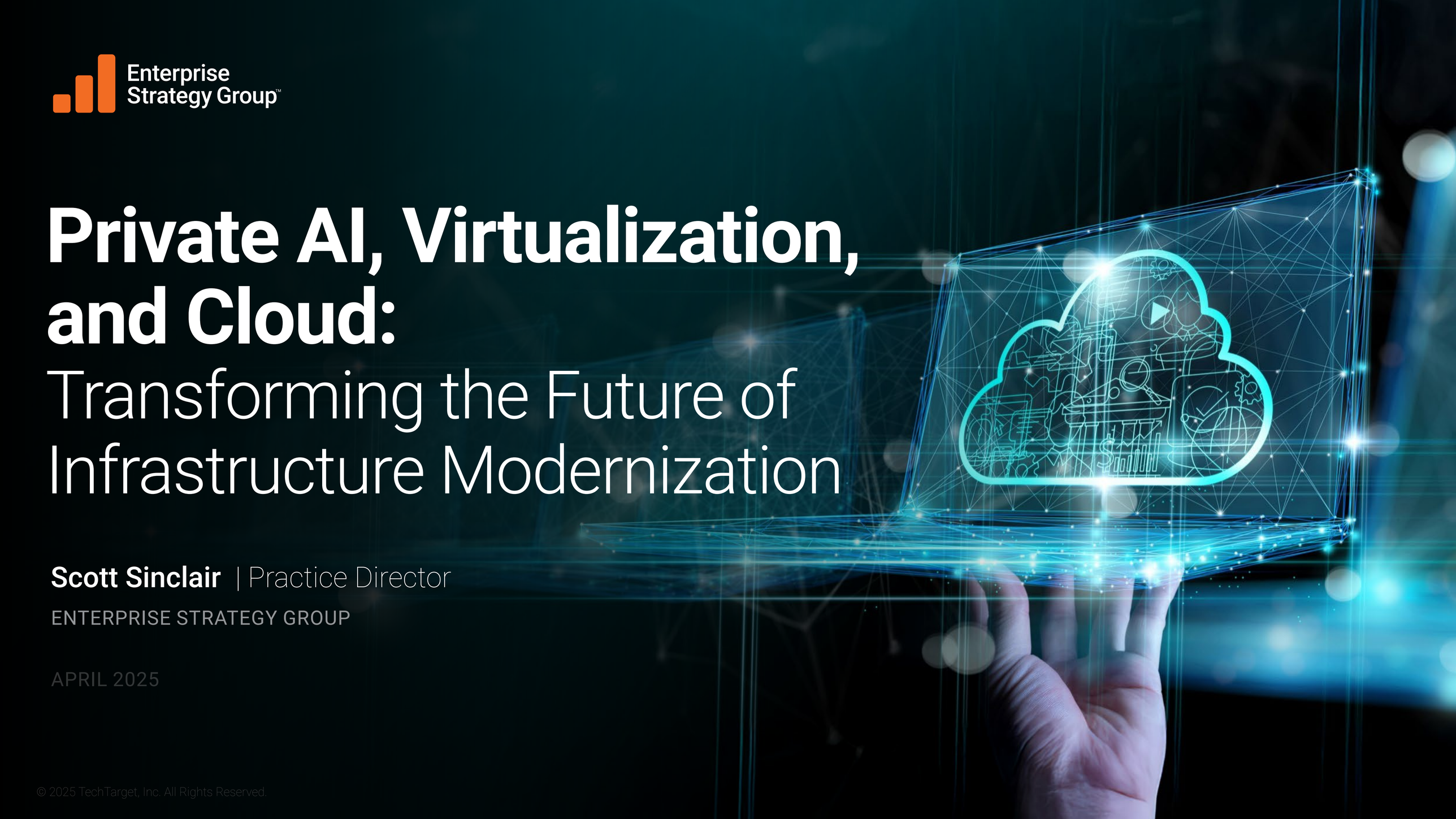
Enterprise Strategy Group™

Private AI, Virtualization, and Cloud:
Transforming the Future of Infrastructure Modernization

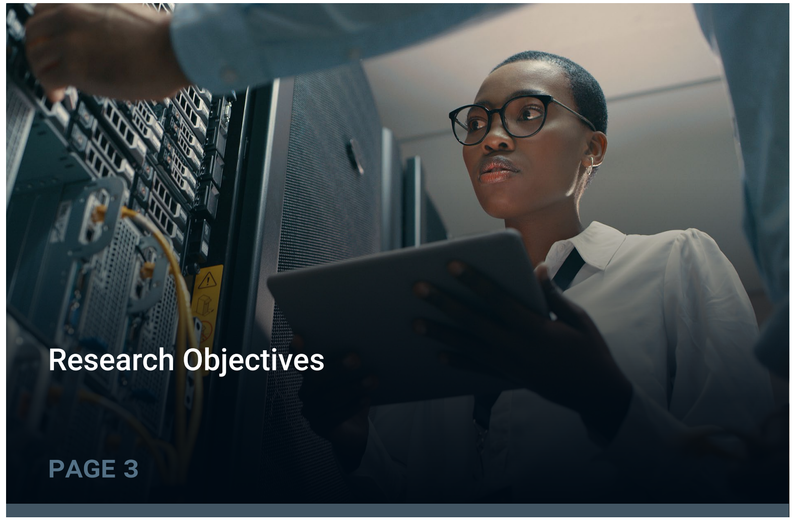


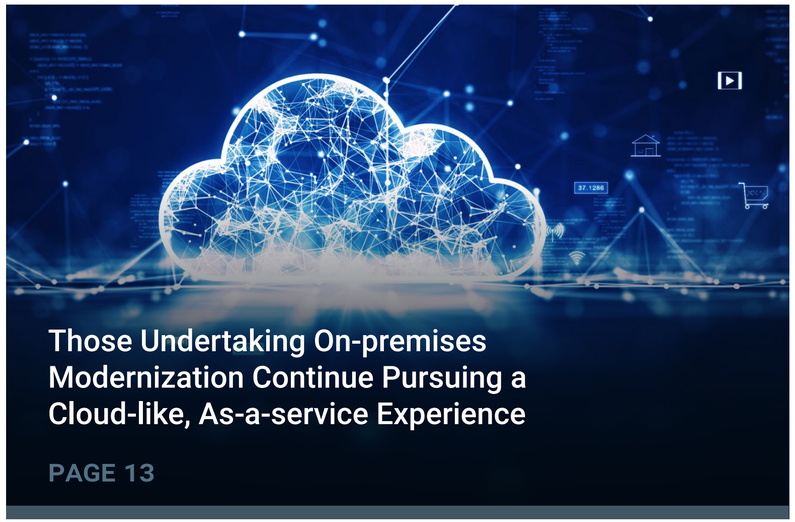
Scott Sinclair | Practice Director

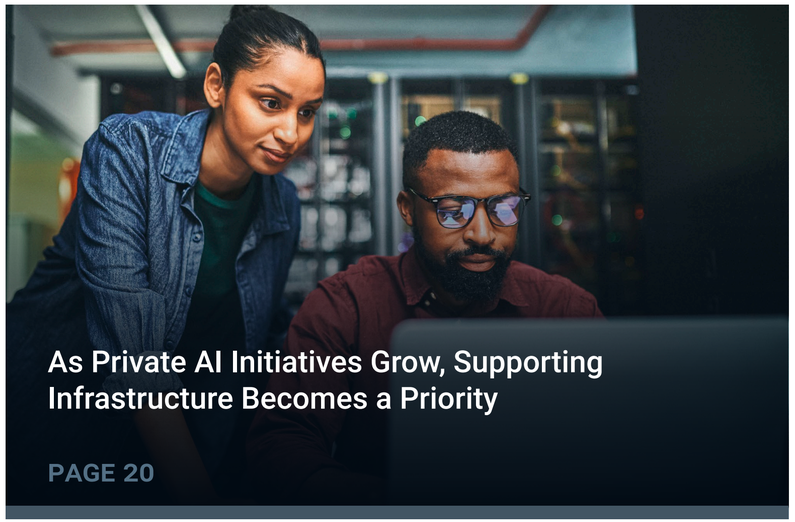
ENTERPRISE STRATEGY GROUP

APRIL 2025

Key Findings







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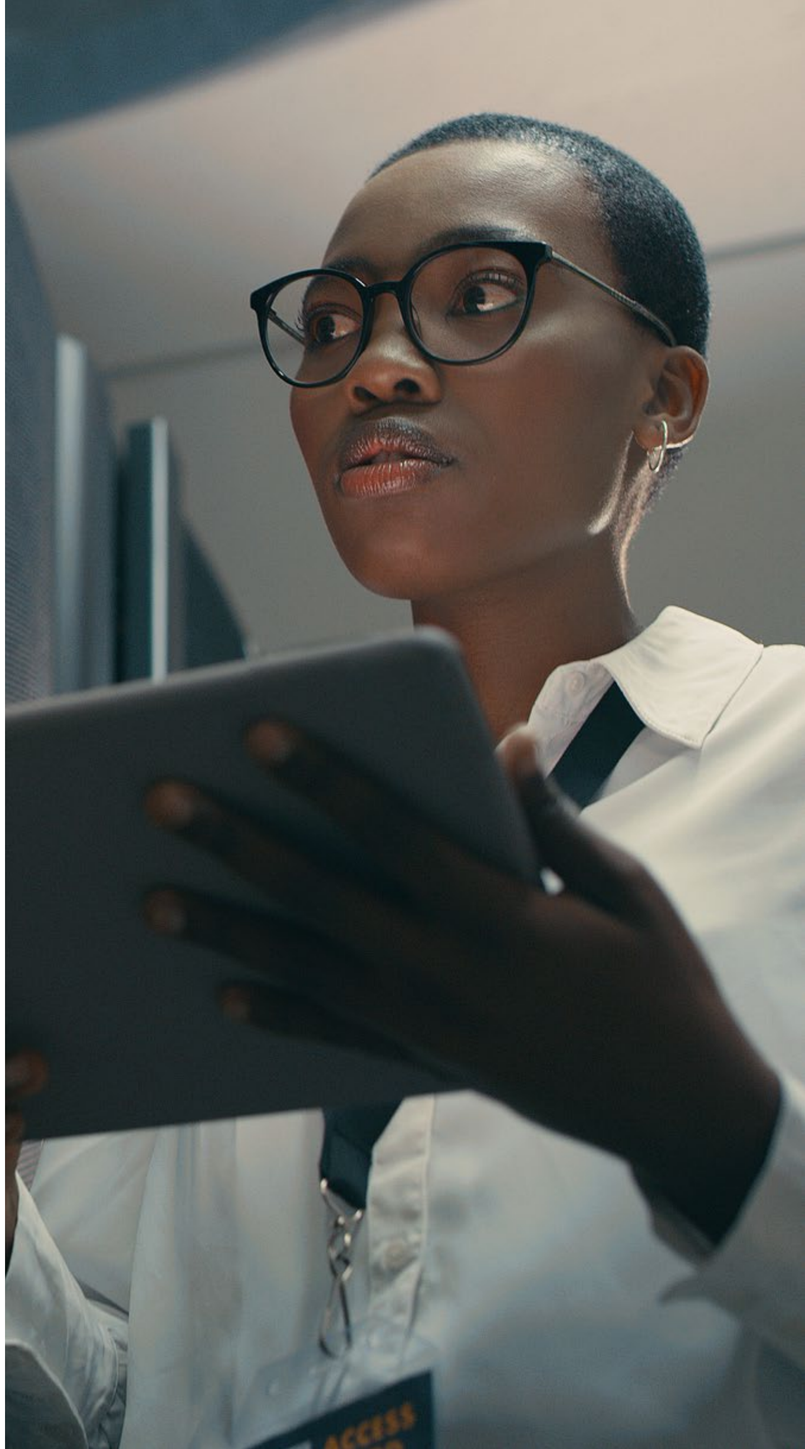
Research Objectives

Recent technological shifts, including the widespread adoption of AI and shifts in the cost of licensing for hypervisor technology, are forcing IT decision-makers to reevaluate their preconceptions in hybrid cloud architecture and design. Cost increases in hypervisor technology have emerged across the IT world, leading to the exploration of alternatives. The prioritization of AI has fueled an increased focus on both the importance of private data and the need for greater control of infrastructure, reaffirming the significance of data centers, colocation, and hosted private cloud options for private AI.

To gain further insight into how these trends are impacting the future of on-premises infrastructure investments, architecture, and design, Enterprise Strategy Group, now part of Omdia, surveyed 380 IT professionals at organizations in North America (US and Canada) involved with or responsible for evaluating, purchasing, managing, and building application infrastructure.

THIS STUDY SOUGHT TO:

- **Identify** how AI, changing hypervisor prices, and perceptions of cloud are changing infrastructure strategy.
- **Determine** whether decision-makers are embracing a platform approach.
- **Establish** the impact of private AI on investment.
- **Monitor** how cloud and on-premises innovation affects experience preferences.



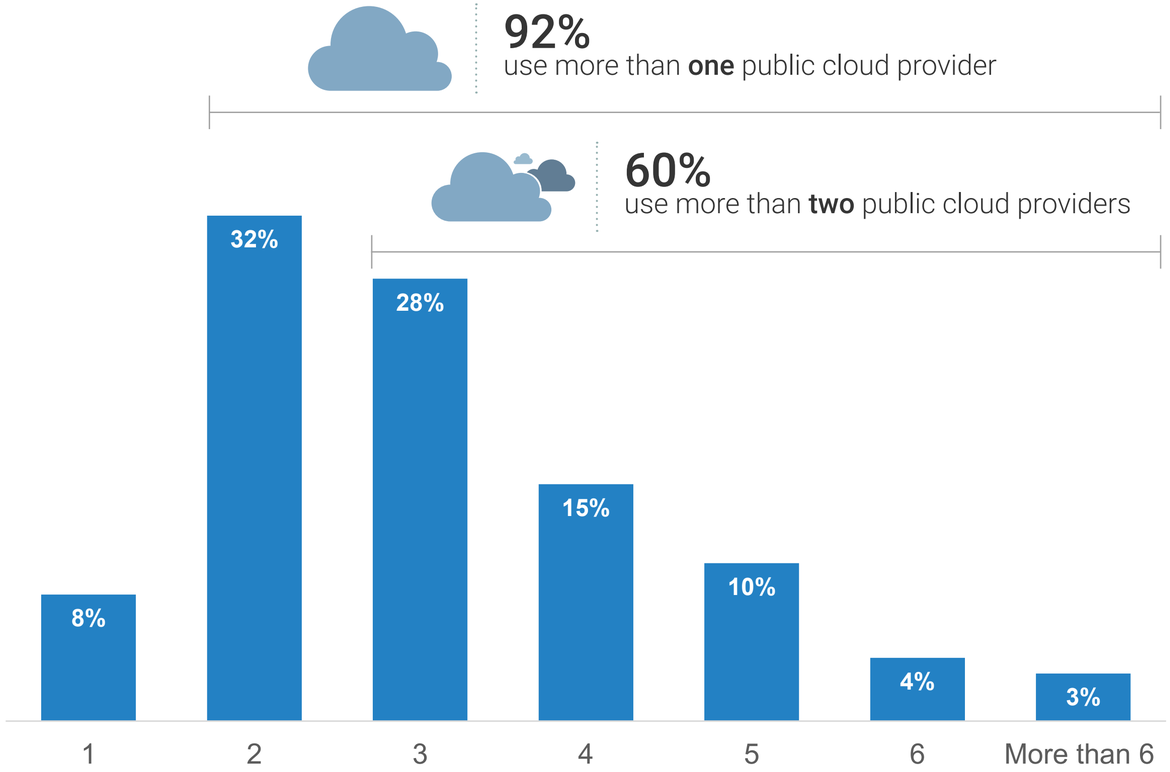
Note: Totals in figures and tables throughout this eBook may not add up to 100% due to rounding or organizations choosing more than one answer to select questions.

AI Fuels an Increasingly Distributed Application Infrastructure Environment

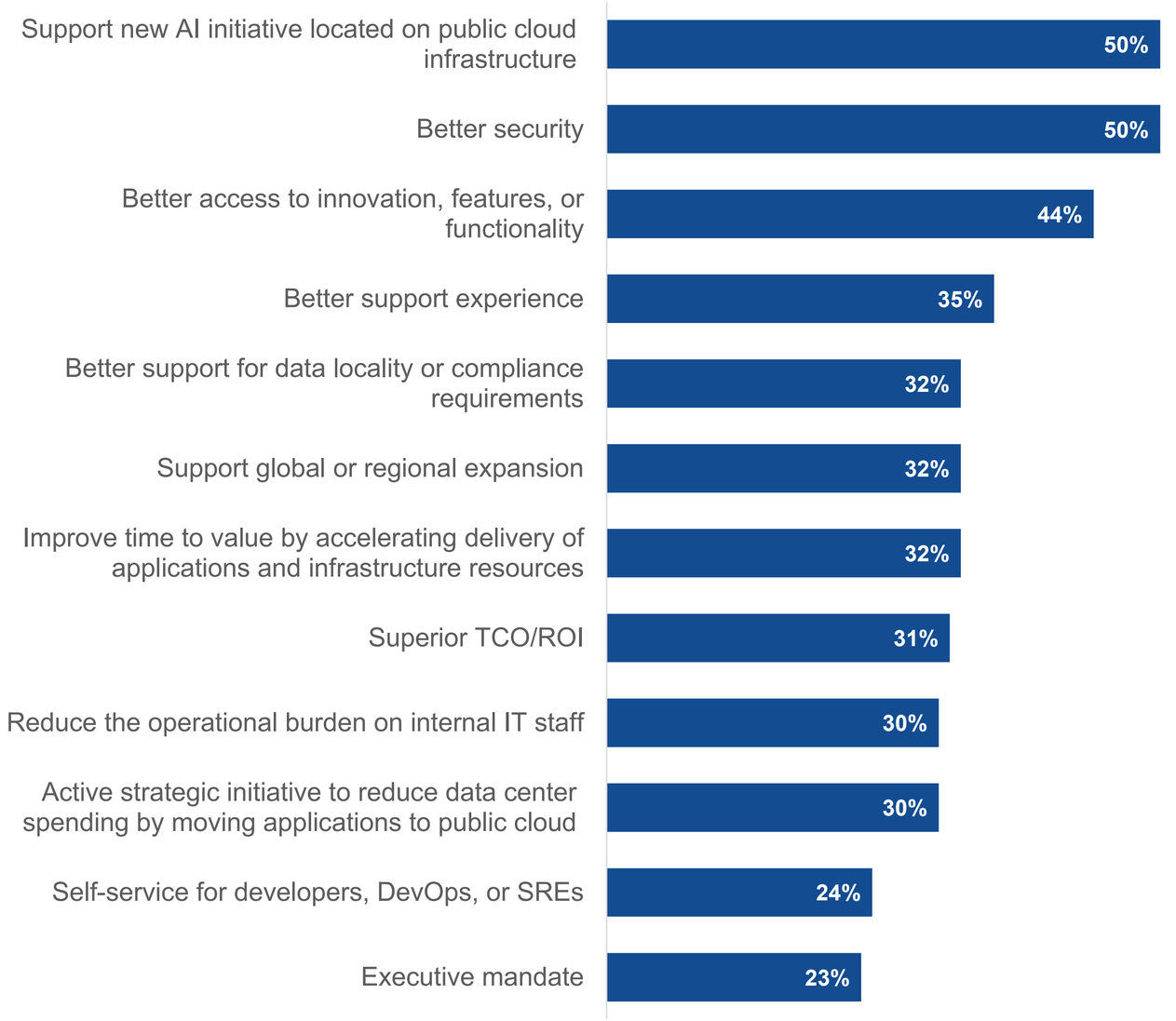
Multi-cloud Infrastructure Is Commonplace

With multi-cloud adoption already nearly universal, AI, better security, and improved access to innovation top the list of reasons nearly a third (29%) of organizations expect to shift a greater share of their IT spending to public cloud over the next two years.

Unique public cloud infrastructure providers in use.



Drivers of increased investment in public cloud.



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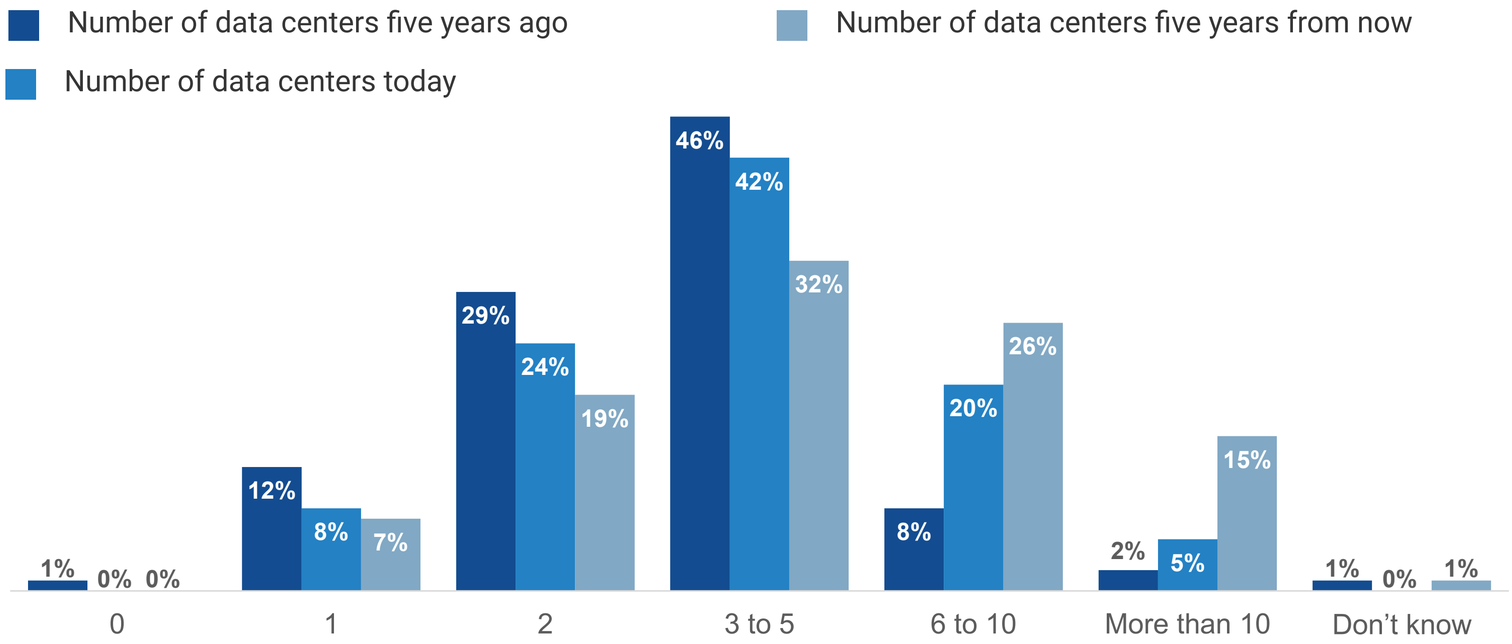
Businesses Are 3x More Likely to Add Data Centers Than Remove Them

As investment in public cloud services continues, on-premises investment persists as well. The percentage of businesses that support six or more data centers is expected to increase from 25% to 41% in five years. Given the cost of public cloud infrastructure and increased importance of private data, organizations are rethinking the significance of data center modernization, making it a top priority.

On-premises data centers in operation.



84%

say data center modernization is a **top IT priority.**

76%

say the **rising cost of cloud infrastructure** has caused them to reevaluate their hybrid cloud strategy.

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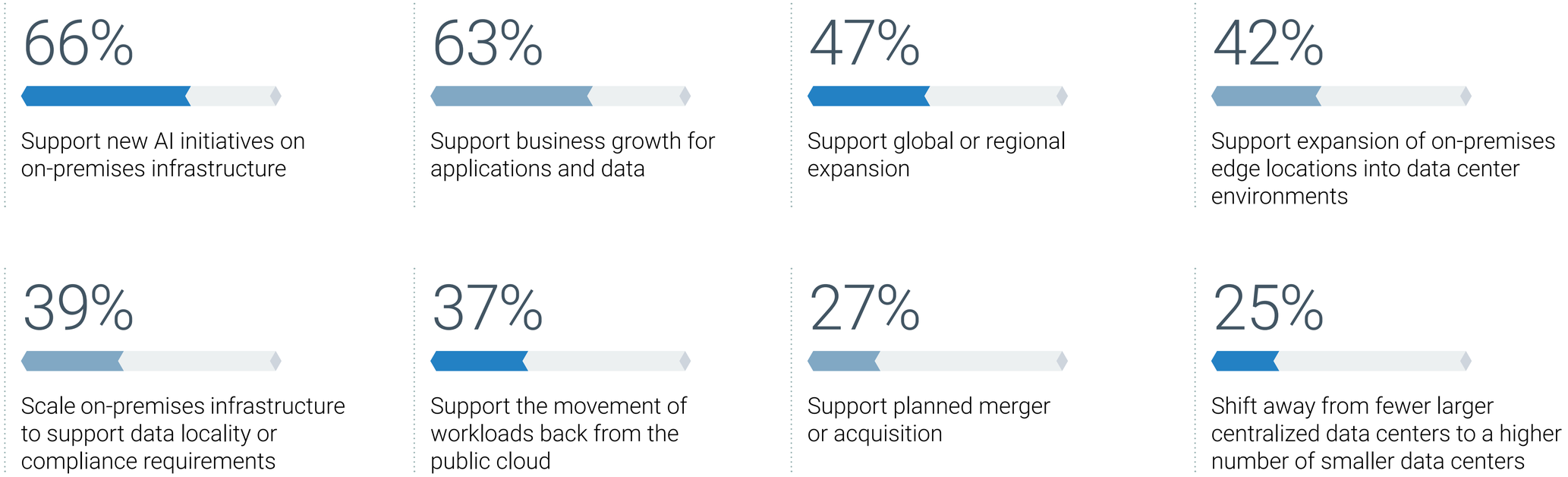
AI and Business Growth Fuel the Proliferation of Data Center Environments

AI surpasses overall business growth as a top justification for organizations that expect to increase the number of data centers they own and operate over the next five years.

The data center is and will remain a foundation of digital business, with the desire for greater control over data, infrastructure, and resources driving the importance and consistent presence of on-premises infrastructure in the years ahead.

Drivers for increasing number of data centers.



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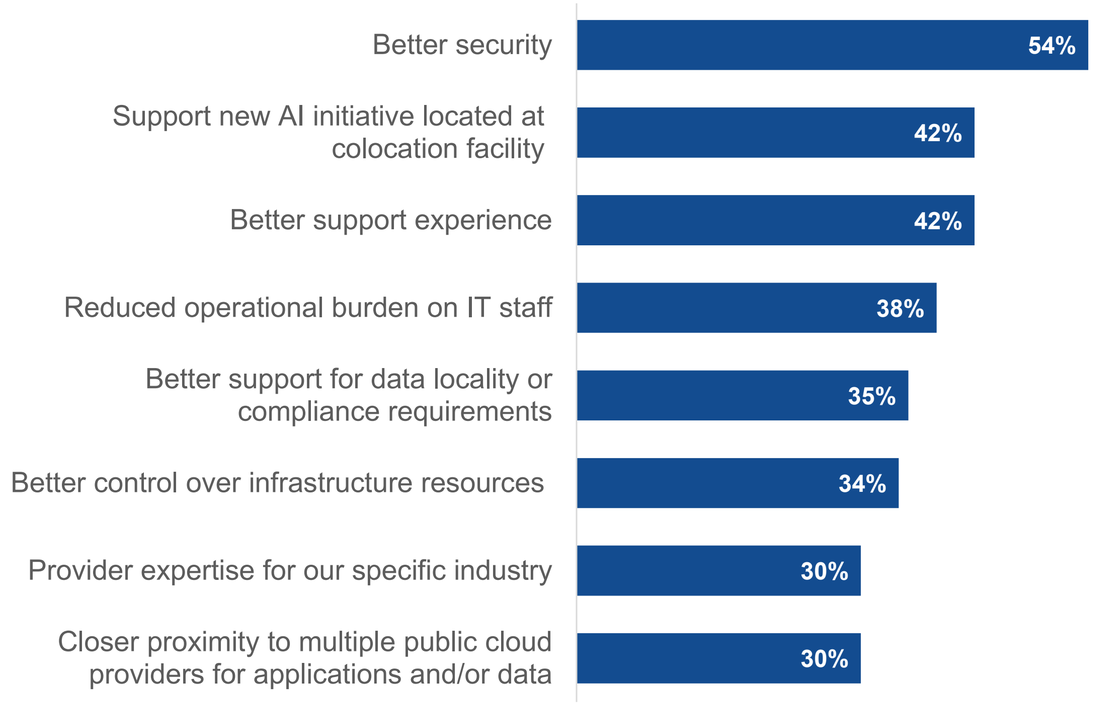
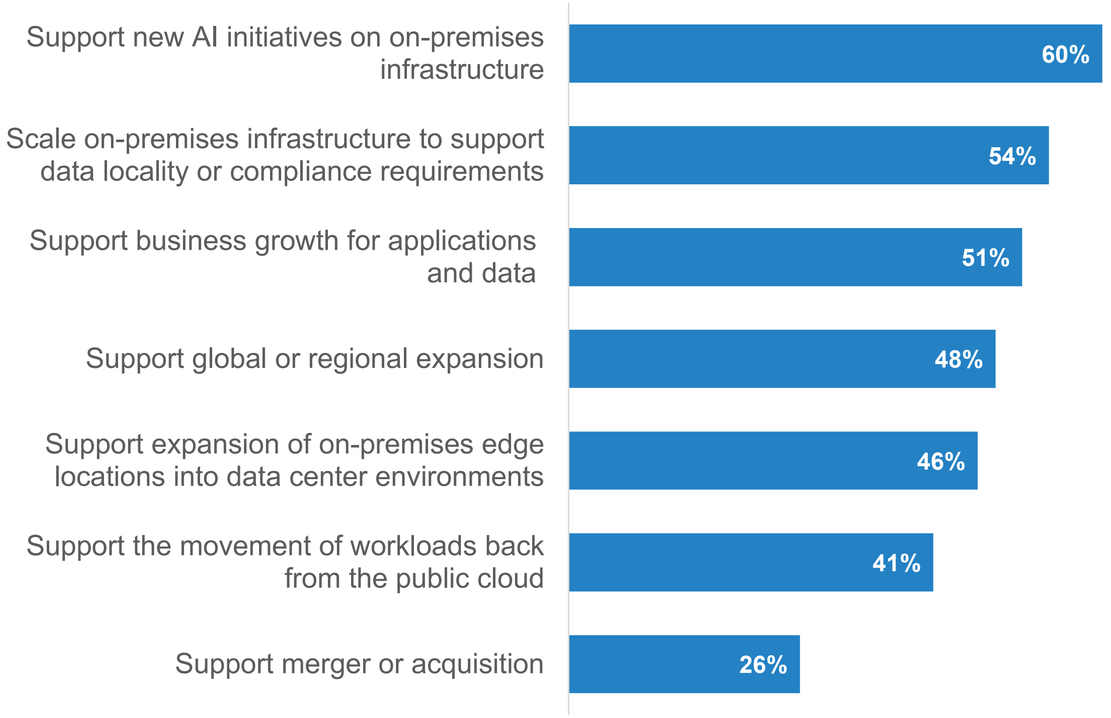
IT Budgets Are Shifting for AI and Greater Control

The need for greater control is fueling the construction of data center facilities for organizations as well as investment in third-party partners that provide hosted private cloud and colocation. Nearly half (47%) of organizations expect their spending with colocation or hosted private cloud providers to outpace their spending with public cloud and on-premises data center environments. When combined with the 24% of businesses planning to increase their data center spending relative to other locations, this represents significant movement to shift spending to infrastructure deployment options that offer greater control for both infrastructure and data as AI initiatives ramp up.

Drivers of increased investment in colocation and hosted private cloud.



Drivers of increased investment in data centers.



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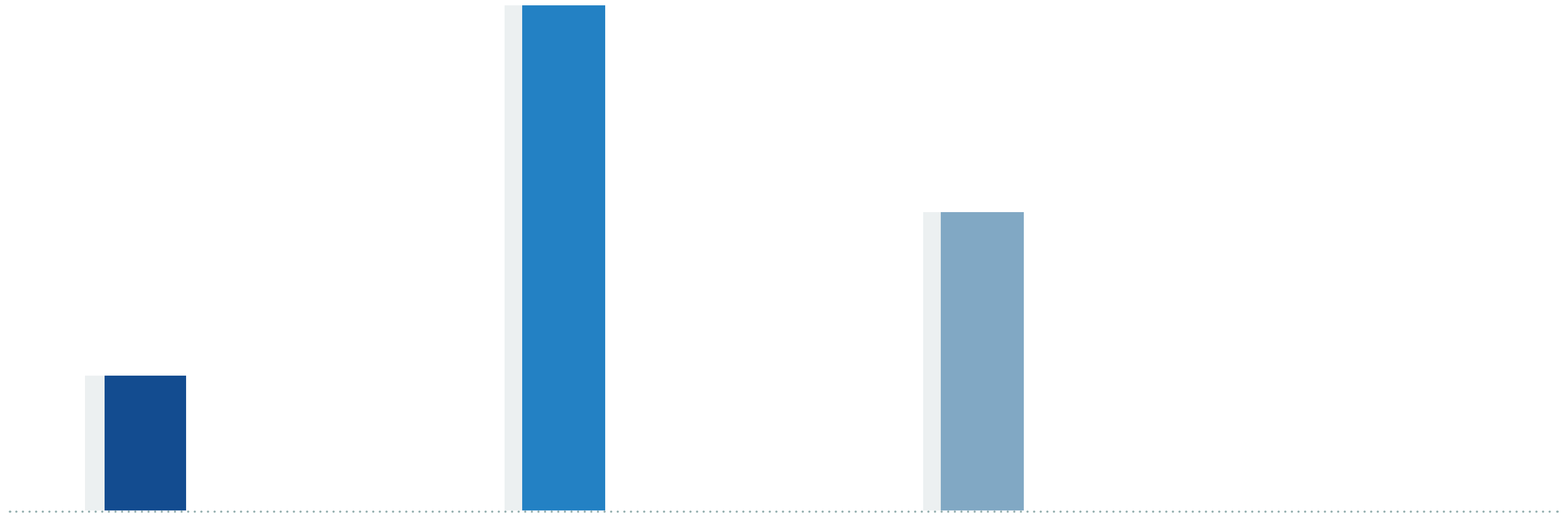
As Virtualization Environments Evolve, Organizations Seek Savings and Alternatives

"72% experienced **a cost increase in their hypervisor environment due to changes in a provider's licensing model** in the past 18 months."

Nearly Three-quarters of Organizations Were Hit With an Increase in Hypervisor License Fees

Adding to the complexity of IT operations, shifting fee structures in the hypervisor market pile significant costs onto already strained IT budgets. The impact forces IT leadership teams to reevaluate existing strategies, partners, and investment priorities. This also prompts organizations to explore options for reducing costs in the short term while implementing strategies to reduce partner lock-in over the long term.

Extent of increase in hypervisor per-licensing costs over the past 18 months.



14%	54%	31%	0%
10% or less	**11% to 50%**	**51% to 100%**	**More than 100%**

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Organizations Balance Cost Realities With Exploration of Alternatives

Organizations are taking a multi-pronged approach to increases in hypervisor licensing costs, often taking more than one action to soften the impact. The most common actions focus on optimizing the environment, either through server or cloud adoption, to reduce the overall cost of the hypervisor environment. While container-based modernization initiatives comprise a second tier of options, the data highlights that organizations are exploring multiple alternatives to their existing provider.

Actions prompted by increase in hypervisor licensing costs over the past 18 months.

51%

Modernize server environment to improve VM utilization and reduce license costs

46%

Accelerate public cloud infrastructure strategy

45%

Increase budget to support the higher cost of hypervisor environment

39%

Accelerate application modernization initiatives to shift virtualization to container-based environments

39%

Shift to a new platform technology with the ability to manage both virtual machines and containers

34%

Shift to a VM management technology running on Kubernetes

29%

Shift to an alternative hypervisor

27%

Retire certain applications or workloads

1%

We do not yet have a plan

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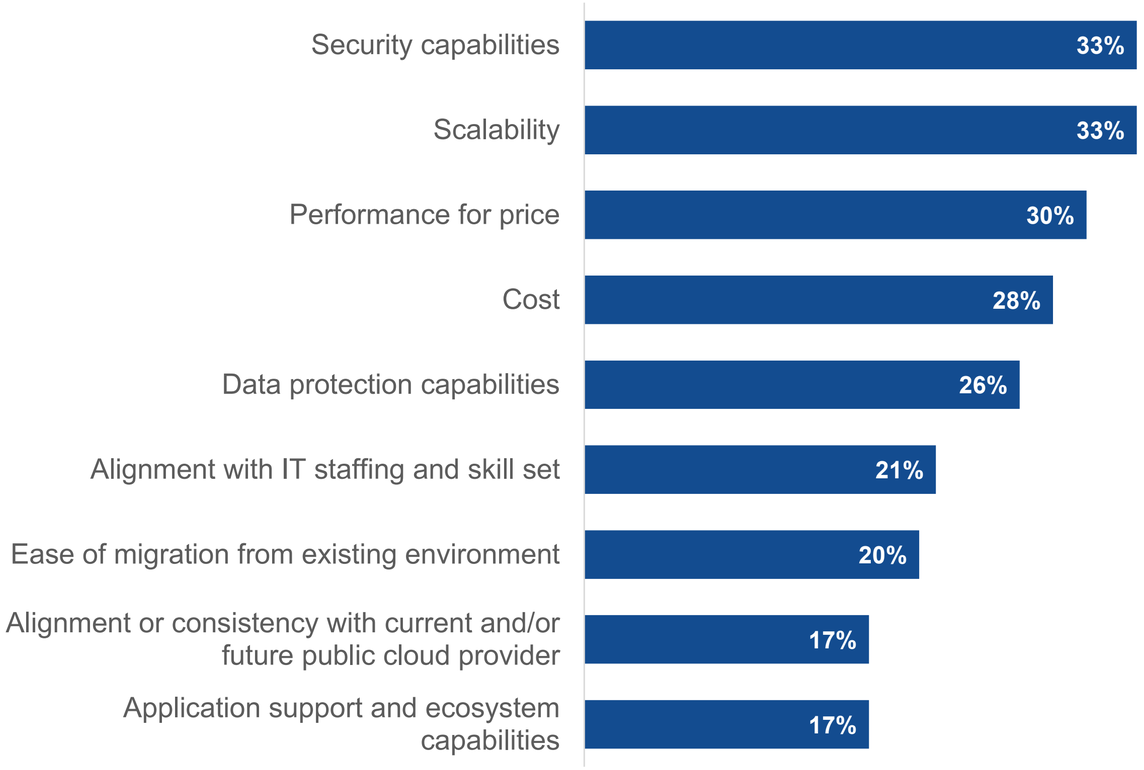
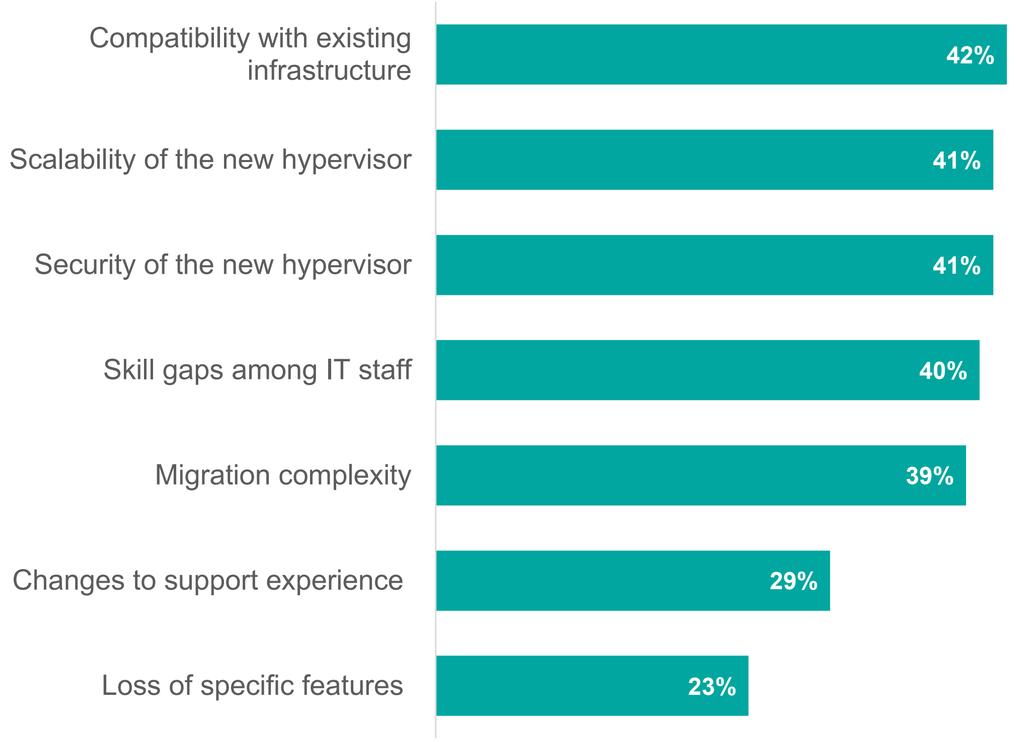
When Evaluating Hypervisor Alternatives, Security and Scale Matter Most

When it comes to reducing investment in or replacing primary hypervisor partners, five core hypervisor requirements outpace others: security, scalability, performance for price, cost, and data protection. While familiarity benefits such as alignment with existing skills and ease of migration are powerful, organizations are focused on ensuring providers can efficiently scale with the demands of the business.

Selection factors for alternative hypervisors.



Concerns about transitioning to alternative hypervisors.



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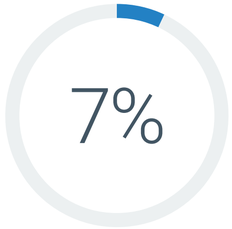
Those Undertaking On-premises Modernization Continue Pursuing a Cloud-like, As-a-service Experience

Hybrid Takes Over Behind a Desire for On-premises Environments to Change

While only 3% of organizations want to abandon data centers, just 7% want to keep everything the same. Whether organizations are increasing, maintaining, or reducing data center spending, two-thirds want to modernize their on-premises infrastructure to provide a more cloud-like experience. As organizations increasingly understand that the future of IT is hybrid, the desire to modernize infrastructure for on-premises environments becomes a priority.

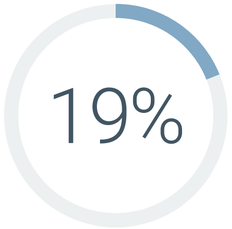
Strategy for on-premises data center environments over the next three years.



Maintain or increase on-premises infrastructure investment for the foreseeable future

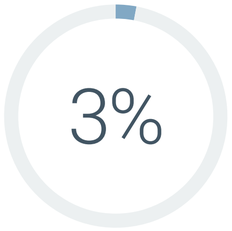
Maintain on-premises infrastructure investments while shifting toward an on-premises cloud-like experience

Reduce on-premises infrastructure investments in favor of migration to or consumption of public or hosted cloud services



Increase on-premises infrastructure investments with a focus on an on-premises cloud-like experience

Reduce on-premises infrastructure investments in favor of migration to or consumption of public or hosted cloud services, while also investing in technologies that provide an on-premises cloud-like experience



Exit on-premises data centers completely

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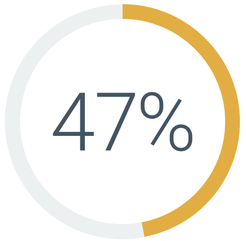
"84% say consistency of experience across data center and cloud environments **delivers significant operational benefits**."

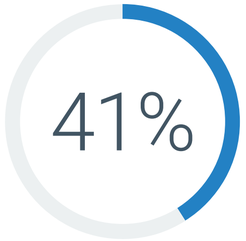
Organizations Prioritize Consistency Across Hybrid Cloud Environments

Most organizations agree that consistency of experience across data center and cloud environments delivers significant operational benefits. Despite widespread understanding of the value of hybrid cloud consistency, nearly half of organizations prioritize best-of-breed tooling over consistency when selecting new tools or infrastructure for their hybrid cloud environment, suggesting a perceived trade-off between consistency and capability.

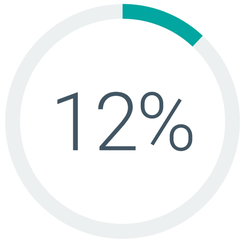
Approach to creating a consistent management experience across hybrid cloud environments.



We prioritize the best tools or infrastructure for specific sites with minimal prioritization of management consistency or tools across locations



We prioritize solutions that deliver a consistent experience across locations as long as capabilities, cost, and other key factors are comparable



We actively pursue technologies that provide cross-cloud or cross-hybrid-cloud consistency

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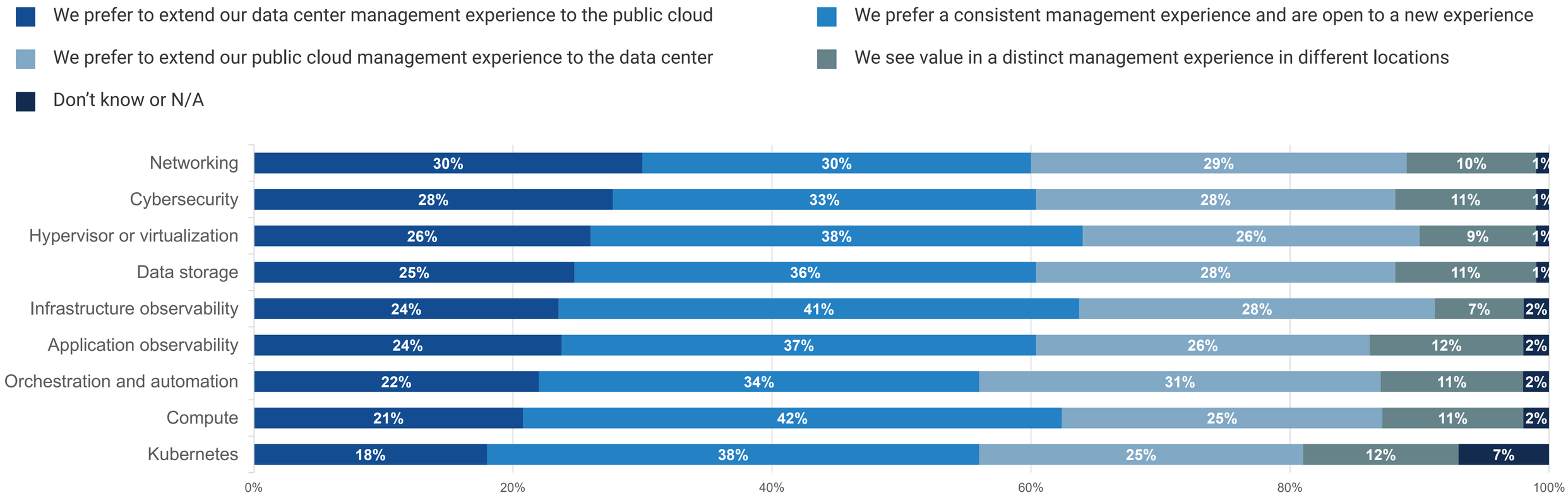
While Organizations Prioritize Consistency, They Often Want Something New

Even organizations that prefer consistency are willing to explore alternatives, highlighting opportunities for alternatives and new entrants to deliver significant value. This finding was most prominent for compute infrastructure and infrastructure observability. Well over a third (37%) of organizations are open to new experiences despite their preference for consistency when it comes to application observability.

Approach that best aligns with management experience per technology.



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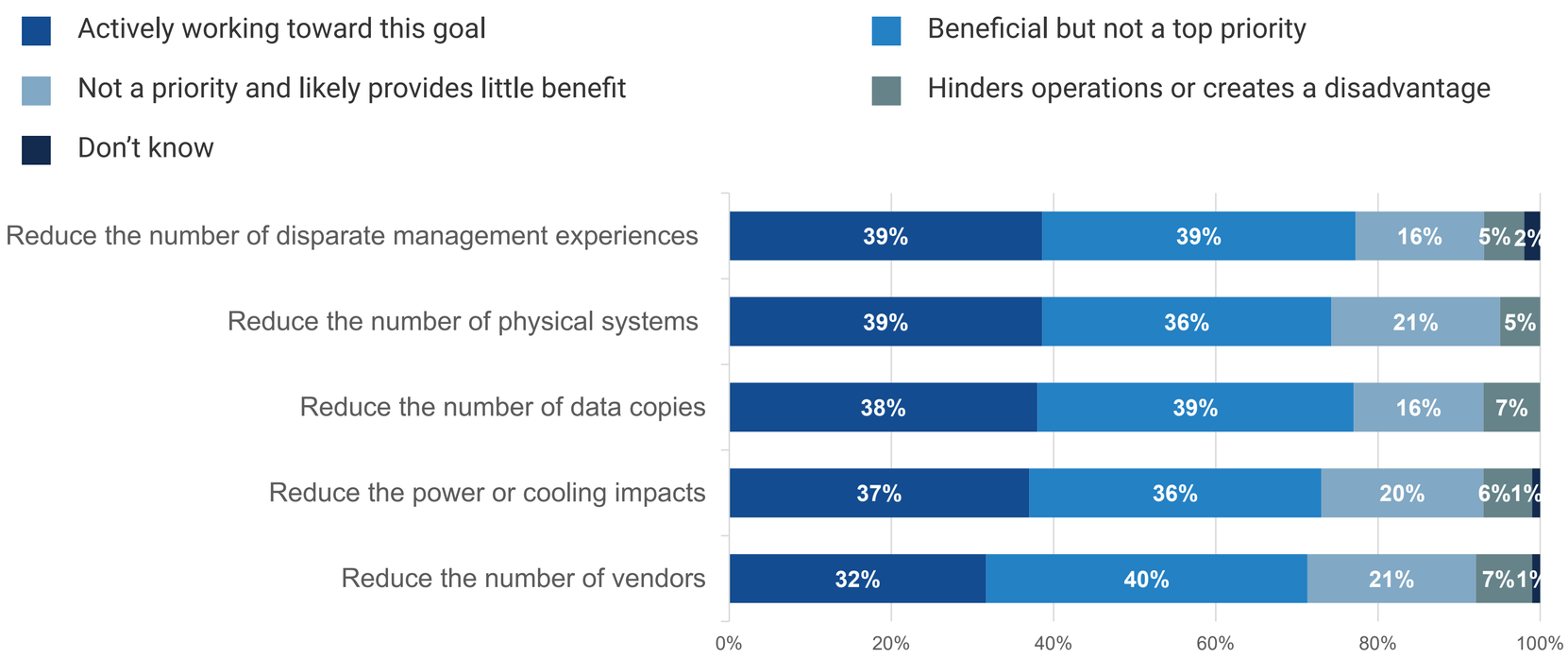
Consolidation Is Beneficial in Modernization Plans

Given the scale of digital initiatives, applications, and data, traditional infrastructure can quickly become unsustainable. As a result, organizations see the benefits of consolidation, with over a third making consolidation a priority for experiences and systems and 32% doing so for vendors. In addition, that nearly four out of 10 organizations actively seek to reduce the number of data copies illustrates how much the rapid growth of data has impacted cost and operations. As businesses pursue consistency, the deployment of self-service capabilities for infrastructure resources becomes a priority.

Status of IT infrastructure strategies in data centers.



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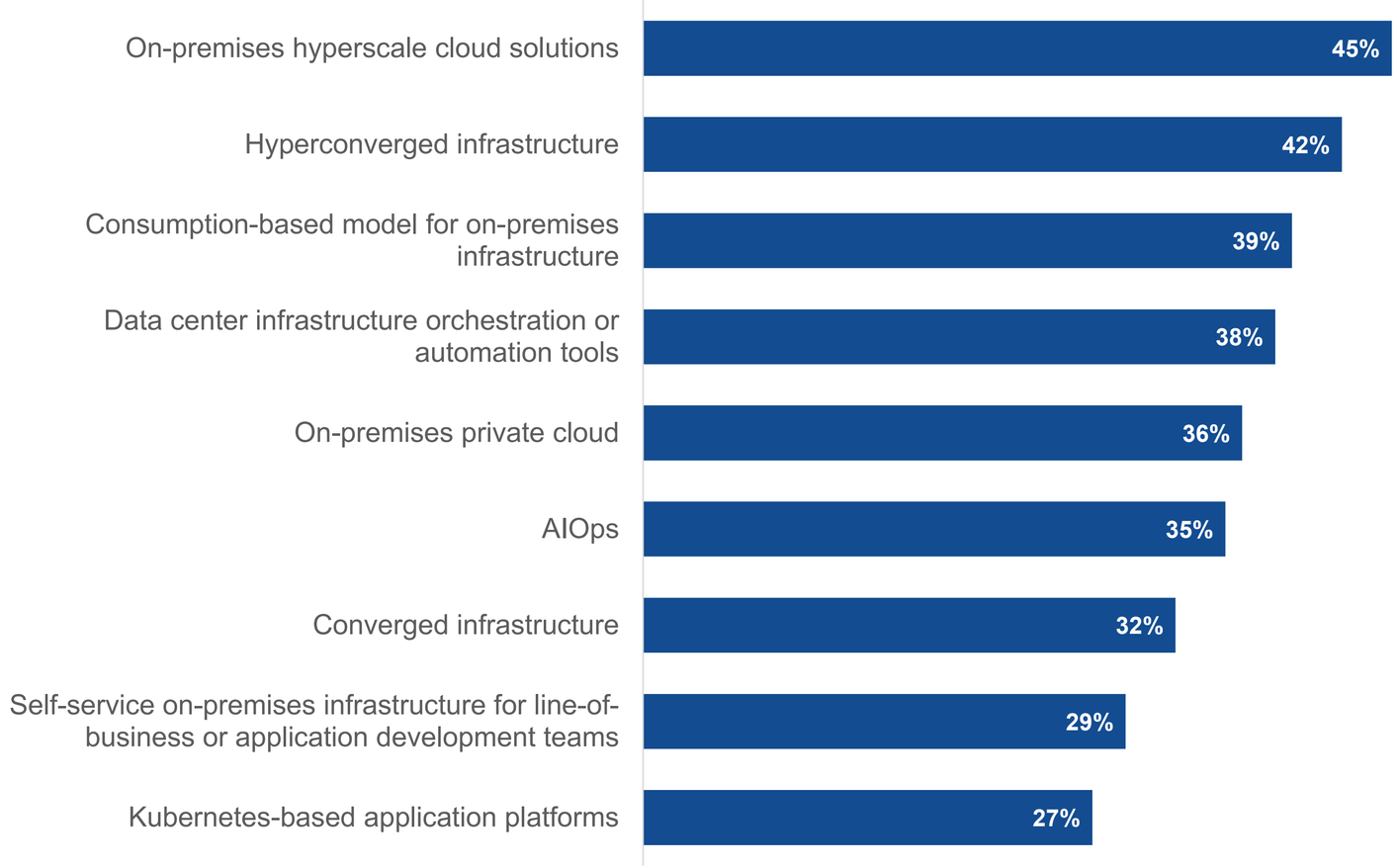
Organizations Seek Cloud-like Experiences From Public Cloud Providers, HCI, and As-a-service Offerings

On-premises hyperscale solutions (leveraging technology from the major public cloud providers), hyperconverged infrastructure (HCI), and on-premises as-a-service infrastructure options eclipse more software-centric management and orchestration technologies and approaches, highlighting interest to couple improved management experience with infrastructure modernization.

Technologies or approaches helping to create a cloud-like experience in data centers.



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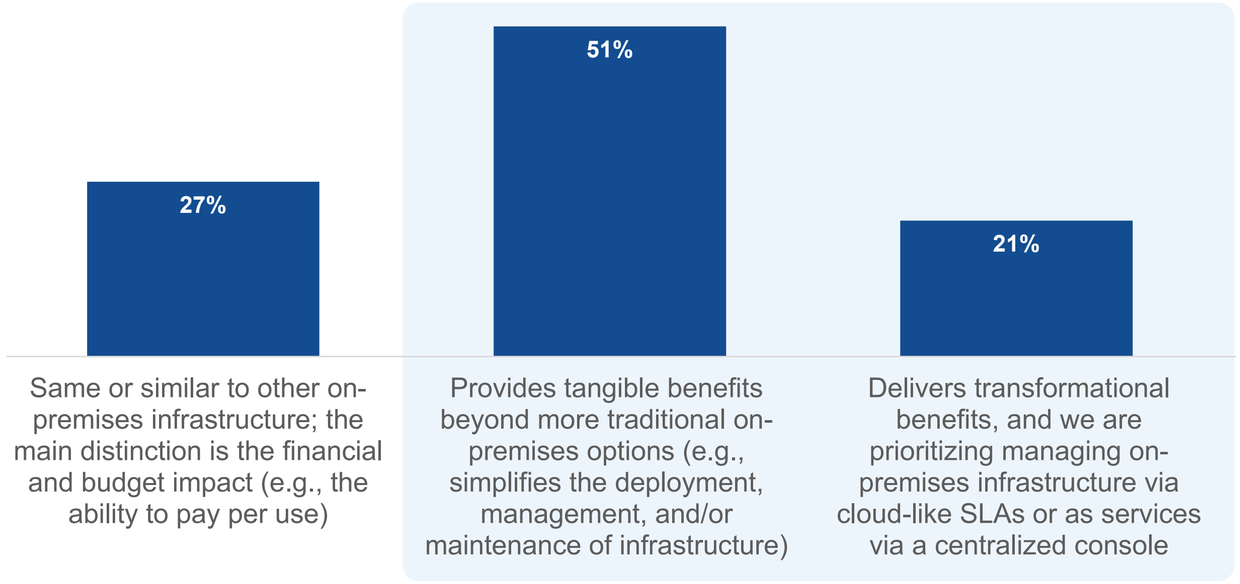
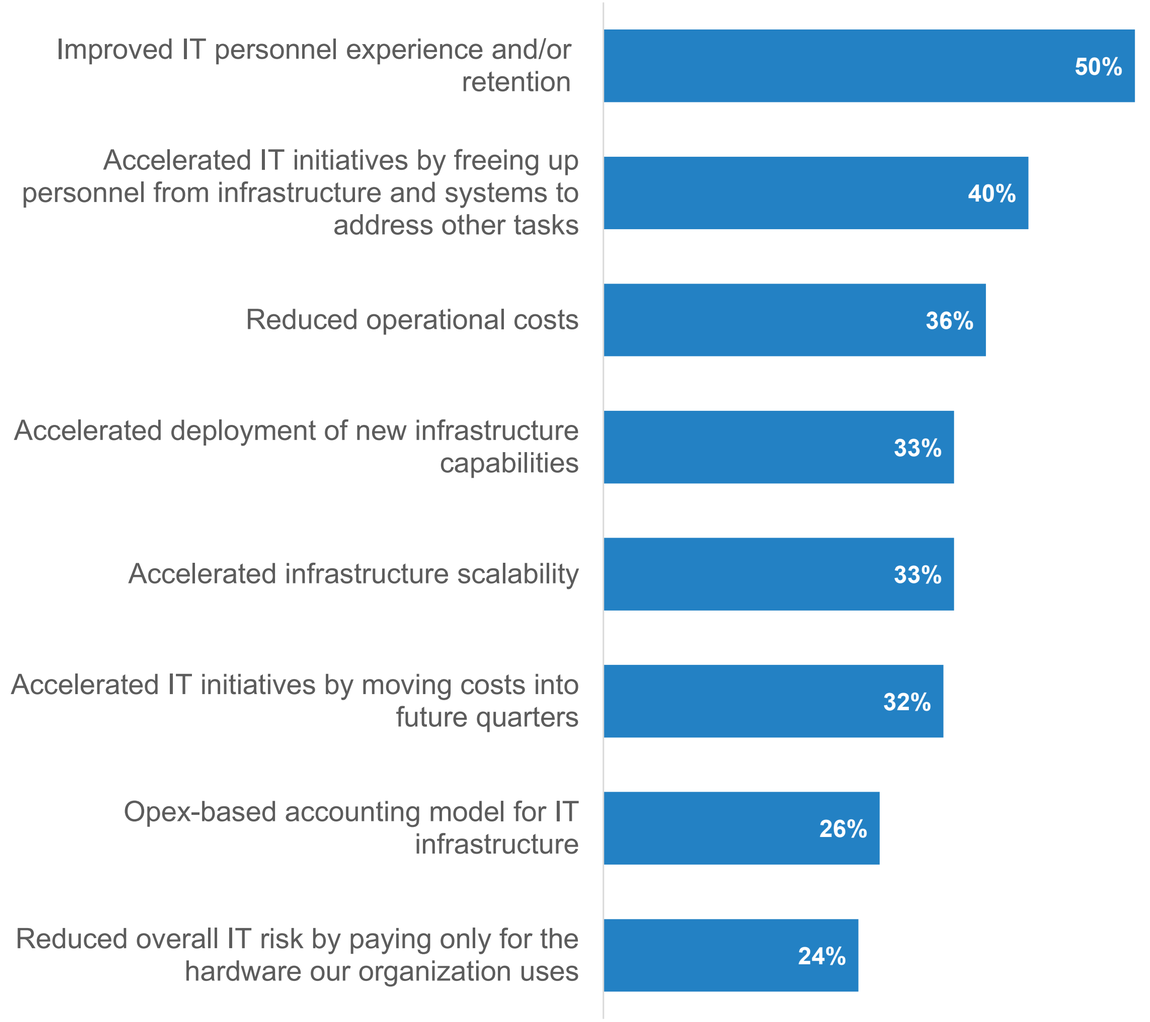
On-premises Consumption-based Solutions Improve IT Experiences, Accelerate Operations, and Become Strategic to the Business

Once considered primarily a financial option, on-premises consumption (pay-per-use) and as-a-service offerings have evolved as a strong option to reduce the burden on internal personnel while improving the experience and retention of IT team members. A majority of organizations now value on-premises infrastructure solutions that leverage a consumption or as-a-service model, as these deliver tangible or transformational benefits beyond those of traditional on-premises infrastructure solutions.

Perceptions of consumption-based or as-a-service models.



Benefits of on-premises infrastructure delivered via a consumption-based model or as a service.



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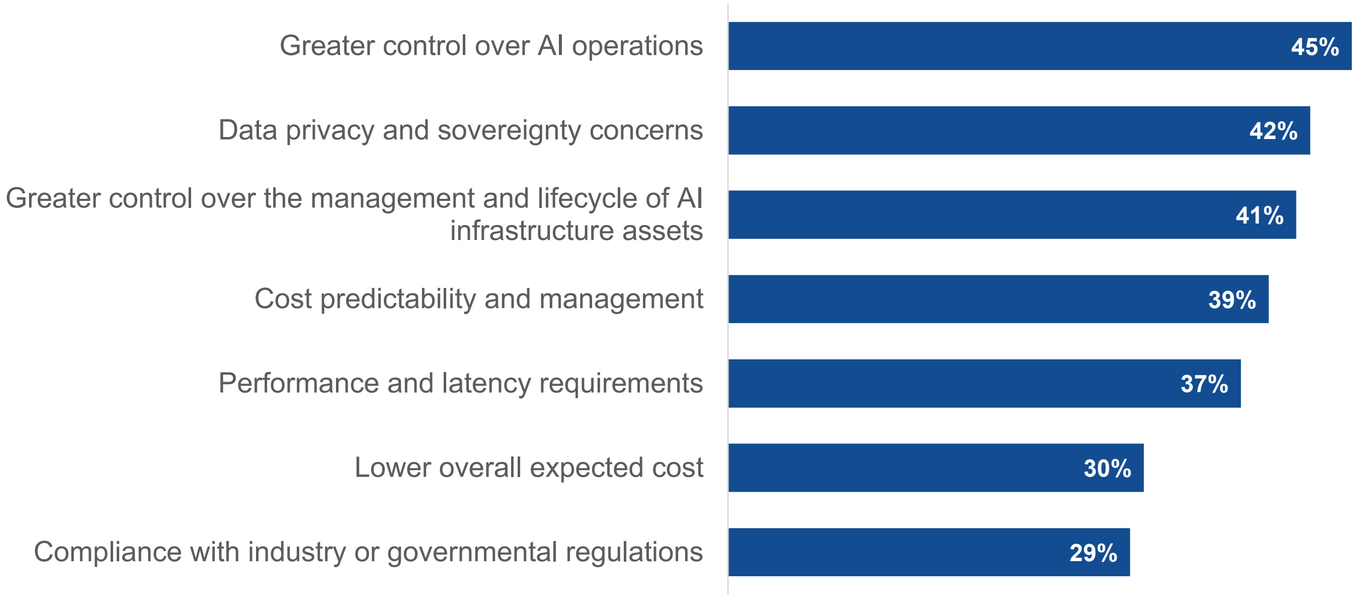
As Private AI Initiatives Grow, Supporting Infrastructure Becomes a Priority

AI Is on Premises for Many and Will Be for More

True for both midmarket and enterprise organizations, the desire and the expectation is that AI will be privately deployed on premises. This fuels the need to modernize infrastructure and ensure overall ecosystem simplicity to better prepare data center environments for the scale required. Control and privacy outweigh costs in terms of reasons organizations pursue AI initiatives on premises.

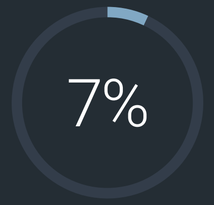
Top rationale for deploying AI workloads on premises.



Status of privatized, on-premises AI deployments.

We are actively pursuing this

We are exploring this as an option



We have AI initiatives but do not plan to privatize AI workloads

We have no plans for AI initiatives

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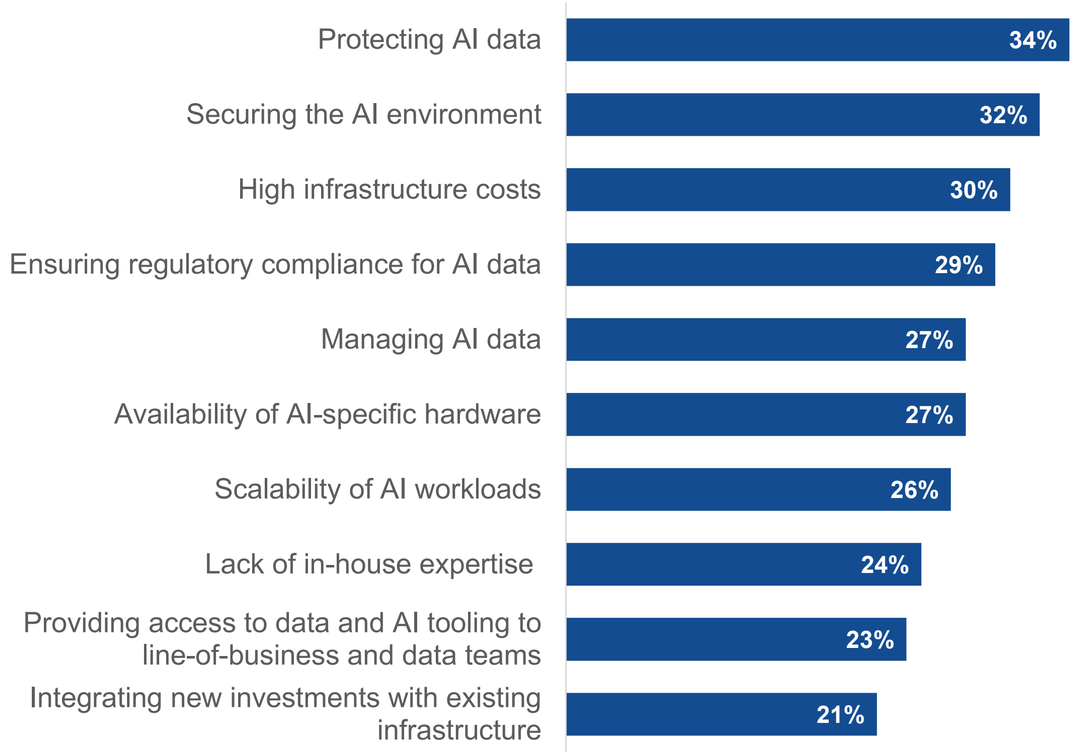
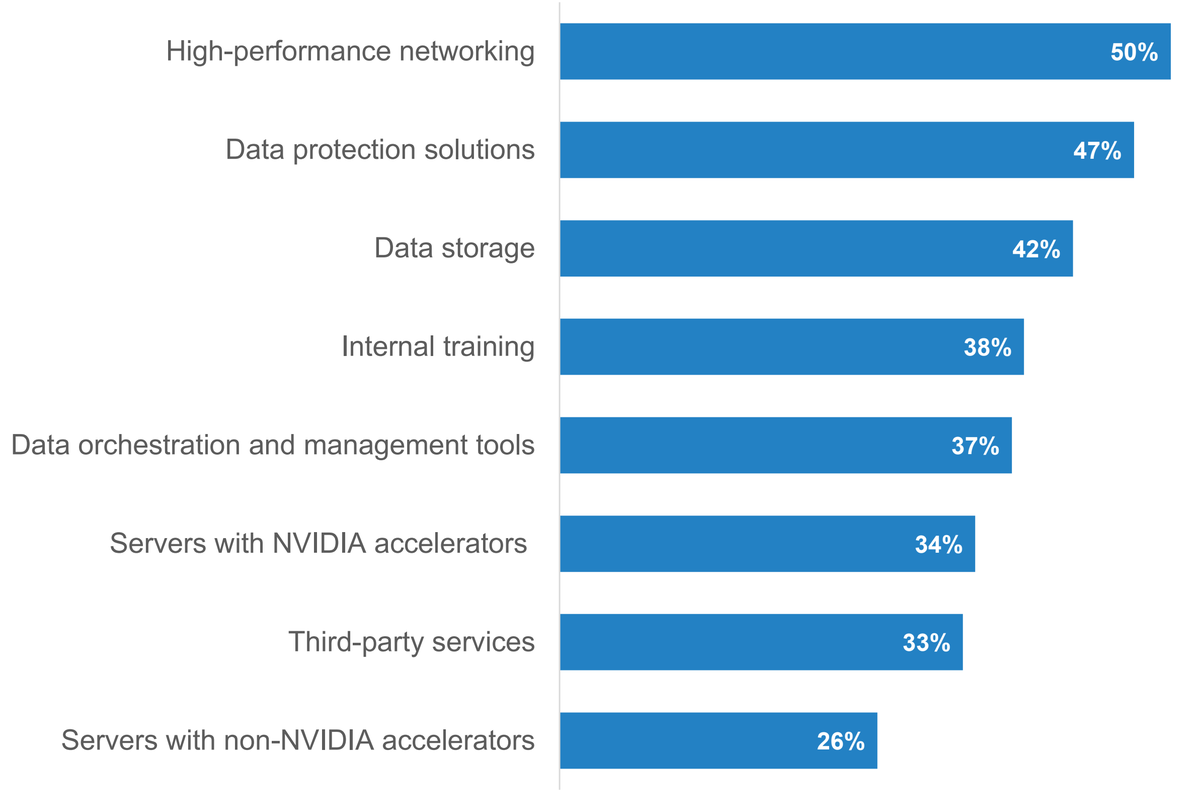
Organizations Invest in On-premises AI Amid Ongoing Concerns

For all the opportunity AI promises for the business, IT is often focused on mitigating the associated risk and cost of AI. These challenges remain consistent across both enterprises and midmarket organizations. For businesses pursuing private AI, the increasing maturity of operations is shifting investment to modernizing the remainder of the supporting infrastructure to support the data, security, and protection needs of AI initiatives.

Concerns with on-premises AI initiatives.



Investment areas to support on-premises AI.



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ABOUT

VergeIO is the future of infrastructure and the leading VMware Alternative. Unlike hyperconverged infrastructure (HCI), its ultraconverged infrastructure (UCI) collapses the traditional IT stack (virtualization, storage, and networking) into an integrated data center operating environment, VergeOS. Its efficiency enables greater workload density using existing hardware while improving data resiliency. The result is dramatically lower costs, improved availability, and greatly simplified IT. For more information, click the link below.

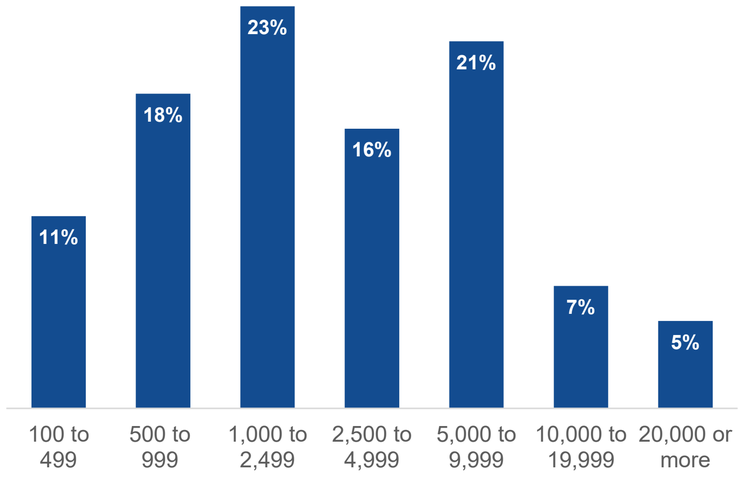
LEARN MORE

RESEARCH METHODOLOGY AND DEMOGRAPHICS

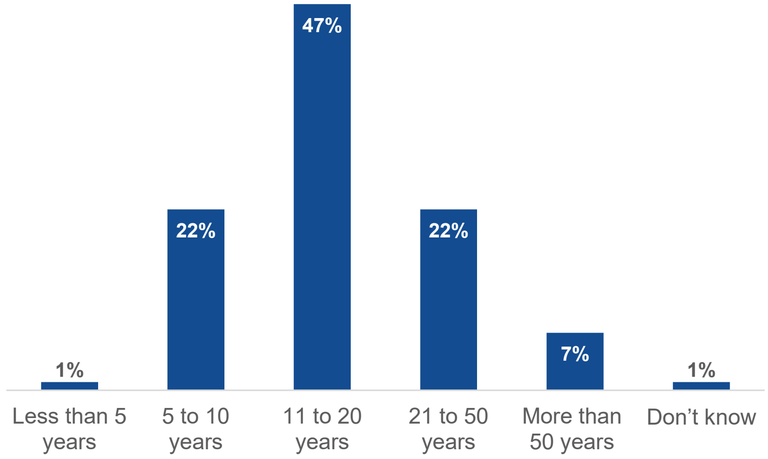
To gather data for this report, Enterprise Strategy Group, now part of Omdia, conducted a comprehensive online survey of IT professionals from private- and public-sector organizations in North America (United States and Canada) between February 21, 2025 and March 5, 2025. To qualify for this survey, respondents were required to be involved with or responsible for evaluating, purchasing, managing, and building application 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 380 IT professionals.

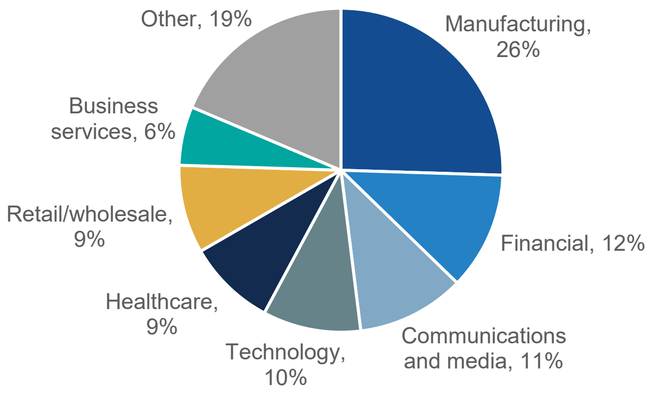
Respondents' organizations by number of employees.



Respondents' organizations by years in operation.



Respondents' organizations by industry.



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