The State of IT Transformation 2019

Datrium

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Executive Summary

Achieving digital transformation is a critical business initiative for any organization seeking to modernize operations and create a competitive advantage through how they deliver value to customers. However, in order to do so, IT infrastructure must be transformed as well. IT is being challenged to keep pace in the on-demand, digital economy where user and customer demands are growing ever higher. In the race to digital transformation, many companies are beginning to realize that their complex, antiquated legacy infrastructure is a barrier to success.

A recent industry survey of 543 IT professionals at organizations consisting of over 500 employees, was conducted to:

- Help identify the primary challenges and opportunities enterprises face as they attempt to transform their IT infrastructure; and what criteria they are using to evaluate solutions
- Assess whether their data centers are adequately equipped to manage the complex demands of modern applications
- Determine what they are doing well to achieve digital transformation and what gaps remain

Survey respondents indicated that they have taken a number of steps to transform IT, including cloud deployment, data automation management and hyperconverged infrastructure, among others. The results of the survey demonstrate that although the vast majority of IT organizations have implemented a variety of tools and systems to modernize, simplify and streamline data management, many are still hampered by inefficiencies in their IT infrastructure. Study findings indicate that the time, energy and resources that enterprises should be investing in the execution of strategic digital transformation initiatives is instead being wasted on running antiquated legacy infrastructure that's overly complex and time-intensive to manage.
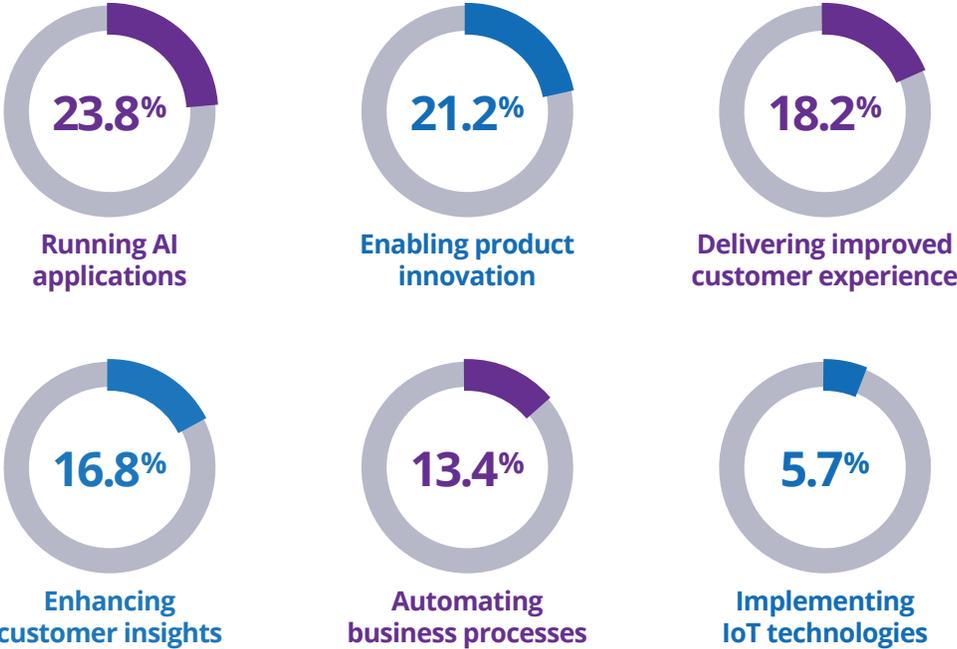
Key Findings

1 Over **40 percent** of IT professionals believe their data center infrastructure is either not adequately equipped, or only somewhat equipped, to manage all of their organization's demanding workloads.

2 **87.5 percent** of respondents stated that if given more time due to the simplification and automation of tasks, newfound time would be spent on more strategic business initiatives.

3 **69.8 percent** of respondents agreed that they'd find value in having their primary and backup storage on a single platform that doesn't require paying extra for backup.

4 **85.6 percent** percent anticipate their company will increase its investment in IT transformation over the next five years.

5 **56.0 percent** percent of respondents noted that their organizations already have Hyper Converged Infrastructure (HCI) deployed in their data centers, while an additional **18.8 percent** are currently evaluating HCI solutions.

6 **34.0 percent** of those claiming their infrastructure cannot properly manage their demanding workloads state that the hyperconverged systems they are aware of don't scale to meet their needs.

7 More than half (**52.3 percent**) of respondents reported that cost savings was the top consideration their IT organization takes into account when measuring whether their infrastructure is meeting the goals that have been set for it.

8 **41.7 percent** of respondents operate a multicloud data center, with **31.9 percent** using both on-premises and multiple public clouds and **9.8 percent** using multiple public clouds only.

9 The most frequently identified barrier to IT transformation was budget constraints, selected by **48.6 percent** of respondents.

10 High costs were identified as the top challenge (**44.2 percent**) businesses experience with their IT infrastructure.

Drivers of IT Transformation

IT transformation is critical to staying competitive in today's business climate. Survey results show that companies are motivated by a wide variety of reasons for their transformation initiatives, including meeting evolving customer demands and enabling the use of new, modern technologies and applications.

What are the drivers of your organization's IT transformation?

23.8%
Running AI applications

21.2%
Enabling product innovation

18.2%
Delivering improved customer experience

16.8%
Enhancing customer insights

13.4%
Automating business processes

5.7%
Implementing IoT technologies

With the exponential growth of data that businesses are producing, storing and analyzing, IT organizations are becoming increasingly overburdened by the need to manage infrastructure that is ill-equipped for the complex modern data center.
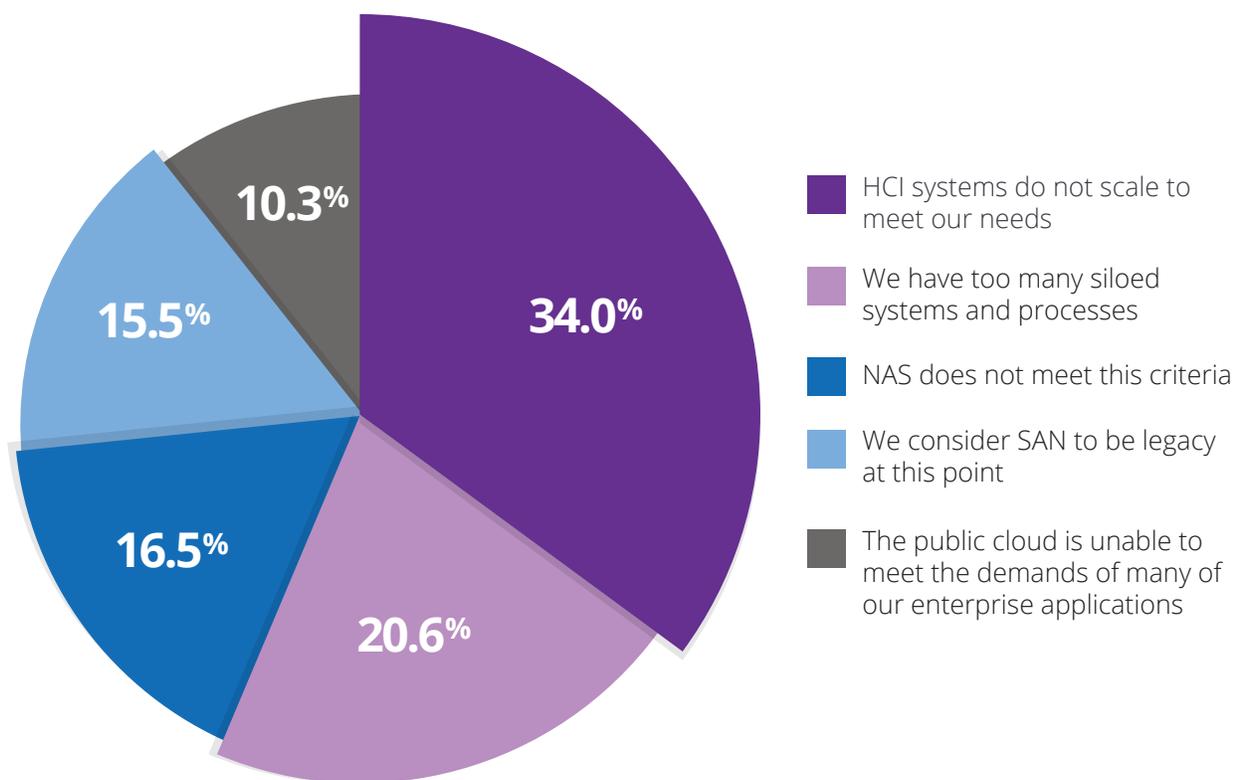
87.5%

of respondents stated that if given more time due to the simplification and automation of tasks, newfound time would be spent on more strategic business initiatives.
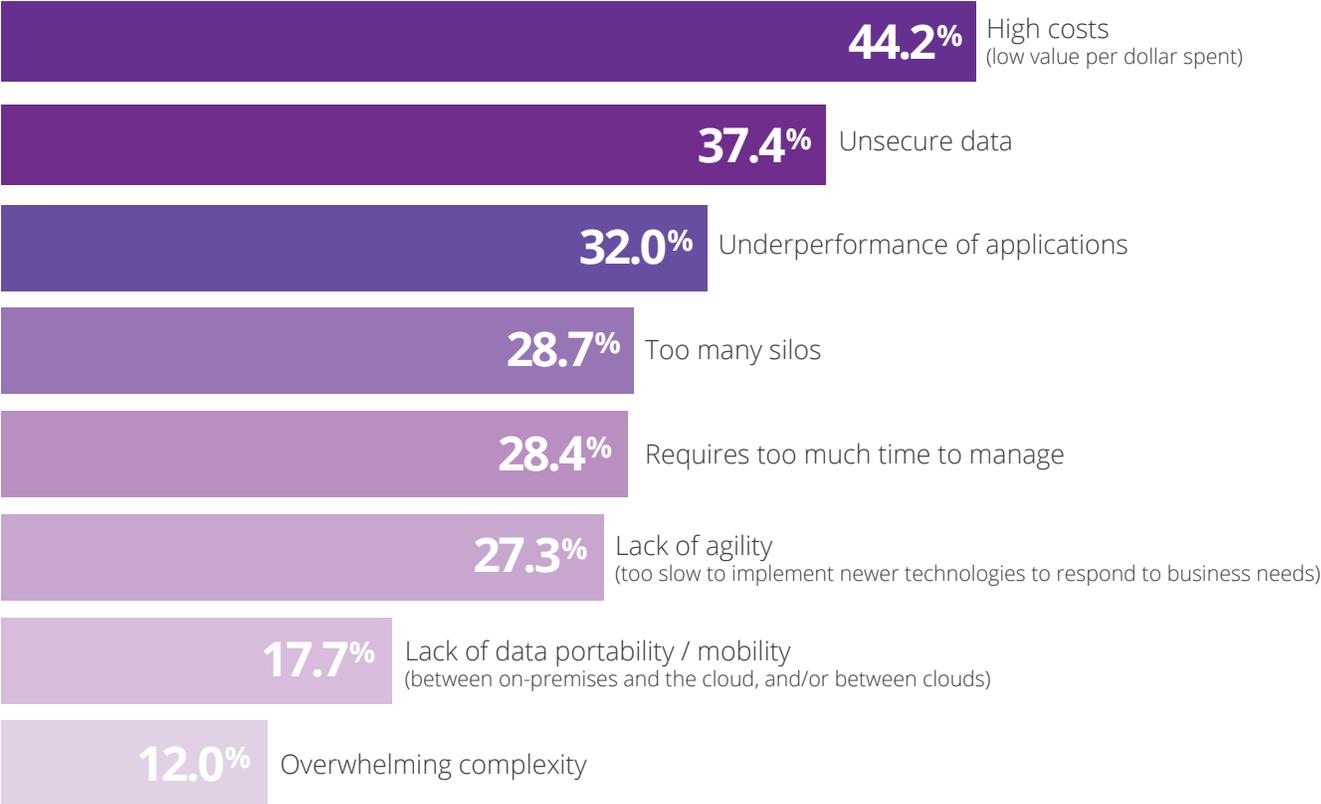
Over # 40% **of IT professionals believe their data center infrastructure is either not adequately equipped, or only somewhat equipped, to manage all of their organization's demanding workloads.**

The top concern among those claiming their infrastructure cannot properly manage their demanding workloads is that the hyperconverged systems they are aware of don't scale to meet their needs (34.0 percent), while 20.6 percent note that they have too many siloed systems and processes.

10.3%

15.5%

34.0%

16.5%

20.6%

- HCI systems do not scale to meet our needs
- We have too many siloed systems and processes
- NAS does not meet this criteria
- We consider SAN to be legacy at this point
- The public cloud is unable to meet the demands of many of our enterprise applications

When asked about challenges organizations are experiencing with their IT infrastructure, high costs were identified as the top challenge (44.2 percent).

44.2% High costs
(low value per dollar spent)

37.4% Unsecure data

32.0% Underperformance of applications

28.7% Too many silos

28.4% Requires too much time to manage

27.3% Lack of agility
(too slow to implement newer technologies to respond to business needs)

17.7% Lack of data portability / mobility
(between on-premises and the cloud, and/or between clouds)

12.0% Overwhelming complexity

The majority of respondents (84.3 percent) are confident that their backup will work when they need to recover data and 72.4 percent say their DR solution can enable their organization to resume operations fast enough to minimize negative impact on the business.

However, 69.8 of respondents agreed that they'd find value in having their primary and backup storage on a single platform that doesn't require paying extra for backup.

Would it be valuable to you if both your primary and backup storage were on a single platform and you didn't have to pay extra for backup?

69.8%
YES

23.4%
NEUTRAL

6.8%
NO
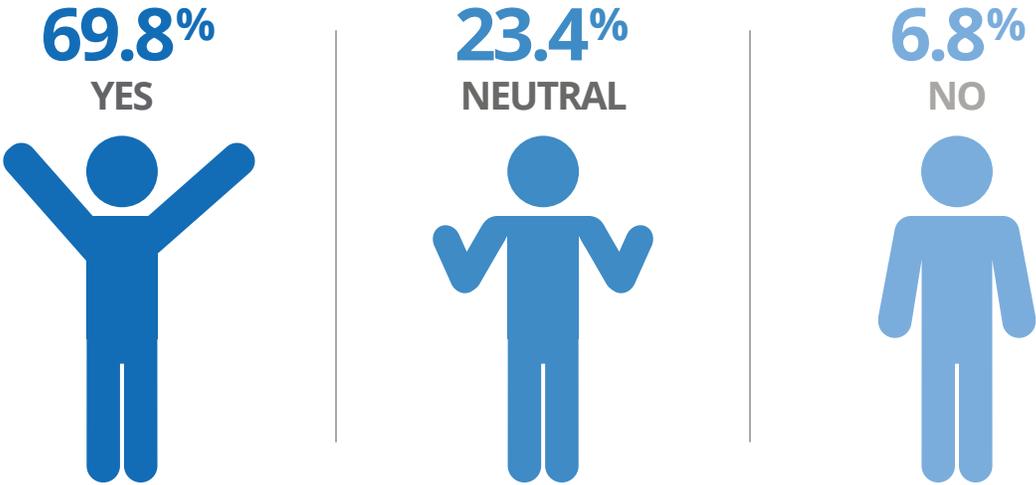
Lastly, the excessive amount of time spent managing infrastructure was identified as a critical challenge caused by the growth in the volume, variety and velocity of data of created.

28.7%
noted that they spend too much time managing infrastructure versus other strategic initiatives

26.7%
indicated that infrastructure management is too complex and time intensive

What other critical challenges have resulted from the exponential growth of data?

51.9%
Application performance deficiencies
(e.g., application latency, jobs crashing, performance bottlenecks)

40.9%
Difficulty keeping up with storage capacity requirements

30.9%
Out-of-control growth of IT spend

27.8%
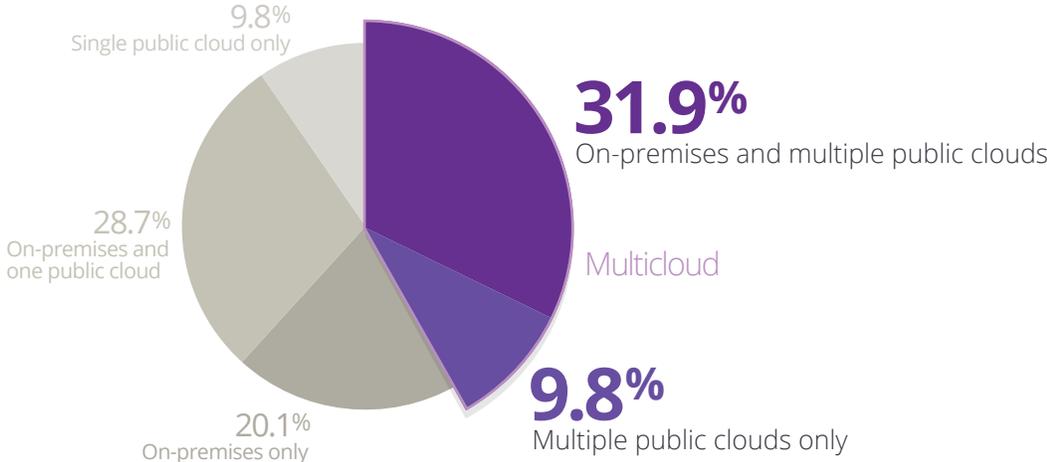Inadequate data security

20.3%
Insufficient agility to respond to changing business needs

Current Approaches to IT Transformation

There's tremendous variety among enterprise data center environments, with organizations utilizing different combinations of IT systems and solutions both on-premises and in the cloud. In fact, many organizations are using multiple public cloud providers to manage their data and transform IT.

41.7 percent of respondents operate a multicloud data center

9.8%
Single public cloud only

31.9%
On-premises and multiple public clouds

28.7%
On-premises and
one public cloud

Multicloud

9.8%
Multiple public clouds only

20.1%
On-premises only

The most common steps respondents have taken to modernize and transform IT each revolve around implementing cloud strategies. These include the deployment of private cloud infrastructure, public cloud infrastructure, a hybrid cloud environment and the use of multiple cloud environments.

Multicloud

29.1%

Private cloud infrastructure

43.0%

Hybrid cloud

35.2%

42.5%

Public cloud infrastructure
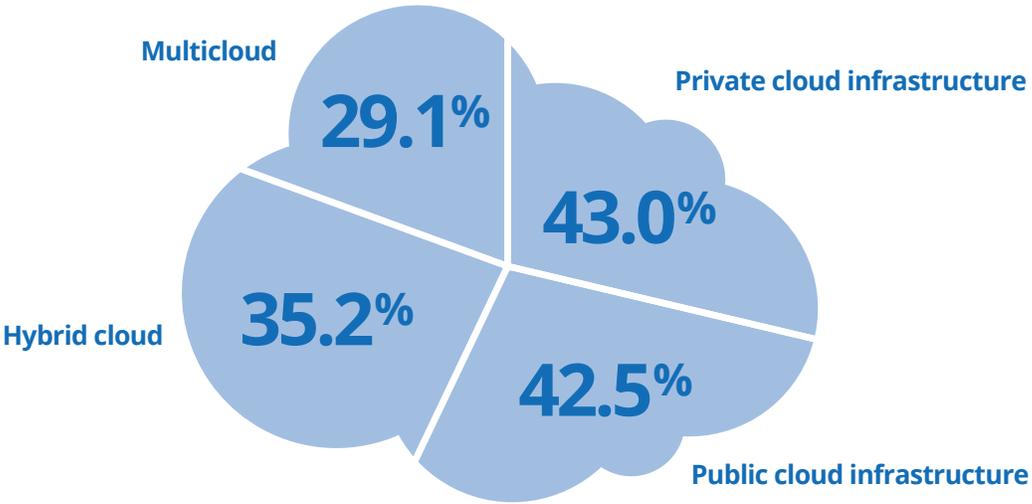
Following these cloud initiatives, virtualization, data management automation and hyperconverged infrastructure were the other important steps that IT professionals reported were part of their IT transformation journey.

VIRTUALIZATION

28.7%

DATA MANAGEMENT AUTOMATION

23.0%

HYPERCONVERGED INFRASTRUCTURE

21.9%
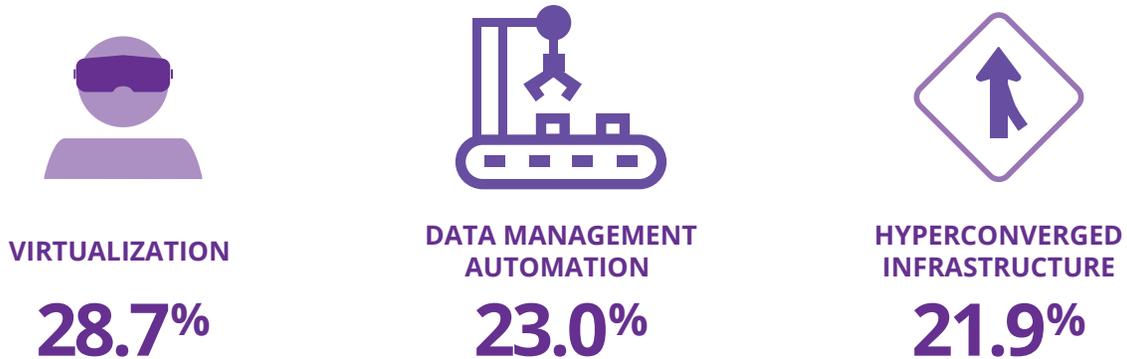
Regarding the implementation of hyperconverged infrastructure (HCI), 56.0 percent of respondents noted that their organizations already have HCI deployed in their data centers, while an additional 18.8 percent are currently evaluating it.
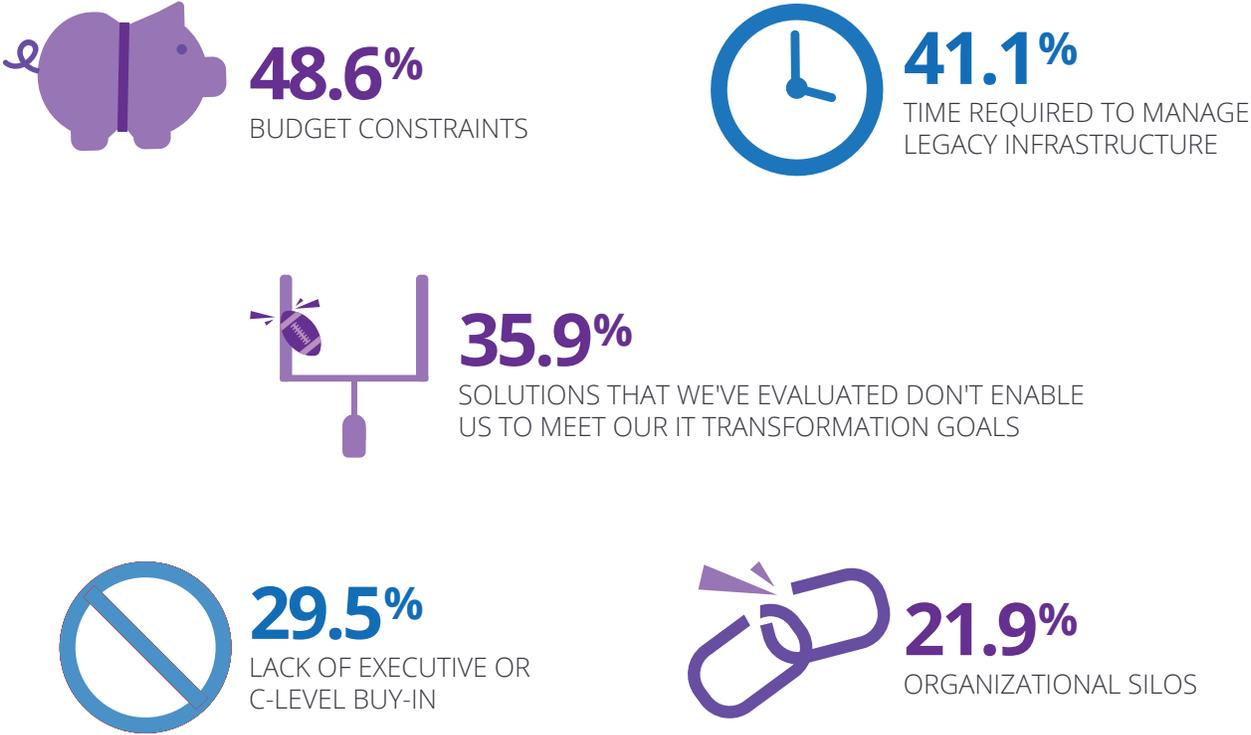
The remaining steps taken by survey respondents to modernize and transform IT include the implementation of operational initiatives such as DevOps, consolidation and BizOps as well as tools and platforms including microservices, containers, AI / ML and composable infrastructure.

DevOps	Microservices	Consolidation	Containers	AI / ML	Composable infrastructure	BizOps
18.2%	14.2%	14.0%	11.8%	9.0%	8.3%	7.4%
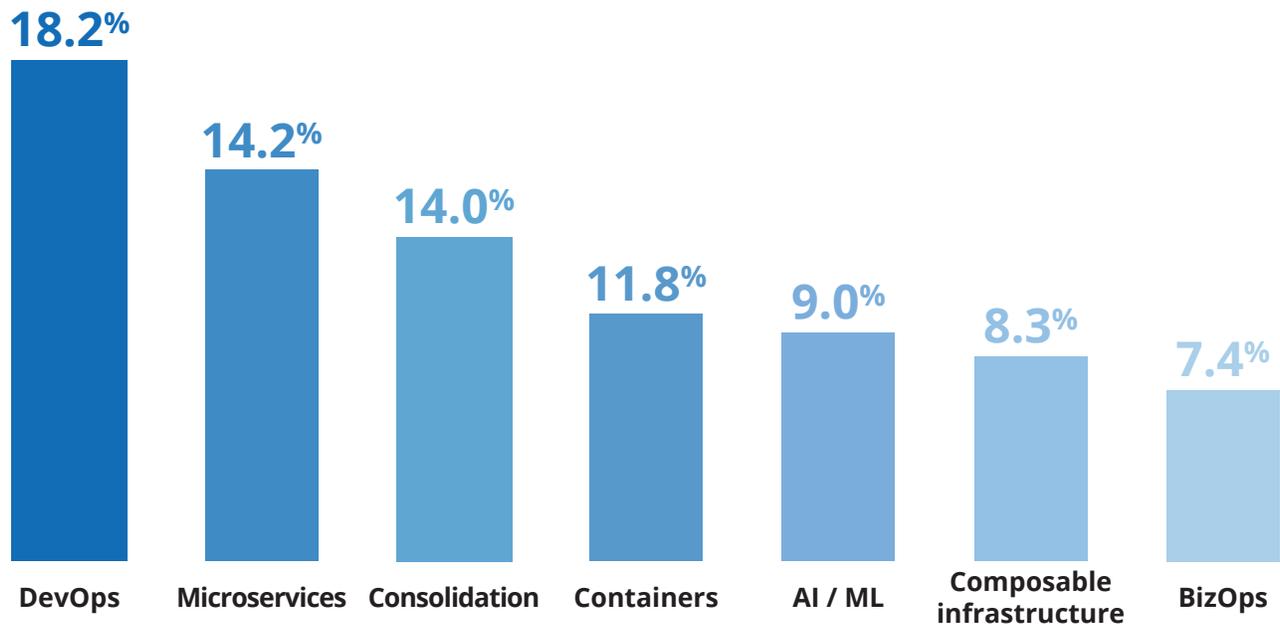
IT Transformation Challenges

Budget constraints and inadequate infrastructure are credited as the top barriers for IT transformation among respondents. At 48.6 percent, the most frequently identified barrier to IT transformation was budget constraints followed by the time required to manage legacy infrastructure (41.1 percent).
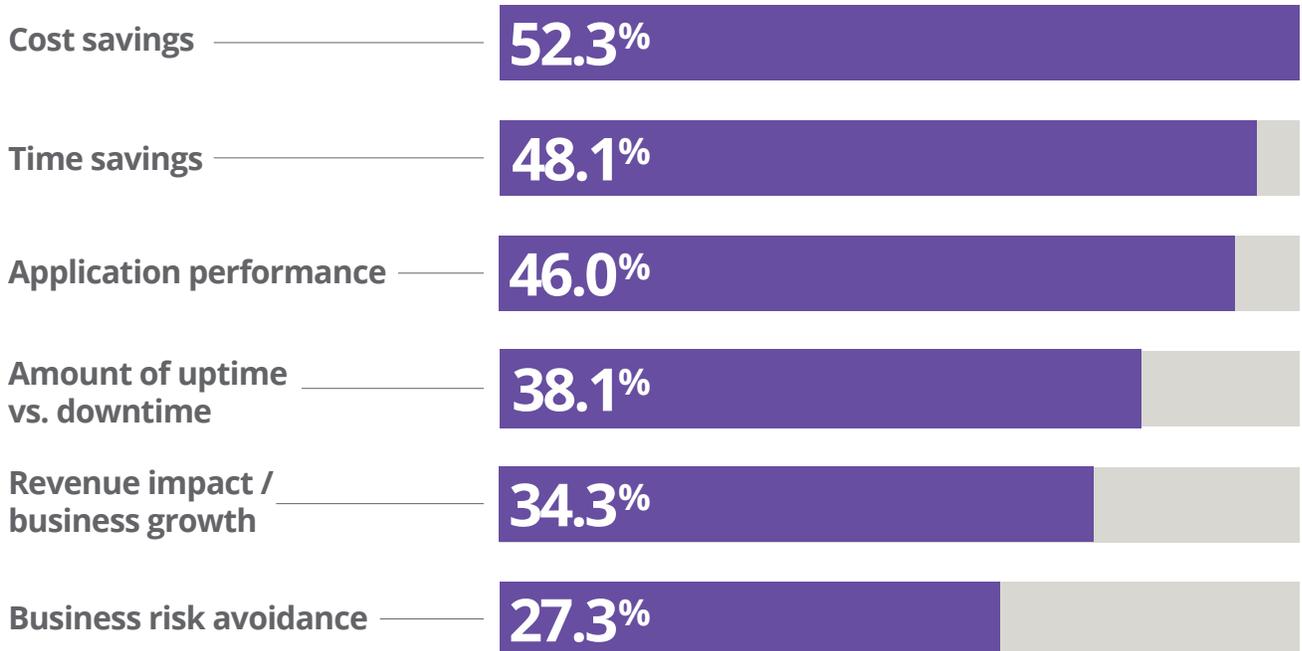
Top barriers for IT transformation

48.6%
BUDGET CONSTRAINTS

41.1%
TIME REQUIRED TO MANAGE
LEGACY INFRASTRUCTURE

35.9%
SOLUTIONS THAT WE'VE EVALUATED DON'T ENABLE
US TO MEET OUR IT TRANSFORMATION GOALS

29.5%
LACK OF EXECUTIVE OR
C-LEVEL BUY-IN

21.9%
ORGANIZATIONAL SILOS

Respondents listed cost savings (52.3 percent) as the most common measurement of whether their IT infrastructure is meeting the goals that have been set for it. This was followed closely by time savings (48.1 percent) and application performance (46 percent).

How do you measure whether your IT infrastructure is meeting the goals that have been set for it?

Cost savings	**52.3%**
Time savings	**48.1%**
Application performance	**46.0%**
Amount of uptime vs. downtime	**38.1%**
Revenue impact / business growth	**34.3%**
Business risk avoidance	**27.3%**

Cost savings are a critical measure of the success of organizations' IT transformation initiatives, making the frequency and resources required for infrastructure refresh cycles important considerations.

77.5 percent of respondents believe that their existing IT infrastructure is capable of delivering the performance their most demanding workloads will require for the next three years. However, nearly a quarter (22.5 percent) of respondents believe their workload demands will surpass the capabilities of its current IT infrastructure.

While transforming IT can be seen as a costly endeavour the vast majority of organizations are planning to invest more in their transformation efforts.

Do you anticipate your company will increase its investment in IT transformation over the next five years?
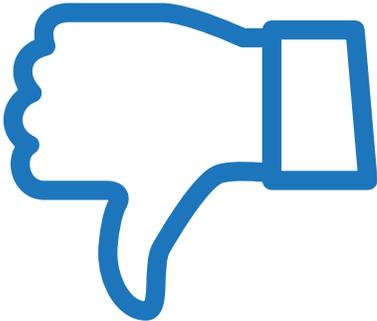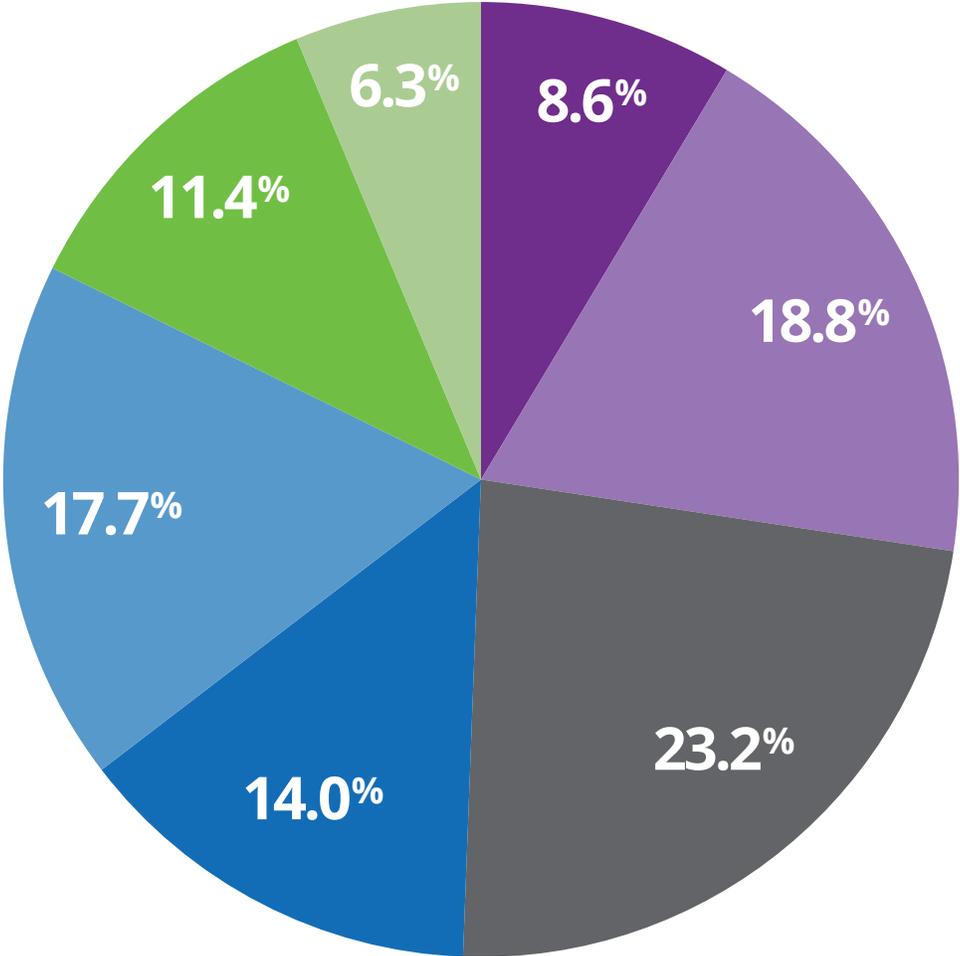
85.6%   **14.4%**

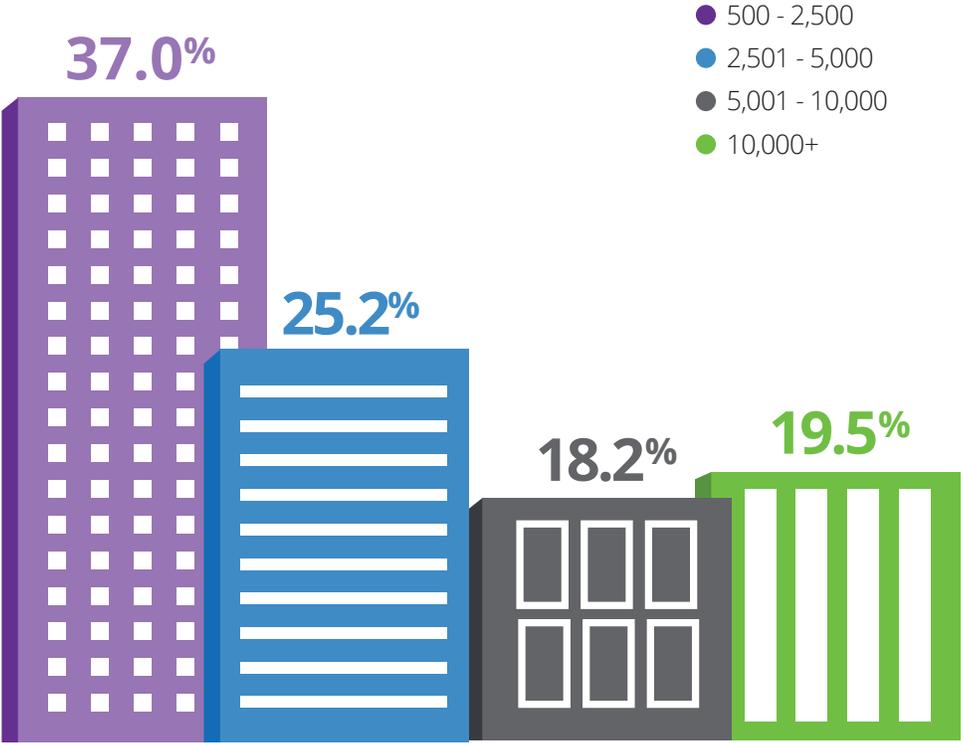# How much are you budgeting towards your next major IT infrastructure refresh?

- 8.6% Below $50,000
- 18.8% $50,000 - 150,000
- 23.2% $150,000 - 500,000
- 14.0% $500,000 - 1,000,000
- 17.7% $1,000,000 - 5,000,000
- 11.4% $5,000,000+
- 6.3% Don't know

Legend:
- ■ Below $50,000
- ■ $50,000 - 150,000
- ■ $150,000 - 500,000
- ■ $500,000 - 1,000,000
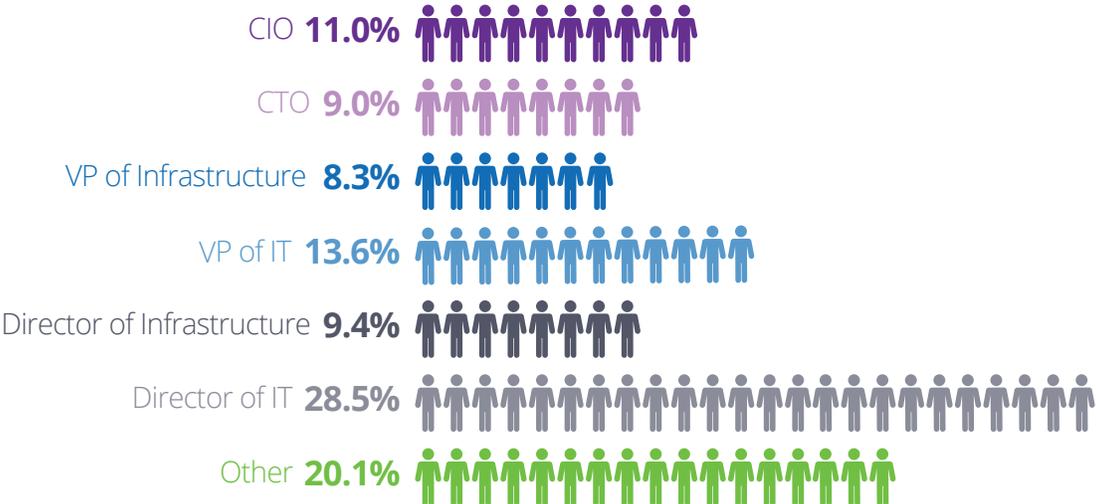- ■ $1,000,000 - 5,000,000
- ■ $5,000,000+
- ■ Don't know

Survey Methodology & Respondent Demographics

Number of employees in company

- 500 - 2,500
- 2,501 - 5,000
- 5,001 - 10,000
- 10,000+

37.0%

25.2%

18.2%

19.5%

Primary role

CIO **11.0%**

CTO **9.0%**

VP of Infrastructure **8.3%**

VP of IT **13.6%**

Director of Infrastructure **9.4%**

Director of IT **28.5%**

Other **20.1%**

Primary focus

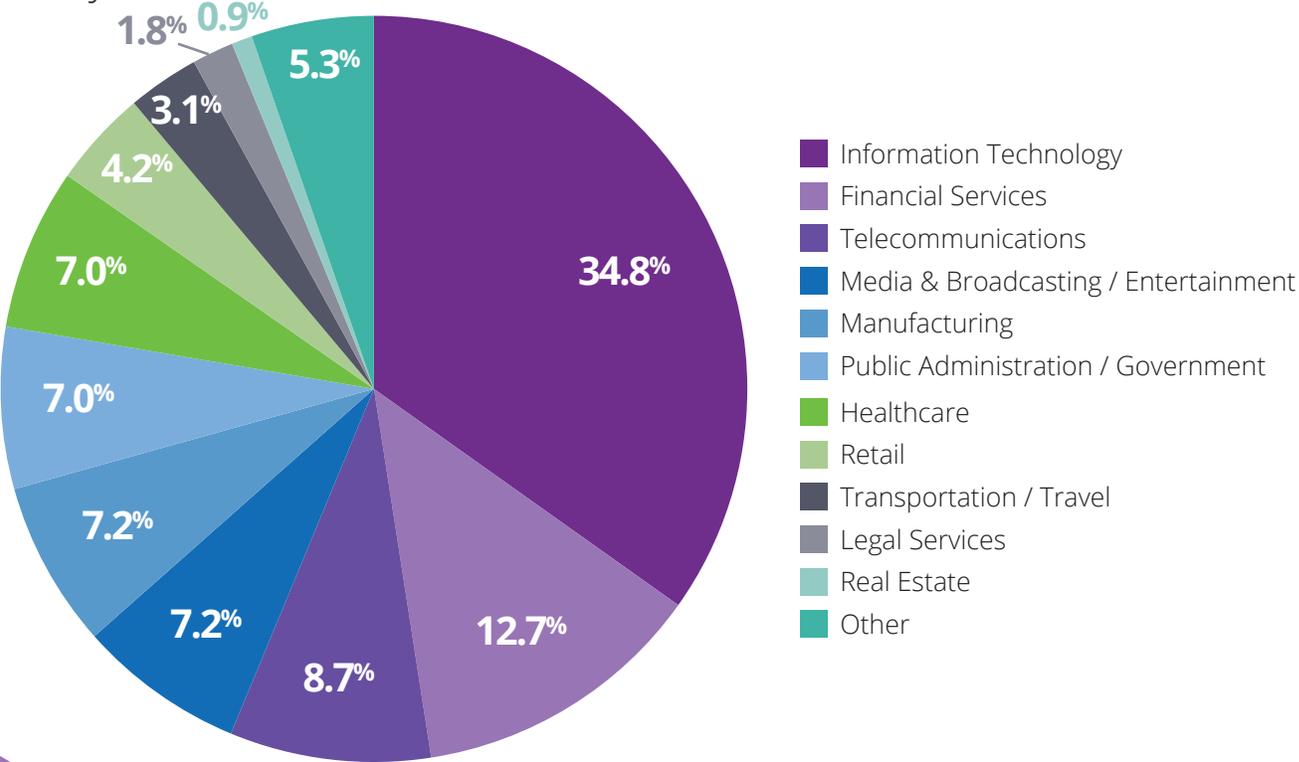- Other — 8.3%
- Disaster Recovery — 7.6%
- Virtualization — 9.2%
- Storage — 10.5%
- Backup / Data Protection — 11.4%
- Network — 13.8%
- Cloud — 18.0%
- Infrastructure — 21.2%

Industry

- Information Technology — 34.8%
- Financial Services — 12.7%
- Telecommunications — 8.7%
- Media & Broadcasting / Entertainment — 7.2%
- Manufacturing — 7.2%
- Public Administration / Government — 7.0%
- Healthcare — 7.0%
- Retail — 4.2%
- Transportation / Travel — 3.1%
- Legal Services — 1.8%
- Real Estate — 0.9%
- Other — 5.3%

Conclusion

The volume, variety and velocity of data creation is rising exponentially with the growing use of AI applications, IoT technologies and automation. Companies who are not properly prepared to meet these modern data center demands risk disruption. In order to reach IT transformation goals and manage these growing and changing workloads, organizations need to modernize their data center infrastructure. The right IT infrastructure for the digital age is one that has the performance to handle modern workload demands, eliminates technology silos and liberates companies from the complexity associated with managing legacy systems.

Despite efforts to improve the efficiency of data center management, many IT organizations continue to struggle with the high cost, time-intensity and lack of agility caused by out-dated legacy systems. A large percentage of IT professionals are in desperate need of technology and operational strategies capable of enhancing application performance, reigning in IT spend, increasing data security and their ability to respond faster to changing business needs. Solving these factors will allow overburdened IT professionals to shift their focus away from the diminutive details of infrastructure management towards more strategic business initiatives.

Additionally, inadequate infrastructure is the root of many IT challenges, and the companies that upgrade their data centers with a cost-effective, high-performance, easily manageable and secure solution will be best suited to reach their digital transformation goals and retain their competitive edge in the years to come. Companies across a broad array of industries expect bigger spend dedicated to their IT transformation initiatives over the next five years, which will give IT professionals the ability to redirect their attention towards business growth activities such as product innovation, enhancing customer insights and running AI workloads.

IT organizations would benefit tremendously from a data management strategy that converges primary storage, backup, disaster recovery, mobility and security within a single, unified system that eliminates complexity and siloed data services. With nearly three-quarters of survey respondents understanding the value in having primary and backup storage on a single platform, the industry is primed for change. Moving away from the traditional array-based storage to a software-defined converged solution would enable companies across industries to eliminate product sprawl and workload immobility to better optimize IT investment and agility.