Enterprise Strategy Group™ by TechTarget

Trends in Organizations' Hybrid and Multi-cloud Strategies

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eBook commissioned by

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Overview

Public cloud transformation activities continues to rise as IT organizations seek to access the benefits of cloud services. Despite years of increased cloud usage, however, cloud migration activities, as well as cloud operations, tend to result in increased cost, complexity, and risk. Effective multi-cloud strategies and capabilities are essential for nearly every organization to achieve their cloud and business objectives.

To gain insight into the state of multi-cloud environments, TechTarget's Enterprise Strategy Group (ESG) surveyed 350 IT professionals at organizations in North America (U.S. and Canada) who are personally involved in the purchase process for private cloud infrastructure, public cloud infrastructure, and/or systems management solutions. This research was intended to understand how the adoption of hybrid and multi-cloud models adds complexity to IT operations and how organizations adapt their strategic approaches in response.

Highlighted Research Findings

Multi-cloud adoption is pervasive and continues to rise.

For the average organization, the bulk of cloud-resident workloads was previously on-premises.

Cloud migrations are costly and time-consuming and create risk.

Cloud operations can often add unexpected cost and complexity, as well.

Note: Totals in figures and tables throughout this eBook may not add up to 100% due to rounding.

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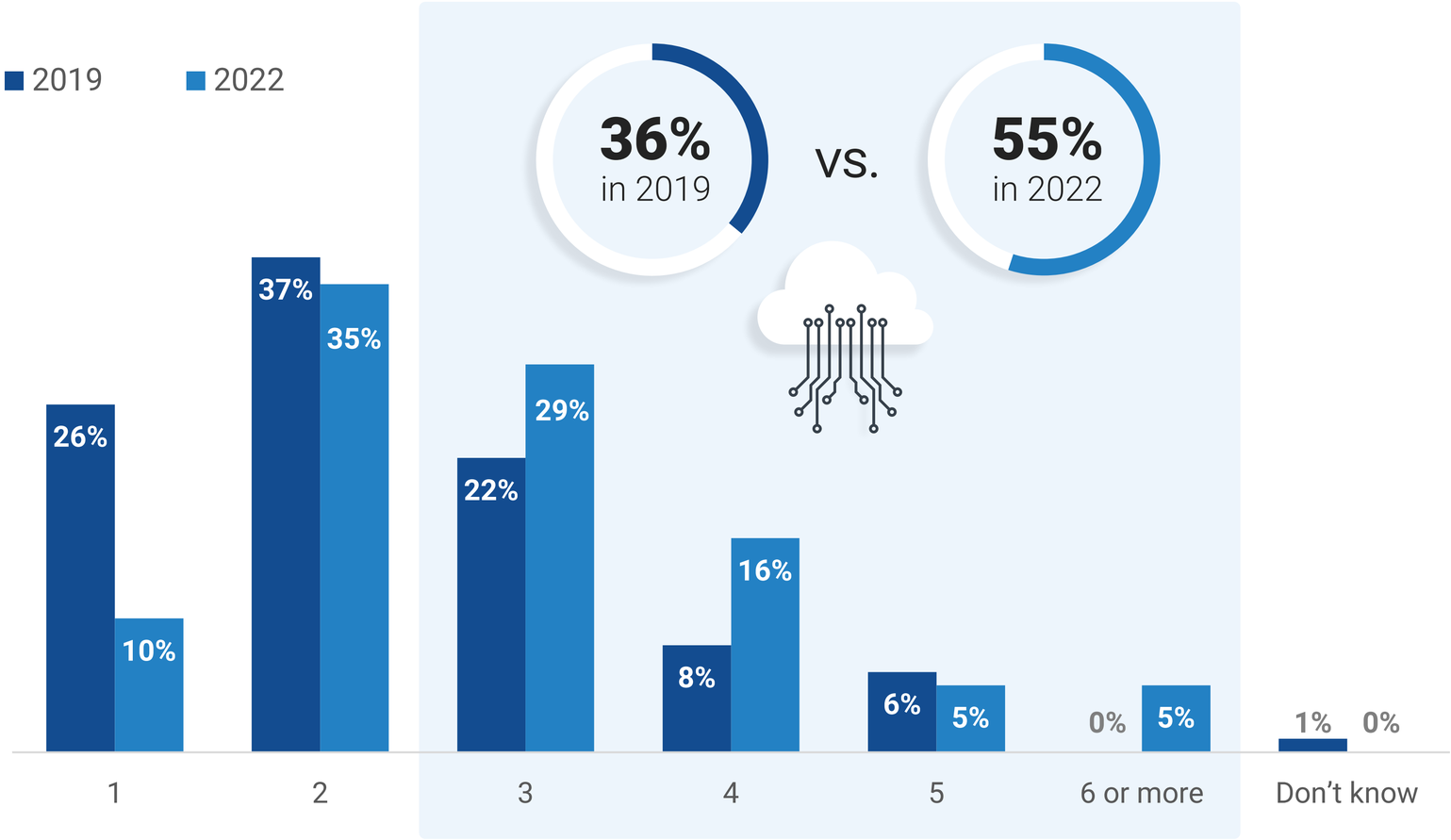
Trends in Hybrid, Multi-cloud Adoption

The Usage of Three or More Unique Public Cloud Providers Has Increased Significantly

With the percentage of organizations leveraging three or more unique public cloud providers increasing significantly, multi-cloud usage is commonplace across organizations.

This increase in multi-cloud adoption is fueled by both the development of new applications and the migration efforts of existing, previously on-premises application environments.

The number of public cloud infrastructure service providers (excluding SaaS) in use at organizations.



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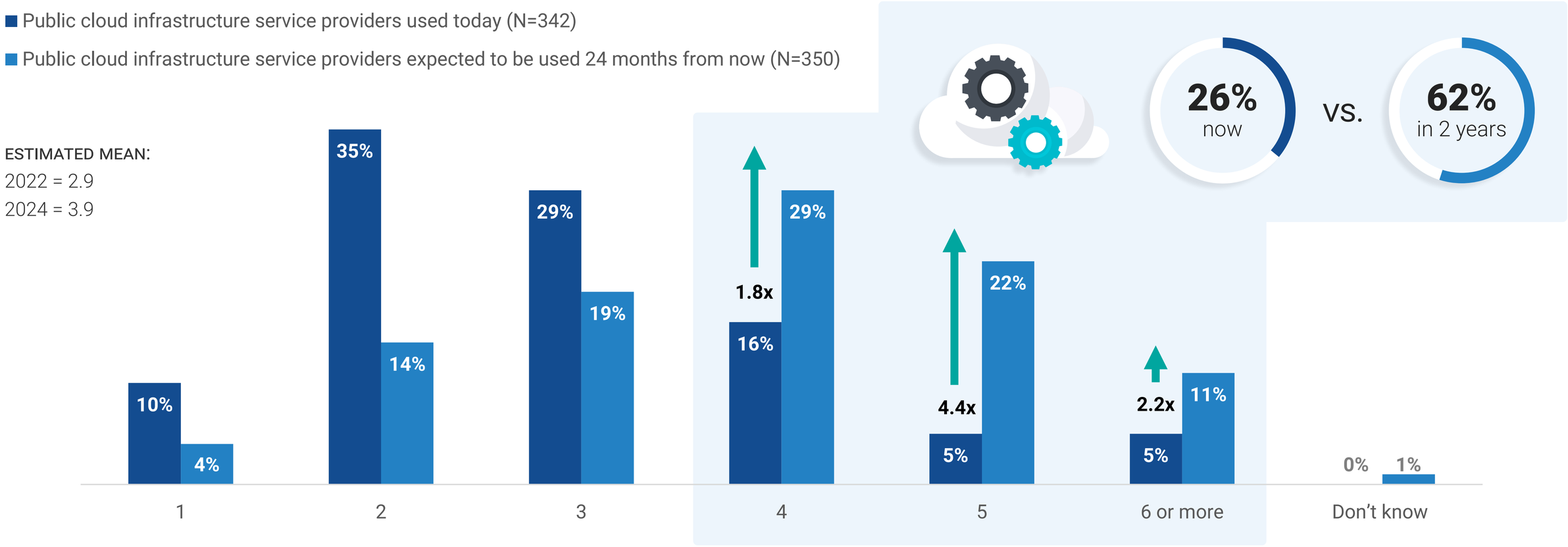
Public Cloud Environments Are Expected to Become Even More Fragmented Over the Next 24 Months

The percentage of organizations expecting to use 4 or more public clouds two years from now (62%) is 2.4x larger than the percentage using 4+ public clouds today (26%). The average organization expects to add 1 new unique public cloud provider over the next 2 years.

The number of public cloud infrastructure service providers (excluding SaaS) currently used and expected to be in use 24 months from now.



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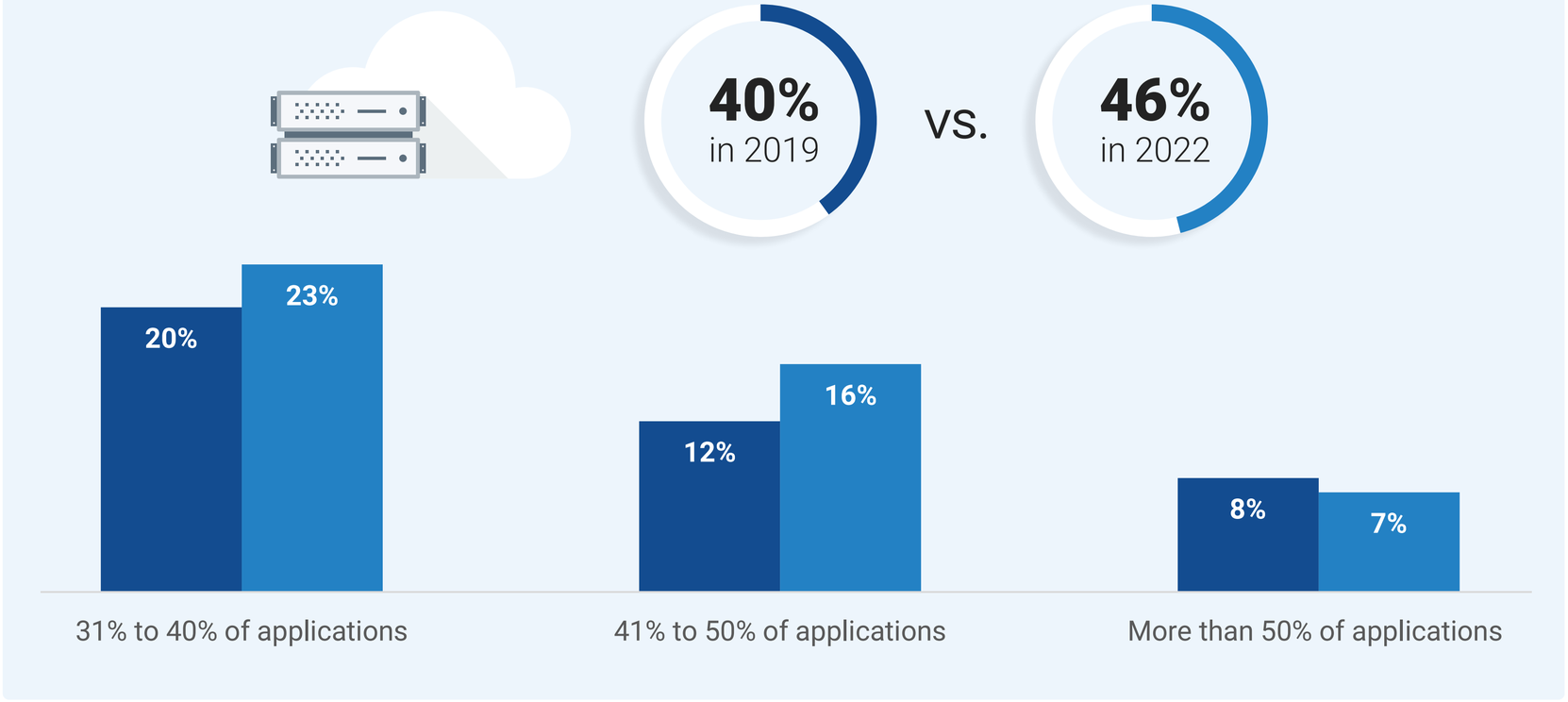
Application Environments Shift More to Public Cloud Infrastructure

With application environments poised to become even more distributed, the bulk of applications under management are expected to shift more to public cloud infrastructure and away from on-premises infrastructure.

As the share of cloud-resident applications grows, the importance of an organization's multi-cloud strategy increases with it.

Percentage of applications run on public cloud infrastructure services (i.e., IaaS or PaaS) 2022 vs. 2019.



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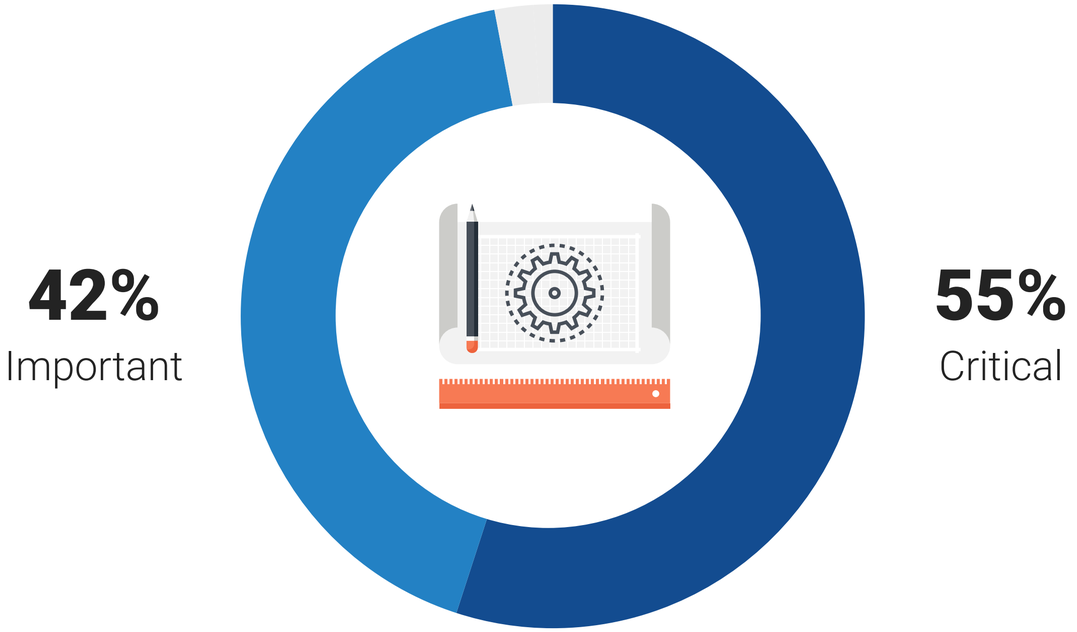
> **Nearly every organization in this study** identified that its multi-cloud strategy is either important or critical to achieving the business's long-term goals."

97% Feel the Pursuit of a Multi-cloud Strategy Is Critical or Important to the Business Achieving Its Long-term Goals

Multi-cloud strategies have become essential not only to IT operations and application development but to business success, as well.

Nearly every organization in this study identified that its multi-cloud strategy is either important or critical to achieving the business's long-term goals. Despite the critical importance of multi-cloud strategies, cloud migration projects continue to face challenges in the areas of cost, risk, and complexity.

The importance of pursuing a multi-cloud strategy to achieve the organization's long-term business and technology goals.



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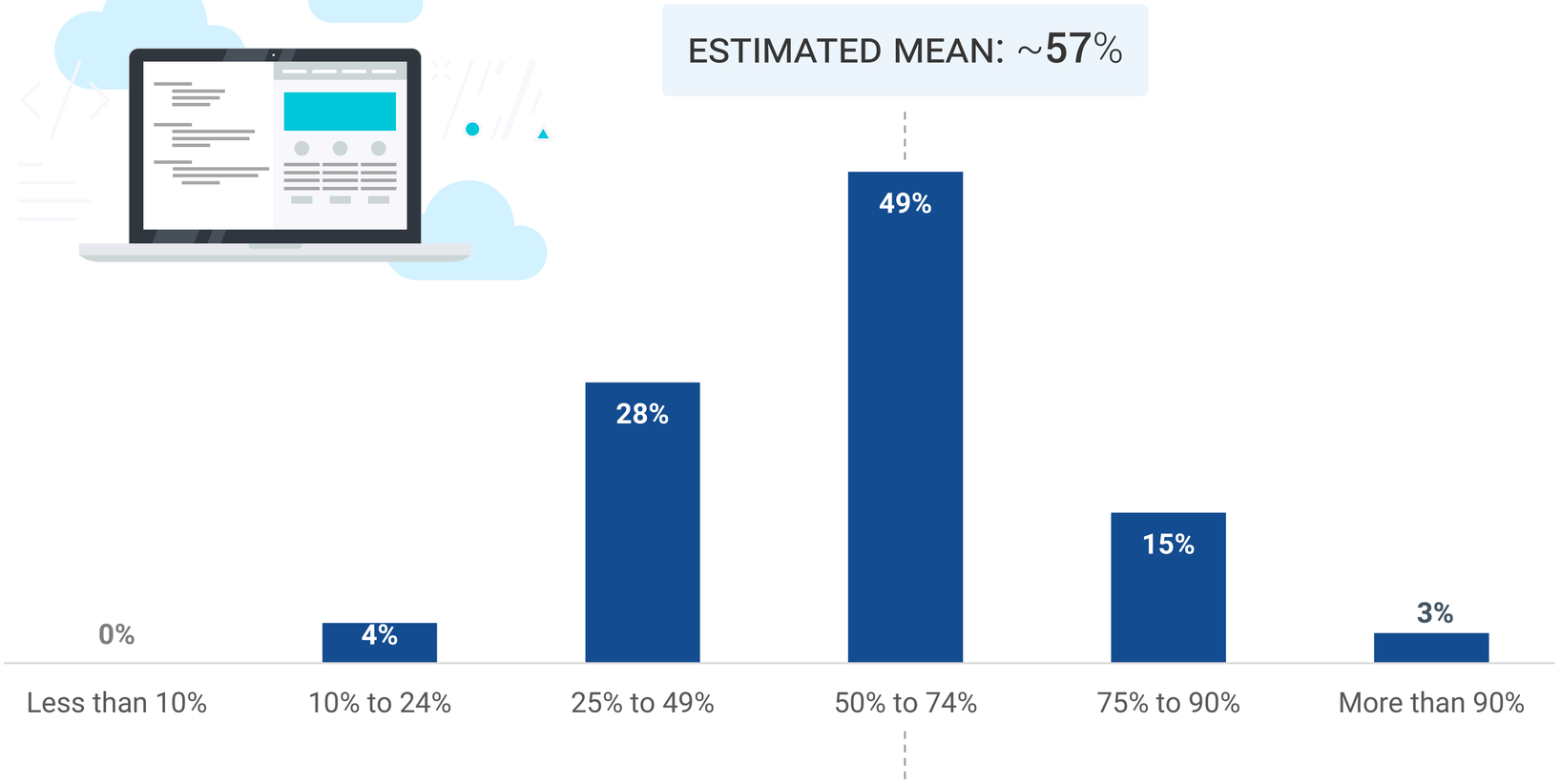
The Risk and Cost of Cloud Transformation

For the Average Organization, the Bulk of Cloud-resident Apps Were Migrated

Even with the increasing usage of public cloud services for application development, the average organization's bulk of cloud-resident workloads represent applications that formerly resided on-premises.

Public and multi-cloud infrastructure represent the operational foundation for a significant percentage of businesses. As adoption continues, migration activities will continue to consume a significant portion of IT resources.

The percentage of cloud applications that were migrated from on-premises environments.



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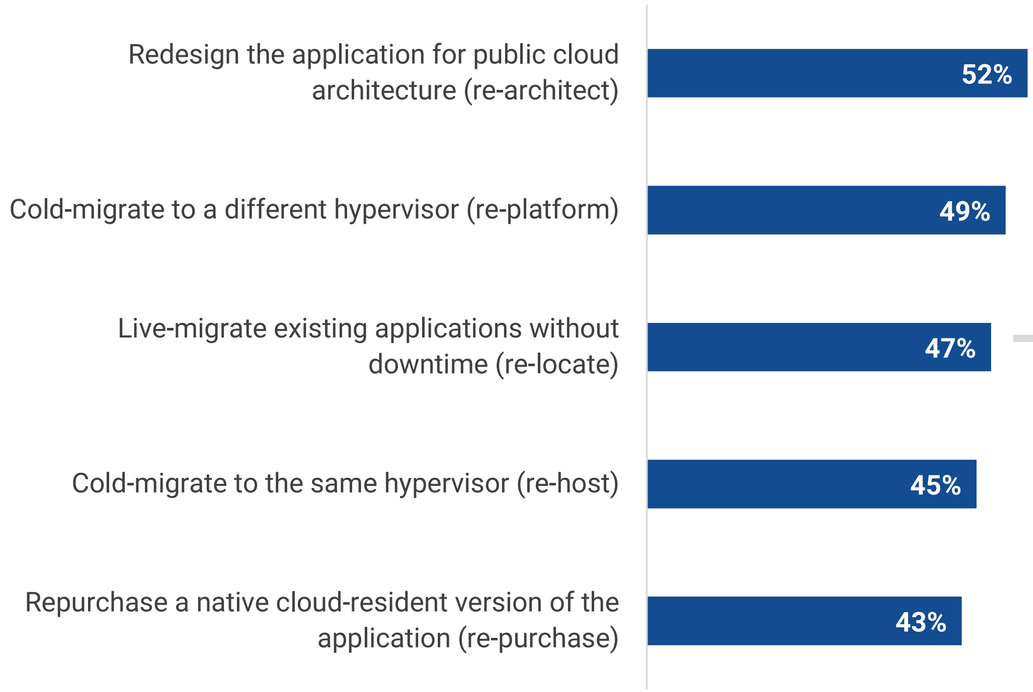
Multiple Cloud Migration Processes Are in Use

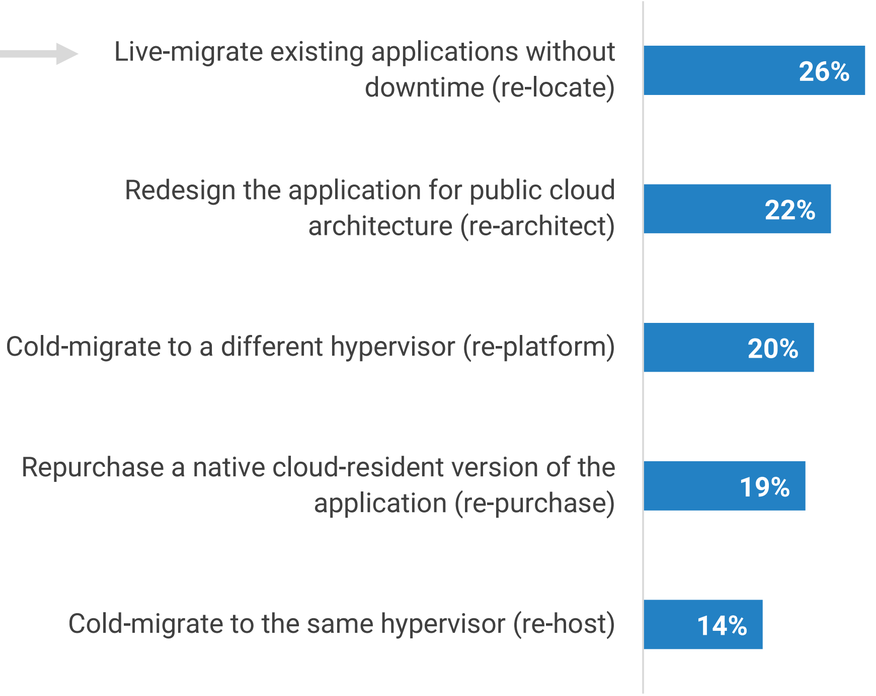
Organizations employ multiple methodologies to migrate workloads to the cloud. Often, employing a combination of methodologies, such as re-architecture or re-platforming, organizations spend a significant amount of money, time, and effort on cloud migration projects.

As the number and type of public cloud providers in use increase, the time and cost spent in cloud migrations are poised to increase, as well, and the third most frequently cited approach (i.e., live migrations) is poised for an uptick in use.

Methods organizations have employed to migrate workloads to the public cloud in the last 12-24 months.



Preferred migration approach moving forward.



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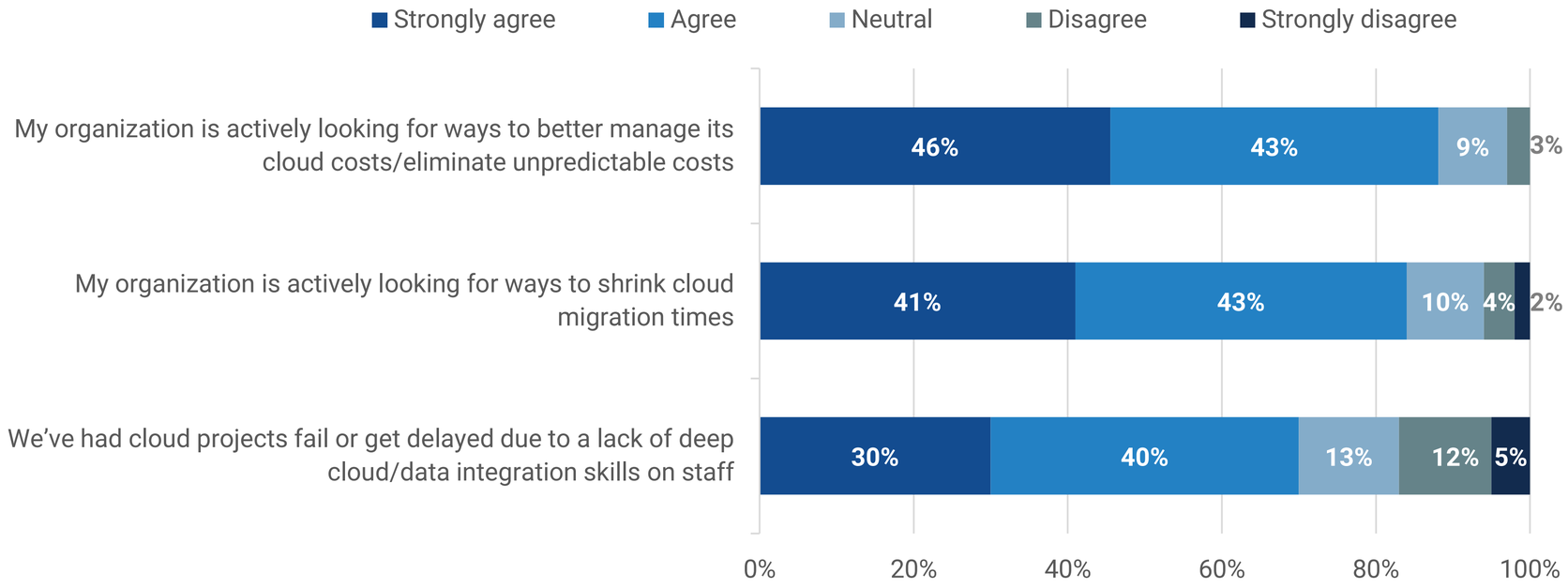
Cloud Transformations Create Risk and Organizations Are Actively Looking to Optimize these Processes

Highlighting the risk involved with public cloud transformation activities, 70% of participants identified that their organization has had one or more cloud projects fail or be delayed due to a lack of skills.

For most organizations, improving cloud management and migration activities has become a priority. For example, 89% of organizations are actively looking for a better way to manage unpredictable cloud costs, and 84% are actively investigating how to shrink cloud migrations times.

> “70% of participants identified that their organization has had **one or more cloud projects fail or be delayed due to a lack of skills.**”

Agreement with statements about public cloud infrastructure experiences.



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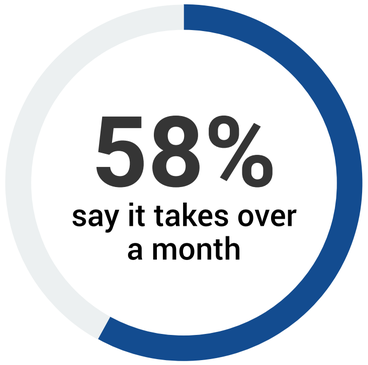
Cloud Transformation Processes Are in Desperate Need of Optimization

When the average times for each step required prior to migrating a workload to the cloud are combined, the time to effectively migrate a workload to the cloud is as much as 3.75 months in aggregate (assuming each step is sequential). The amount of work, resources, complexity, and risk associated with each cloud migration is unsustainable given the pace and scale of contemporary cloud operations, reinforcing the need to prioritize the optimization of migrations.

The amount of time different processes take, when migrating workloads from on-premises to cloud infrastructure.

PROCESS:

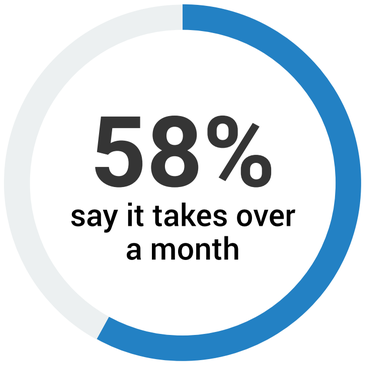
Matching workload requirements to cloud infrastructure SLAs/performance characteristics



with an estimated average of about 5 weeks.

PROCESS:

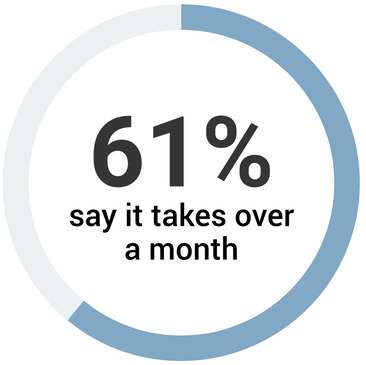
Getting internal approvals



with an estimated average of about 5 weeks.

PROCESS:

Vendor/service evaluations and negotiation



with an estimated average of about 5 weeks.

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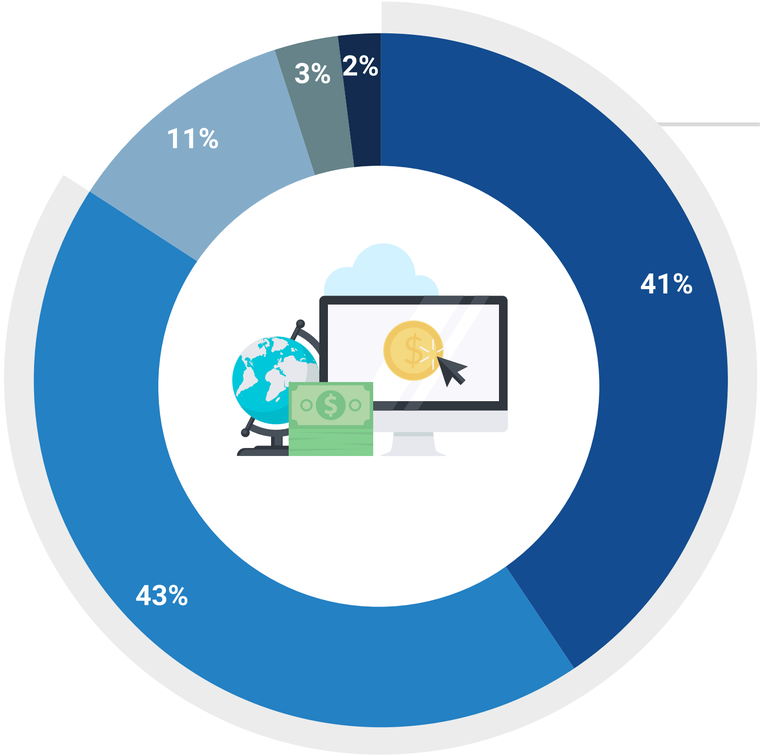
Cloud Transformation Activities Often Lead to Increased Infrastructure Costs

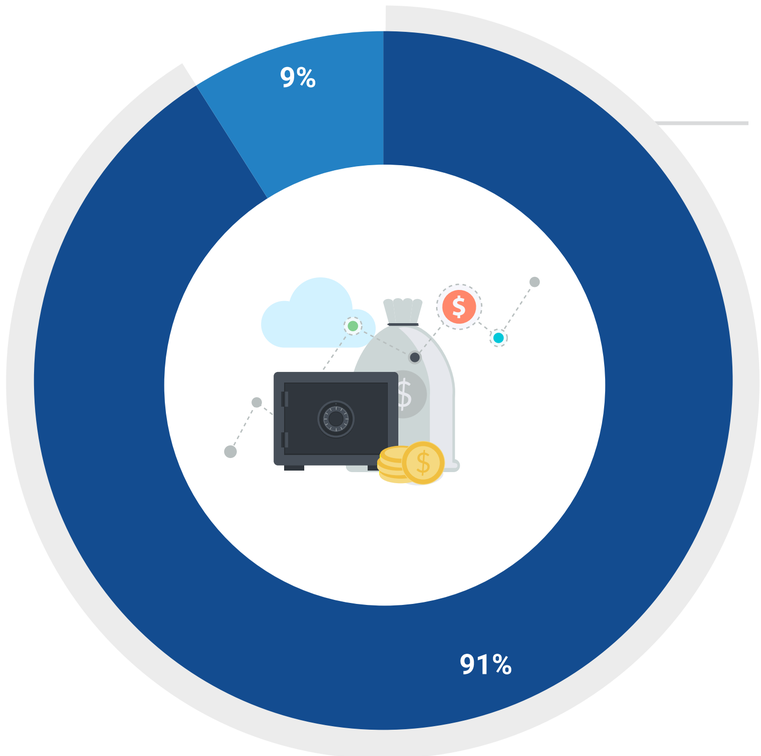
Post migration, has your organization **purchased additional infrastructure services** to support running them in the cloud?



85%
say "Yes"

- Yes, always
- Yes, usually
- Sometimes
- No, not usually
- No, never

Did those additional infrastructure purchases lead to the **increased cost** of running critical workloads on public cloud?



91%
say "Yes"

- Yes
- No

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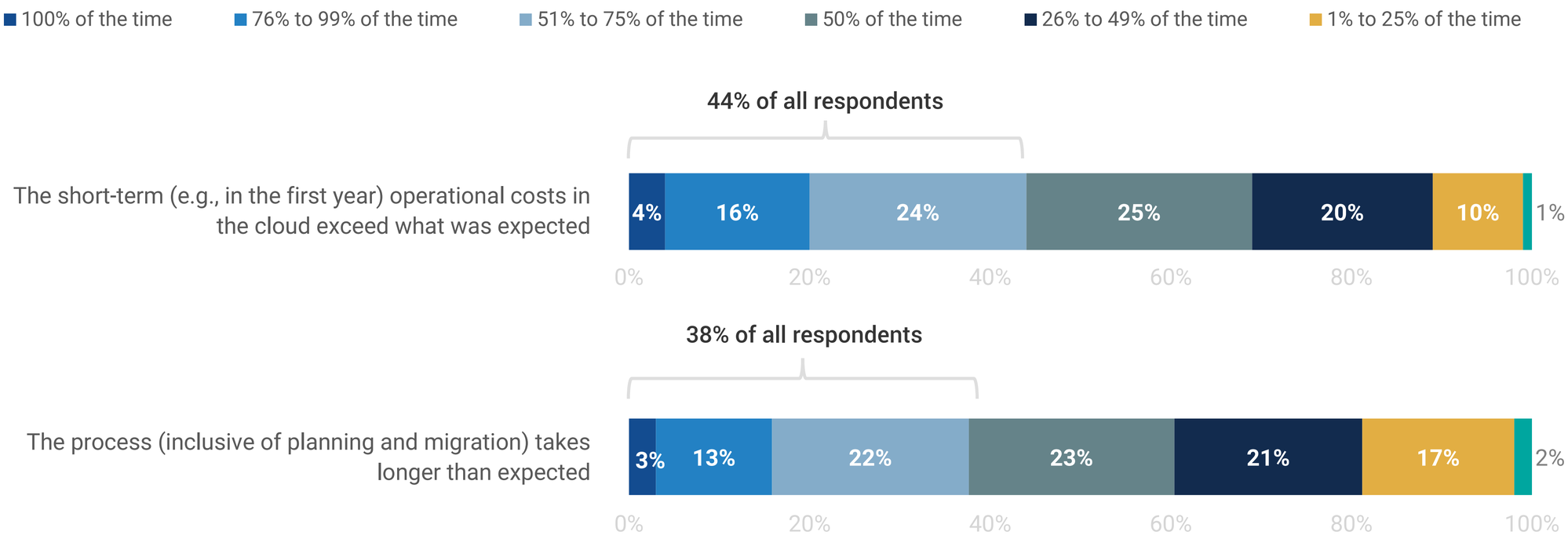
Cost, Time, and Risk of Cloud Transformation

When it comes to cost or time required in cloud transformation activities running over expectations, it is not a question of if, but when. 99% of respondents identified that operational costs exceeded expectations at least 26% of time, with 44% saying costs are exceeded more than 50% of the time.

When it comes to scheduled overruns, the findings were similar, as 98% of respondents identified that the process took longer than expected at least 26% of time, with 38% saying the process took longer than expected more than 50% of the time. Businesses have either a massive challenge with cloud migrations, or with planning/setting expectations, or both.

The percentage of time public cloud migration projects run over budget and take longer than expected.



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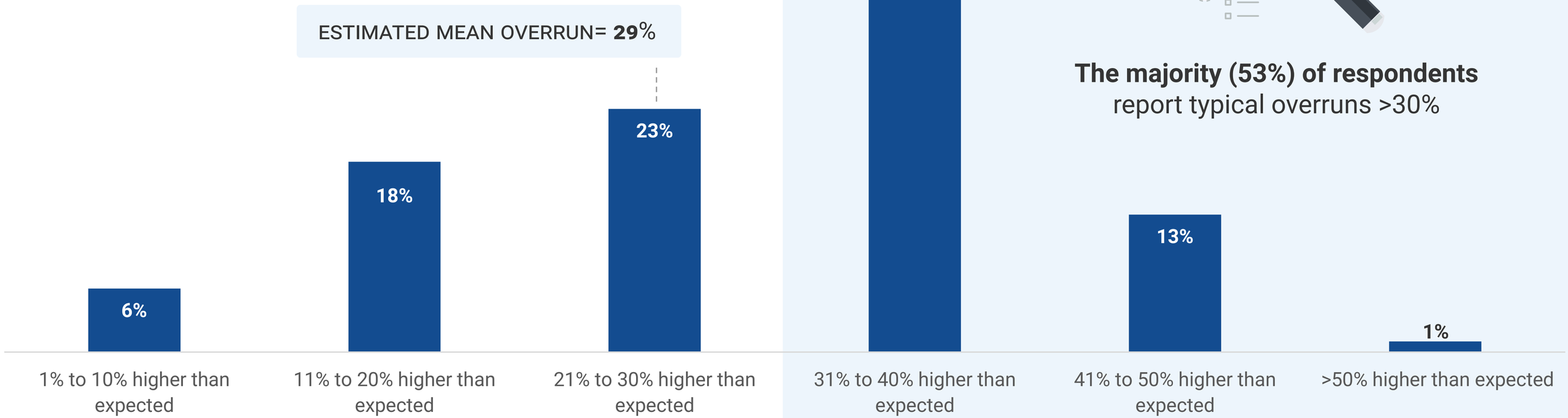
By How Much Do Transformation Costs Exceed Projections?

The amount by which short-term operational costs typically exceed expectations post migration.



The majority (53%) of respondents report typical overruns >30%

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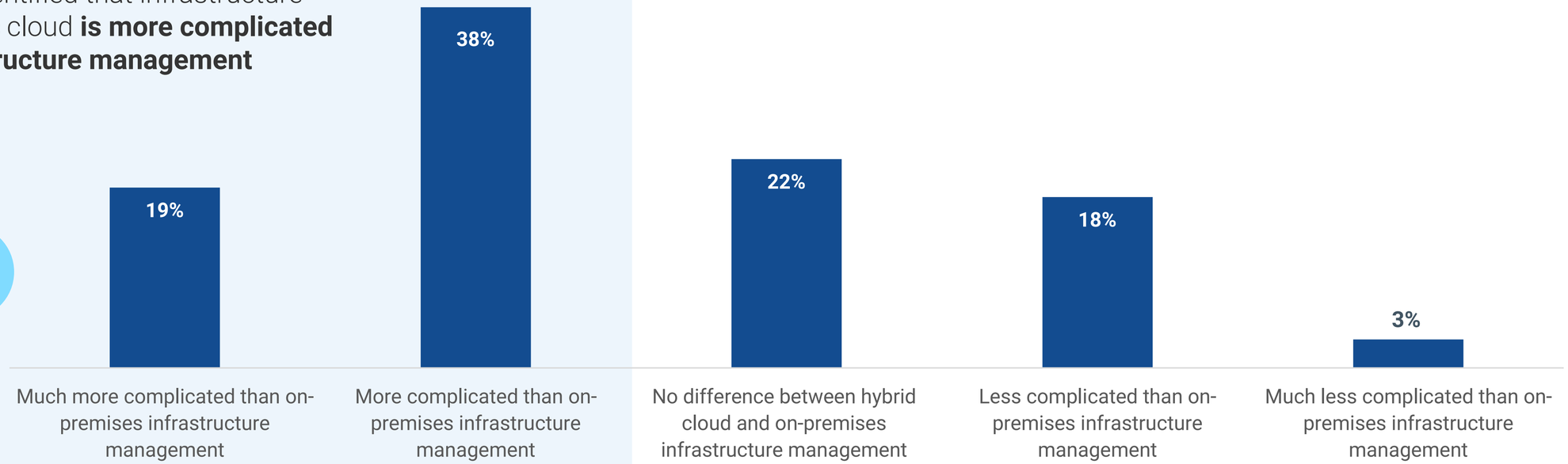
Cloud Adoption Often Adds Complexity

Once applications are in the cloud, complexity can often continue to mount. In fact, 57% of all respondents identified that infrastructure management in the public cloud is more complicated than on-premises infrastructure management (versus only 21% saying it is less complicated). The complexity that stems from adopting new or diverse environments often adds unexpected cost to operations, altering the cost comparison between on- and off-premises deployments.

The complexity associated with infrastructure management is in the public cloud, relative to on-premises systems management.

57% of all respondents identified that infrastructure management in the public cloud **is more complicated than on-premises infrastructure management**



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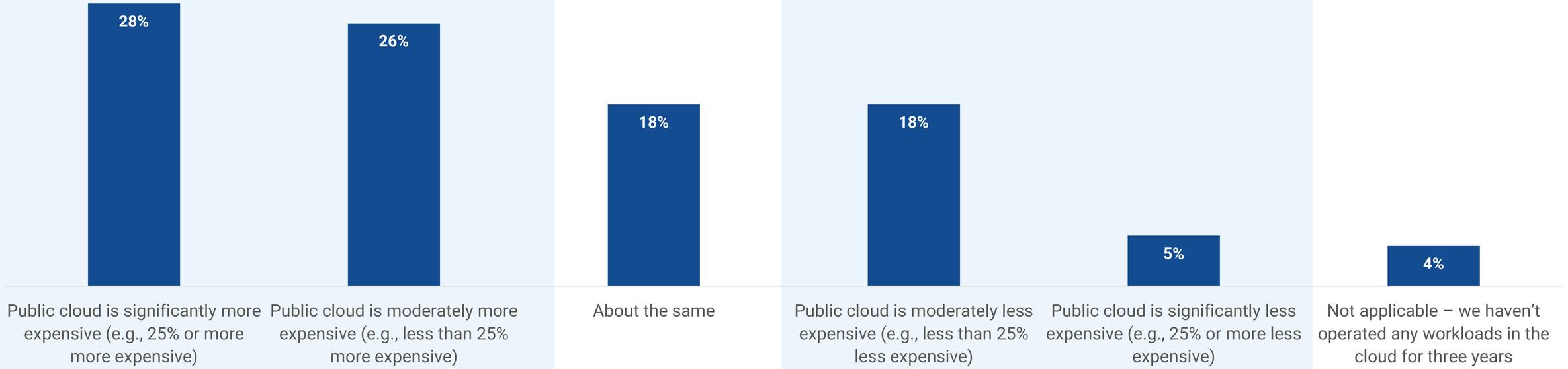
Public Cloud Transformation Viewed as More Likely to Increase Operational Costs

The total three-year operating cost for workloads running on public cloud infrastructure relative to the operating costs of running an equivalent footprint on-premises.

54% of all respondents say the public cloud is **significantly or moderately more expensive** than similar on-prem infrastructure.

Only 23% found the **public cloud operating costs moderately or significantly less expensive.**



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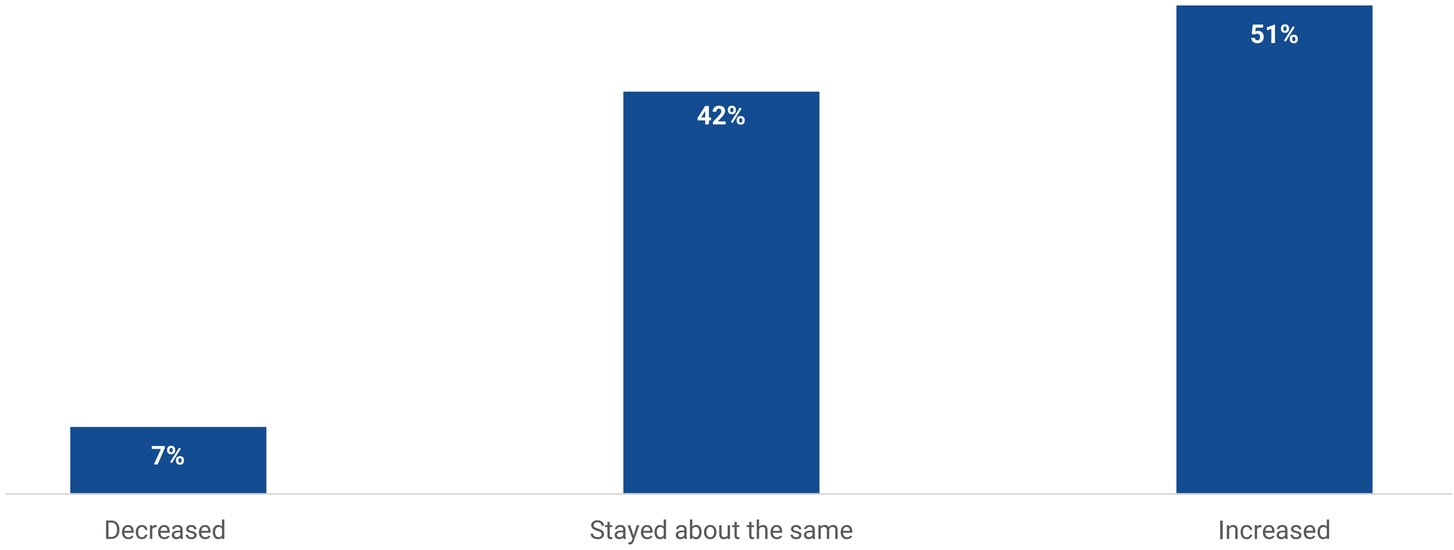
Critical Workloads Are 7.3x More Likely to Experience an Increase in Expenses Over Time When Running on Public Cloud Infrastructure

Enterprise Strategy Group (ESG) found that respondents were 7.3x more likely to experience an increase in costs for critical workloads running on public cloud infrastructure versus a decrease. Among the 7% that identified a decrease in costs, 88% identified investment in post-migration workload optimization efforts as a factor in their savings.

As part of an effective multi-cloud strategy, organizations need to expect costs to scale over the life of cloud-resident applications.

> "88% identified investment in post-migration workload optimization efforts **as a factor in their savings.**"

The cost of running critical workloads on public cloud infrastructure over time.



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VMware Can Help Simplify Cloud Migration and Operations for Multi-cloud Environments

Conclusion

Based on this data, Enterprise Strategy Group (ESG) found that multi-cloud environments are already pervasive across IT, with the bulk of workloads continuing to shift to public cloud infrastructure. As cloud adoption increases, organizations often face increased cost, complexity, and risk with cloud migration activities. Once in the cloud, cost and complexity often do not diminish either. With multi-cloud environments poised to become increasingly distributed, organizations need effective multi-cloud strategies in place to help reduce risk and simplify the migration to the cloud along with management in the cloud.

IT leaders must prioritize technologies that deliver simplicity across hybrid and multi-cloud infrastructure to reduce the cost, complexity, and risk associated with cloud initiatives.

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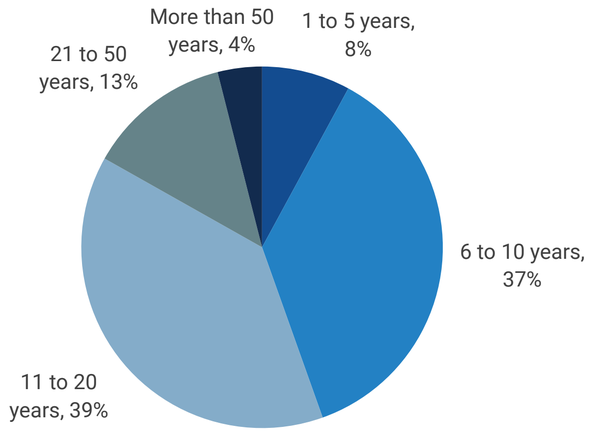
Research Methodology

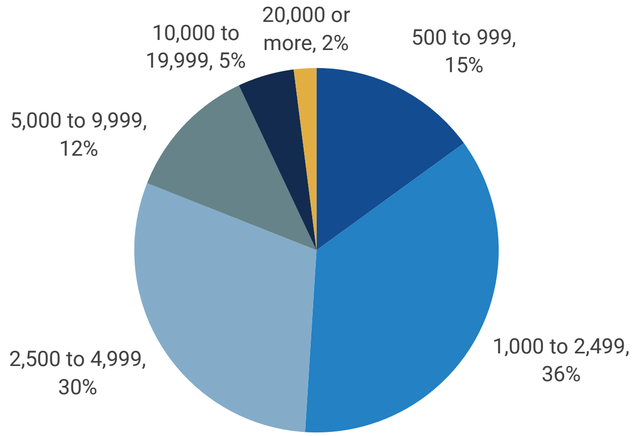
To gather data for this report, Enterprise Strategy Group (ESG) conducted a comprehensive online survey of IT professionals from large midmarket (500 to 999 employees) and enterprise (1,000+ employees) organizations in North America (U.S. and Canada) between June 22, 2022 and June 23, 2022. To qualify for this survey, respondents were required to be IT professionals personally responsible for/knowledgeable about their organization's cloud-based infrastructure. All respondents were provided an incentive to complete the survey in the form of cash awards and/or cash equivalents.

After filtering out unqualified respondents, removing duplicate responses, and screening the remaining completed responses (on a number of criteria) for data integrity, we were left with a final total sample of 350 IT and business professionals.

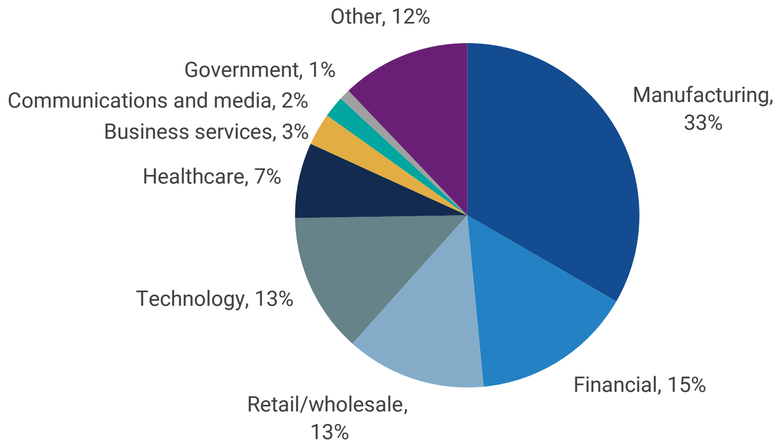
Respondents by Age of Organization



Respondents by Number of Employees



Respondents by Industry



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