glitches or time lost to troubleshooting has a major impact on productivity (see Figure 7). But today's standard work devices are prone to interruptions, updates, and break-fix outages. Seventy-two percent of information workers indicated that the ability to fix issues without losing productivity is very or extremely important in the devices they use for work purposes. In comparison, one-third of IT decision makers said they are challenged by lost employee productivity due to device issues. Forrester found similar patterns in 2018, suggesting that productivity is still a top-of-mind issue for both workers and decision makers, and that they have not yet solved issues identified two years ago.
- › **Security is a major challenge for enterprise IT decision makers.** The top three challenges ITDMs face with the devices that support workforce productivity are all related to security: potential device theft, security patches, and concerns about legacy devices or operating systems (see Figure 7). Device security is critical, especially in an era when remote work has dramatically increased.

To fully serve workforce needs by providing access to critical work information and applications (whenever and wherever they might be), firms must address these concerns.

Figure 7

Challenges IT organizations face with the devices that support workforce productivity:



Base: 969 Enterprise technology decision makers who oversee workforce devices and cloud applications
Source: A commissioned study conducted by Forrester Consulting on behalf of Google, January 2020

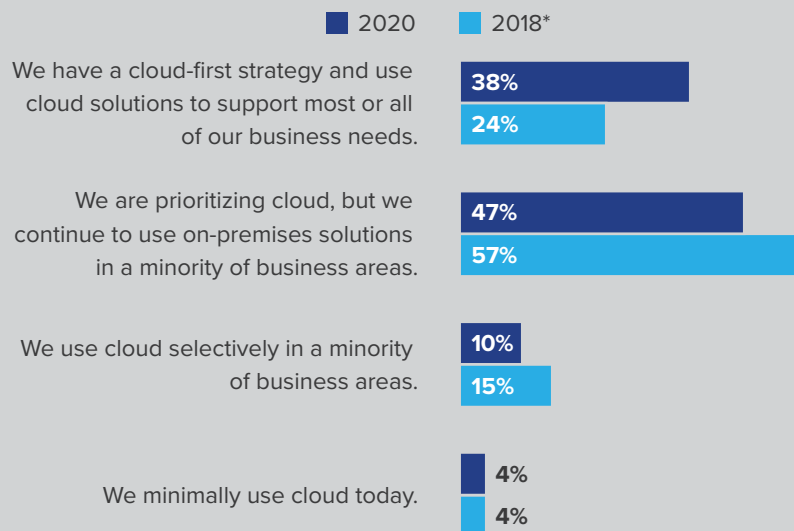
Figure 6

FIRMS ARE SHIFTING BACK-END INFRASTRUCTURE TO CLOUD . . .

“What percentage of your organization’s end user applications run in the following environments today/in two years?”

	Today (%)	In two years (%)
Public cloud	27%	32%
On-premises hardware	30%	25%

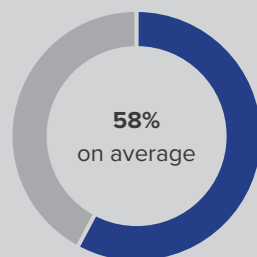
“Which of the following best represents your firm’s/company’s strategy for deploying new business applications?”



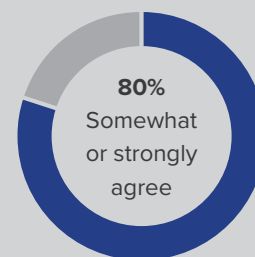
▲ 58% increase in firms with a cloud-first strategy

. . . BUT BUSINESS APPLICATIONS AND ENDPOINT DEVICES LAG BEHIND

“What percentage of your organization’s applications do you estimate could be accessed via a browser?”



“My organization has successfully migrated some key applications to the cloud, but work remains to be done.”



Base: 969 Enterprise technology decision makers who oversee workforce devices and cloud applications

Source: A commissioned study conducted by Forrester Consulting on behalf of Google, January 2020

*Base: 1,060 enterprise technology decision makers in nine countries who oversee workforce devices and cloud applications

*Source: A commissioned study conducted by Forrester Consulting on behalf of Google, February 2018

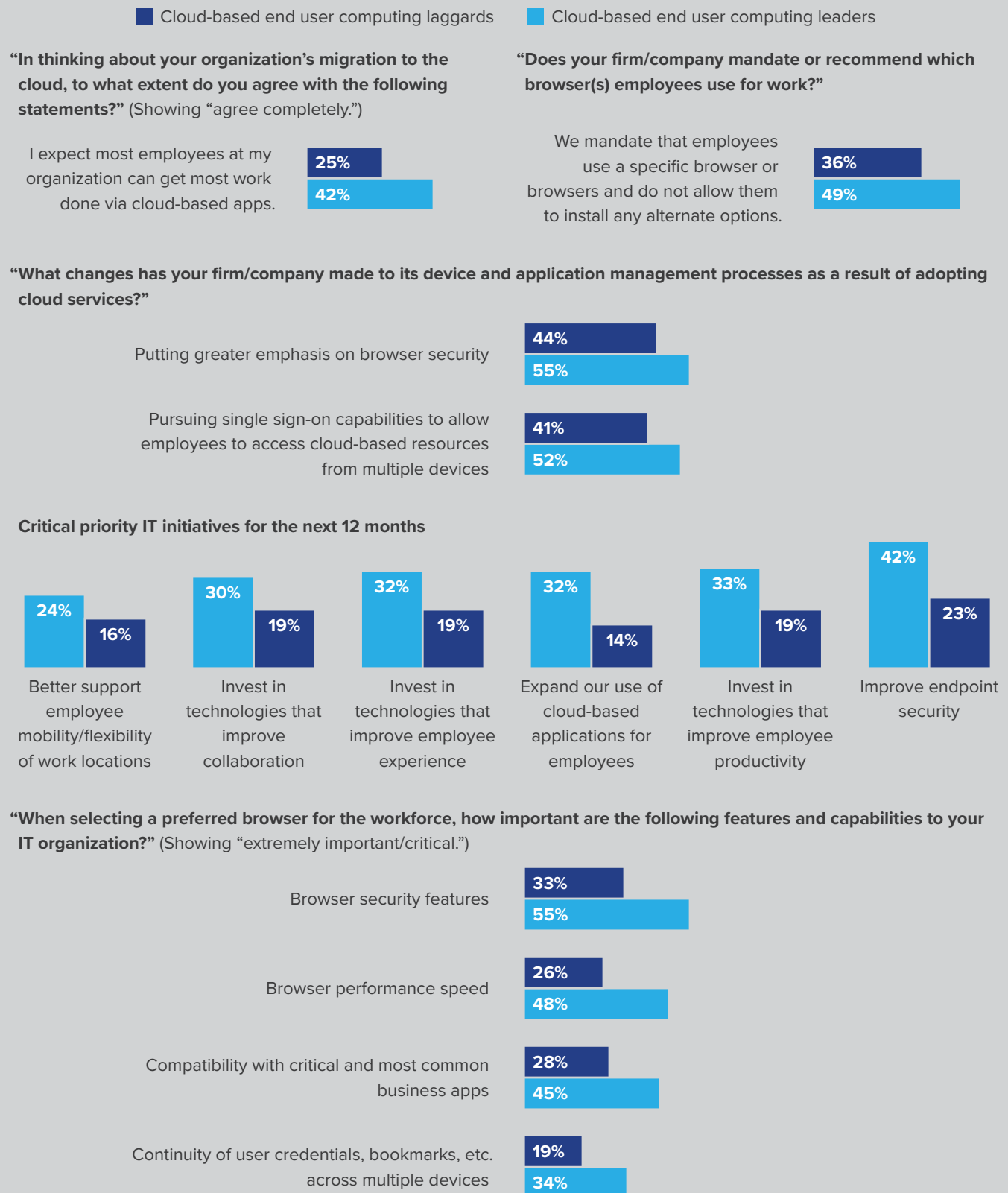
Firms Focused On Cloud-Based End User Computing Are More Resilient

Some firms show evidence that pre-pandemic, they were more crisis-ready than others and will likely to be more resilient in the face of globally disruptive events. Forrester compared firms that significantly or completely evolved their technology approaches to support employee productivity based on cloud-based end user computing to those that have not. The findings revealed that early adopters (see Figure 8):

- › **Provide support and access for cloud workers.** Early adopters are 1.7 times more likely than laggards to expect that employees can get most of their work done via cloud-based apps. They are also 2.3 times as likely to expand their use of cloud-based applications for employees in the next 12 months.
- › **Invest in endpoint and browser security.** A majority of cloud-based user computing early adopters have made changes to put greater emphasis on browser security. They are also 1.4 times as likely to mandate browsers and disallow alternate installations, and 1.8 times as likely to say that improving endpoint security is a critical priority over the next 12 months. Early adopters also place significantly higher consideration on browser selection, and they consider browser security features to be important or critical.
- › **Invest in technologies that support remote work.** The majority of early adopters have pursued single sign-on to enable employees to access their work from multiple devices. Even pre-pandemic, early adopters were 1.5 times as likely to have critical IT initiatives to support employee mobility and flexibility of work locations.
- › **Deliver better employee experience by supporting productivity and collaboration.** Early adopters have critical priority IT initiatives to invest in collaboration and productivity technology in the next 12 months.

The current global disruption will not be the last, and firms must be prepared to mitigate the risk of future disruption.⁵ When remote work is no longer optional, decision makers have an opportunity to embrace a cloud-first model of work to drive employee experience, productivity, and profit.

Figure 8



Base: 969 Enterprise technology decision makers who oversee workforce devices and cloud applications
Source: A commissioned study conducted by Forrester Consulting on behalf of Google, January 2020

Key Recommendations

Cloud workers are a major presence in the workforce, and Forrester found that employers are increasingly making it a priority to cater to worker needs and preferences. The global COVID-19 pandemic will only accelerate the fundamental need for secure, anywhere and anytime computing with a great employee experience. Forrester's in-depth survey of enterprise IT decision makers and information workers about their device and applications usage for work and collaboration yielded several important recommendations:⁶



Place employees at the center of your strategy. To drive employee experience gains using the cloud, you must first understand your employees. This is not a general proposition. You need to map the employee journey step by step to understand how technology can help at each point of the day. During and after the pandemic, this journey will often include more remote work. The journey mapping effort begins with collecting qualitative and quantitative data to derive insights into an employee's daily journey. Is a particular class of worker switching devices frequently given their physical context? What problems does an employee face during the day where they could use technology to quickly solve it?



Tap into the power and insights of cloud workers. Cloud workers are at the forefront of applying technology to their employee journeys. As such, they are both a key target for your design efforts, but also a source of insights. Providing cloud workers with extensions to the tools they already use will drive additional gains. For example, artificial intelligence (AI) is an emerging area of cloud-enabled insight that can help them succeed. And studying this group will help you learn best practices you can apply to other employees as they also adopt the cloud. Understanding how employees self-serve from home is a key context during and after the pandemic since they won't always be able to walk into the IT department for help.



Design workforce solutions in a holistic cloud context. The cloud worker movement isn't happening in isolation. The investments you make in your overall cloud migration strategy play a key role in enabling employees. Placing employee experience in the mix requires rethinking some of the processes you use for your wider cloud strategy, but you can also make those investments far more valuable. Here, you must align those responsible for EX with those responsible for cloud technology in general.



Measure ongoing results. Convene a working group of technologists, business leaders, and information workers to set key performance metrics, determine measurement methods, and revisit deployments. This needs to be a continuous effort because the cloud will invite — and empower — you to continuously improve your employee systems.

Appendix A: Methodology

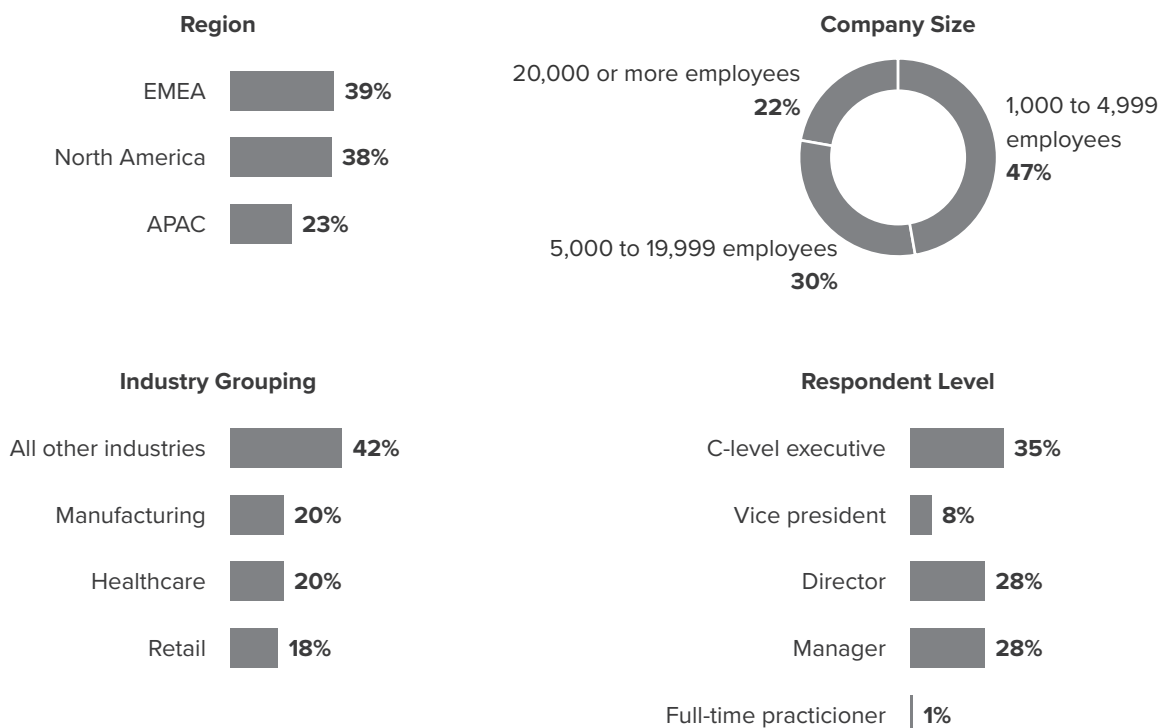
In this study, Forrester conducted surveys of two audiences to evaluate the evolving needs of technology employees and the ways decision makers are planning to meet these needs. The first audience included 969 enterprise technology decision makers who oversee workforce devices and cloud applications. Respondents were decision makers in IT and business roles who are responsible for making or influencing decisions related to devices and applications that their employees use for work and collaboration. Questions provided to the participants asked about their companies' strategies for deploying new business applications, the types of devices that employees currently use for work purposes, and the challenges their IT organizations face with devices that support worker productivity.

The second audience included 1,356 global enterprise information workers who use cloud applications for work at least weekly. Questions provided to the participants asked about the types of devices they currently use for work purposes, the types of devices they plan to use in the future, and the importance of specific capabilities for devices.

Respondents were offered a small incentive as a thank you for time spent on the survey. The study began in December 2019 and was completed in January 2020.

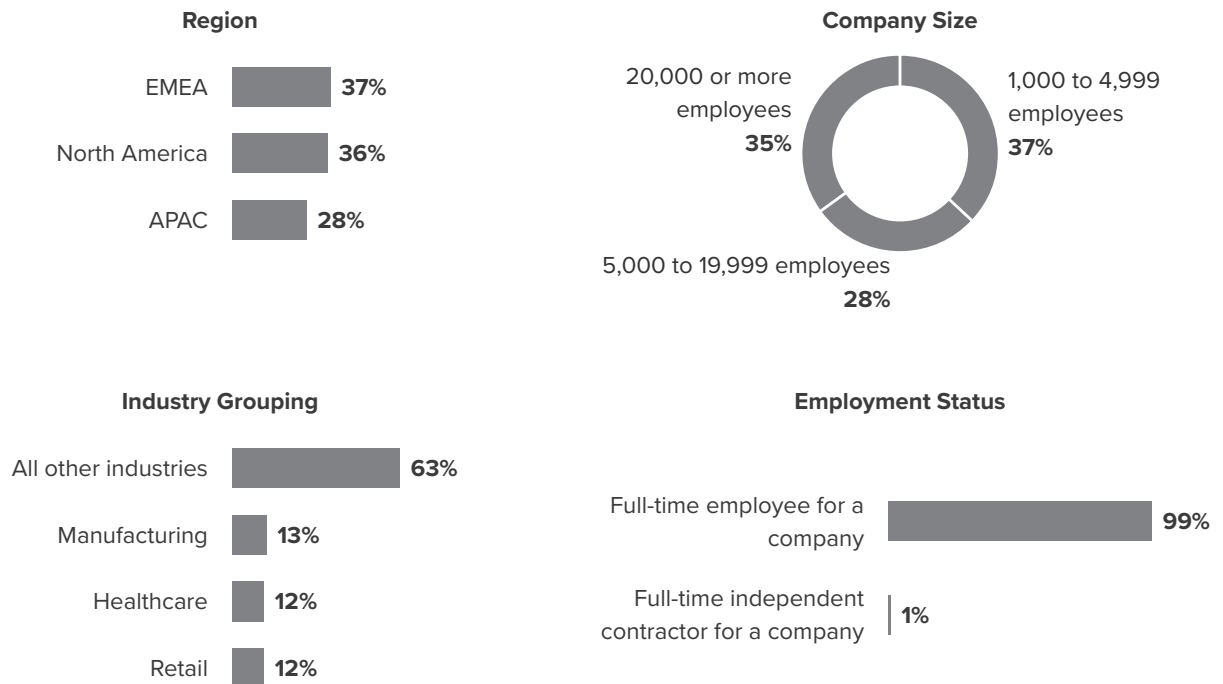
Appendix B: Demographics

DECISION MAKERS



Base: 969 Enterprise technology decision makers who oversee workforce devices and cloud applications
Source: A commissioned study conducted by Forrester Consulting on behalf of Google, January 2020

WORKERS



Base: 1,356 global enterprise information workers who use cloud applications at least weekly for work.
Source: A commissioned study conducted by Forrester Consulting on behalf of Google, January 2020

Appendix C

RELATED FORRESTER RESEARCH

“The Employee Experience Bill Of Rights In The Era Of AI And Automation,” Forrester Research, Inc., December 5, 2019.

“Predictions 2020: Employee Experience,” Forrester Research, Inc., October 31, 2019.

“The Adaptive Workforce Will Drive The Future Of Work,” Forrester Research, Inc., July 25, 2019.

Appendix D

ENDNOTES

¹ In 2018, Forrester estimated that one in four information workers (26%) were cloud workers based on the number of hours workers spent completing tasks in a browser, the kind of device they used for work, and their frequency for using cloud applications. Forrester’s 2020 estimate has been adjusted: We still consider the kind of device and frequency of cloud app use, but we have expanded the list of activities to include both completing tasks in a browser and attending virtual meetings. This adjustment provides a more comprehensive and accurate picture.

² In 2018, Forrester estimated that one in four information workers (26%) were cloud workers based on the number of hours workers spent completing tasks in a browser, the kind of device they used for work, and their frequency for using cloud applications. Forrester’s 2020 estimate has been adjusted: We still consider the kind of device and frequency of cloud app use, but we have expanded the list of activities to include both completing tasks in a browser and attending virtual meetings. This adjustment provides a more comprehensive and accurate picture.

³ Source: “Forrester’s EX Index: A Deeper Look At The Data,” Forrester Research, Inc., March 4, 2020.

⁴ Source: “Introducing Forrester’s Employee Experience Index Landscape,” Forrester Research, Inc., February 14, 2019.

⁵ Source: “CEOs: COVID-19 Is Not A Black Swan Event But A Clarion Call For Business Resilience,” Forrester Research, Inc., April 14, 2020.

⁶ Forrester defines information workers as full-time employees across roles who use a mobile-connected device for at least one hour per workday.