



# Multicloud is the New Normal

Cloud enables Digital Transformation (DX), but more clouds bring more challenges

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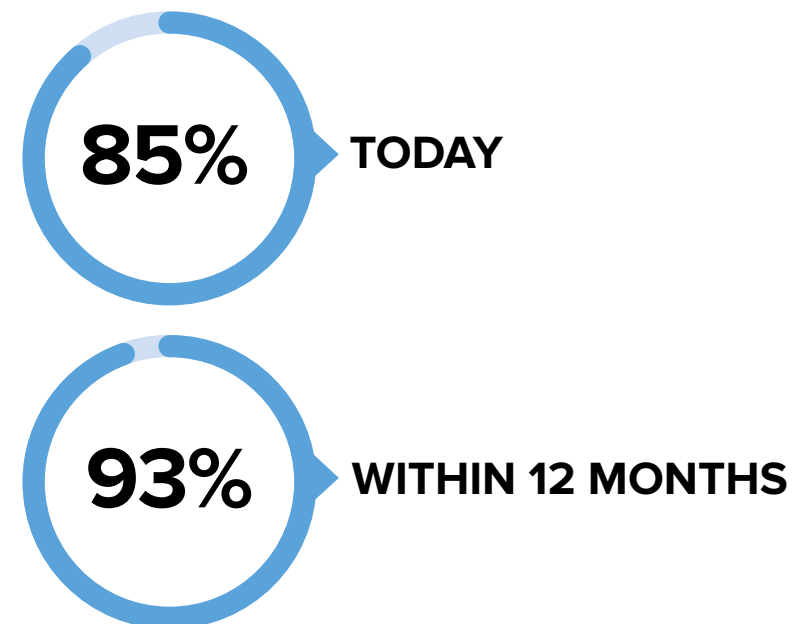
## EXECUTIVE SUMMARY

# Cloud is a key enabler of digital transformation

However, with multicloud deployments now the norm, the ensuing complexity limit the business benefits of cloud and the realization of DX.

- Cloud is a key enabler of innovation and digital transformation, delivering cost reduction and revenue improvements.
- Multicloud is here to stay; the number of clouds used is expected to increase, as is the level of complexity that must be managed across people, process, and technologies.
- While cloud adoption continues to grow (78% in 2017) and 54% of C-level executives are pushing a cloud-first strategy, cloud maturity remains below its potential—only 44% have optimized, managed, or repeatable cloud strategies. Obstacles to greater cloud maturity include cost-prohibitive changes to network services and a lack of a consistent security model across all deployment types.

## MULTICLOUD AS % OF CLOUD ADOPTERS



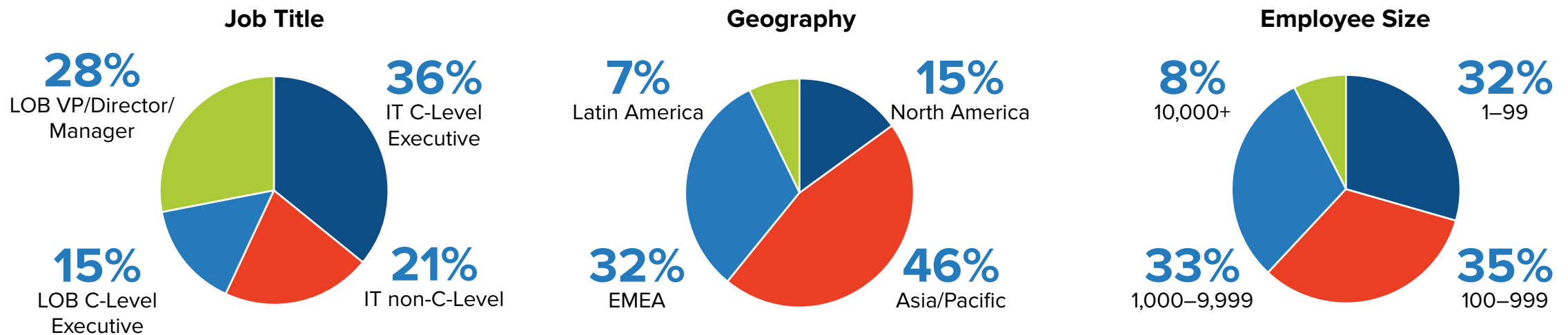
## EXECUTIVE SUMMARY (CONTINUED)

- More mature adopters enjoy better business outcomes, including increased revenue and more strategic allocation of IT budget. The greater the level of cloud maturity the more likely organizations are to support advanced technologies including microservices architectures, containers, and Internet of Things (IoT).
- The proliferation and integration of traditional and modern applications (i.e. containers, microservices) in a multicloud world require sophisticated management and orchestration capabilities.
- Effective management of containers and microservices enables infrastructure and operations teams and cloud architects to adjust and scale to the increase in software deployment frequency that development teams deliver through multicloud channels.

# The cloud landscape – study methodology

To measure and describe the current cloud landscape, IDC’s 2017 CloudView Survey interviewed director-level and above respondents from a global sample of 8,188 executives knowledgeable about IT decisions. Of this sample the full survey was conducted on the 6,084 respondents actively using cloud for multiple workloads.

## Survey Participant Profile



# Organizations recognize Digital Transformation (DX) is mandatory to remain competitive

Cloud is a key enabler of digital transformation

**56%**

of cloud adopters are using cloud to enable innovation

**50%**

of cloud adopters expect cloud to improve business agility

**37%**

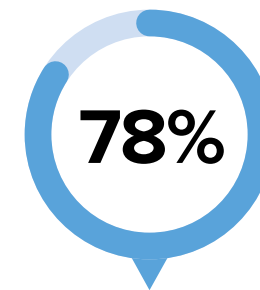
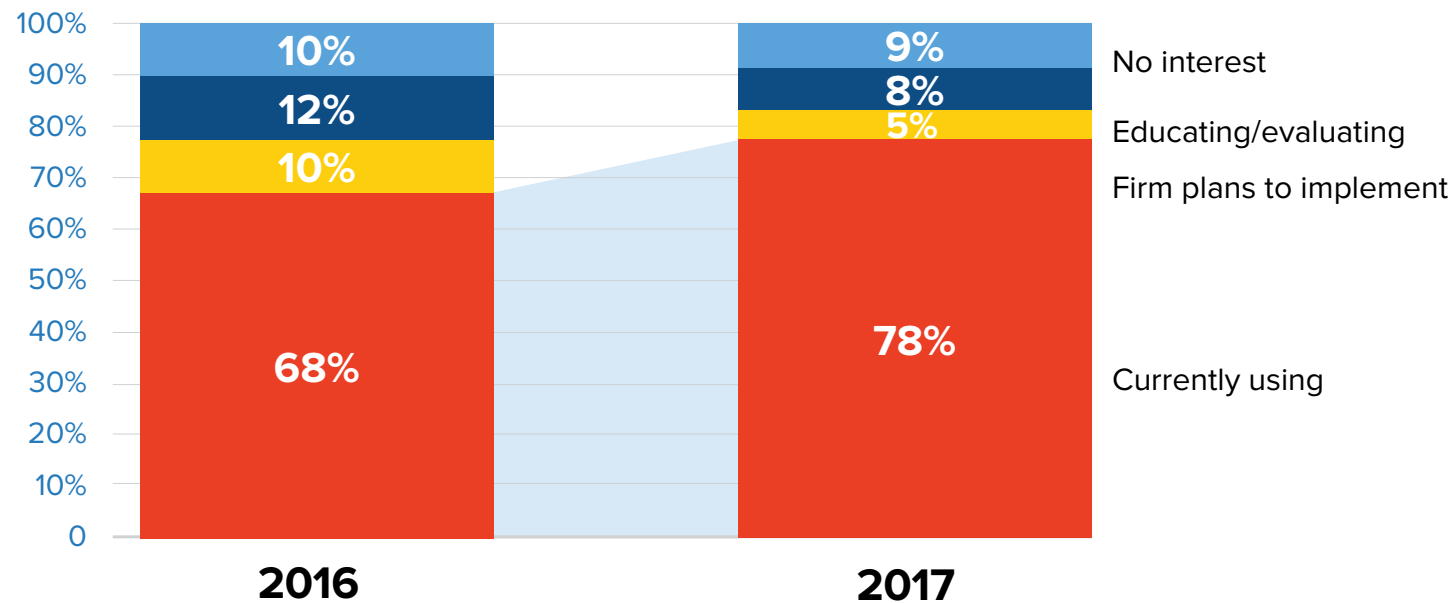
expect to improve their time to market

# So it's no wonder C-Level executives are pushing a cloud-first strategy

54% of cloud adopters' C-level executives pursue a cloud-first strategy for new workloads and 55% have a cloud-first strategy to replace existing workloads.

# Cloud adoption continues to increase

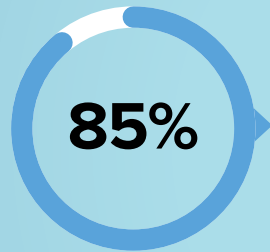
## Use of Public or Private Cloud



of organizations use some form of cloud, representing a **15% increase** from last year

**Q: How would you best describe your organization's current or near-term plans to use public cloud or private cloud solutions to support production workloads and services?**

# Multicloud deployments are now the norm



of cloud adopters have multiple types of cloud deployment options



with **58% working with at least 4 vendors**

The most cloud-mature organizations expect to be able to choose from multiple cloud providers based on location, policies, and governance principles and have implemented collaborative business and IT governance to do so.





# What are the drivers of multicloud deployments?

IDC interviews with cloud customers reveal:

**LOB, Non IT/CXO, developers and DevOps driven proliferation**

**Immediately beneficial client virtualization and client SaaS (e.g. Office365, desktop virtualization, etc.)**

**Best in class, market dominant SaaS (e.g. Salesforce.com, Workday, etc.)**

**Different stacks for different tasks... AWS for net new cloud native; Azure and others for lift and shift**

**Legacy and private continue on a variety of multicloud hosting options**

**New tech (e.g. cognitive/machine learning, IOT, etc) run from specialized stacks and clouds**

**Industry and community clouds such as GE Predix, Athenahealth, or AWS GovCloud**

# Multicloud drivers by use case and outcomes

IDC research reveals the following:

## Lift and Shift

- Disaster recovery
- Reduced hardware costs

## Redevelop

- Developer productivity and deployment frequency increase
- DevOps and agile adoption increases

## Re-platforming

- Move custom-developed applications
- Improved process efficiency from cloud native tools
- Take advantage of new technologies (IoT, BI, analytics, automation, etc.) from specialized services

## Hosted Applications

- LOB/Non IT/CXO driven decisions to increase time to market
- Industry clouds and SaaS adoption
- Different stacks for different tasks/capabilities

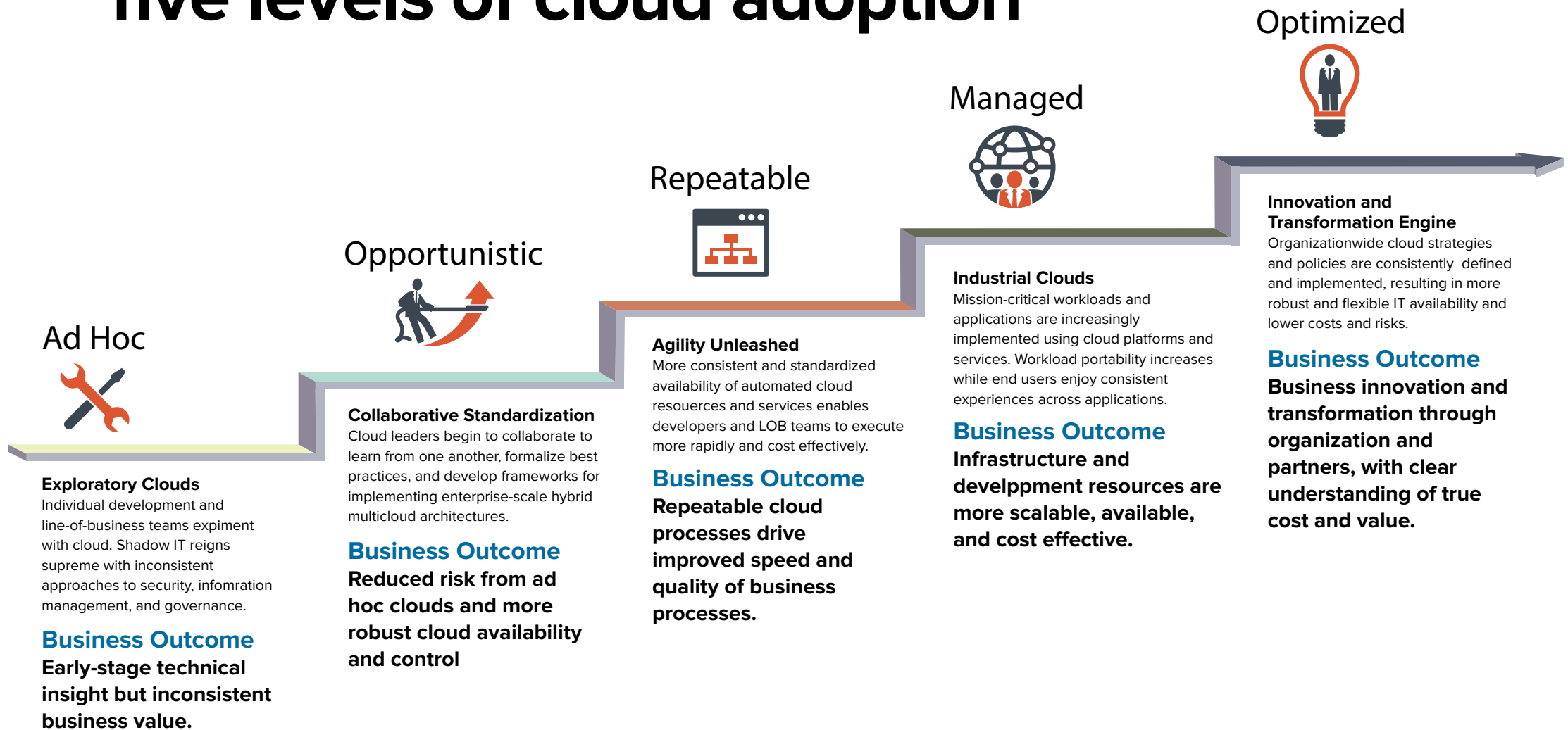
# Multicloud deployments continue to grow



**Q: Please describe your organization's current or near-term plans for each of the following cloud deployment options?**

**Q: Which of the following companies are you using to support your overall adoption of cloud services?**

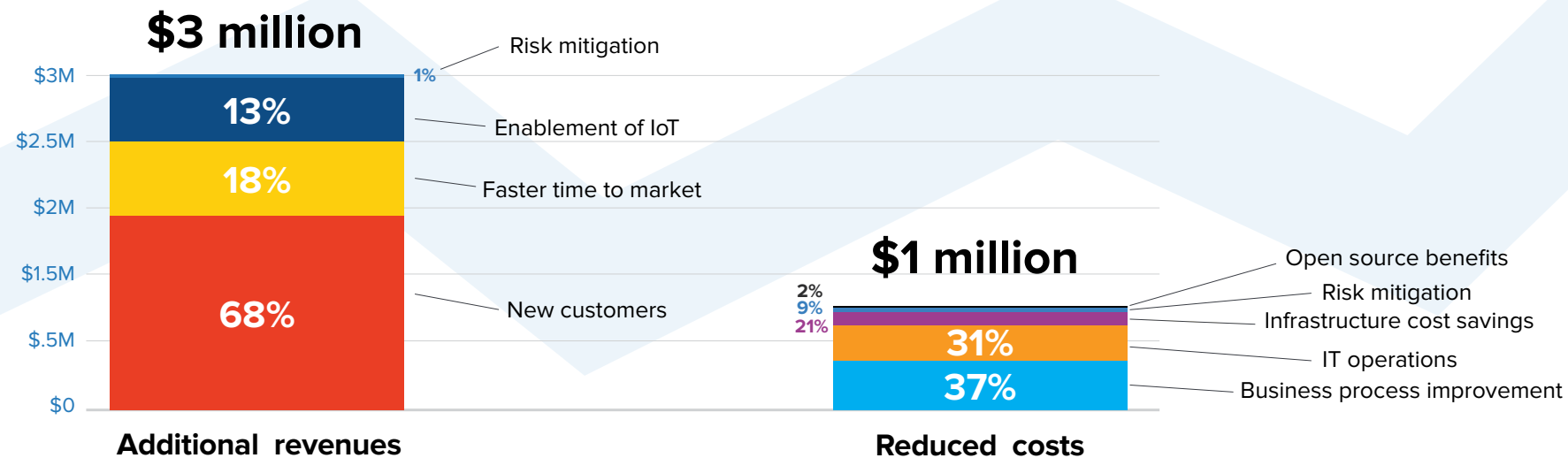
# IDC categorizes organizations using five levels of cloud adoption



# More mature organizations recognize benefits across the board

The benefit per cloud-based application across organizations studied by IDC averaged \$3 million in additional revenues and \$1 million in reduced costs.

## Annual Benefit per Cloud-Based Application



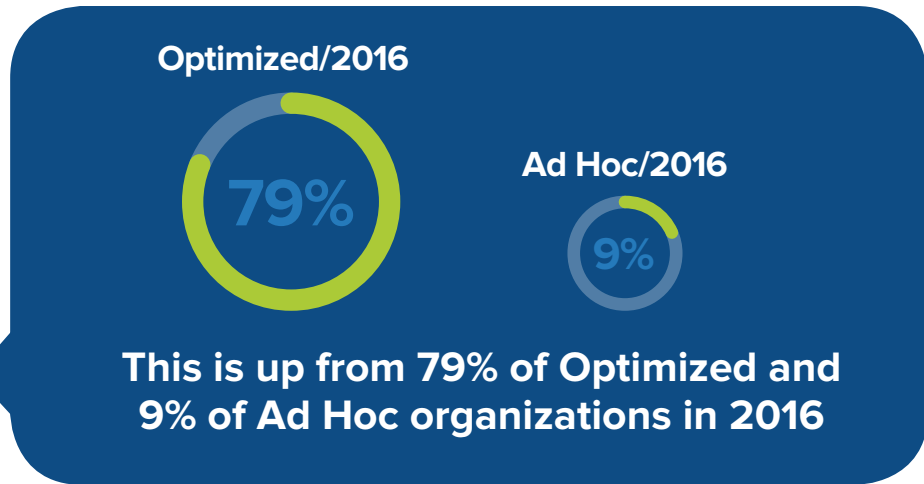
# Cloud-mature organizations make greater use of containers and microservices architectures



of Optimized organizations today use **microservices architectures** to develop cloud native apps (cloud native development)



compared to only **18%** of **Ad Hoc organizations**



**97% OF OPTIMIZED ORGANIZATIONS**



**AND 15% OF AD HOC ORGANIZATIONS**

develop applications on containers



compared to **66%** of **Optimized** and **20%** of **Ad Hoc organizations last year**

# Cloud-mature organizations also take more advantage of the Internet of Things (IoT)

## THE MOST MATURE CLOUD ADOPTERS

are nearly twice as likely to support IoT and other real-time initiatives through an event-driven architecture.\*

97%

Most mature (Levels 4+5)

Managed



Optimized

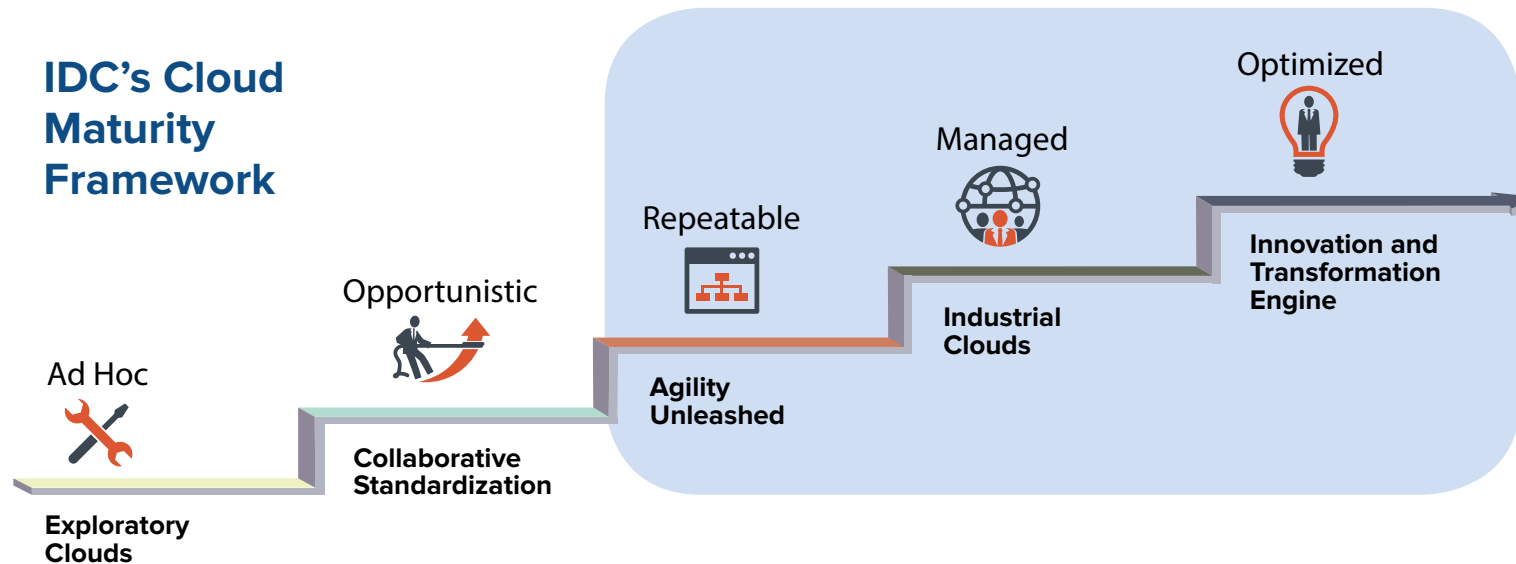


53%

Overall cloud adopters

# While cloud has reached wide scale adoption (78%+), cloud maturity—and in turn—the level of business benefit organizations derive from cloud, continues to lag.

## IDC's Cloud Maturity Framework



Only 44% of organizations have repeatable, managed or optimized strategies—enabling them to maximize the business value from cloud adoption.



Representative industries

- Healthcare/life sciences
- Retail/wholesale
- Professional services
- Government

- Oil & Gas
- Utilities

- Financial Services

- Manufacturing/tech

- Manufacturing/tech



# What are the barriers to increasing cloud maturity?

IDC research reveals the following:



## Organizational structure and skills

Need for new titles, new development and automation skills that reside in non development teams, such as the networking and infrastructure and operations teams.



## Pace and rate of technology change

New cloud services from providers outpace IT organizational adoption and absorption rate.



## Security

While much improved, organizations still require security planning, requirements, and integrations for the cloud.



## Process integrations

Spanning both technology and business processes are required.



## Data Governance/geo location

Government regulations, and compliance requirements demand certain geo-centric limitations for data storage and movement.



## Poorly defined business metrics

While cost avoidance or reduction are often possible, business metrics should be defined in terms of speed and quality.

# ...and what are the challenges of adding more clouds?

Increased security exposure due to a larger attack surface

Applications, users and data proliferate from varied constituents in the organization—thus challenging integration

Multiple clouds with varying terms, schedules, costing and billing leads to confusion

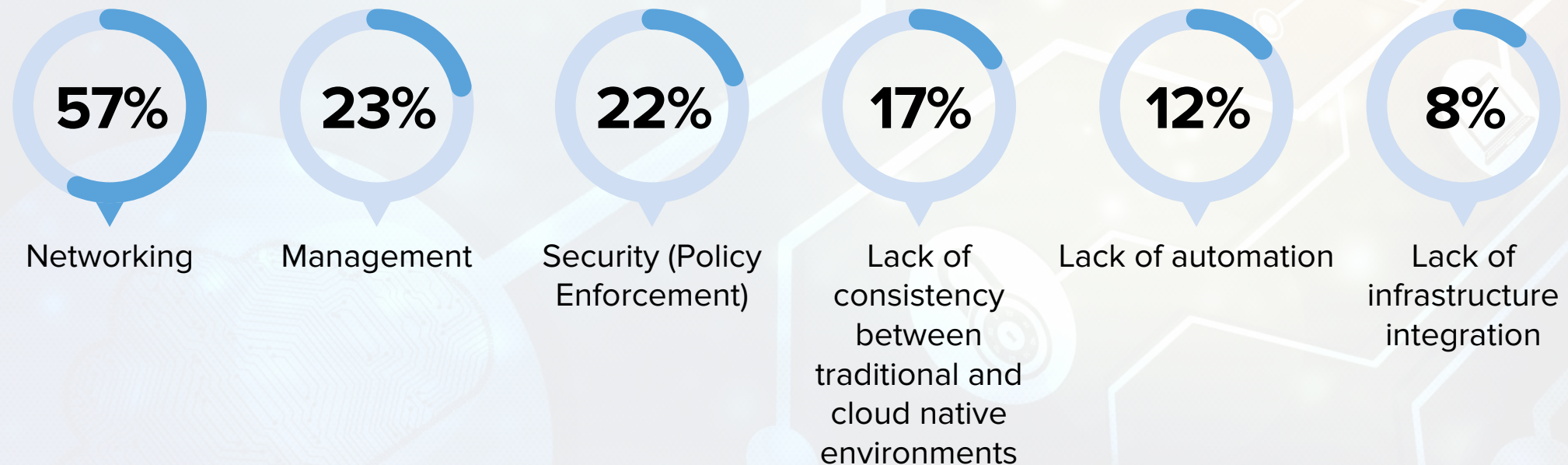
Reduced visibility into pricing across the myriad of clouds and vendors being used means less leverage

Augmenting legacy applications with cloud functions remains elusive without rip and replace

Orgs lack tools to do stress testing with a full network view across the entire multicloud network architecture

# Networking and management are primary inhibitors to container use

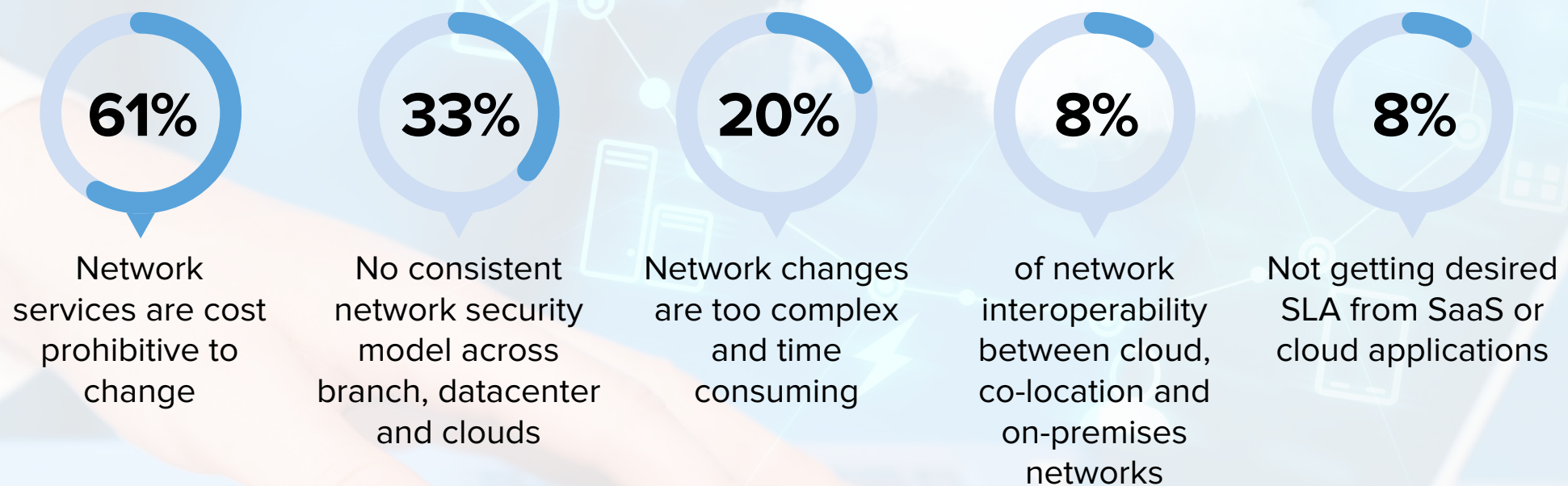
Inhibitors to deploying applications on containers



**Q: What are the inhibitors in deploying applications on containers?**

# Cost to change and security are primary network inhibitors to public/hosted cloud adoption

Network inhibitors to moving to/consuming public/hosted cloud services



**Q: What are the network inhibitors for you to move to or consume public/hosted cloud services?**

## IDC OPINION:

# Cloud maturity requires integrated and automated capabilities that span a multicloud world, and work across traditional and modern IT environments, such as:



Identifying and containing security threats, meeting compliance regulations and managing security policies across the organization, for all users, data and applications.



Simplifying global connectivity between data centers and public clouds, reducing maintenance and operations costs



Integrated performance management of traditional and cloud native applications can deliver cost optimization using automated processes across multiple clouds.



Multicloud data collection and analysis for streamlined problem identification and resolution processes that prevent downtime, improve customer understanding and ultimately, a better customer experience.

**Find out how your organization scores and get guidance using IDC's maturity model.**

[Assess your cloud maturity](#)