

Data Centers in Flux: The IT Optimization Challenge

Q3 – 2016



An Insight company



About the Survey

The purpose of this Datalink-commissioned survey was to examine how organizations assess and determine which IT operations model(s) and data center platform optimization strategies are best suited to drive operational efficiency and to take their businesses into the future.

Respondents

100+ IT executives from large U.S. organizations were polled

Data center optimization overwhelms IT.

- Only 9% report their data centers are optimized. More than 60% say defining a data center platform strategy is one of their most challenging decisions.

There are a number of challenges facing companies as they strive to optimize their IT operations.

- Among these: managing day-to-day operations while also making time for innovation, evaluating new technology choices and cloud platform options, skills gaps, pressure to align IT operations with business needs, and rapid data growth.

Organizations are facing an increasingly complex application ecosystem that continues to grow in size and scope.

- The average enterprise today has 376 applications in use and expects that to grow by 13% to 426 applications in use in 2 years on average.

The need to manage this growing application portfolio is placing increased demands on IT resources

- In fact, the data suggests that the vast majority of applications in use today (as well as those planned for use in the future) are being managed by the internal IT organization. To further complicate the landscape, a growing number of mission-critical applications within that application portfolio raises the stakes for the IT organizations tasked with managing those apps.

Companies are grappling with the challenges of dividing workloads between on premises and off premises platforms.

- IT infrastructure and application workloads residing in corporate owned data centers is expected to shrink from 59% today to 47% in 2 years on average, with much of the difference being shifted to public cloud environments.
- Digging a bit deeper into the composition of cloud-based workloads reveals that while private cloud captures a large share of the cloud-based IT workload, **migration to public and hybrid cloud models will continue to grow.**

Regardless of platform choice, security requirements top the list of requirements IT organizations consider when deciding which platform to leverage for specific applications.

- In fact, 62% of IT decision makers cite security requirements as a critical factor in their decision making.

Interestingly nearly 40% of organizations with public cloud experience report having moved public cloud workloads back to on premises, mostly due to security and cost concerns.

- This underscores the importance of understanding workload requirements prior to making platform decisions to avoid risk and control costs.

IT organizations are slowly increasing their reliance on outsourced service providers (from 18% today to 25% of workload in 2 years)

- But are still heavily relying on in-house staff to handle their IT operations management tasks. The factors weighing most heavily in the insource versus outsource decision for IT talent are cost and skills needed.

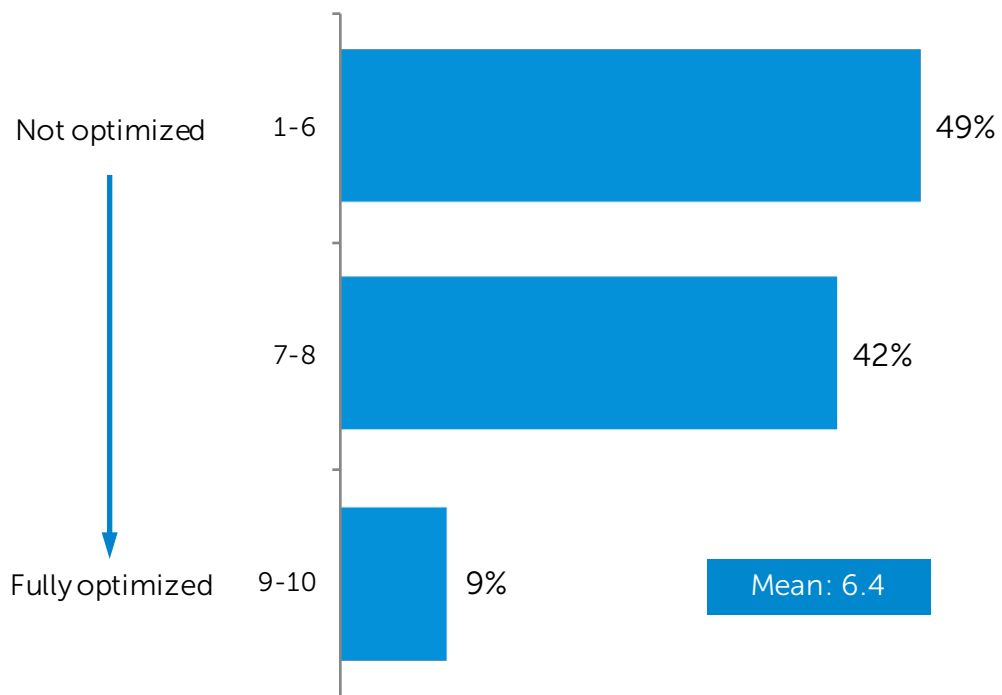
From a macro perspective, more than one-third of companies are focusing on expanding their cloud initiatives, developing or acquiring new skill sets, consolidating applications and/or increasing end-to-end process automation as near-term solutions to optimizing their IT operations.

- In fact, among current investment priorities private and public cloud top the list followed by converged/hyperconverged infrastructure technologies.

Survey Results

With fewer than 10% reporting their IT operations are fully optimized, the majority of IT organizations report room for improvement as they rate their progress to date in optimizing IT operations.

Rating of overall progress in optimizing IT operations

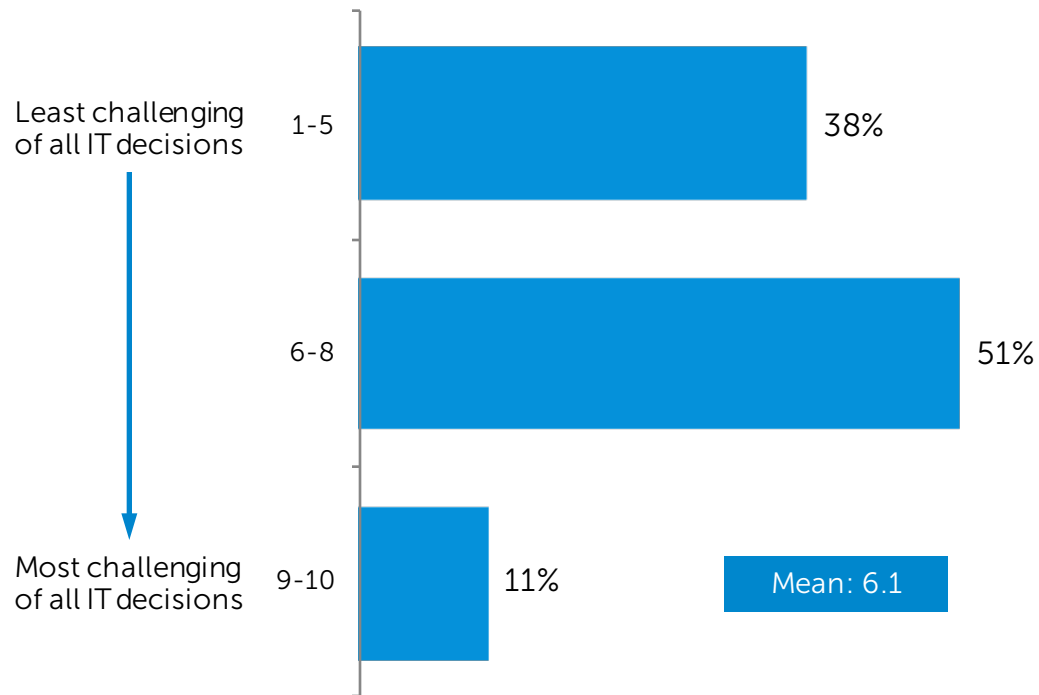


Q2: How would you rate your IT organization's overall progress to-date in optimizing IT operations - including team staffing models, standardizing processes, and managing application workloads?

Base: 100 qualified respondents

IT decision makers note that determining a data center platform strategy ranks high on their list of most challenging decisions.

Rating of challenges facing IT organization today as it strives to determine your data center platform(s) strategy



Q1: Collectively, how would you rate the challenges facing your IT organization today as it strives to determine your data center platform(s) strategy? By platform, we are referring to a technology or group of technologies that provide a base upon which applications, processes or other technologies are developed. Examples include public cloud, private cloud, hybrid cloud, hyperconverged/ converged, etc.

Base: 100 qualified respondents

IT Optimization Challenges

A variety of challenges are inhibiting IT optimization. In addition to the “balancing act” of managing day-to-day operations while also making time for innovation, enterprises wrestle with a host of new technology choices and cloud platform options, skills gaps, pressure to align IT operations with business needs, and rapid data growth.

Challenges to optimizing your IT operations

| | Top challenges to consider when optimizing IT operations | Most difficult challenges to address | Single challenge that would have the most positive business impact if solved |
|--|--|--------------------------------------|--|
| Balancing day-to-day operations with time needed for innovation/business initiatives | 62% | 37% | 24% |
| Assessing new technology choices (cloud, flash, converged, hyperconverged, etc.) | 55% | 17% | 6% |
| Ensuring that internal IT skill sets match IT operational management needs | 53% | 27% | 16% |
| Aligning operations with business strategies/outcomes | 49% | 27% | 16% |
| Managing data growth and related operations | 46% | 22% | 12% |
| Evaluating cloud platform options (public, private, hybrid) | 44% | 19% | 10% |
| Inventorying applications and workloads to determine current and future operations needs | 34% | 15% | 9% |
| Transitioning to a service broker role with a self-service portal | 28% | 9% | 3% |
| Defining the platform for each app/workload | 27% | 14% | 4% |

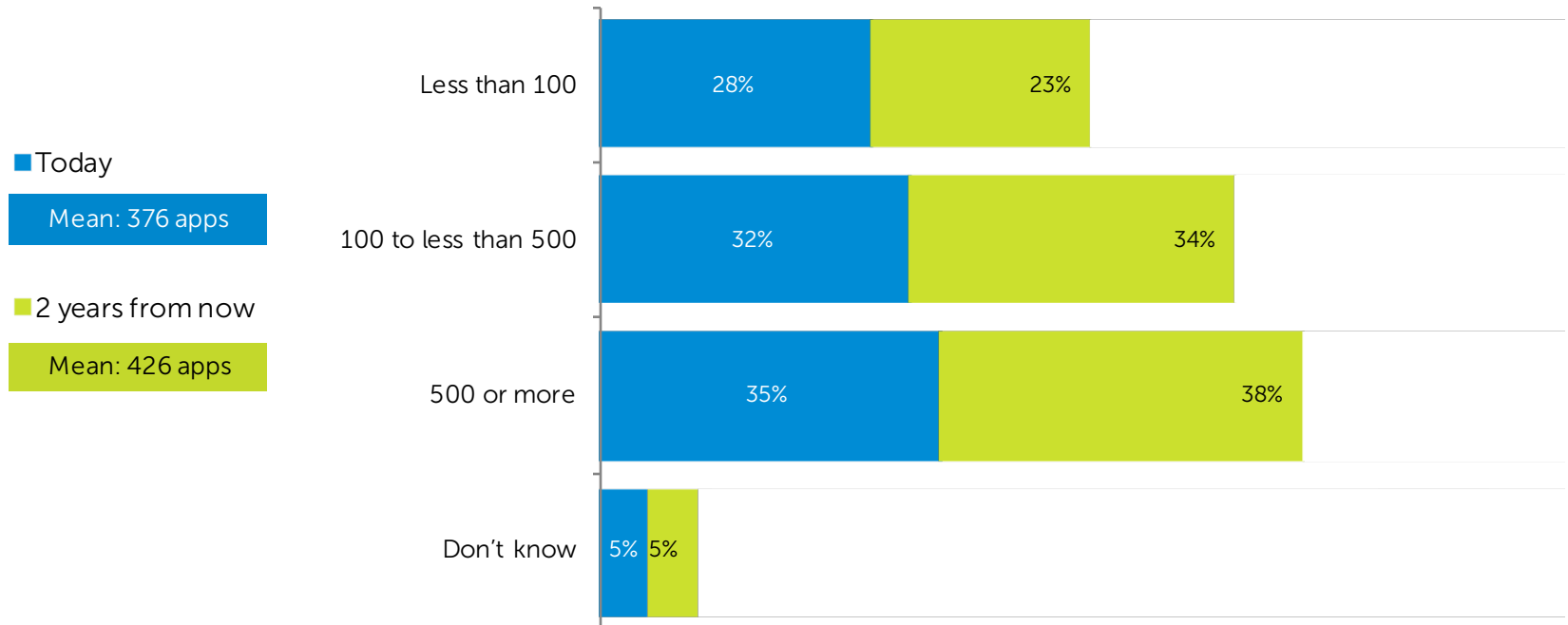
Those in larger organizations with 5,000 or more employees are more likely to consider **inventorying applications** and **transitioning to a service broker role** as top challenges.

Q3A: Which of the following are top challenges your organization needs to consider as you work to optimize your IT operations? (Please select all that apply.) **Q3B:** Of the challenges you mentioned, which are the most difficult to address? (Please select up to three.) **Q3C:** You mentioned that the following challenges are the most difficult for your organization to address. If you were able to solve these challenges, which ONE do you think would have the most positive impact on your business?

Base: 100 qualified respondents

Contributing to IT optimization challenges, organizations are facing an increasingly complex application ecosystem that continues to grow in size and scope.

Number of applications in use by your organization...



Those in larger organizations with 5,000 or more employees use more applications today (469 vs 187 at companies with less than 5,000 employees) and expect to use far more two years from now (523 vs 230).

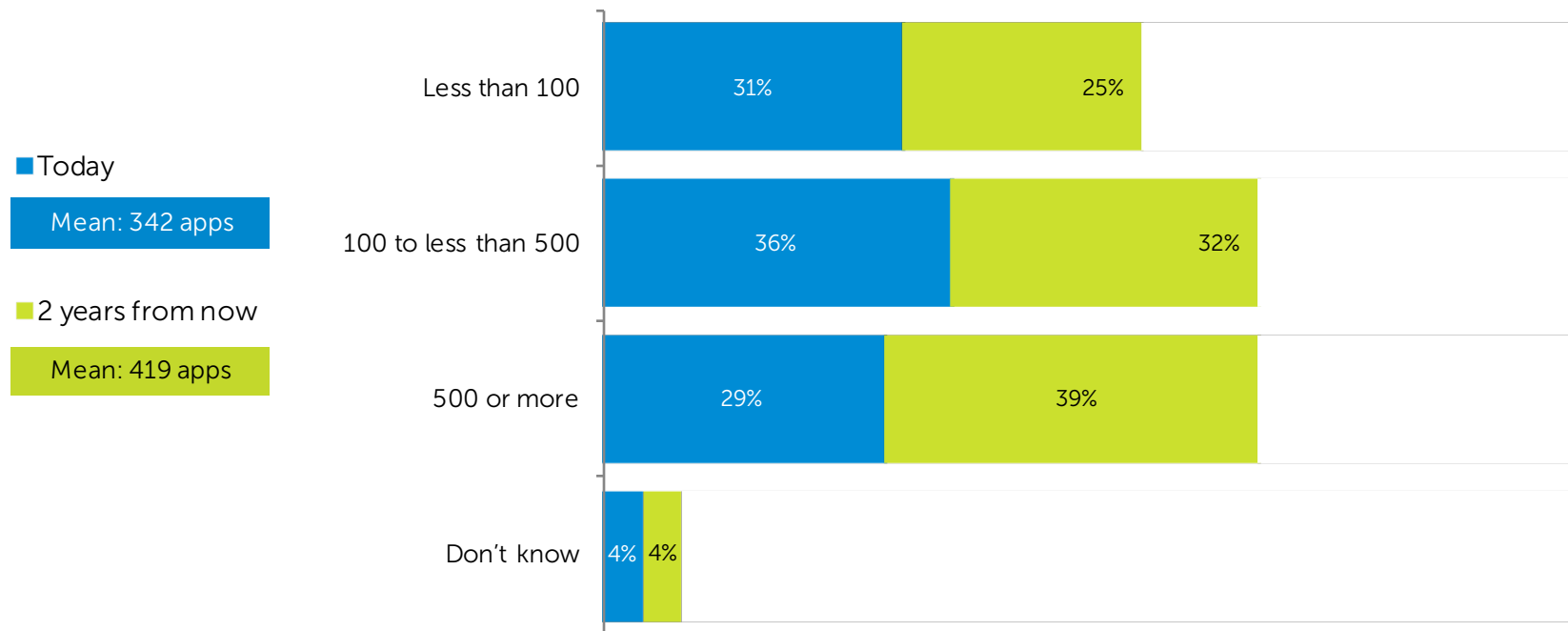
Q4A: Approximately, how many applications are in use by your organization TODAY?

Q4B: Approximately, how many applications do you expect to be in use by your organization 2 YEARS FROM NOW?

Base: 100 qualified respondents

The need to manage this growing application portfolio is placing increased demands on internal IT organizations' resources.

Number of applications managed by internal IT organizations...



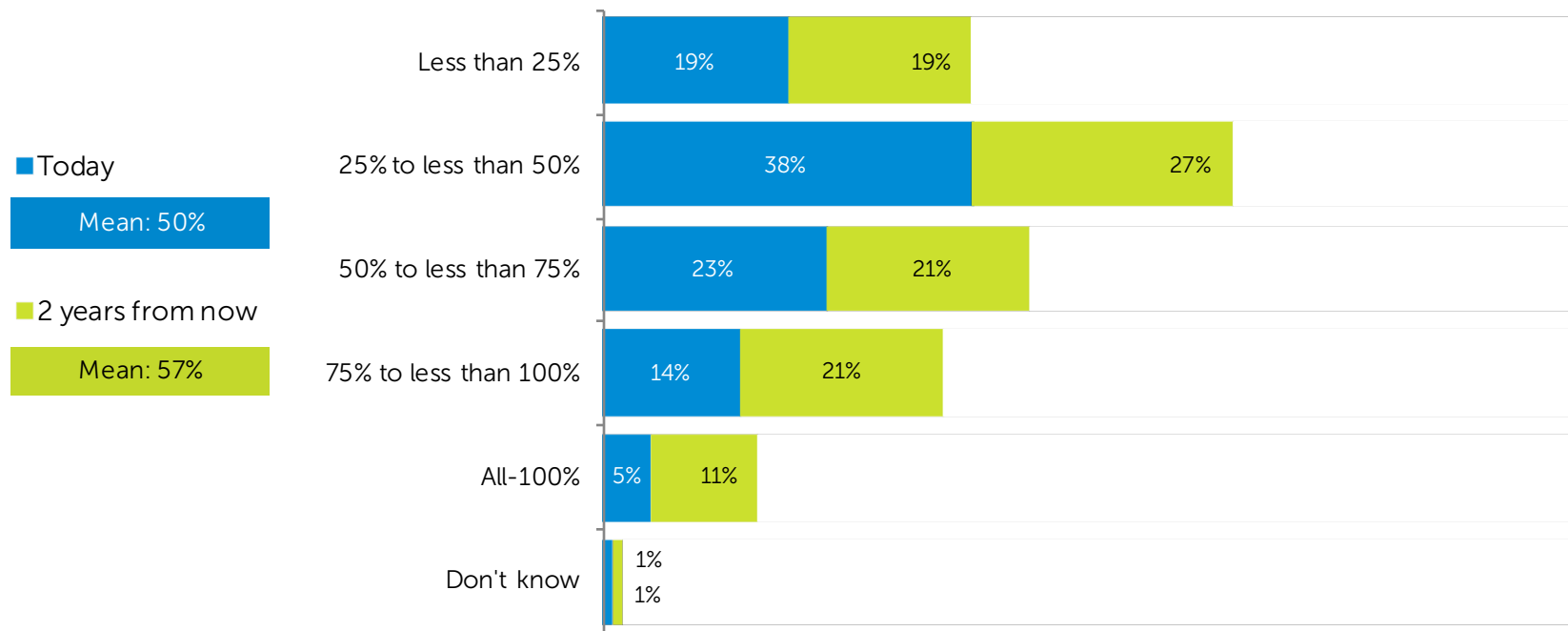
Q5A: Approximately, how many applications does your IT organization need to manage TODAY?

Q5B: Approximately, how many applications do you expect your IT organization will need to manage 2 YEARS FROM NOW?

Base: 100 qualified respondents

A growing number of mission-critical applications raises the stakes for the IT organizations tasked with managing those apps.

Percent of internally managed applications that are mission-critical



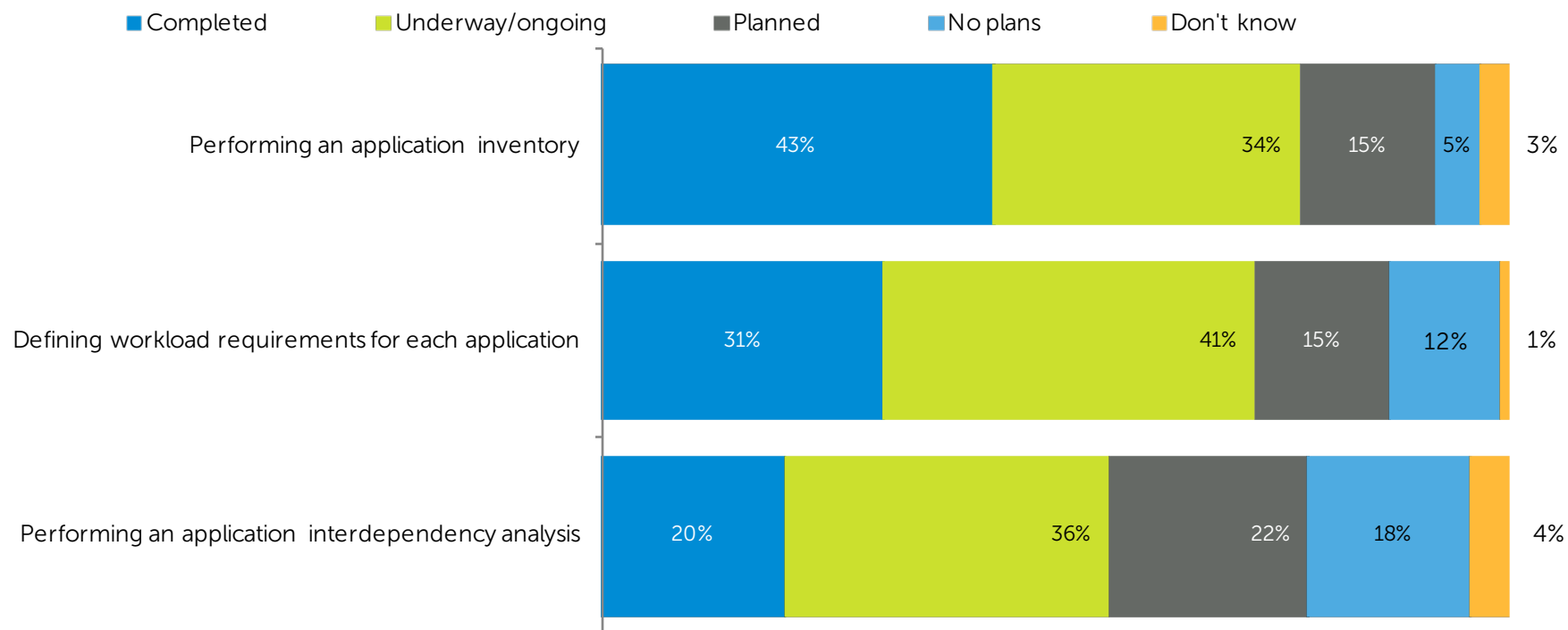
Q6A: Approximately, what percent of the applications your IT organization manages TODAY are mission critical?

Q6B: Approximately, what percent of the applications your IT organization will need to manage 2 YEARS FROM NOW do you expect to be mission critical?

Base: 100 qualified respondents

While companies are investing time and resources to perform application inventories and workload assessments which lay the groundwork for next generation platform selections, far fewer are performing application interdependency analyses, which are required for operational optimization.

Status regarding application assessment initiatives

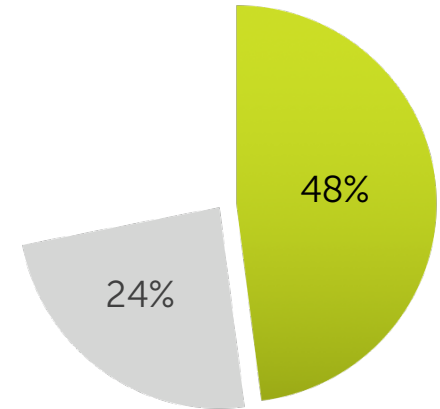
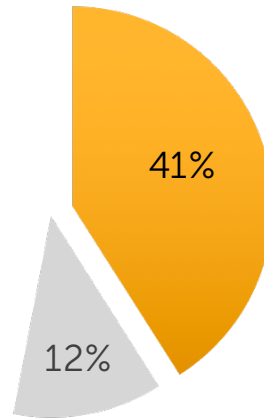
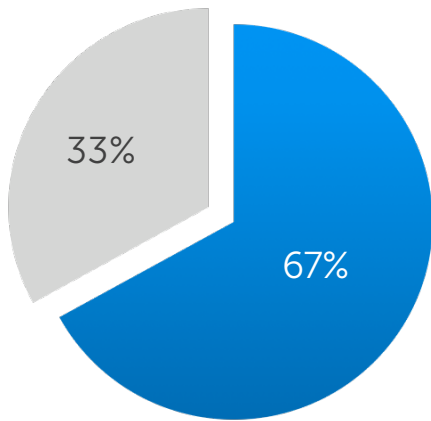


Q7: Please describe your IT organization's status with respect to the following initiatives.
 Base: 100 qualified respondents

Enterprises that take the time to inventory applications and analyze their requirements and interdependencies are more likely to report success with IT optimization.

Of those who report their IT Operations are more fully optimized... (8-10 rating on a 10-point scale)

- Have completed application inventory
- Have defined workload requirements
- Have conducted an interdependency analysis
- Reported by the rest of the respondents
- Reported by the rest of the respondents
- Reported by the rest of the respondents

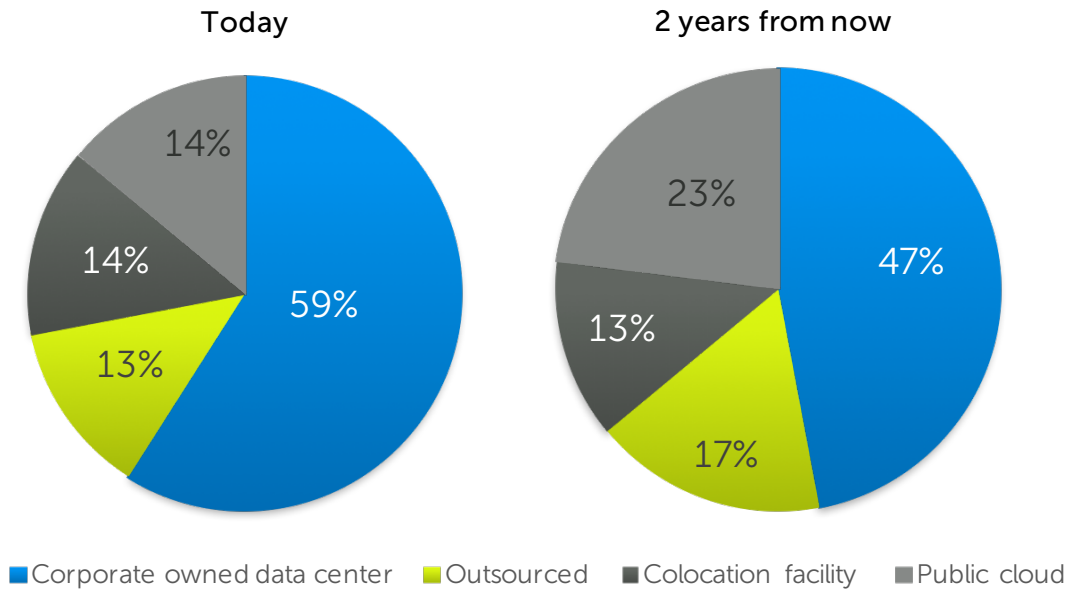


Q7: Please describe your IT organization's status with respect to the following initiatives.
Base: 100 qualified respondents

IT Platform Decisions

Over the next few years, IT infrastructure and application workloads are expected to shift from corporate owned data centers to public cloud and off-premise solutions.

How much IT infrastructure and application workload is distributed across each model...



DEFINITIONS

Corporate owned data center refers to a dedicated on-premises data center which houses a client's own infrastructure. The raised floor and infrastructure is entirely owned and managed by the client.

Outsourced data center refers to a dedicated off-premises data center which houses a client's infrastructure. The raised floor and infrastructure is owned and managed by a third-party.

Colocation refers to a shared off-premises data center which houses a client's own server hardware. The client leases the raised floor, but the server hardware is entirely owned and managed by the client.

Public Cloud is a computing model where a cloud infrastructure is provisioned by a cloud provider for open use by the general public. It may be owned, managed, and operated by a business, academic, or government organization, or some combination of them.

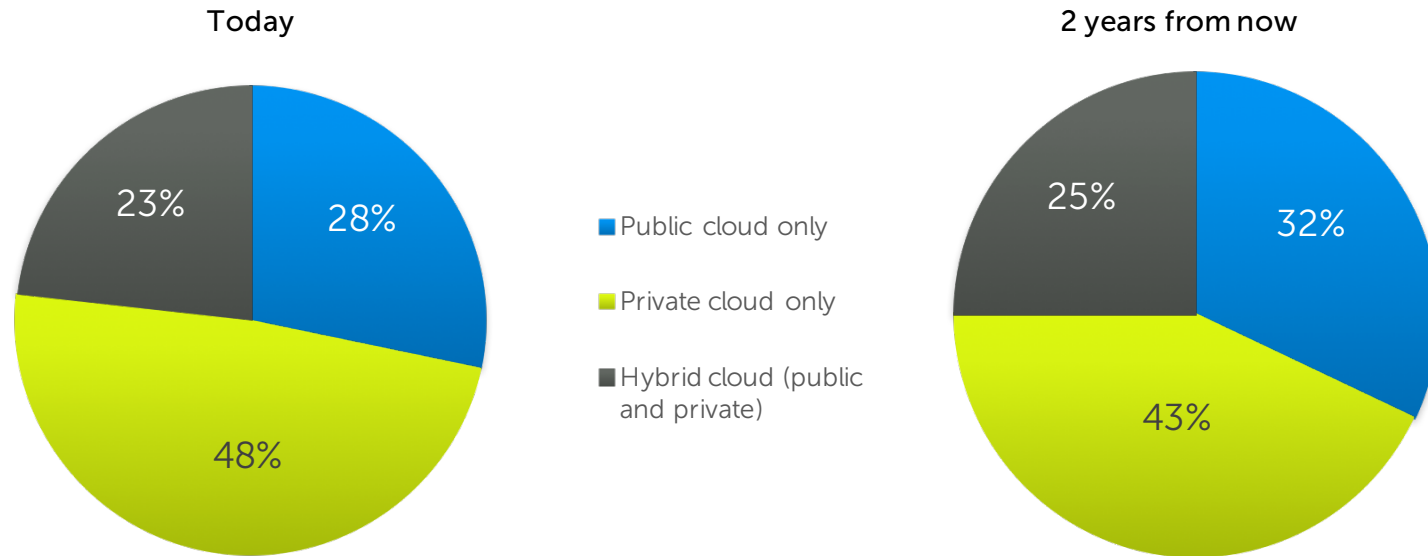
Q8A: Approximately how much of your IT infrastructure and application workload are distributed across each model below TODAY?

Q8B: Approximately how much of your IT infrastructure and application workload do you expect to be distributed across each model below 2 YEARS FROM NOW?

Base: 100 qualified respondents

While private cloud captures a large share of the cloud-based IT workload, migration to public cloud and hybrid cloud models will continue to grow.

How much cloud-based IT infrastructure and application workload is distributed across each model...



Both small (1,500 - 4,999 employees) and large enterprises (5,000+ employees) have very similar cloud-based distributions.

Q9A: Approximately how much of your cloud-based IT infrastructure and application workload are distributed across each cloud model below TODAY?

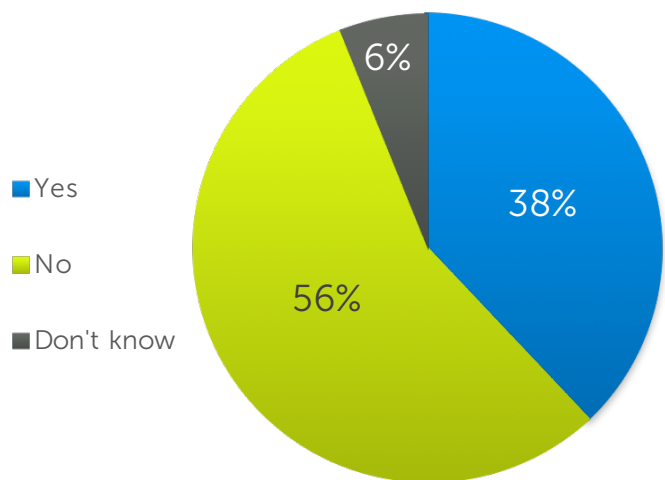
Q9B: Approximately how much of your cloud-based IT infrastructure and application workload do you expect to be distributed across each cloud model below 2 YEARS FROM NOW?

Base: 100 qualified respondents

Nearly 40% of organizations with public cloud experience have moved public cloud workloads back on premises. Security, cost/pricing, and manageability are the top reasons for the move(s).

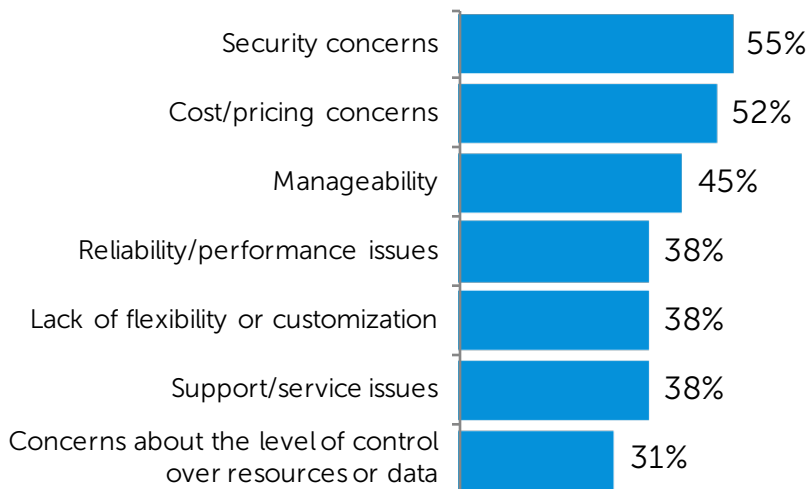
23% have NEVER deployed applications to a public cloud. Of those that have...

Have you moved applications away from public cloud back to an on premises deployment model?
(Among those who have deployed to a public cloud)



Why?

(Out of those that moved applications away from public cloud to on premises deployment)



Those in C-Level+ roles are significantly more likely to cite pricing concerns and support issues as the top reasons for moving.

Q10A: Has your organization ever moved applications and workloads away from a public cloud back to an on premises deployment model?

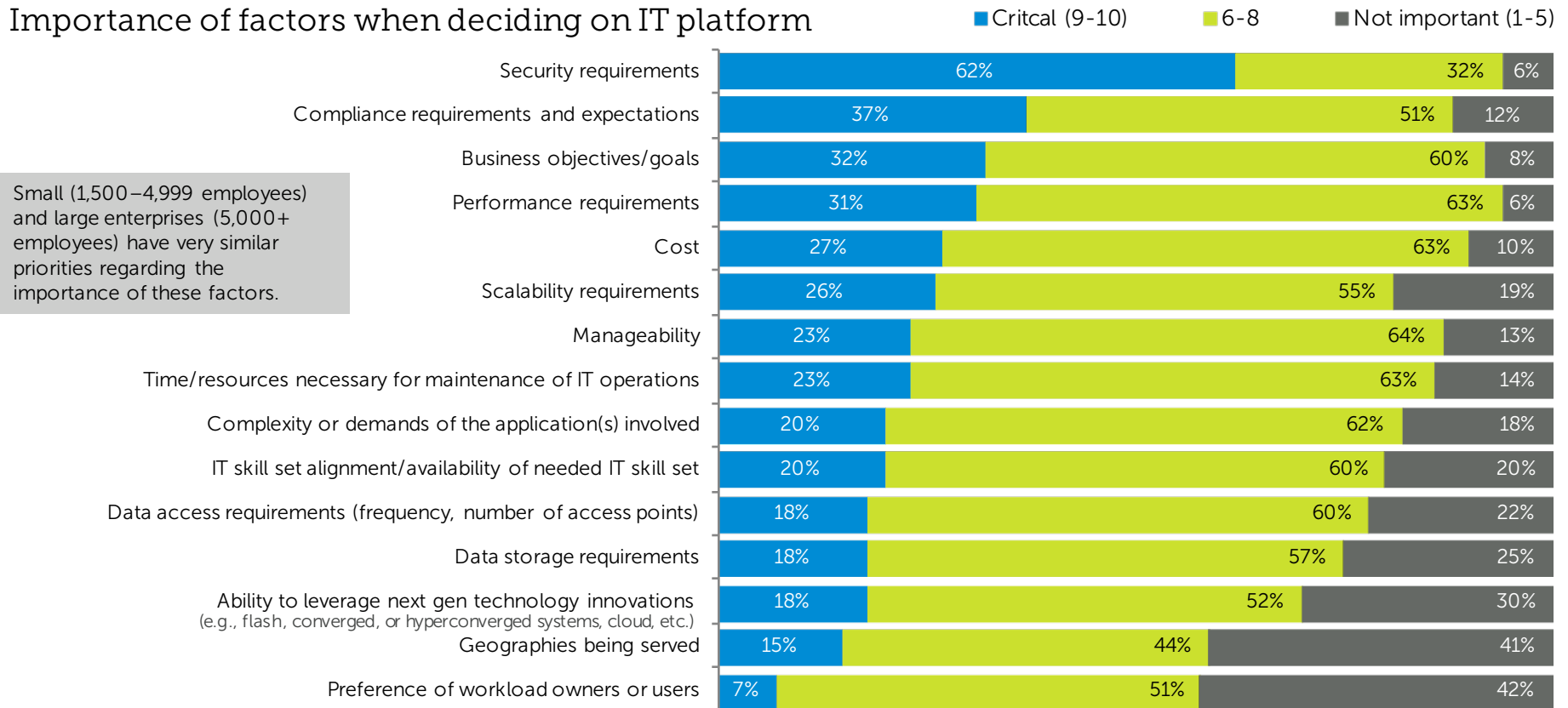
Base: 77 respondents who have deployed to a public cloud

Q10B: Why did your organization decide to move applications and workloads away from a public cloud to an on-premises deployment model?

Base: 29 qualified respondents who have moved applications away from a public cloud

Security requirements top the list of factors taken into consideration when deciding which platform to leverage for specific IT workloads.

Importance of factors when deciding on IT platform



Small (1,500–4,999 employees) and large enterprises (5,000+ employees) have very similar priorities regarding the importance of these factors.

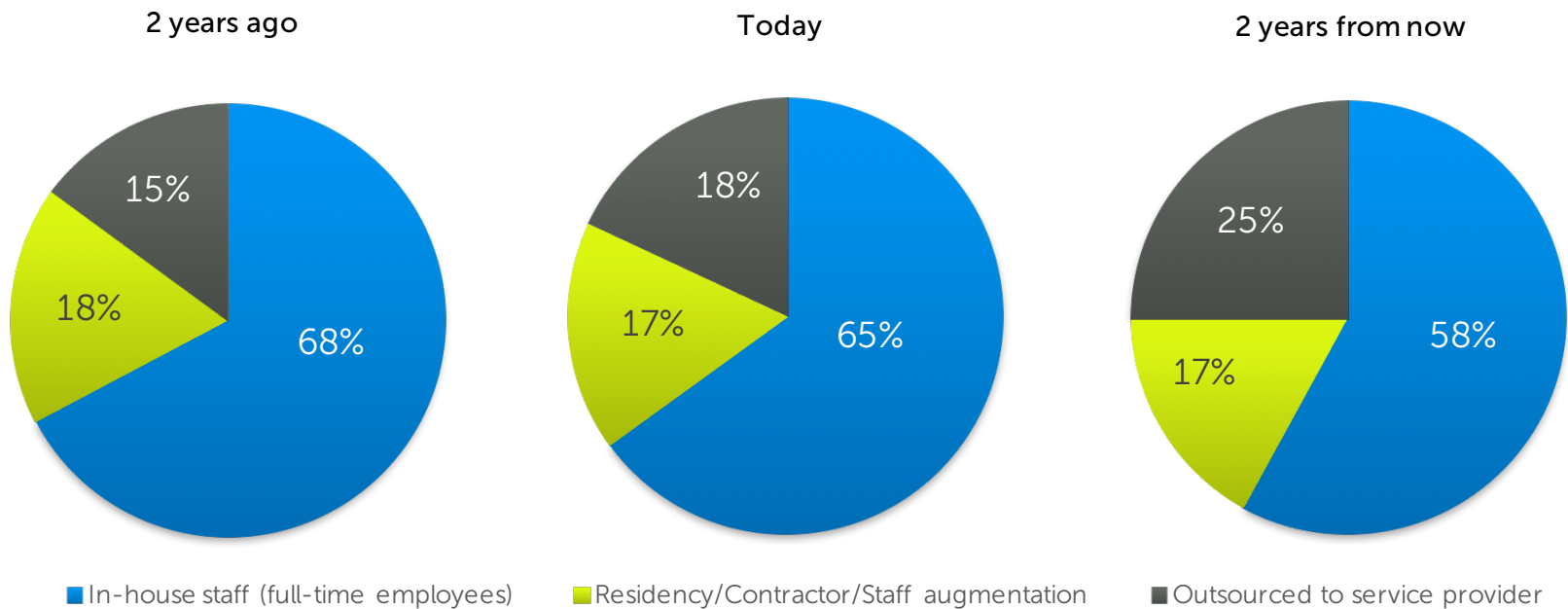
Q11: How important are the following factors when deciding which platform(s) (e.g., on premises infrastructure, private cloud, public cloud, hybrid cloud, etc.) to leverage for specific IT workloads?

Base: 100 qualified respondents

IT Resource Decisions

IT organizations are slowly increasing their reliance on outsourced service providers, but in-house staff still carry a large share of the workload for IT operations management.

Proportion of IT operations management tasks resourced by:



Q12a: Now, thinking about the IT skill sets and human resources that your organization utilizes for IT operations management tasks, approximately what percent was handled by in-house staff versus external parties (staff augmentation or outsourcing to a provider) 2 YEARS AGO?

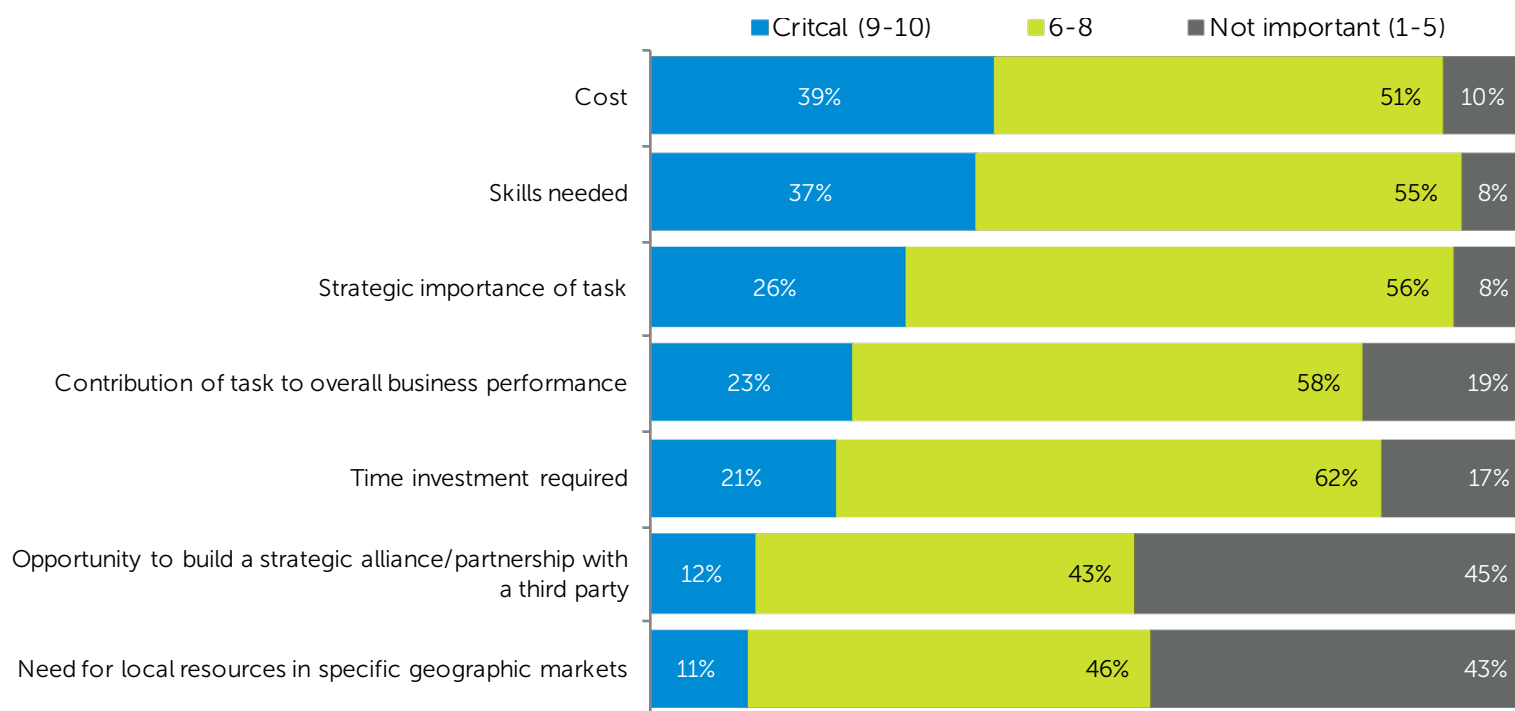
Q12b: Approximately, what percent of your IT operations management tasks are handled by in-house staff versus external parties TODAY?

Q12c: Approximately, what percent of your IT operations management tasks do you expect to be handled by in-house staff versus external parties 2 YEARS FROM NOW?

Base: 100 qualified respondents

While there isn't one top factor for deciding whether to use internal or external resources, many organizations think cost and necessary skills are highly important to the decision.

Importance of factors when deciding on internal versus external resources for IT operations management tasks

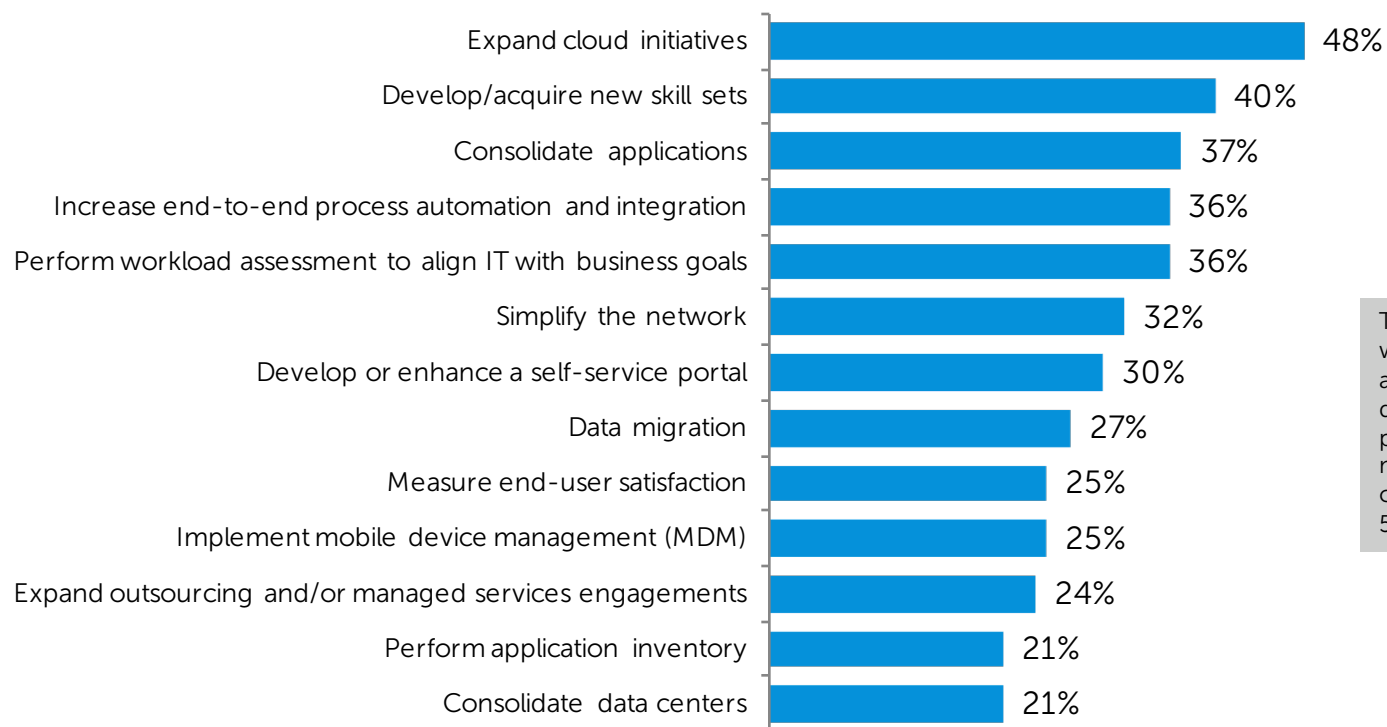


Q13: How important are the following factors when deciding whether to leverage internal versus external resources for specific IT operations management tasks?
Base: 100 qualified respondents

IT Optimization Practices and Future Plans

As they look for ways to optimize IT operations, almost half of organizations report they will focus on expanding cloud initiatives, followed by developing new skill sets and consolidating applications.

Key areas of focus for optimizing IT operations over the next 12-24 months

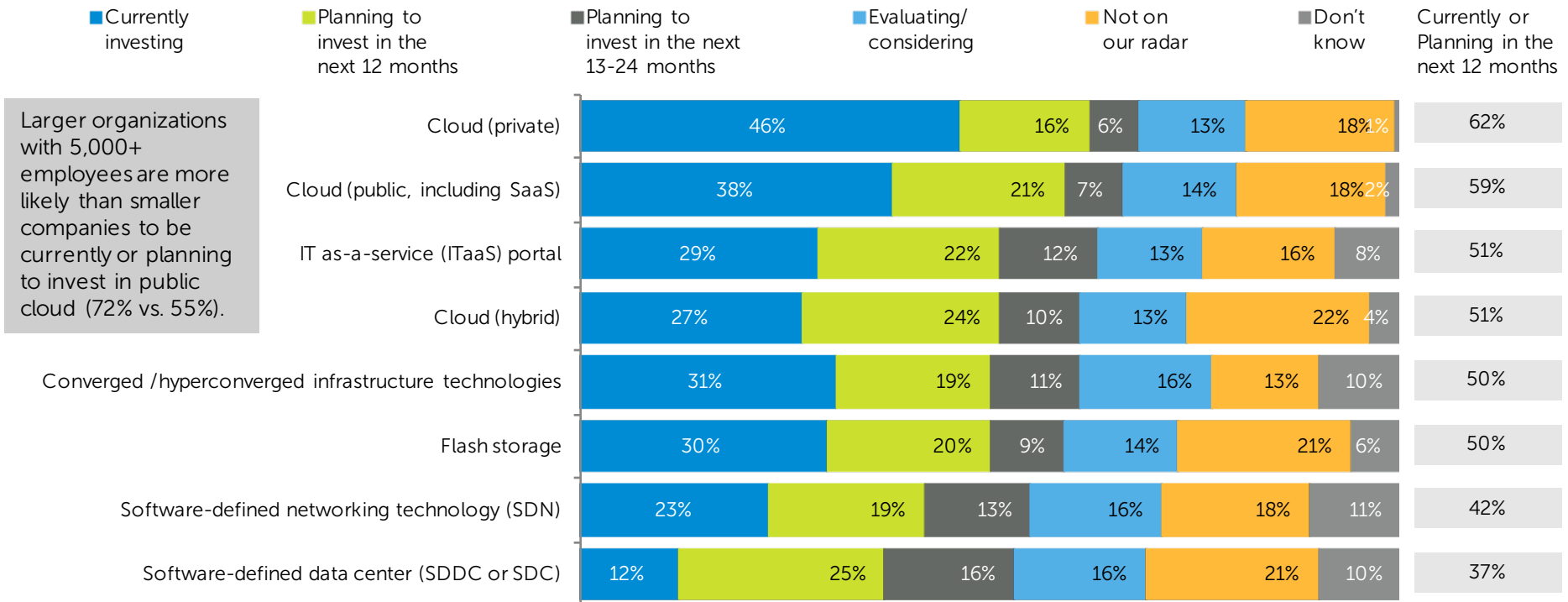


Those in larger organizations with 5,000 or more employees are more likely to focus on development of self-service IT portals over the next 12-24 months (36% vs 18% among companies with fewer than 5,000 employees).

Q14: What are your organization's key areas of focus over the next 12-24 months as you look for ways to optimize your IT operations?
Base: 100 qualified respondents

Six out of ten organizations are currently or planning to invest in the next year in private and public cloud technologies.

Level of investment in next-generation technologies



Q15: Where does your organization stand with respect to investment in the following technologies?

Base: 100 qualified respondents

About Datalink

Datalink is a complete IT services provider that helps companies transform their technology, operations, and service delivery to meet business challenges. Combining extensive experience, a full lifecycle of services and a comprehensive approach to producing IT innovations that empower positive business outcomes, Datalink delivers success across cloud IT transformation, next-generation technology, and security.

For more information, call 800.448.6314 or visit www.datalink.com.

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