May 2022

virtana

The State of Multi-Cloud Management

www.virtana.com

Key Findings:

82% of organizations are currently leveraging a multi-cloud strategy

78% of organizations have workloads deployed in more than three public clouds

51% of respondents plan to increase their number of public cloud instances by the end of 2022

75% of respondents are lacking cloud governance to guide cloud management

63% of respondents are using five or more separate tools for migration, cloud cost optimization, IPM, APM, and cloud infrastructure monitoring

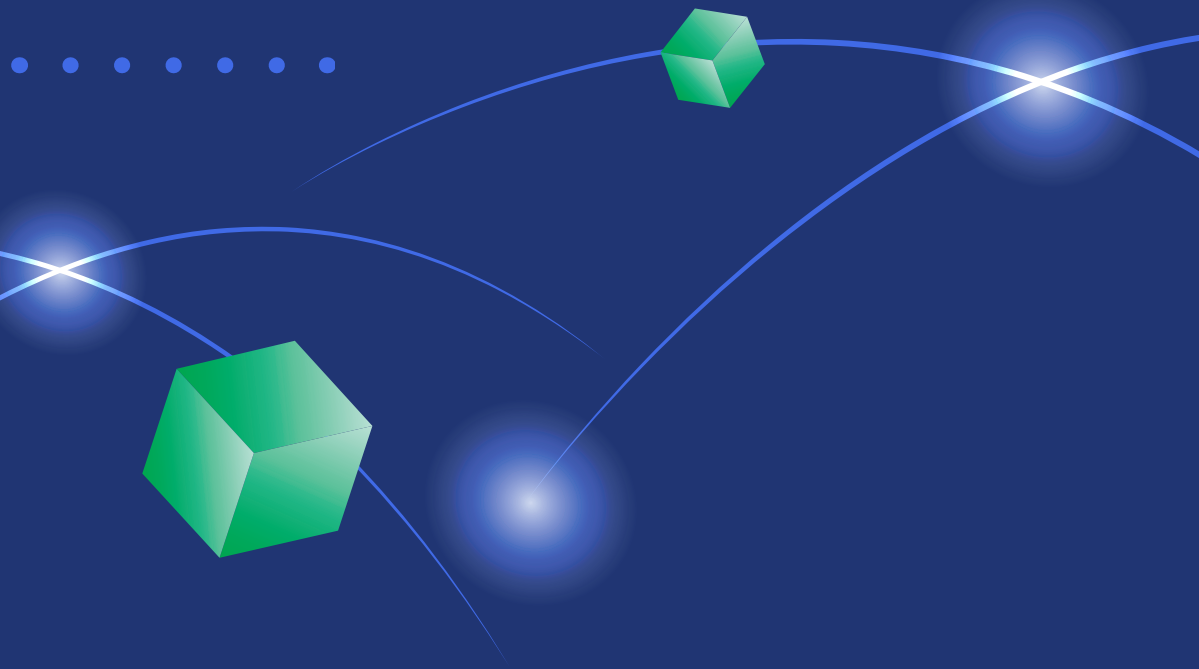
95% of respondents see value in a serverless strategy, but only 76% are in the early stages of implementing one

87% of respondents see the value in FinOps but 70% of respondents have not yet developed a mature FinOps practice

83% are expending some level of manual effort to consolidate data from all of these tools, while 53% of organizations using 20+ tools still have manual processes

SURVEY PARTICIPANTS AND METHODOLOGY

Virtana commissioned an independent research firm to survey 360 cloud decision-makers in the US and the UK during February and March 2022. Respondents were verified and randomized using global panel service providers, and all surveys were completed online. The margin of error for this study is +/- 5.2% at the 95% confidence level.



Executive Summary

For most organizations, 2020 was all about getting to the cloud. While most were already on that path, the overnight shift to remote everything forced enterprises to accelerate the journey, collapsing the time frame from years to months or even weeks. The work continued into the following year and 2021 was marked by the discovery of the downsides of the cloud and the repercussions of suboptimal implementations, including skyrocketing costs and performance problems.

As we look ahead, 2022 will be about reimagining hybrid, multi-cloud strategies and processes. Virtana commissioned a survey to understand what the driving needs are and the direction enterprises are headed in.

Key findings we uncovered include:

- **Hybrid cloud infrastructures are increasingly complex as multi-cloud adoption grows and on-premises deployment continues to be strategic.**
  - 52% of enterprises will continue to maintain a hybrid (private/data center plus public cloud) environment as a key strategy.
  - 82% have a multi-cloud strategy, more than three-quarters (78%) have workloads deployed in more than three public clouds, and 51% of respondents plan to increase the number of public cloud instances by the end of 2022. Of the organizations not currently using multi-cloud, 38% will be using three or more by the end of 2022.
- **Tool sprawl and siloed data impede transformation.**
  - 63% of respondents are using more than five tools for migration, cloud cost optimization, IPM, APM, and cloud infrastructure monitoring.
  - 83% are expending some level of manual effort to consolidate data from all of these tools, or they're just using the tools separately. 53% of organizations using 20+ tools still have manual processes, and 6% aren't consolidating the data at all.
  - 73% stated that siloed efforts limit their ability to realize the full potential of the cloud.
- **Cloud deployment may be widespread, but formal controls are not.**
  - While the vast majority—87%—agree that there's value in FinOps, it's still early days as 70% have started but have not yet developed a mature practice.
  - Likewise, 75% are lacking cloud governance to guide cloud management despite the fact that 96% see it as valuable.
- **Management capabilities are evolving, but technology is changing and there are challenges to overcome.**
  - 96% of respondents see value in workload portability, but 71% are only in the early stages, with the top benefits anticipated to be maximized cost savings (58%), reduced cloud service provider (CSP) risk (46%), and increased business agility (43%).
  - 95% see value in serverless computing, but 76% are only in the early stages, and the top benefits cited are increased scalability (55%) and reduced cost (54%).

Findings

Hybrid cloud infrastructures are increasingly complex as multi-cloud adoption grows and on-premises deployment continues to be strategic

The vast majority of organizations are well past their initial migrations into the cloud. In fact, the number of respondents with more than half of their public workloads in the public cloud grew from 34% to 59% over the last year—a 75% increase. *(Figure 1)*

The journey is not just about moving more workloads into the cloud, but about using more clouds, and 82% of respondents are managing a multi-cloud environment today. *(Figure 2)*

FIGURE 1
Percentage of organization's workloads currently deployed in the public cloud

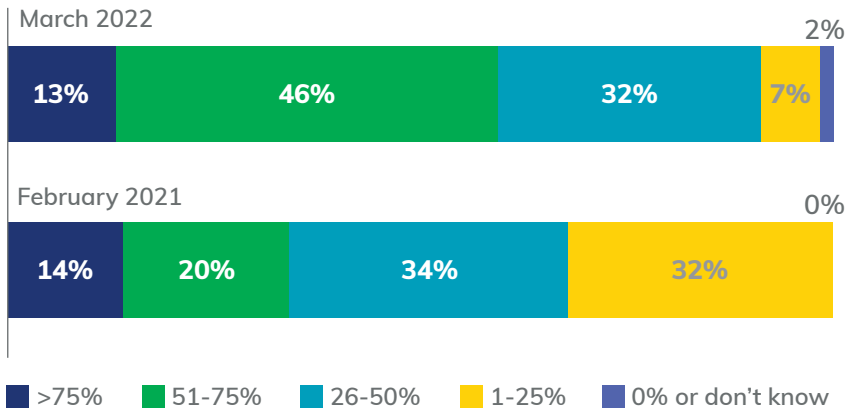
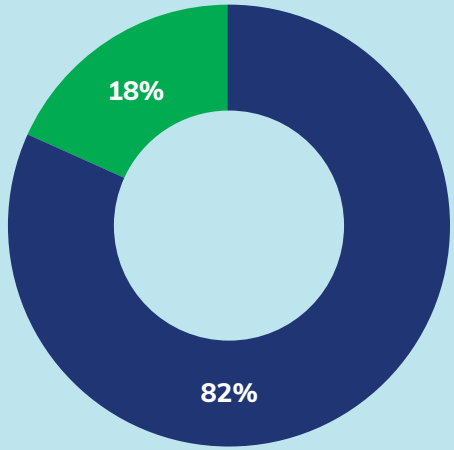


FIGURE 2
Does your organization have workloads deployed in more than one public cloud?



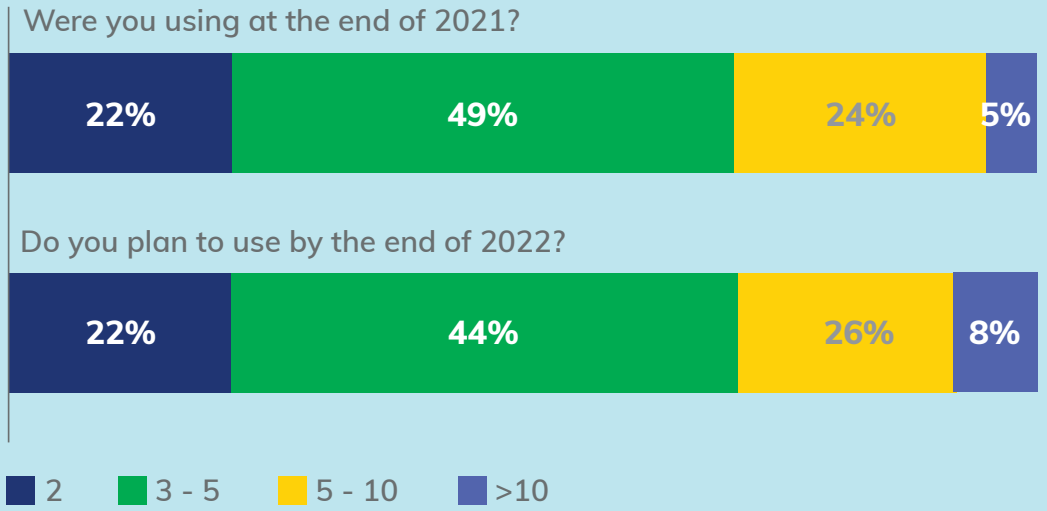
N= 360

The number of organizations using five or more public clouds will grow from 29% at the end of 2021 to 34% at the end of 2022, while the number of organizations using only two public clouds will hold steady at 22%. (*Figure 3*) But this seemingly small growth doesn't tell the full story.

34%

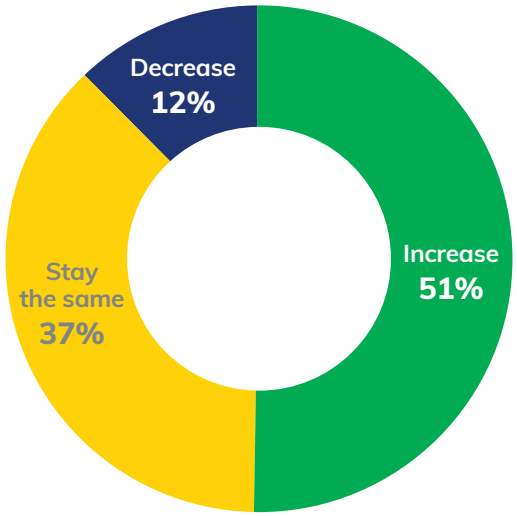
of organizations plan to use five or more public clouds at the end of 2022

FIGURE 3
How many public clouds ...



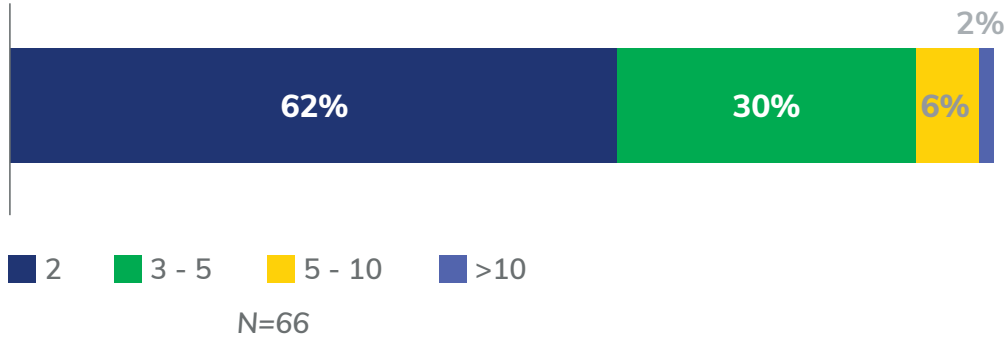
When you look beyond the totals, there's a lot more activity planned. In fact, more than half of respondents (51%) are planning to increase the number of cloud instances employed over the course of 2022 (*Figure 4*) and 38% of respondents that are not currently using multiple clouds plan to use three or more by the end of the year (*Figure 5*).

FIGURE 4
Change in the number of cloud instances by the end of 2022



N= 360

FIGURE 5
Public cloud instances planned for end of 2022 by respondents using only one today



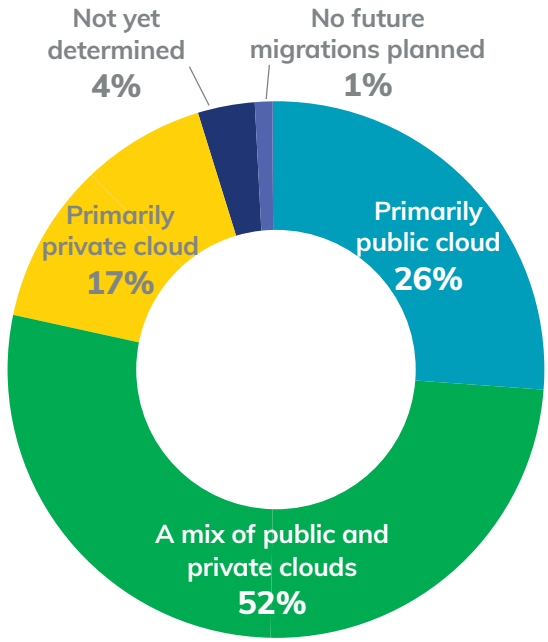
N=66

But this doesn't mean on-premises deployments are dwindling. On average, organizations are maintaining 17% of their workloads on premises, 22% in a private cloud, and 53% in the big three CSPs. (*Figure* 6) This hybrid approach will continue to be a key strategy for future migrations. (*Figure* 7)

FIGURE 6
Percentage of your organization's workloads running in each of the following (mean)

N=360

FIGURE 7
Strategy for future cloud migrations



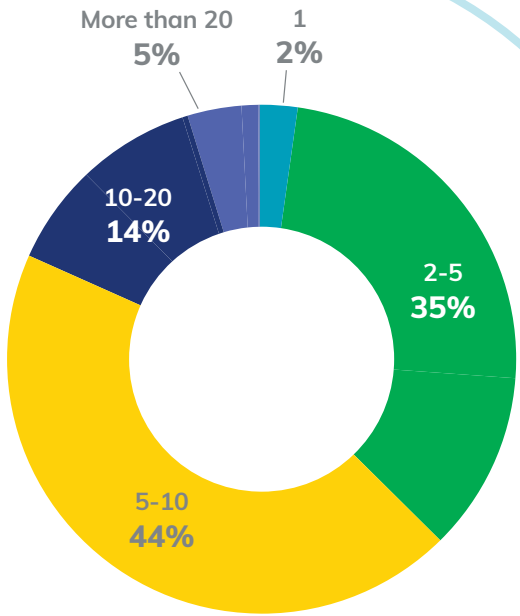
As organizations continue to move more workloads into more public and private clouds, it becomes increasingly critical to be able to manage it all, including tools, data, controls, and evolving capabilities.

Tool sprawl and siloed data impede transformation

Organizations use a variety of tools to monitor and manage different aspects of their complex hybrid, multi-cloud environments. There are tools for migration, cloud cost optimization, IPM, APM, cloud infrastructure monitoring and more. And 63% of respondents reported they use five or more of these tools. (*Figure 8*)

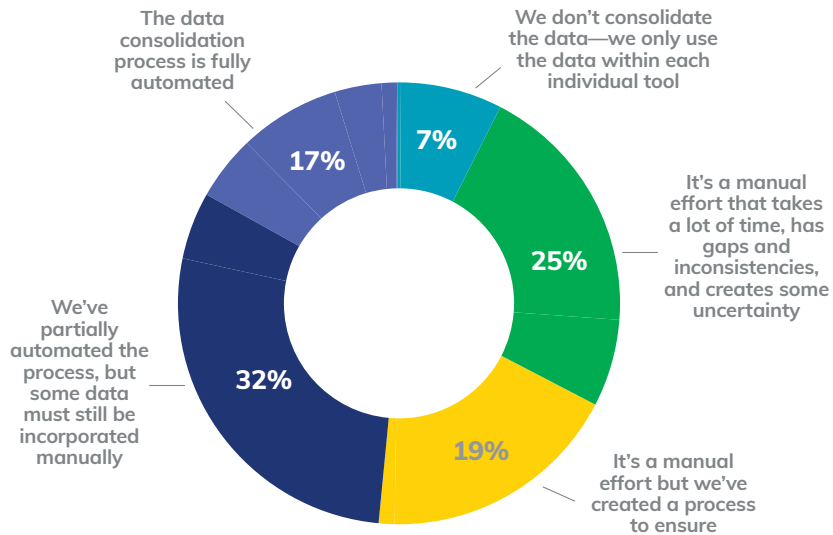
In and of itself, this isn't necessarily a problem as each of these tools provides a specific important function. The challenge is that if you can't consolidate data from all these different tools, you cannot get a comprehensive and complete view of your infrastructure. This lack of global visibility creates gaps that can expose you to performance, cost, and other risk. But consolidating all of that data is not easy. In fact, 83% are expending some level of manual effort, which creates a lot of extra work, or they're just using the tools separately, which limits global visibility and control. (*Figure 9*)

FIGURE 8
Number of tools used for migration, cloud cost management, IPM, APM, on-premises performance monitoring, and cloud infrastructure monitoring



N=360

FIGURE 9
How would you characterize the effort to consolidate data from the various tools?

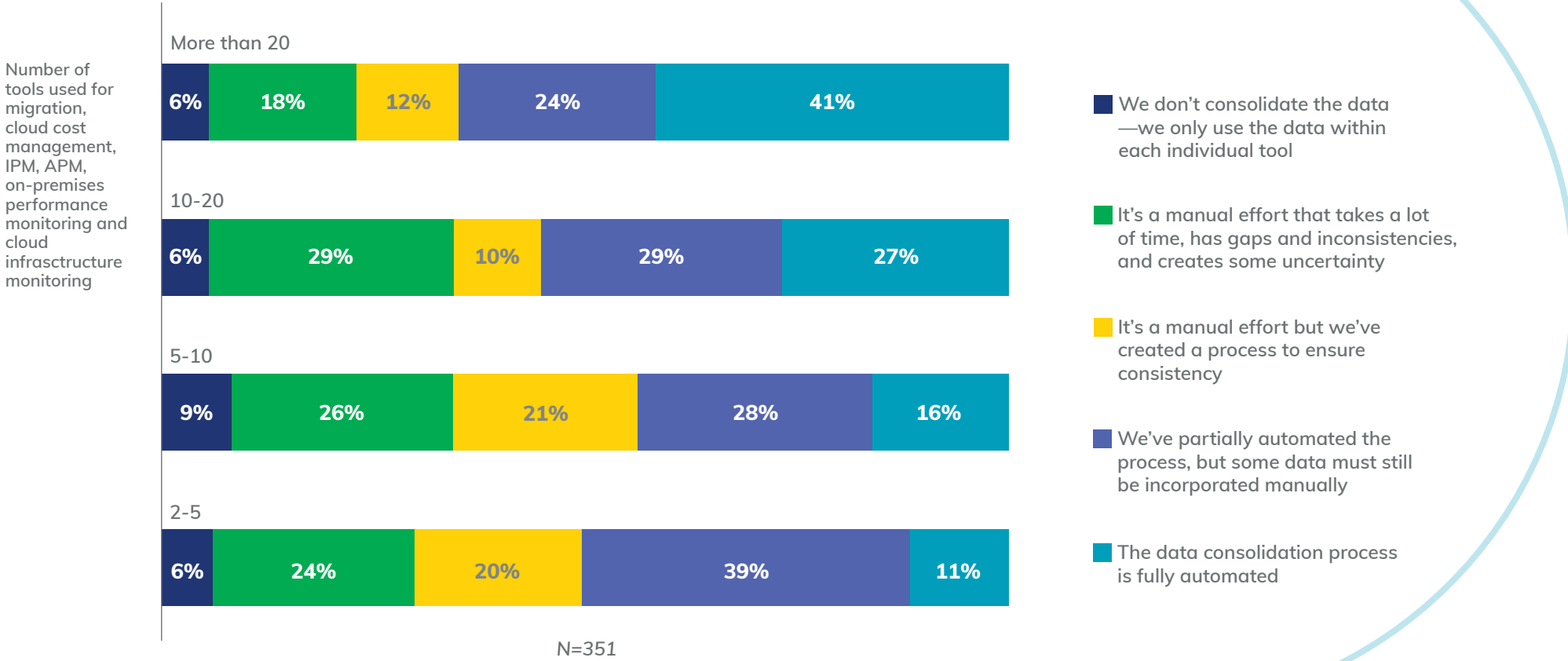


N=351

The more tools an organization has, the more likely it is to have fully automated the process of consolidating the data from all those tools. However, even among respondents using more than 20 tools, 53% are still expending some effort in manual data consolidation processes and 6% aren't consolidating that data at all. (*Figure 10*)

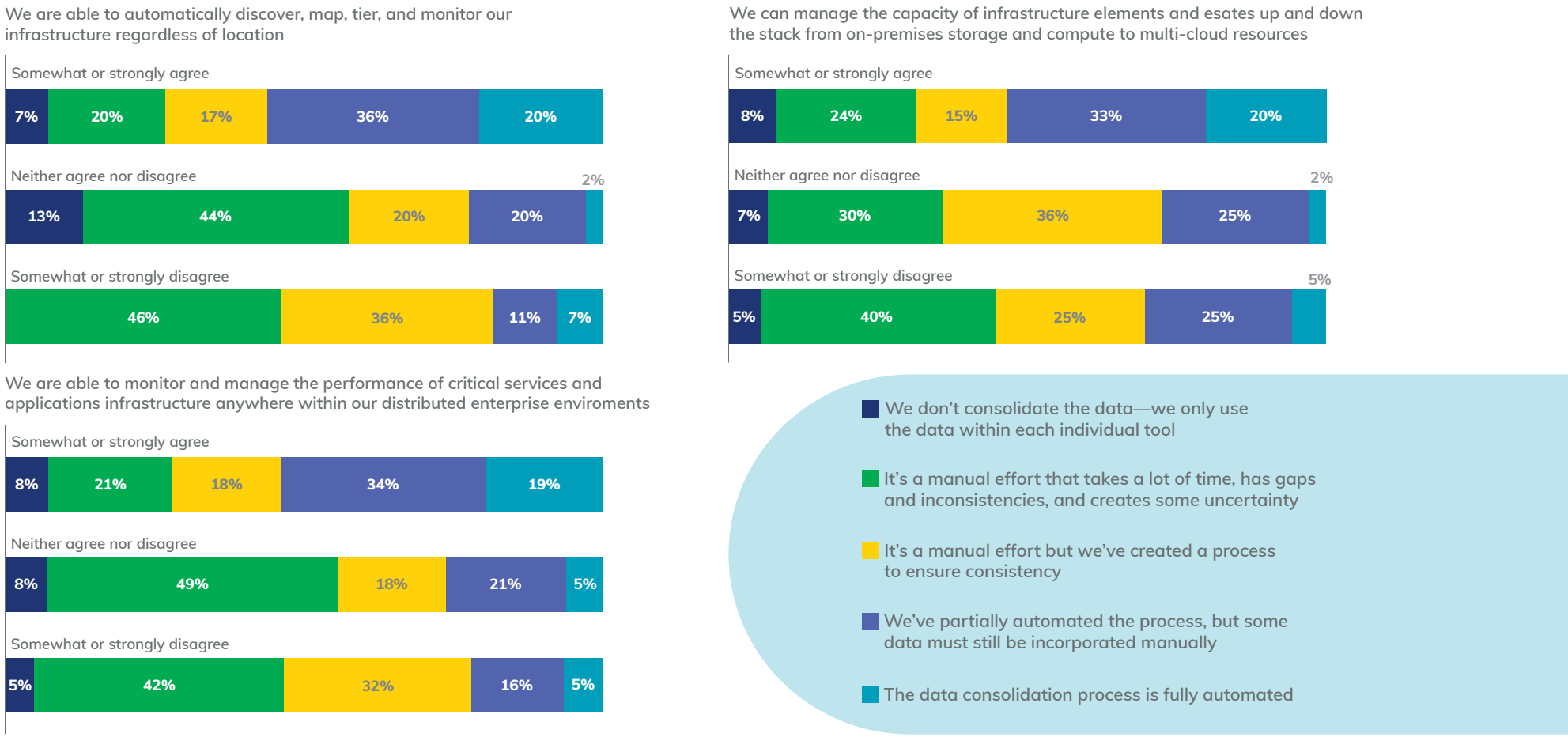
FIGURE 10

How would you characterize the effort to consolidate data from the various tools?



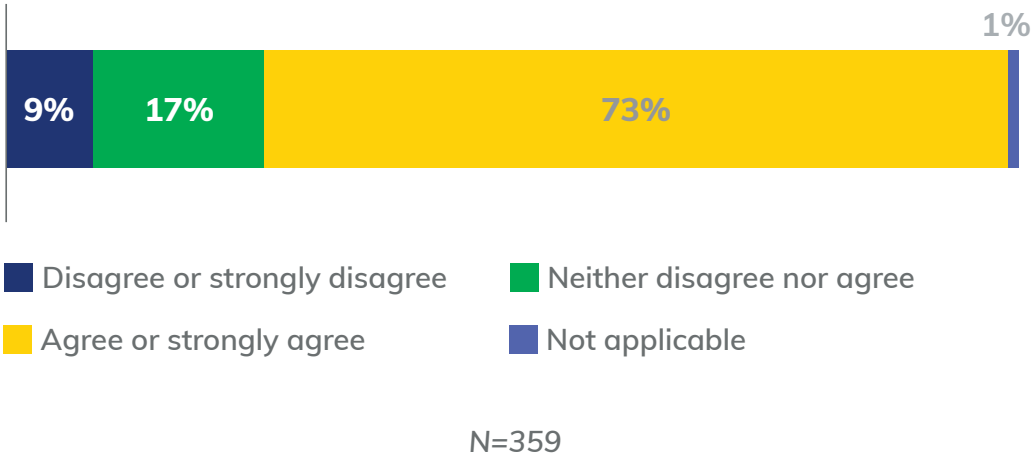
This has an impact on teams' satisfaction with their ability to manage various aspects of their infrastructure. In fact, 56% of respondents that have partially or completely automated data consolidation said they are able to automatically discover, map, tier, and monitor their infrastructure regardless of location. On the other hand, 82% of those who cannot do that work also have to rely on manual data consolidation. Likewise, 53% of organizations who can manage the capacity and performance across the entire infrastructure can work from one common data set. In contrast, 70% struggle with managing capacity and 79% with performance when data consolidation is manual to any extent. (*Figure 11*)

FIGURE 11. How would you characterize the effort to consolidate data from the various tools?



It's not just team satisfaction that's at stake, however, as 73% of respondents stated that siloed efforts limit their ability to realize the full potential of the cloud. (*Figure 12*) This can have a chilling effect on digital transformation efforts.

FIGURE 12
Siloed efforts limit our ability to realize the full potential of the cloud

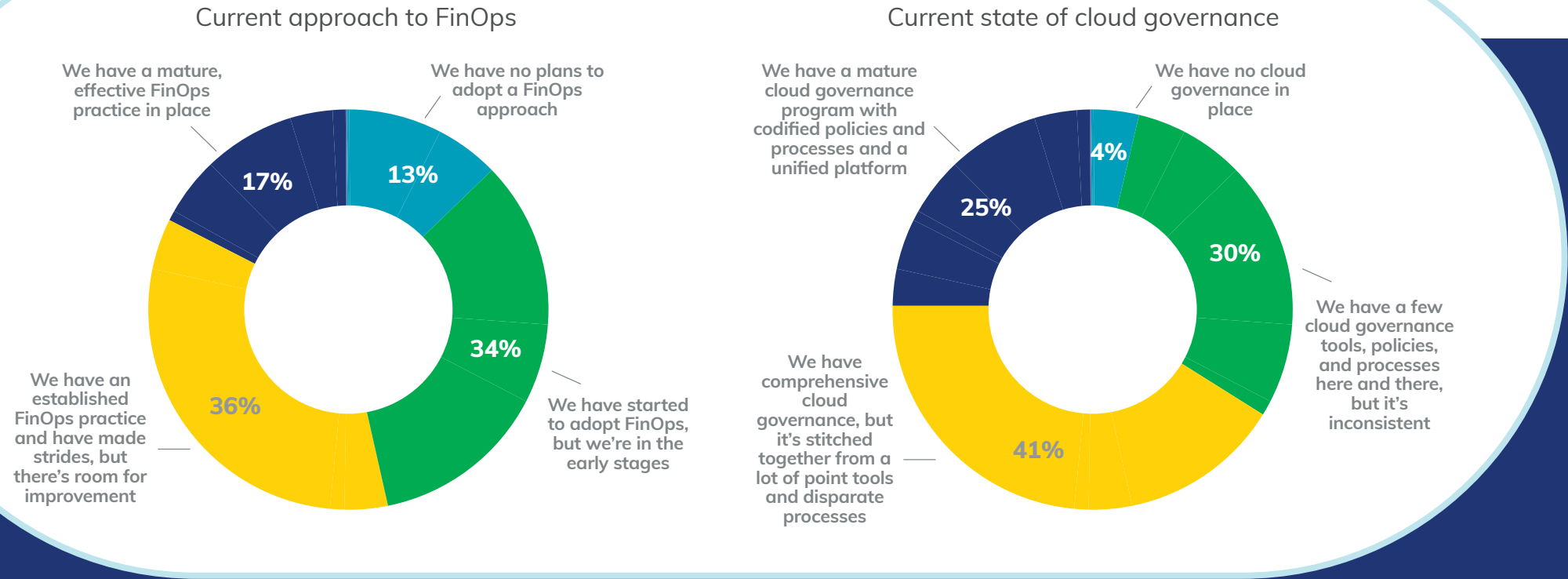


N=359

Cloud deployment may be widespread, but formal controls are not

The prevalence of hybrid, multi-cloud infrastructures, and the high cloud costs they entail—not to mention the strategic importance to digital transformation and competitiveness—might lead one to assume that enterprises would have solid cost and governance controls in place. While there's a lot of industry buzz around FinOps (*cross-functional ownership to bring financial accountability to the variable spend model of the cloud, enabling all teams to make business trade-offs between speed, cost, and quality*) and cloud governance (*framework of mechanisms, processes, and relations used by various parties to control and to operate a cloud environment*), it seems at this point to be more talk than action. While the vast majority—87%—agree that there's value in FinOps, it's still early days as 70% have started but have not yet developed a mature practice. Likewise, 75% are lacking cloud governance to guide cloud management despite the fact that 96% see it as valuable. (*Figure 13*)

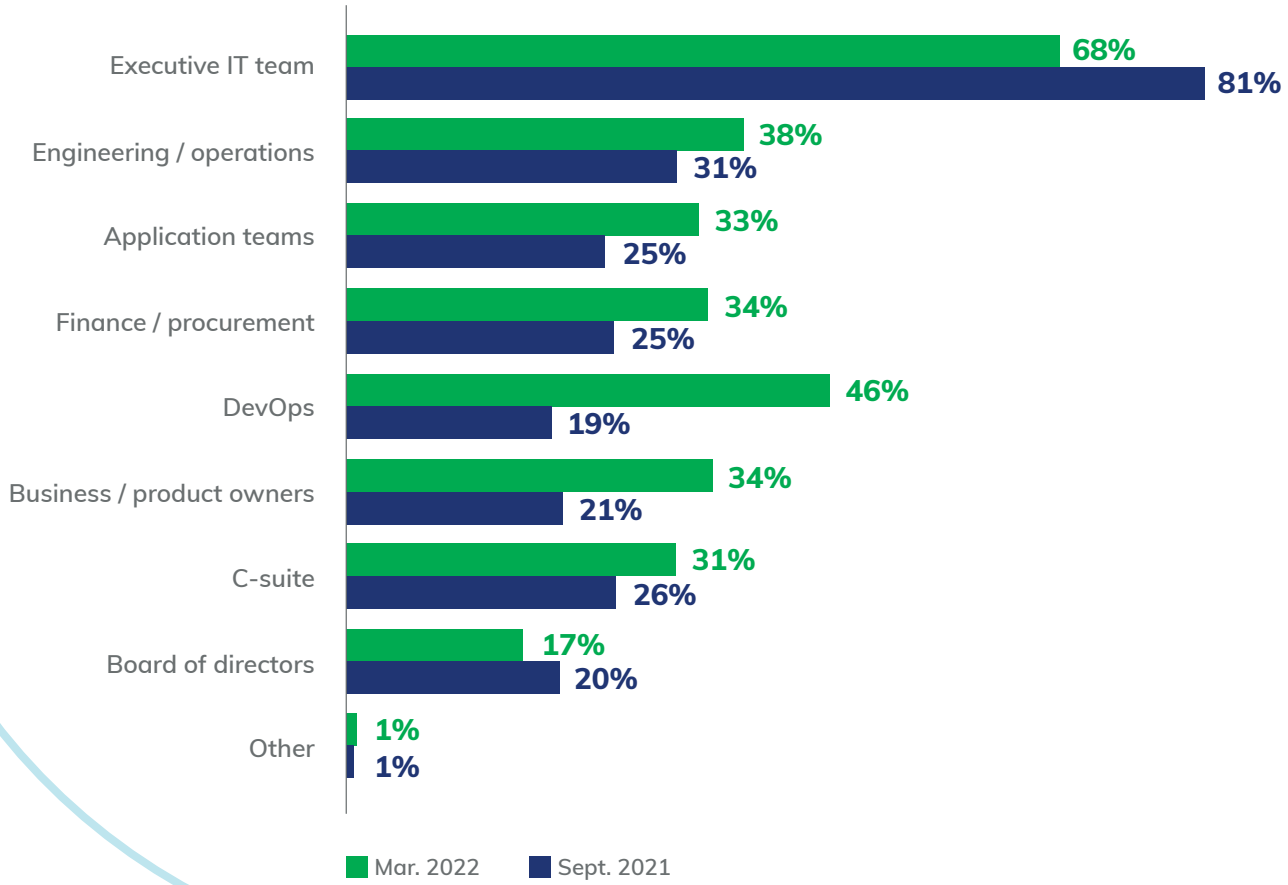
FIGURE 13



Effective FinOps and cloud governance require cross-functional participation and accountability. There has been some improvement, particularly when it comes to including DevOps, which went from 19% of organizations counting them as active cloud stakeholder in September 2021 to 46% today, a jump of 26%. Business/product owners have become more involved with those numbers increasing from 21% to 34%, a 13% bump. The participation of finance has also increased 9%, from 25% to 34%. (*Figure 14*)

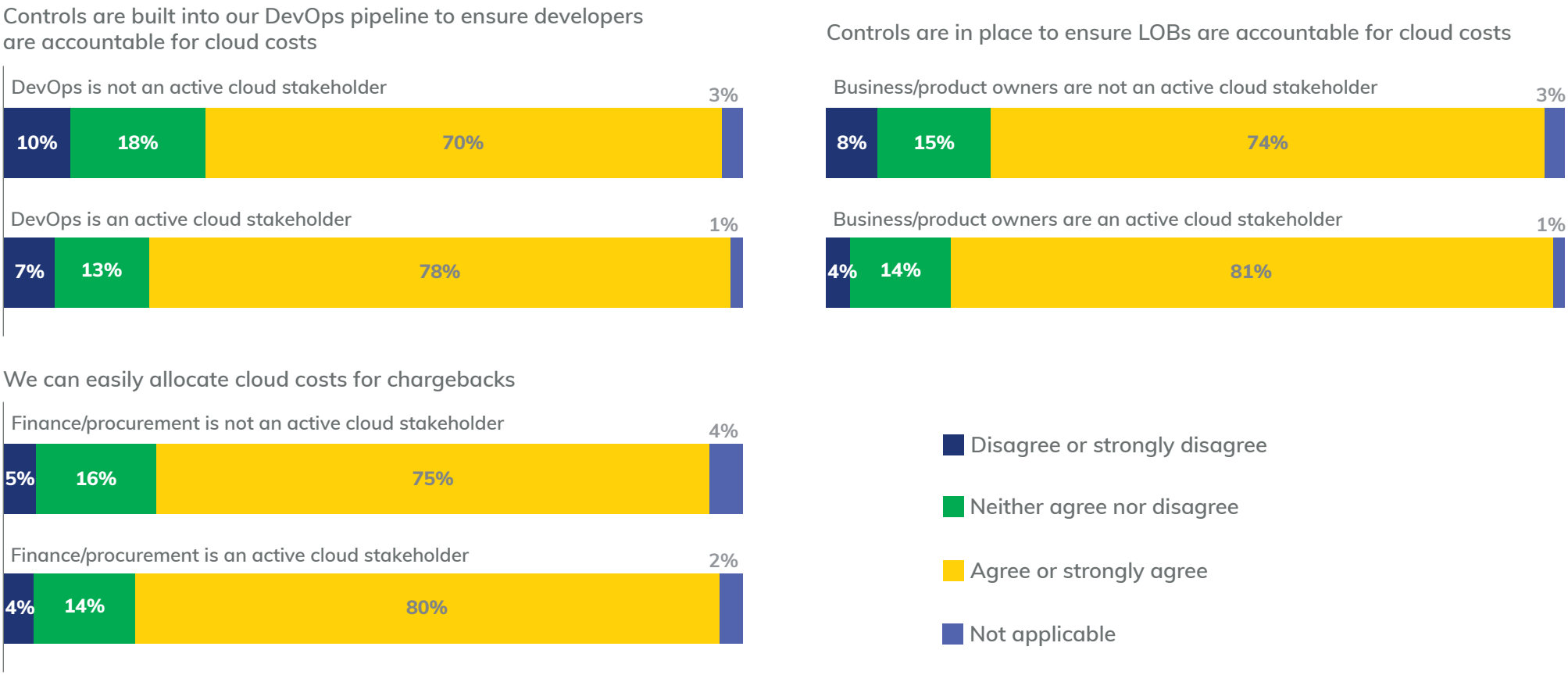
FIGURE 14

Which groups are active cloud stakeholders in your organization?



There is a demonstrable impact to increasing levels of formal participation. Organizations are 8% more likely to have controls built into the DevOps pipeline when DevOps is an active stakeholder, and 7% more likely to keep lines of business accountable when business/product owners are active stakeholders. Enterprises who include finance/procurement are also more likely to be able to easily allocate cloud costs for chargebacks. (*Figure 15*)

FIGURE 15



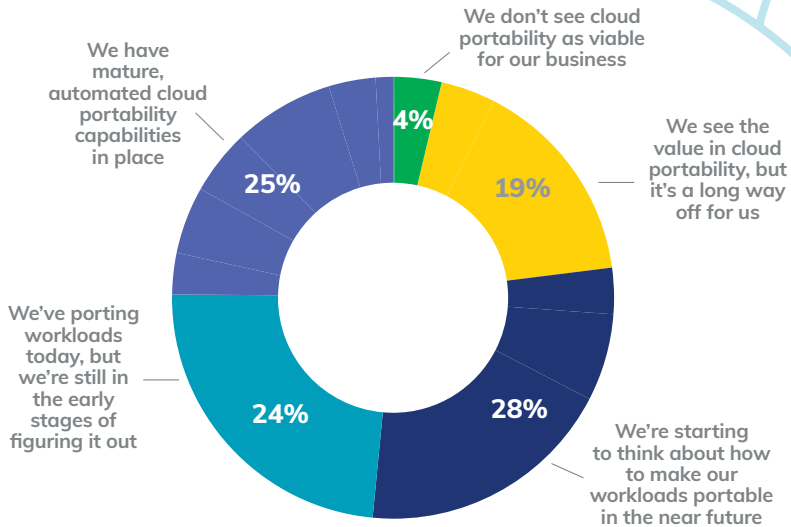
Management capabilities are evolving, but there are challenges to overcome

Given the complexities of hybrid, multi-cloud environments, organizations will look for new ways to improve their management capabilities. Two approaches—workload portability and serverless computing—are starting to gain ink in the industry, but are they gaining traction in practice within enterprise infrastructures?

Let's start with workload portability, which is the ability to easily move workloads between on-premises systems and across multiple CSPs. The vast majority (96%) of respondents said they see value in workload portability, but for most (71%) it's not yet an operational reality. (*Figure 16*)

FIGURE 16

How does your organization view cloud portability?

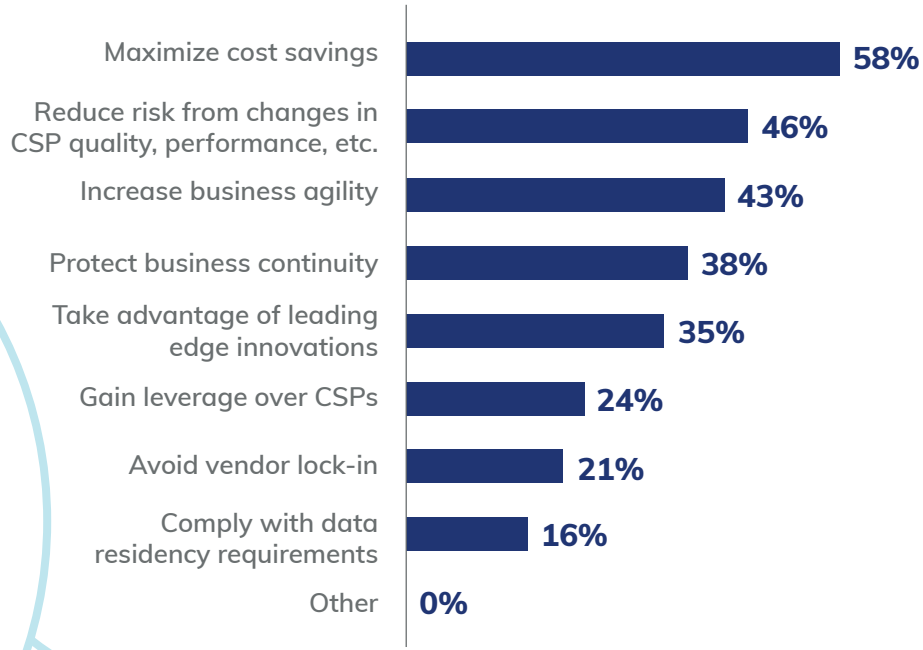


N=360

When asked about the top benefits they anticipate cloud portability will deliver, respondents are primarily looking to maximize cost savings (58%); reduce risk from changes in CSP quality, performance, etc. (46%); and increase business agility (43%). (*Figure 17*)

FIGURE 17

Top benefits of cloud portability

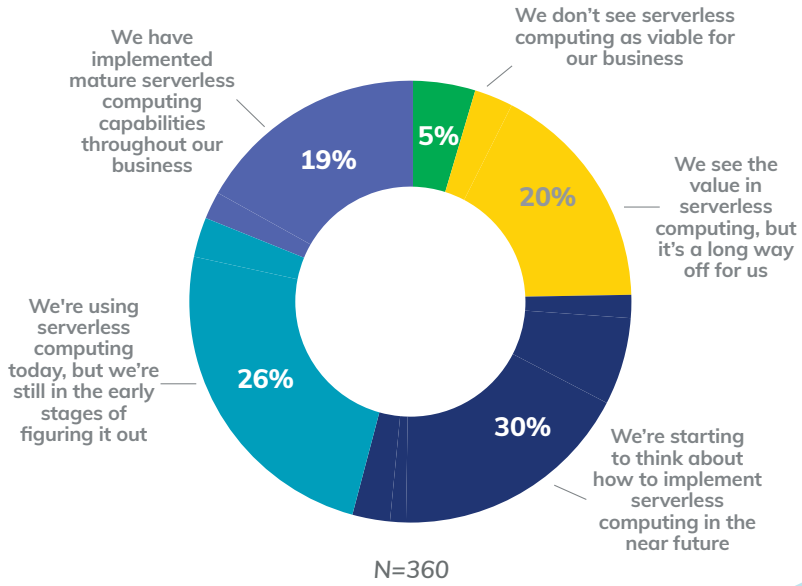


N=347

These top two present an interesting dichotomy. When you lift-and-shift, you simply transfer your costs, so to truly maximize cost savings, you have to take advantage of cloud benefits, which ties you to the CSP. Enterprises will struggle to balance the potential cost savings of embedding themselves into a CSP, thus sacrificing portability and increasing risk of CSP changes, versus potentially spending more for increased portability.

Serverless computing is at a similar stage, with 95% of respondents saying there's value for their organization but 76% haven't made significant strides yet in this area. (*Figure 18*)

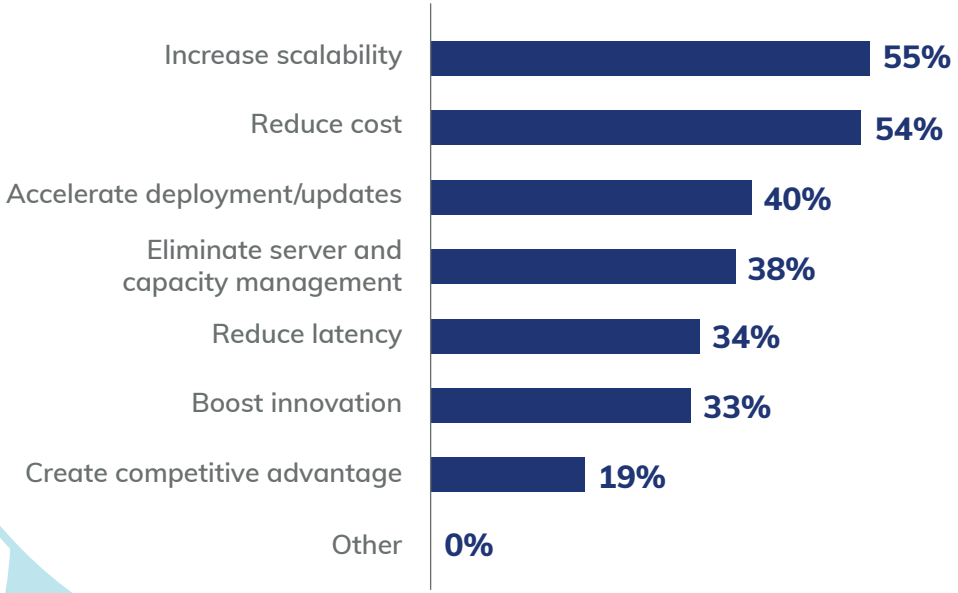
FIGURE 18
How does your organization view serverless computing?



N=360

In this case, the top anticipated values are increased scalability and reduced cost cited by 55% and 54% of respondents respectively. (*Figure 19*)

FIGURE 19
Top benefits of serverless computing



N=343

To grow and contract endlessly, however, your application has to be written for that, so this will require investment.

The Case for Simplified Multi-Cloud Management

As the rapid march to hybrid, multi-cloud infrastructures continues, enterprises are coming to terms with the challenges of migrating and managing these complex and dynamic environments. Unified visibility and simplified management are critical to implement and enforce the cross-functional accountability and formal governance needed to control cost and risk and to pave the way to maximizing the benefits of the cloud—and the business transformation it enables—on an ongoing basis.

About Virtana

Virtana provides a unified multi-cloud management platform to simplify the optimization, migration, and monitoring of application workloads across public, private, and hybrid cloud environments. The cloud-agnostic SaaS platform allows enterprises to efficiently plan their cloud migrations and then rightsize workloads across their hybrid cloud infrastructure for performance, capacity, and cost—most customers see 25% cloud cost savings or more within the first 10 days of use.

Try Virtana's optimization module for free at:
virtana.com/optimize-free-tier.

Follow Virtana for industry insights: Twitter | LinkedIn | Virtana
#KnowBeforeYouGo

virtana

3101 Park Blvd.
Palo Alto, CA 94306
+1.408.579.4000
virtana.com