

A Forrester Consulting
Thought Leadership Paper
Commissioned By Atos And VMware
July 2020

Hybrid Cloud: The New Normal

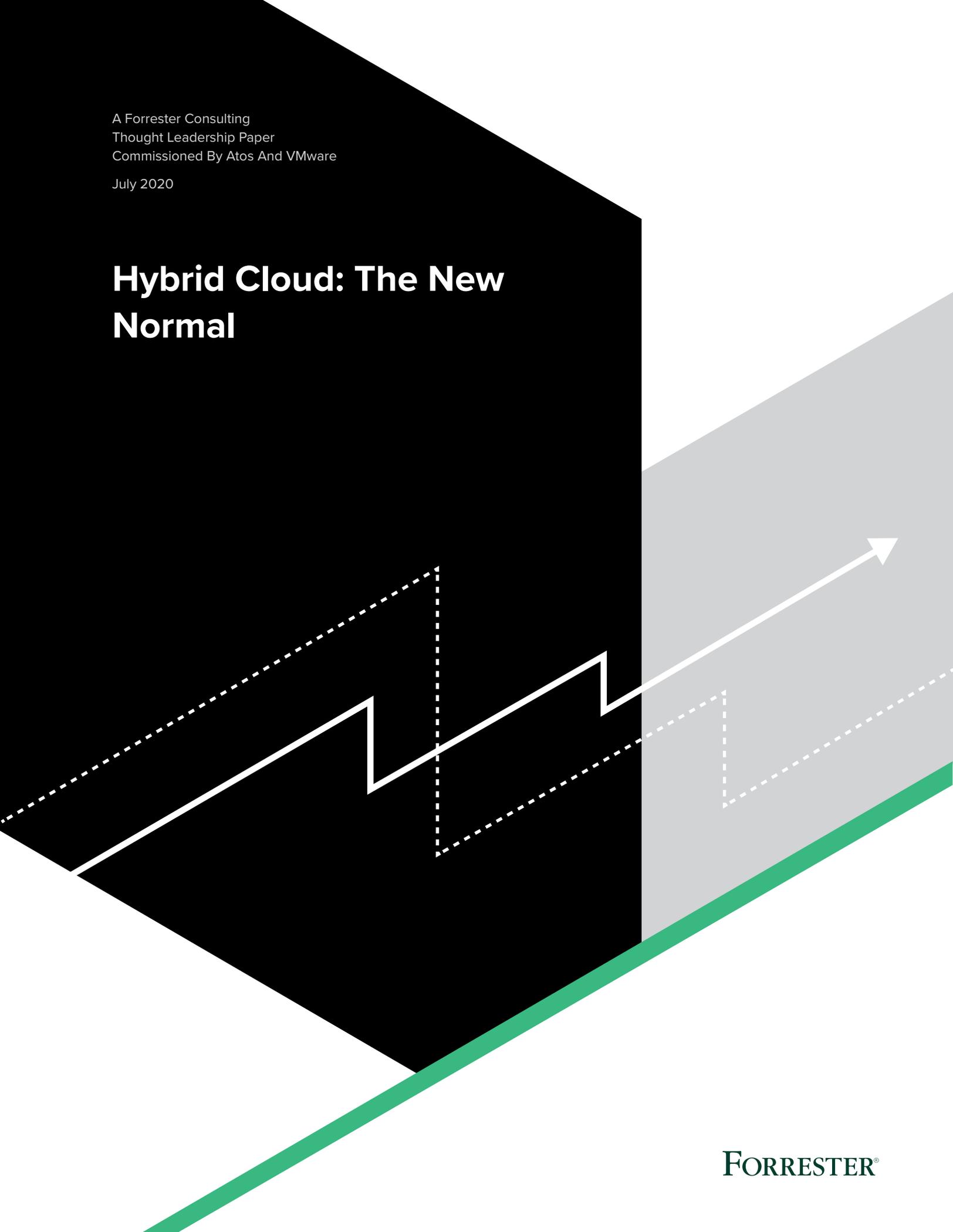


Table Of Contents

- 1** Executive Summary
- 2** Hybrid Cloud Is Not The Future: It's Here Today And Here To Stay
- 6** To Realize The Full Potential Of Hybrid Cloud, Firms Need Strategy, Skills, Flexible Infrastructure
- 9** Effective Hybrid Brings Substantial Benefits
- 12** Conclusion
- 13** Appendix

Project Director:
Josh Blackborow,
Market Impact Consultant

Contributing Research:
Forrester's Infrastructure &
Operations research group

ABOUT FORRESTER CONSULTING

Forrester Consulting provides independent and objective research-based consulting to help leaders succeed in their organizations. Ranging in scope from a short strategy session to custom projects, Forrester's Consulting services connect you directly with research analysts who apply expert insight to your specific business challenges. For more information, visit forrester.com/consulting.

© 2020, Forrester Research, Inc. All rights reserved. Unauthorized reproduction is strictly prohibited. Information is based on best available resources. Opinions reflect judgment at the time and are subject to change. Forrester®, Technographics®, Forrester Wave, RoleView, TechRadar, and Total Economic Impact are trademarks of Forrester Research, Inc. All other trademarks are the property of their respective companies. For additional information, go to forrester.com.
[O-00042007]



Executive Summary

Hybrid cloud is not a third type of cloud, distinct from public or private, on-premises clouds. It describes the optimal use of the right mix of public and private cloud services, tools, and processes to help companies create better software faster, leverage existing infrastructure investments, improve security, and establish consistent, automated management processes that keep cost and complexity in check. More companies will use more cloud platforms every year; a solid hybrid cloud strategy will set the leaders apart.

In April 2020*, Atos and VMware commissioned Forrester Consulting to evaluate the state of hybrid cloud in the enterprise. Forrester conducted an online survey of 287 global IT decision makers to explore this topic. This study yielded several important recommendations:

Establish a comprehensive hybrid cloud strategy today. Seek the right balance of choice versus consistency to delight both developers and operations teams. Your hybrid strategy should signal to your dev teams, your IT teams, and your customers that you are committed to bringing the best tools and platforms to each product and service you deliver. Ensure your hybrid cloud infrastructure strategy encourages flexibility and simplicity from the outset; complex or cumbersome hybrid infrastructure will limit your hybrid cloud success.

Prioritize flexibility, efficiency, and time-to-market over cost cutting. Hybrid cloud's greatest potential lies in business agility: enabling companies to change direction and deliver software faster while keeping IT costs under control. A commitment to hybrid cloud is a commitment to being customer obsessed and not constrained by how you've done things in the past.

Build new apps and modernize legacy apps on a unified platform. Cloud-native development (highly automated and elastic app development based on containers) encourages development speed, app portability, and infrastructure efficiency. Hybrid cloud development platforms not only accelerate new microservices app development; they also expand your options for modernizing existing apps, including extending them with elastic cloud-native customer-facing front ends.

Extend the value of your current infrastructure. Hybrid cloud gives new life to existing resources and opens up opportunities to extend your current infrastructure and management tools — not simply replace. Whether for data center extension, consolidation, or backup and disaster recovery, hybrid infrastructure enhances and extends the value of what you have today.

Don't go it alone: Partner with a hybrid cloud expert provider. Start by leveraging a cloud service partner to create a comprehensive hybrid strategy for every development and IT stakeholder. Use providers to augment your cloud-native skills while you hire and train your cloud-savvy team. And explore fully managed hybrid cloud services for true lights-out operation, for a hybrid cloud that combines the automation of public cloud with the safety and security of private cloud.

**Note: While this study was fielding during the COVID-19 pandemic, we believe it highlights important hybrid cloud strategies that will be even more important to companies as they adapt to and recover from challenging market and customer conditions.*

Hybrid Cloud Is Not The Future: It's Here Today And Here To Stay

In the past two years, organizations have increasingly moved toward using multiple public and private cloud providers in a hybrid model. Our study looked at those using hybrid today (71% of respondents) and those planning on adopting hybrid within the next two years (29% of respondents).

Hybrid cloud adopters view this hybrid cloud as a steady state, not a temporary solution. Technology leaders realize that hybrid is the default operating model now, and for some years to come, and are increasingly focused on how to reap the benefits of using multiple clouds as efficiently, reliably, and cost-effectively as possible.² Eighty-three percent of respondents using hybrid today said it is their preferred long-term cloud strategy because:

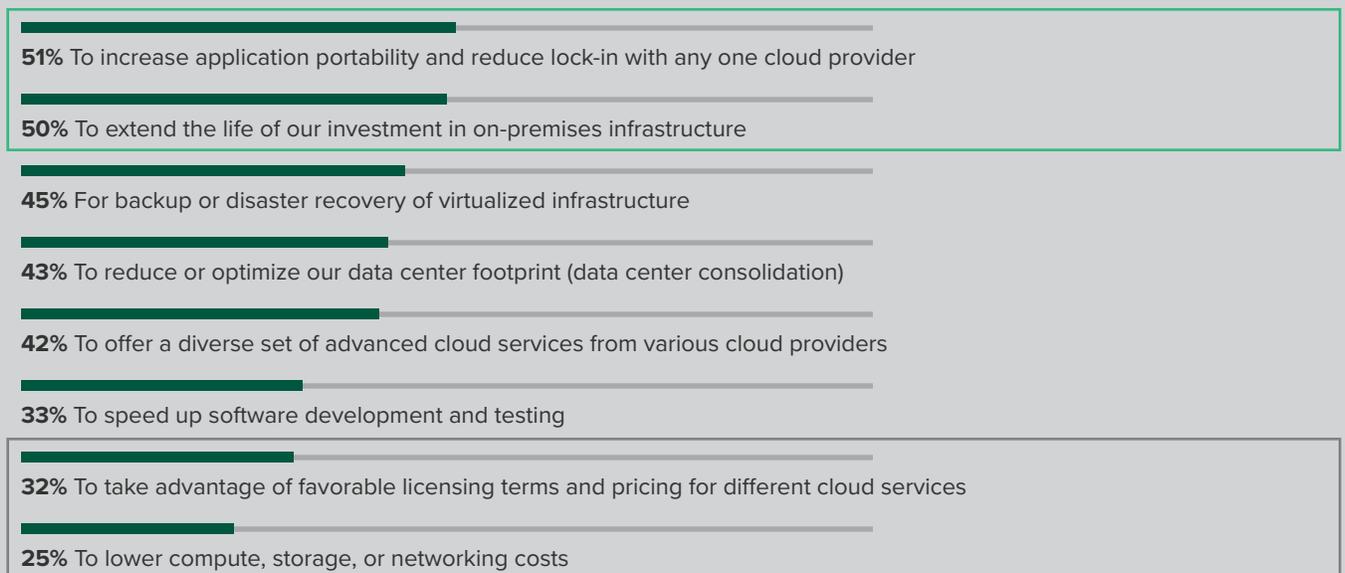
- › **Hybrid is a strategic choice to maximize all cloud benefits.** The adoption of hybrid cloud has little to do with short-term tactical gains, like cost savings or improved software licensing: It's a strategic move. Using a mix of private and public cloud gives users the freedom to customize and capitalize on cloud services with fewer limitations — and to extend cloud benefits across platforms. Our study found that the top motivating factors for adopting hybrid were increased security, time-to-market speed, and extended life of existing assets, whereas lowering costs was the least common motivating factor at only 25%. Additionally, 51% of respondents said that they use hybrid to reduce lock-in with one cloud provider, allowing them to take advantage of increased access to a diverse set of advanced, high-end services offered by various cloud providers (see Figure 1).



83% of hybrid cloud users call it their preferred long-term cloud strategy.

Figure 1

“Why is your company using hybrid cloud today?”

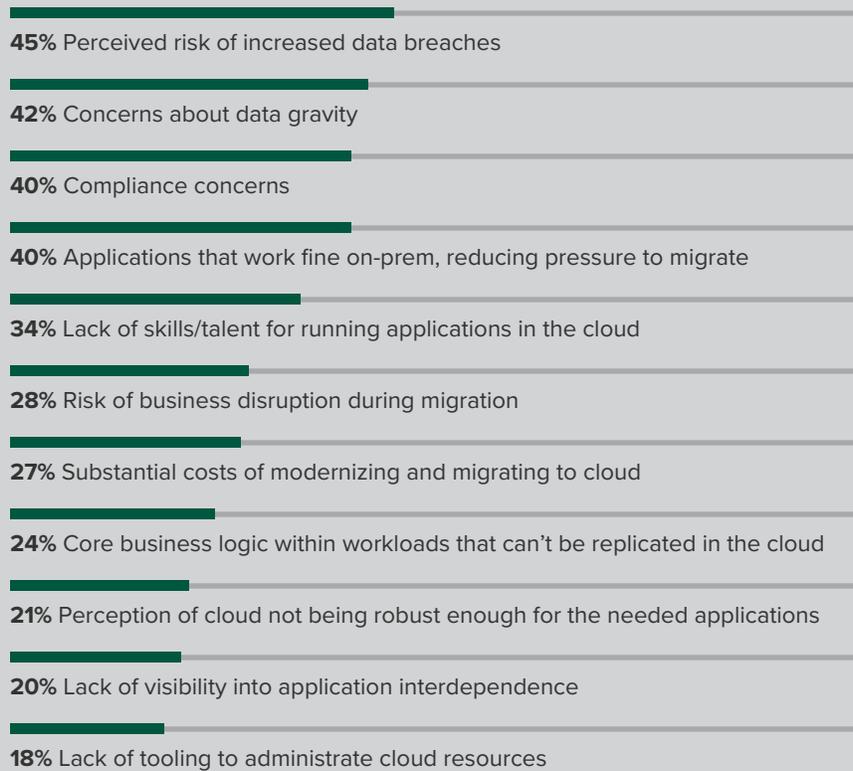


Base: 205 global IT decision makers at organizations that have implemented a hybrid cloud strategy
Source: A commissioned study conducted by Forrester Consulting on behalf of Atos and VMware, April 2020

- › **Hybrid encourages cloud flexibility and portability.** The way hybrid cloud users are deploying applications is just as hybrid as the places they are deploying them to. Our study found that 69% of decision makers deploy applications that span multiple clouds (e.g., front end in public, database in private). This opens up the ability to move apps — and app components — where needed for security and compliance or to migrate apps to improve overall availability and better prepare for disaster recovery scenarios.
- › **Hybrid enables a phased approach to cloud adoption.** While moving applications to the public cloud offers clear benefits, this process also presents considerable challenges. Organizations lack knowledge, skills, and resources and worry about being able to maintain the same level of security and compliance in the cloud as they have on-premises. They also struggle to overcome data gravity, which makes it difficult to move data easily between clouds. In addition, many organizations find that they can't make a compelling business case to migrate applications to the public cloud if they work well on-premises (see Figure 2). This is often when organizations realize that a hybrid strategy enables selective migrations, a phased approach, and incremental benefits.

Figure 2

“What challenges have prevented you from moving apps or workloads to public cloud?”



Base: 287 global IT decision makers

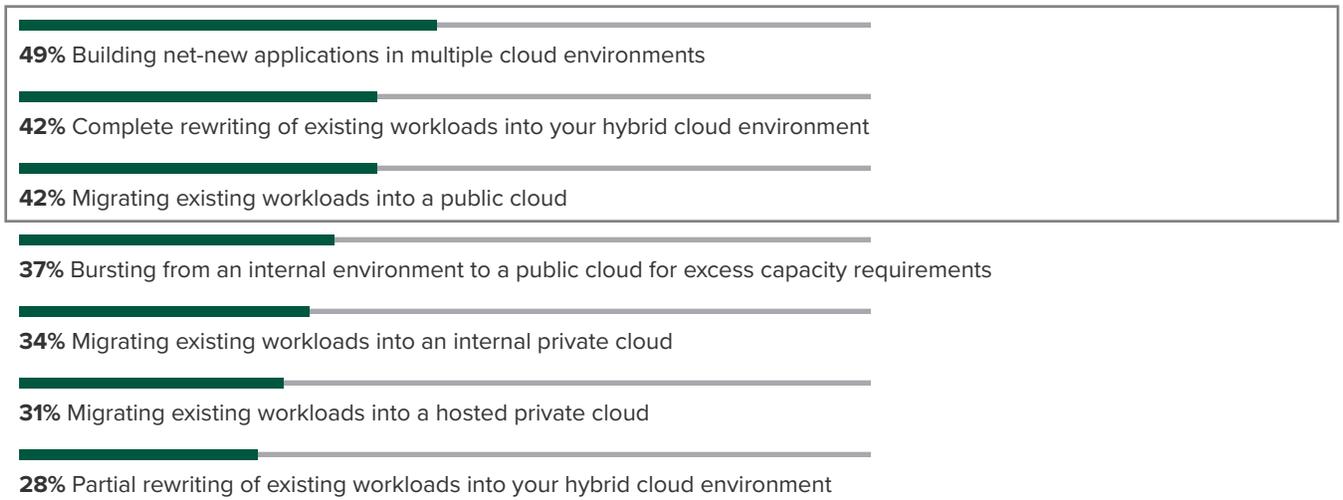
Source: A commissioned study conducted by Forrester Consulting on behalf of Atos and VMware, April 2020

› **Hybrid brings traditional and modern apps together.** Decision makers at leading enterprises see hybrid cloud as a key driver of software innovation to accelerate digital transformation. This is clear in what respondents cited as their top three reasons for expansion of a hybrid cloud strategy: building more net-new applications in multiple cloud environments (49%), rewriting more existing application workloads for cloud (42%), and migrating more existing workloads into public cloud (42%) (see Figure 3). Using an optimal mix of public and private clouds enables new architectures alongside traditional workloads without creating additional silos or stacks to manage. This creates a modern development platform bringing old and new worlds together and allows for expanded use cases like IoT and edge to be built alongside and integrated with traditional applications.

Hybrid cloud benefits are identifiable by both users and nonusers, so it's no surprise that hybrid cloud use is expanding. Companies want to be able to develop new apps and modernize existing apps using cloud at just the right pace for *their* business. Users benefit from, and are taking advantage of, the mobility and flexibility that comes from being able to build in or move applications to the ideal cloud for each use case they have.

Figure 3

“How do you expect to expand your use of hybrid cloud?”



Base: 287 global IT decision makers

Source: A commissioned study conducted by Forrester Consulting on behalf of Atos and VMware, April 2020

COMPANIES WITH HYBRID EXPERIENCE SEE THEIR FUTURE AS HYBRID EVERYWHERE

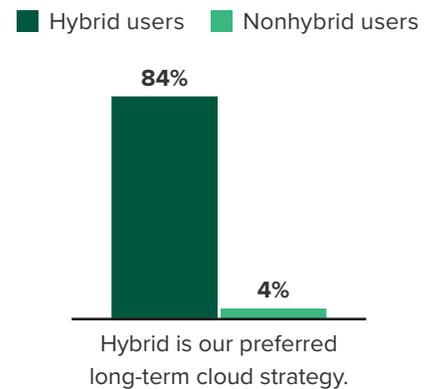
Our study examined the differences between those whose firms are using a hybrid strategy today and those whose companies are planning to adopt hybrid within the next year — and we found a disconnect between the two. While those already at firms already using hybrid see it as their long-term strategy, those whose companies are not yet taking a hybrid approach anticipate it will be a temporary state. In fact, only 4% of those who are not hybrid today see hybrid as a long-term solution (see Figure 4).

Clearly, experience with hybrid cloud makes its long-term benefits very apparent. Those at firms using hybrid today reported that they can achieve consistency across environments and capitalize on the operational benefits they get from having a unified, consistent management portal (52%), consistent services (45%), and consistent data (43%) across clouds.

Decision makers whose firms are not hybrid yet have yet to experience the benefits of consistent services and management across clouds; they are more focused on using hybrid to solve immediate needs. Fifty-two percent said they will use hybrid for data center extension in the next two years; 49% said they will deploy hybrid to use different clouds for different needs (see Figure 5). Those at firms not yet using hybrid see it less as an opportunity to create consistency across environments and more as a way to extend existing infrastructure investments. Hybrid benefits end up building on each other when the focus is on long-term strategy, consistency, and portability — and less on immediate cost savings or data center extension.

Figure 4

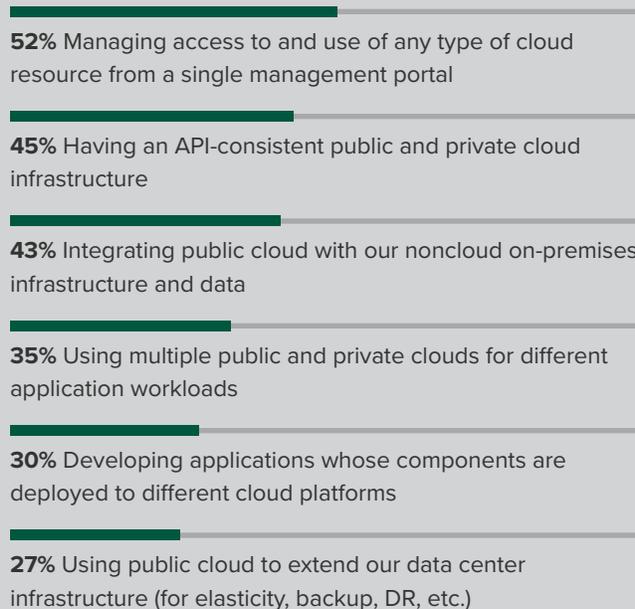
“To what extent do you agree with each of the following statements?”
(Showing percentages of users who agreed or strongly agreed)



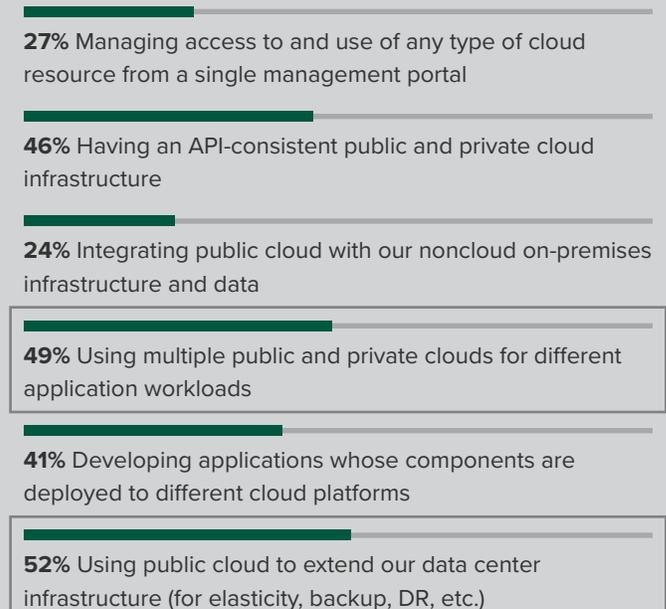
Base: 287 global IT decision makers
Source: A commissioned study conducted by Forrester Consulting on behalf of Atos and VMware, April 2020

Figure 5

“Which of the following hybrid cloud use cases has your company deployed today?”



“Which of the following hybrid cloud use cases is your company planning to deploy in the next two years?”



Base: 205 global IT decision makers at organizations that have implemented a hybrid cloud strategy
Source: A commissioned study conducted by Forrester Consulting on behalf of Atos and VMware, April 2020

Those whose firms do not yet use hybrid cloud are also more concerned about the amount of work required to deploy a successful hybrid cloud. For example, 73% said they think they need to completely rewrite existing workloads for hybrid cloud. Only 30% of those whose companies use hybrid cloud reported the same. Why? It's likely that nonhybrid companies simply lack familiarity with today's hybrid cloud platforms, tools, and services, which take the heavy lifting out of hybrid cloud provisioning, simplify hybrid cloud management, and make it easier to build and modernize apps in the best cloud.

To Realize The Full Potential Of Hybrid Cloud, Firms Need Strategy, Skills, Flexible Infrastructure

When it comes to cloud, knowing what to move, when to move it, and where to move it to is easier said than done. Organizations must have a measured and comprehensive cloud strategy to take advantage of all that a hybrid approach offers. And yet 69% of decision makers whose organizations use hybrid cloud reported lacking a comprehensive cloud strategy — their No. 1 cloud challenge overall. Without a cohesive strategy, organizations will be limited in their ability to succeed because:

- › **Organizations lack the skills and tools to build and operate cloud-native apps effectively.** Among leaders at organizations that have adopted hybrid cloud today, most still struggle to develop new software natively in the cloud using the cloud-native tools and automations available. Organizations lack both the DevOps and platform ops skills needed to adopt cloud-native software development and delivery practices. A lack of DevOps skills stems fundamentally from issues around priorities and strategy. Without a comprehensive cloud strategy in place, organizations struggle to hire, train, and retain the development and operations skills needed to get the most out of hybrid cloud. In fact, those who are the most challenged by a lack of comprehensive cloud strategy are nearly 3x more likely to also report that their lack of DevOps skills is also a top challenge.

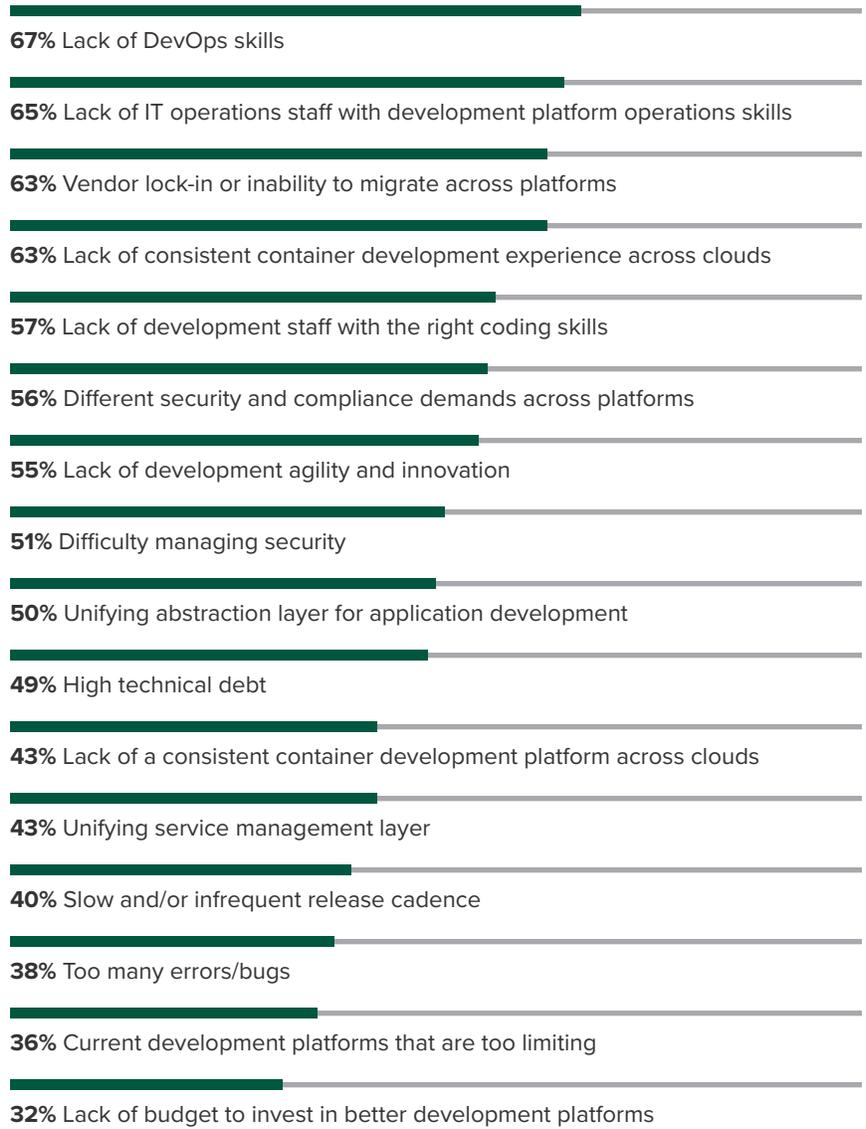
This lack of skills coupled with the disparate nature of a hybrid cloud architecture underlines the need for an effective hybrid container platform solution. On average, 15.3% of respondents' custom-built applications are being built natively for containers, and decision makers project that 27% will be in two years. However, nearly two-thirds (63%) cited a lack of consistent container development experience across clouds as a challenge; 63% also cited an inability to migrate across platforms (see Figure 6).

67% of decision makers said their organizations are challenged with a lack of skills to adopt cloud-native technologies.

Figure 6

“As your company adopts cloud-native (containers/Kubernetes/microservices) software development and delivery practices, what challenges do you face?”

■ Very/Extremely challenging

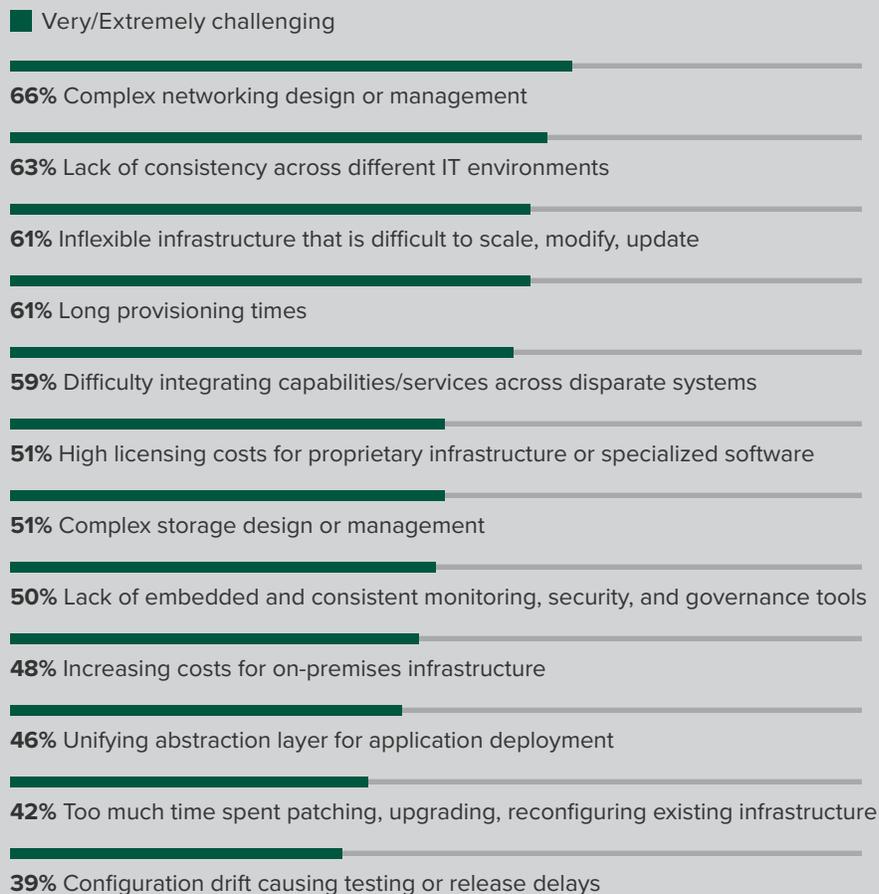


Base: 205 global IT decision makers at organizations that have implemented a hybrid cloud strategy
Source: A commissioned study conducted by Forrester Consulting on behalf of Atos and VMware, April 2020

› **Inflexible infrastructure holds organizations back.** Many organizations lack the infrastructure necessary to get the most out of their hybrid deployments. When it comes to creating and operating infrastructure in a cloud environment that encompasses both public and private clouds, complex networking, lack of consistency across environments, and lack of infrastructure flexibility stand in the way. Inconsistencies across different IT environments (63%) and inflexibility (61%) keep organizations from being able to scale, modify, or update infrastructure and take advantage of new hybrid cloud opportunities when they arise (see Figure 7). This, again, comes back to issues around a lack of comprehensive strategy. Those who are the most challenged by a lack of a comprehensive cloud strategy are also more than 3x more likely to report infrastructure flexibility as a top challenge. When organizations fail to take a long-term, strategic approach to cloud, they miss out on the ability to take advantage of unique hybrid strengths in the short term as well.

Figure 7

“To what extent has your company experienced the following challenges around infrastructure in a hybrid cloud environment?”



Base: 205 global IT decision makers at organizations that have implemented a hybrid cloud strategy
 Source: A commissioned study conducted by Forrester Consulting on behalf of Atos and VMware, April 2020

Effective Hybrid Brings Substantial Benefits

Despite the many hurdles that hybrid users are working through to build an effective hybrid cloud strategy, they still overwhelmingly see hybrid as their preferred long-term strategy to get the most from every cloud they need — today and tomorrow. That's because even though their hybrid approaches to date have been challenging, they are already yielding substantial benefits:

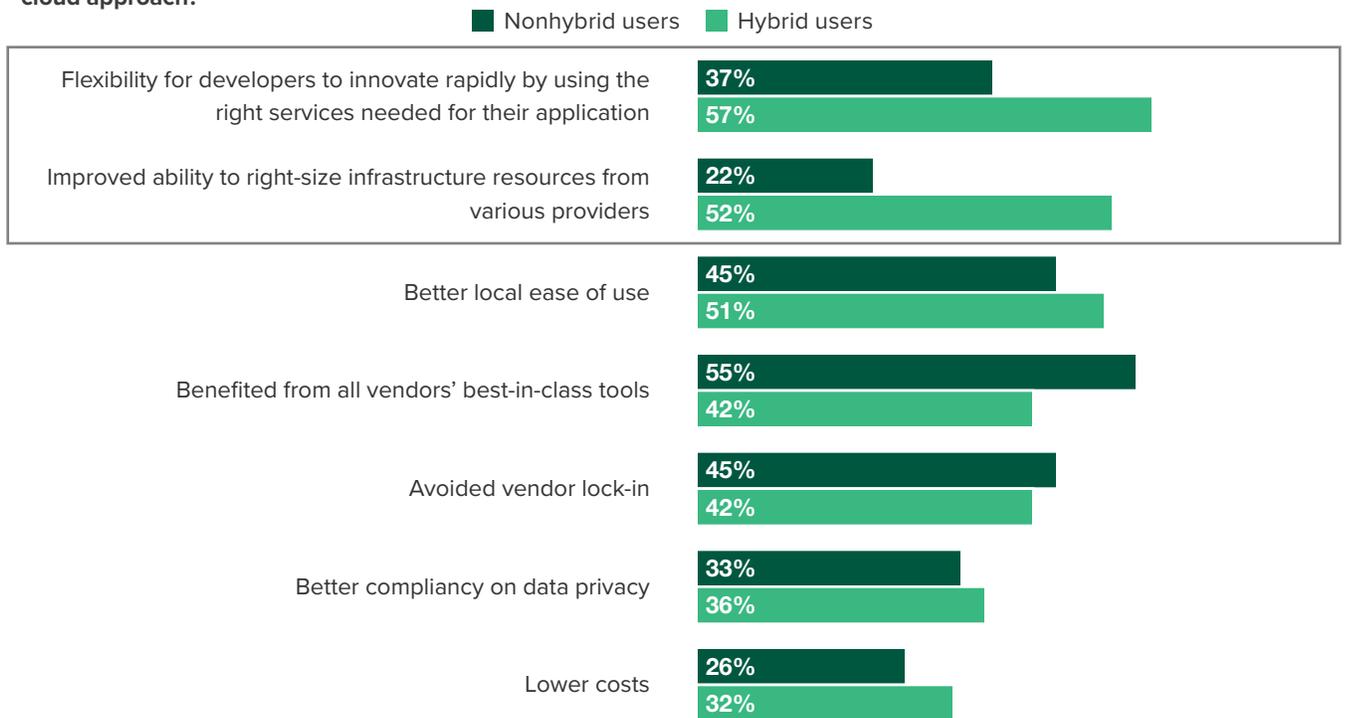


- › **Hybrid increases flexibility, infrastructure efficiency, and developer satisfaction.** The flexibility to innovate and ramp up business agility plus the ability to right-size infrastructure resources were the top benefits cited by our respondents (52%), and they are fundamental drivers for hybrid cloud today. And, as companies increasingly differentiate with software, developers must be productive with the best tools for each job. Using the right balance of private and public clouds can maximize consistency of both dev and ops experience across common functionality through common hybrid development platforms and common infrastructure management tools. This results in greater ease of use for developers and operations teams, another top benefit (51%).
- › **Hybrid limits vendor lock-in and increases access to best-in-class tools.** Although the strategic flexibility and efficiency benefits of hybrid cloud are what makes it most valuable, hybrid also future-proofs many cloud decisions by reducing dependence on specific cloud services or tools only offered in a single cloud platform. A long-term commitment to hybrid cloud lays the foundation for future business agility — and app portability — and expands the available catalog of best-of-breed tools, platforms, and services companies can offer their development teams and IT professionals.
- › **Hybrid done right can also reduce costs.** Though lower costs was the least cited benefit of hybrid cloud (32%), it's certainly not insignificant. Organizations are adopting hybrid as a long-term strategic decision, not as short-term cost-cutting measure. But over time, being able to develop and deploy apps to whichever cloud offers the best mix of time-to-market, operational simplicity, and infrastructure efficiency will keep overall cloud costs from growing out of control.

Even nonhybrid users can identify the value that hybrid cloud provides, most notably around the logistical benefits from vendor best-in-class tools (55%) and the prevention of vendor lock-in (45%) (see Figure 8). However, many nonusers fail to see the more strategic benefits around flexibility for innovation and ability to right-size infrastructure that users experience on a firsthand basis. This speaks to the nonhybrid users' lack of understanding of the ability for hybrid to be a viable long-term cloud strategy.

Figure 8

“Which of the following benefits has your company experienced/do you expect to experience from adopting a hybrid cloud approach?”



Base: 205 global IT decision makers at organizations that have implemented a hybrid cloud strategy
 Source: A commissioned study conducted by Forrester Consulting on behalf of Atos and VMware, April 2020

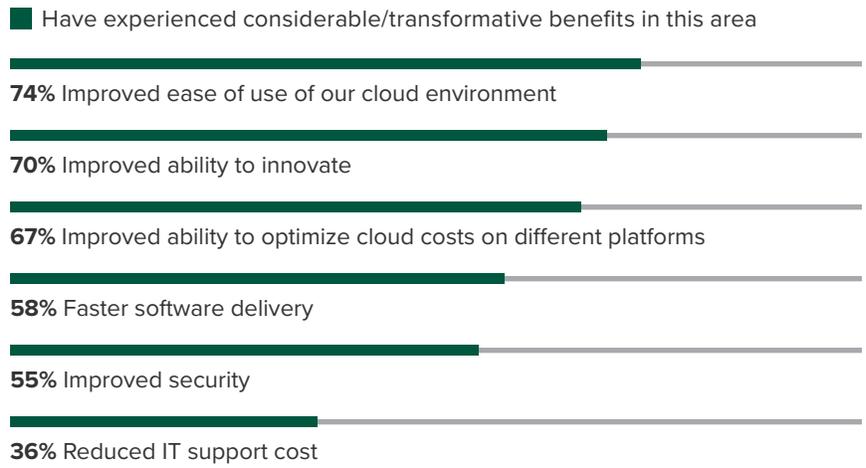
ORGANIZATIONS TURN TO SERVICE PROVIDERS TO MITIGATE CHALLENGES

Hybrid cloud environments are complex, and with the expansion of use, there is a substantial need for cloud service consultants to mitigate the inevitable challenges. Eighty-seven percent of respondents said that cloud migration services would be very or extremely valuable to their organizations, and 85% reported that cloud technical architecture and design services would be a top service. The data makes this growing demand clear: While 29% said they implemented cloud platforms themselves two years ago, only 22% go it alone today. In contrast, 37% said they relied on cloud service providers to implement their clouds in the past, but nearly half (49%) leverage cloud service providers today.

Organizations have not only identified the need of working with a cloud service provider that offers migration services, but also what benefits they expect as their partnership continues. Respondents view access to a hybrid cloud-savvy service provider as an opportunity to speed up time-to-market for new app development (56%), improve overall cloud security posture (54%), and automate much more of their overall IT operations (51%). Hybrid cloud users whose firms have partnered with service providers have seen substantial benefits beyond what they initially anticipated. Seventy-four percent of hybrid users stated that their service provider has helped make their hybrid environments more consistent and easier to use; 70% said they are more innovative; and 67% said the service provider relationship has helped them optimize overall cloud costs (see Figure 9).

Figure 9

“To what extent have you seen a benefit in each of the following areas from using a cloud service provider for your hybrid cloud environment?”



Base: 101 global IT decision makers

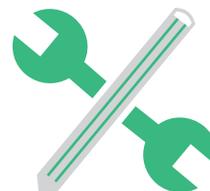
Source: A commissioned study conducted by Forrester Consulting on behalf of Atos and VMware, April 2020

Conclusion

Forrester's study of 287 global IT decision makers found that the way that organizations view and deploy hybrid cloud is rapidly changing — and those whose firms are using it effectively see significant benefits.

KEY FINDINGS

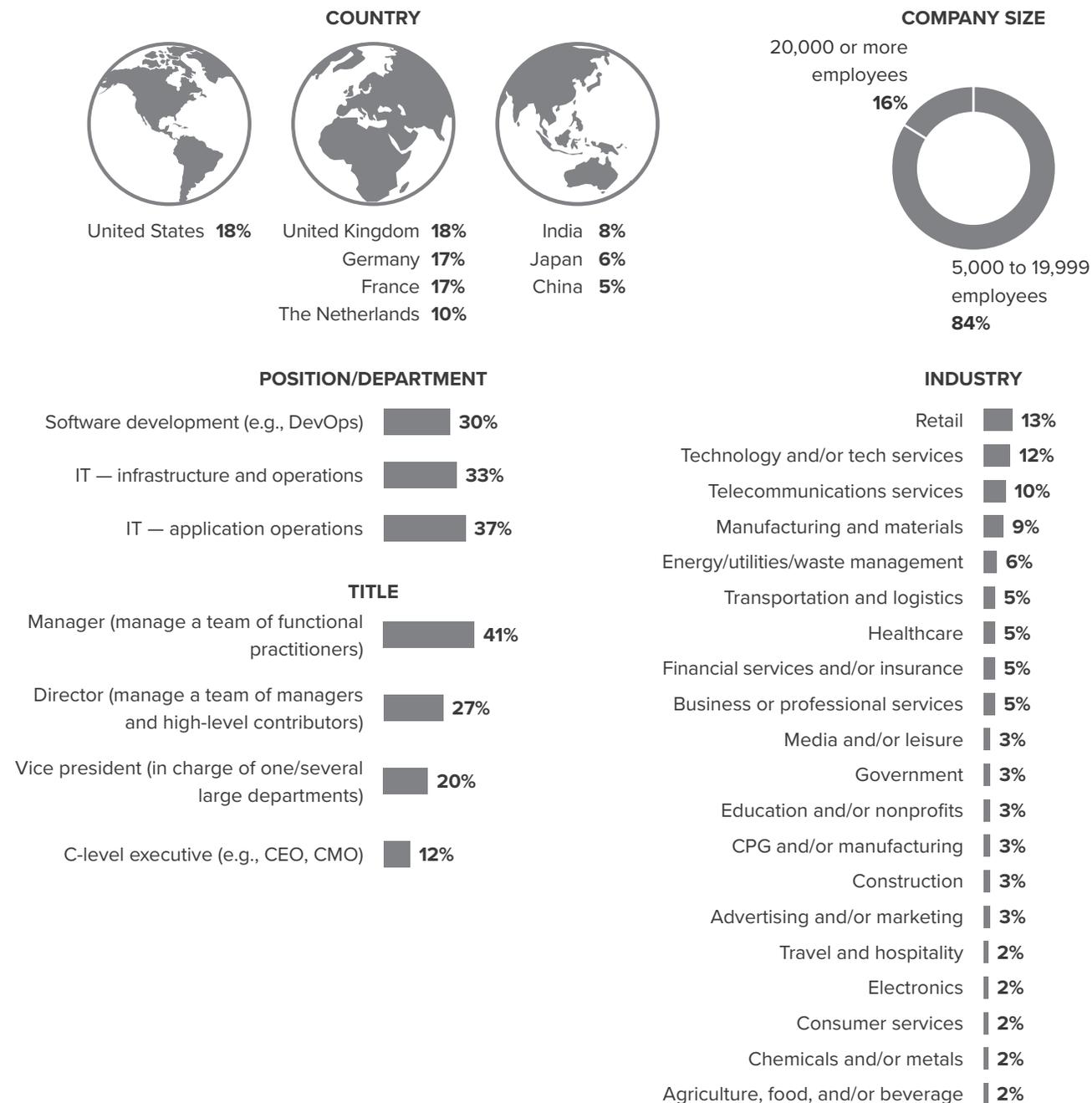
- › **Hybrid cloud is a strategic state.** Those whose firms use hybrid today overwhelmingly do not view it as a temporary solution; 83% of cloud users consider it to be their long-term strategic state. However, those whose firms haven't adopted today struggle to envision its value: Only 4% think hybrid cloud will be their long-term strategy.
- › **Adopting hybrid is not easy.** Knowing when, where, and how to deploy applications and workloads in the cloud is far easier said than done. The adoption and implementation of an effective hybrid cloud strategy are a struggle for most organizations. In fact, over two-thirds of hybrid adopters said they do not have comprehensive cloud strategies at all. In addition, many organizations lack the flexible infrastructure needed to capitalize on important features of hybrid. Adopting in a nonstrategic way or with inflexible infrastructure keeps many organizations from achieving the benefits that hybrid cloud has to offer.
- › **Organizations turn to cloud providers.** To navigate the murky waters of building a hybrid cloud strategy, many organizations have begun turning to hybrid cloud service providers to mitigate challenges. Our study found there is a decrease in the number of organizations attempting to self-implement and a significant increase in the use of cloud service providers. This has helped organizations better innovate, improved ease of use, and helped optimize cloud on different platforms.



Appendix A: Methodology

In this study, Forrester conducted an online survey of 287 global IT decision makers (manager+ in IT, infrastructure and operations, or DevOps) from a range of industries to evaluate hybrid cloud use and adoption. Questions provided to the participants asked about their organizations' current use of cloud, future plans for using cloud, and the associated benefits and/or pain points. Respondents were offered incentives as a thank you for time spent on the survey. The study began in March 2020 and was completed in April 2020.

Appendix B: Demographics



Base: 287 global IT decision makers

Note: Percentages may not total 100 because of rounding.

Source: A commissioned study conducted by Forrester Consulting on behalf of Atos and VMware, April 2020