Eliminate Multicloud Chaos and Focus on Delivering Business Outcome

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Authors:
Archana Venkatraman
Carla Arend

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Cloud is the Foundation for Modern IT Architecture and Digital Business Transformation

Digital transformation is a business imperative and organizations are leveraging cloud technologies as the foundation to deliver digital business objectives. In IDC's European cloud research in 2018, less than 3% of organizations said they have "no plans" to utilize any cloud computing technologies and services.

By 2021,
European enterprises' spending on cloud will pass

$100 billion

The shift to cloud over the past 10 years has changed the IT paradigm in Europe and cloud has completely reset people's expectations from IT in terms of speed, collaboration, and agility. But as cloud becomes mainstream, its adoption is becoming a lot more nuanced and it is changing:

- ☑ It is becoming distributed, from edge to cloud to datacenter
- ☑ It is moving beyond general-purpose workloads to specialized workloads such as AI
- ☑ New stakeholders are emerging as investment influencers
- ☑ Most importantly, it is becoming multicloud
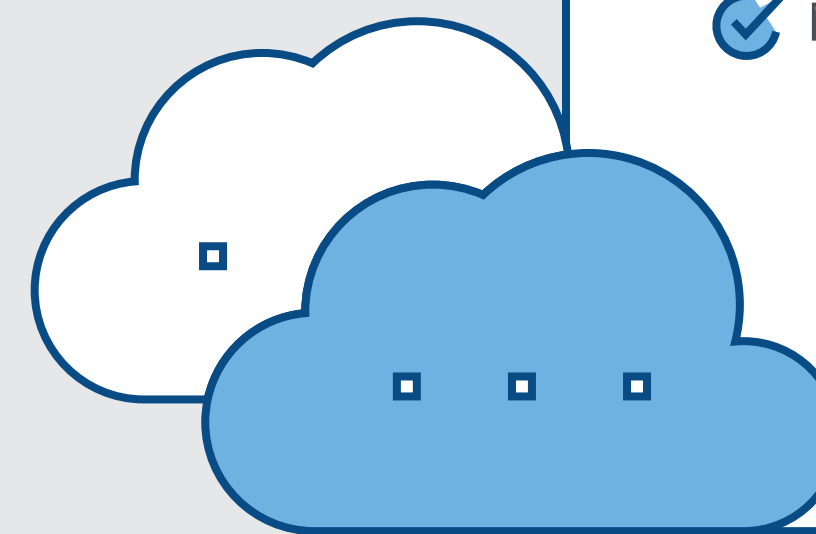
Multicloud is Mainstream

The dawning realization among cloud adopters that one size doesn't fit all workloads — combined with the need for IT control, cost management, and freedom from cloud lock-in — means multicloud and hybrid cloud environments are the natural evolution.

Organizations need to move from multicloud chaos, which stems from departmental and project-driven purchase of cloud solutions, to multicloud control, with a cloud operating model and governance in place.

By 2020,

90% of European organizations will use multiple cloud services and platforms, but only

40% will have established mechanisms to operate their multicloud environments efficiently.
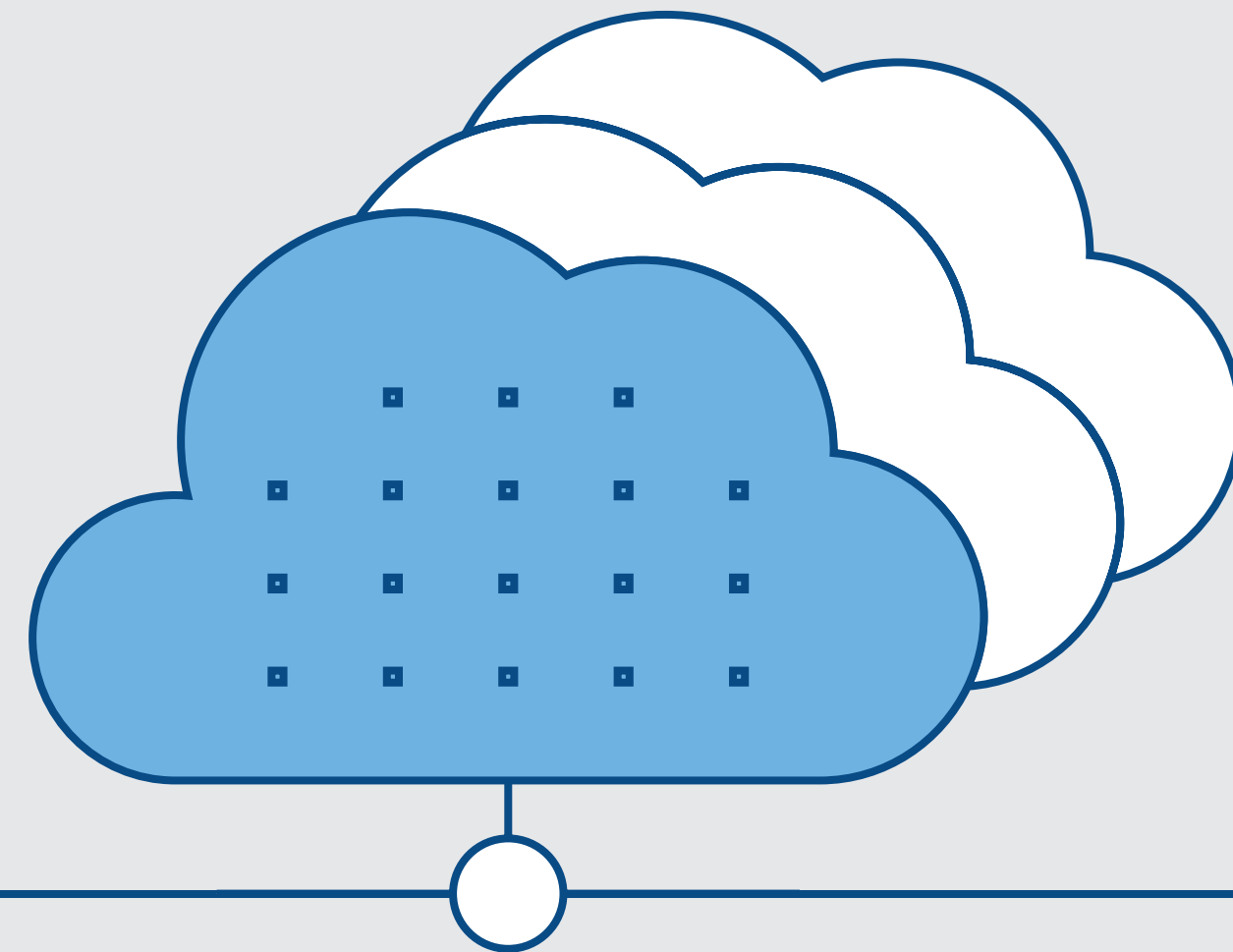
A multicloud strategy is built on:

Multicloud governance model: A framework to decide which cloud services to use for which workloads and why — one that matches the right cloud platform (private, managed, hosted, or public cloud) with the actual use case or application.

Multicloud operating model: A strategy to define roles and responsibilities, monitoring, security policy, and cost control.

Connected hybrid cloud: A technology architecture where an on-premise private cloud connects to a managed, hosted, or public cloud.

Multicloud Drivers and Benefits

IDC research shows that planned multicloud strategies are initiated primarily to support digital transformation goals:

Enabling LOB to source IT through self-service access to innovative services —
35% of organizations

Moving from capex to opex to align cost with value creation —
34% of organizations

Improving business agility through access to cloud-based innovation —
35% of organizations

Multicloud strategies are adopted to ensure access to the fast-paced innovation provided by cloud providers and their ecosystems. Cloud provides the building blocks that organizations can use to drive innovation.

- Cloud provides the foundation for value creation by delivering the backbone for new products, services, and ultimately new business models and revenue streams.

- Cloud also enables new ways of working and collaboration such as DevOps, and encourages a culture of experimentation and exploration without the need to invest massively in IT resources upfront.

- Digital transformation initiatives rely on accelerated application development. Cloud plays an essential role in speeding up the CI/CD pipeline process and providing choice of development environment and flexibility for developers.

- Cloud and especially multicloud architectures need to be managed efficiently to realize these benefits. Using multiple cloud platforms helps to mitigate the risk of relying on a single cloud provider.

| DX Imperatives	Multicloud Value
01 NEW REVENUE STREAMS	Access to new innovations
02 TIME TO VALUE	Cost and operational efficiency and modern metrics (speed to market, new economics model, return on value)
03 CHANGE AND AGILITY	Dynamically creating new capabilities

Source: IDC EMEA, IDC Multicloud Maturity Survey, 2018

Where Does Your Organization Fit?

IDC's 2018 Multicloud Maturity Survey found that there is a wide range of maturity levels for multicloud adoption. Less than 10% of organizations have a multicloud-by-design strategy.

Four Stages of Multicloud Maturity

42%
38%
11%
9%

● Bystanders   ● Pedestrians   ● Travelers   ● Pathfinders
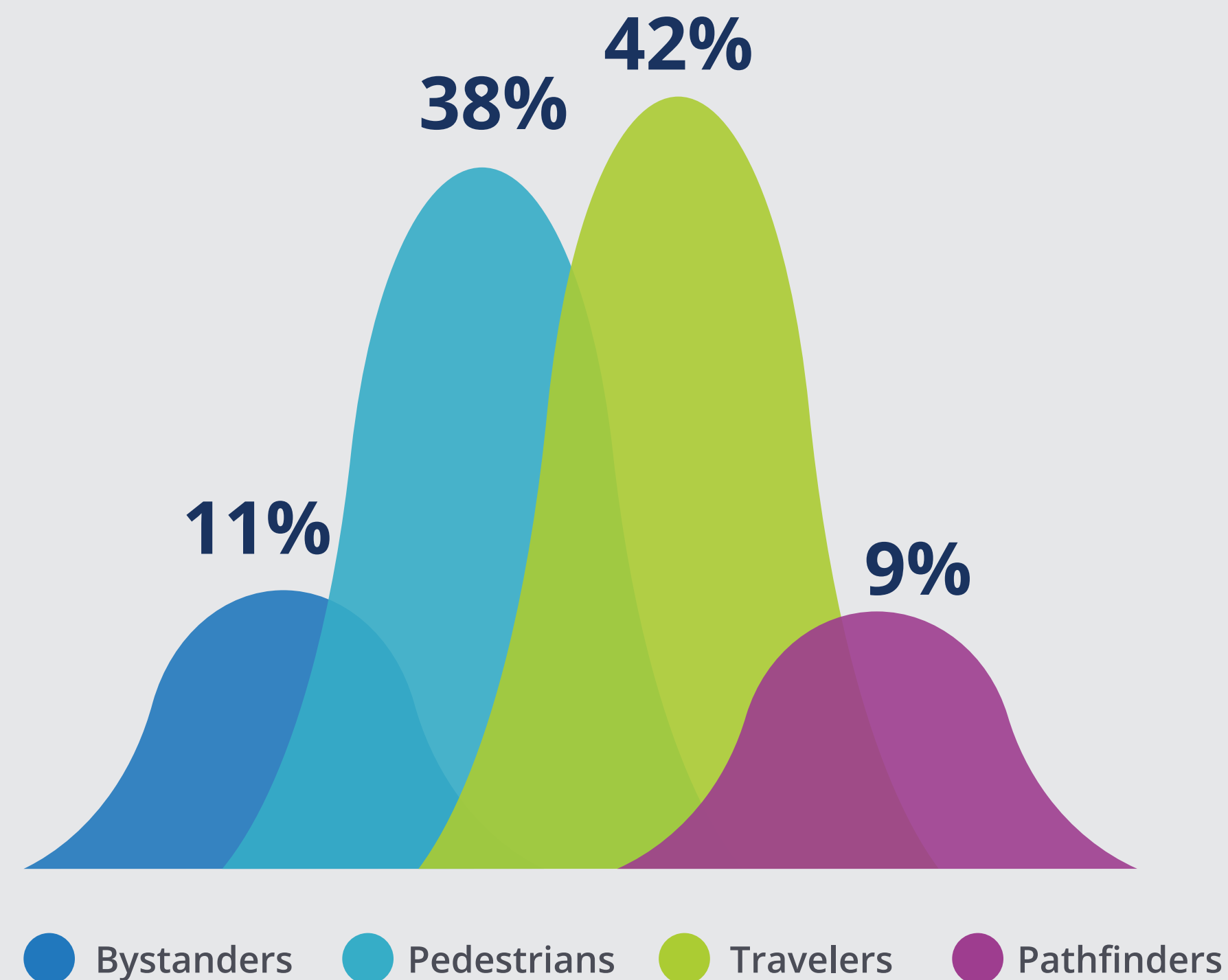
Source: IDC EMEA, IDC Multicloud Maturity Survey, 2018

Bystanders have zero visibility or control of cloud services, live in a capex world, and have IT operations strictly focused on on-premise infrastructure. For these organizations, rules, regulations, and risks are still an impediment to cloud adoption.

Pedestrians focus on on-premise private cloud and occasional use of native cloud-sync tools and deployment automation, but are still mired in shadow IT with limited security visibility or confidence. These organizations are cloud-aware but instead of being internally driven and in full control, they react to external forces.

Travelers have connected some off-premise resources to on-premise resources and have started monitoring user experience on external cloud services to appease developer teams. These organizations are steadily adopting cloud to execute on digital transformation projects.
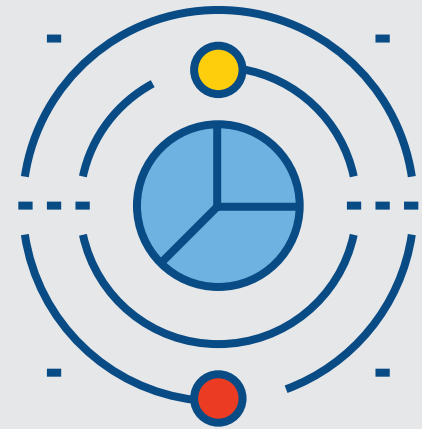
Pathfinders make use of policy-based automated deployment across clouds, have evaluated hardware consumption models, steer their cloud costs proactively, and set in place a compliance strategy based on codes of conduct. These trailblazing companies are seeking ways to further optimize their use of cloud, are becoming more agile, and are in the mature stages of digital transformation.

What Multicloud Success Looks Like: Learning from Pathfinders

| 01 | **Ruter#** | Transportation Management Company |

TECHNOLOGY REQUIREMENTS

- ✓ Operationalize a Big Data solution in the cloud to accelerate time to market
- ✓ Hybrid cloud platform for next-generation services and Big Data projects
- ✓ Managed services for operation of both cloud-native applications and existing (traditional) solutions

SOLUTION

- Advanced hybrid cloud solution with strict security governance from Orange Business Services' Basefarm
- End-to-end services in the engagement model for public cloud, from ideation and advisory to consultancy and operation of applications
- Managed solutions to provide guided, frontline, and platform operation 24 x 7
- Introduction of DevOps culture

BUSINESS BENEFITS

- IT platform to deliver next-generation transportation services with no impact on existing "legacy" IT that provides critical transportation applications
- Increased flexibility and future-readiness to explore disruptive technology
- Smoother application life-cycle management with the tools and components in the cloud platform
- Cost-effective and scalable cloud-based Big Data solution
- Freedom from vendor lock-in
- Vendor support available on-demand to support efficient management

Big Data is at the heart of Ruter's digital objectives to deliver a next-generation transportation experience.

It wanted to **scale the analysis of real-time traffic information with speed and agility**.

With managed hybrid and multicloud services, Ruter can now **take innovative ideas to production faster** than ever before and has **improved customer experience**. Operationalizing Big Data on cloud with managed services has helped it **become data-driven and digitally competitive**.

What Multicloud Success Looks Like: Learning from Pathfinders

kerlink
communication is everything

Global Infrastructure Provider for IoT

Kerlink wanted to strengthen its position as a **global supplier of Internet of Things (IoT) networks**.

It aimed to be **multicloud-ready and have cloud-agnostic skills, support, and tools so that it can choose any public cloud that meets its speed-to-market requirements** at any time.

TECHNOLOGY REQUIREMENTS

- ✓ To increase responsiveness to new IoT project demands and offer local and agile services to customers
- ✓ To leverage third-party expertise to migrate and automate deployment of the business application on the AWS cloud and have the flexibility to move to another public cloud in future to leverage the best cloud at all times for its goals
- ✓ To stop relying on traditional siloed infrastructure based on virtualization, cloud, and open source technologies
- ✓ A vendor with the skills and expertise to train and support Kerlink professionals on AWS and the ability to support migration to another cloud for future multicloud flexibility

SOLUTION

- Professional services and cloud expert services to handle the migration and automation of the application on AWS as a cloud platform, but with freedom from vendor lock-in
- Implementation of the reference platform on AWS and make the most efficient use of the public cloud platform of choice
- Best practice blueprints on the future-ready design of the cloud architecture to make the application cloud- native
- Support for the creation of a pilot for the platform
- Facilitate cloud choice and a multicloud strategy despite the current choice of using just one public cloud

BUSINESS BENEFITS

- Optimize the use and value of cloud infrastructures with DevOps and cloud-native applications
- Faster international implementation in any geographical zone, independent of the infrastructure to bring flexibility and freedom of choice
- Implementation of local infrastructures to meet regional compliance, data locality, and regulatory requirements
- Leveraging a public cloud of choice currently but can migrate to another public cloud or use multiple public clouds in future with skills, implementation, and training from solution provider
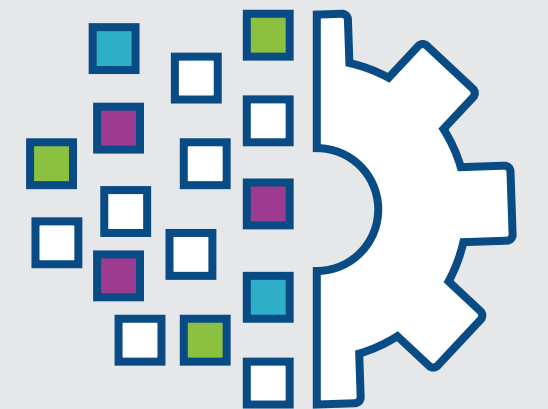
With a **multicloud-ready strategy**, the Kerlink team is **more competitive in supporting its clients globally in their IoT network deployment and digital transformation**.
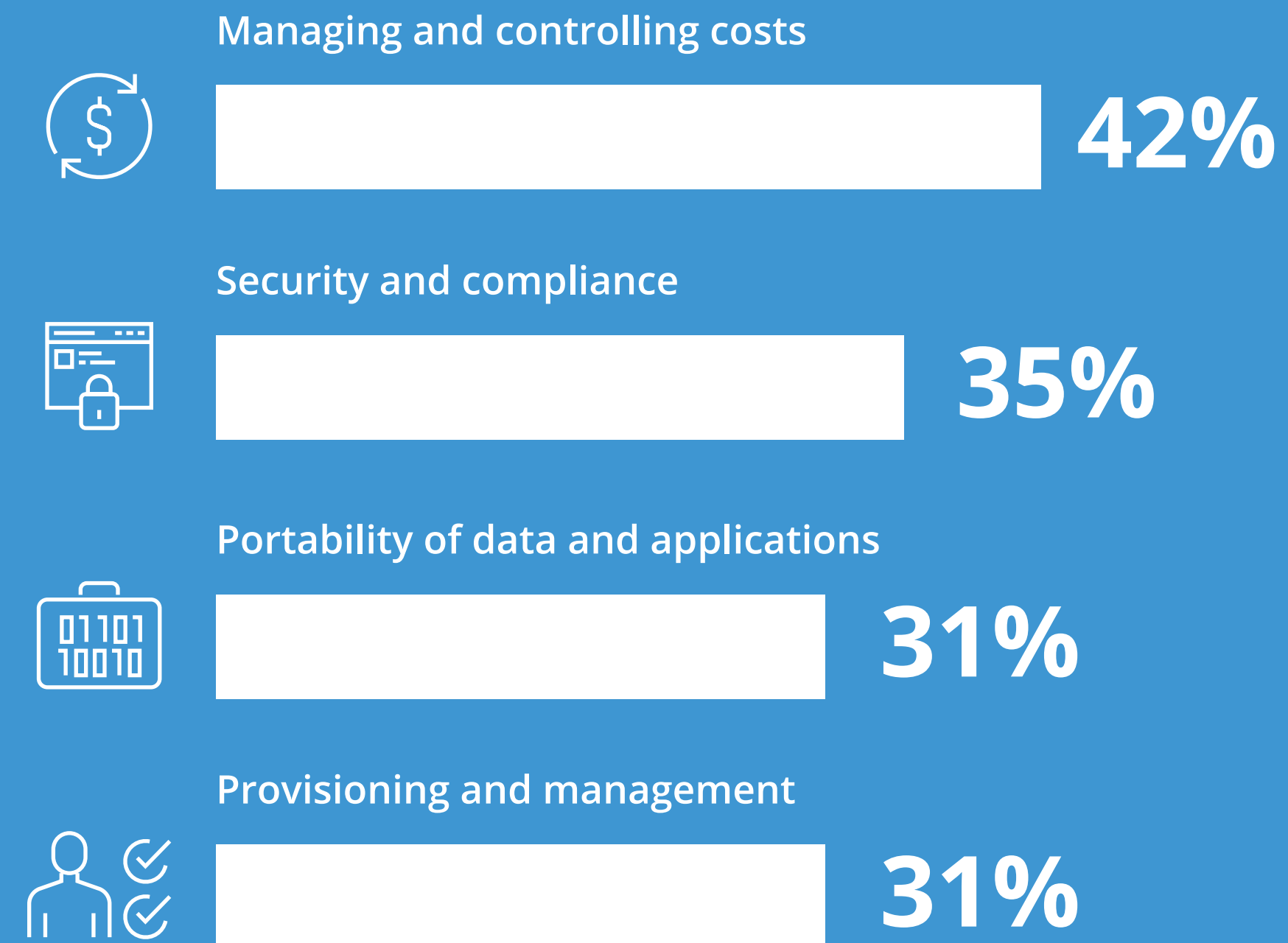
Kerlink can **accelerate international expansion** with a solution available on **any cloud and in any region**.

# Multicloud Challenges: Key Hurdles to Moving Up the Maturity Ranks

Most organizations are still in the early stages of multicloud maturity. Cost and compliance are the most pressing multicloud management challenges.

With less than 10% of organizations fully ready in 2018, we expect more organizations to accelerate their journey in the coming months as they look to map existing cloud infrastructures and outline concrete multicloud strategies.

The four key hurdles to urgently address are:

Managing and controlling costs
42%

Security and compliance
35%

Portability of data and applications
31%

Provisioning and management
31%

Multicloud skills, auditing the cloud provider, shadow IT control, and data protection were also cited as important priorities.
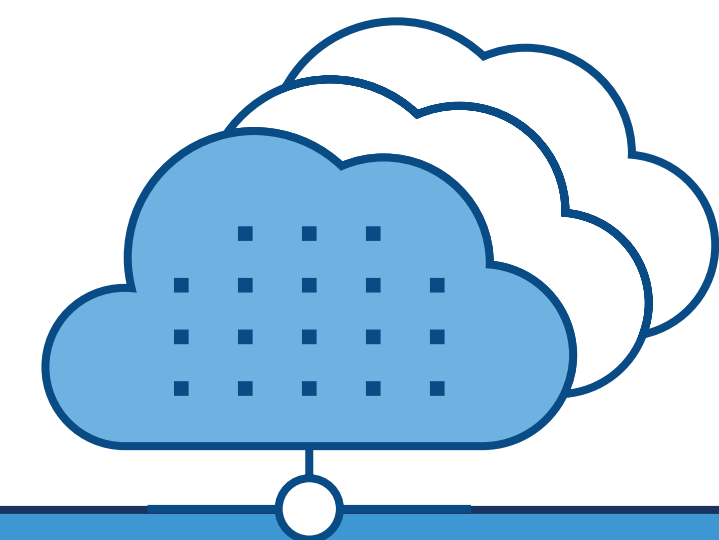
Source: IDC European Multicloud Infrastructure Survey, March 2018

Five Dimensions of Transformation Are Critical to Become Multicloud-Ready
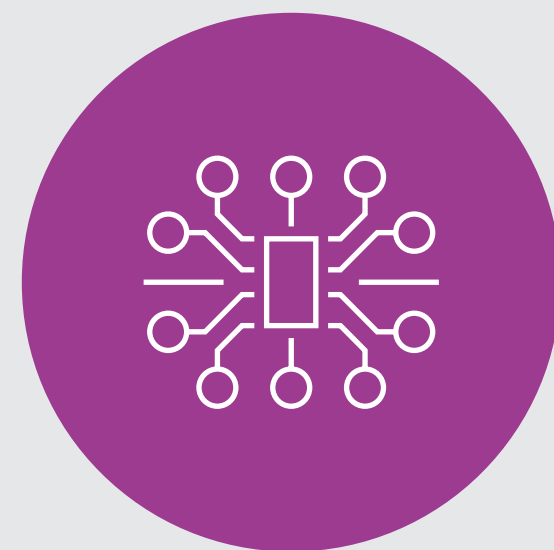
Five Multicloud Dimensions

Cloud vision

Cloud economics

Process and compliance

Technology

People and culture

Successful multicloud implementations require maturity along five dimensions:

Cloud vision: Top management needs to support and mandate a multicloud strategy.

Cloud economics: Controlling cost across multiple cloud services and providers is complex yet critical to avoid cloud sprawl and cloud cost explosion.

Process and compliance: Establishing cloud governance processes as well as SLA monitoring processes is key to continuously understanding the health and performance of the multicloud environment.

Technology: Multicloud management technologies are maturing and are the technology foundation for multicloud success.
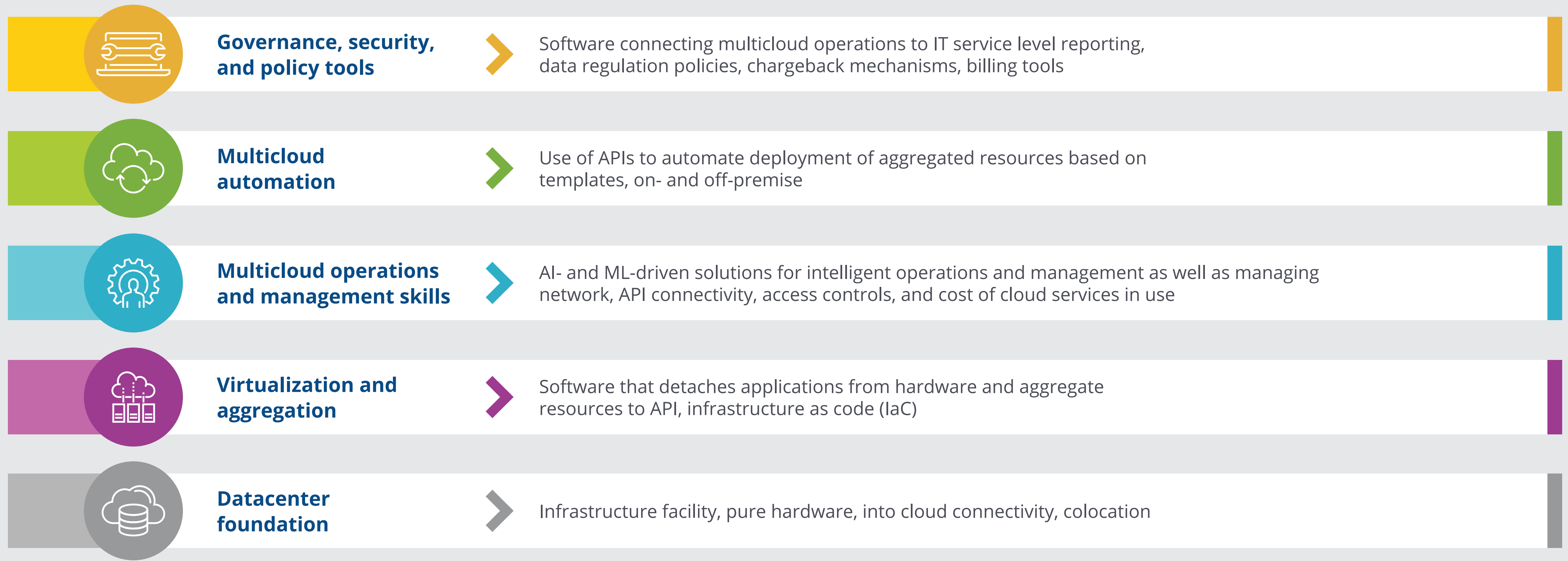
People and culture: Moving to a multicloud architecture and operating model requires a significant organizational and cultural change and often coincides with the introduction of DevOps processes and the establishment of a cloud center of excellence.

These elements define a cloud operating model.

Source: IDC EMEA, IDC Multicloud Maturity Survey, 2018

Transform from Accidental to Intentional Multicloud

Automation, software-defined and intelligent management, next-gen security control, and multicloud skills are fundamental for multicloud success.

Governance, security, and policy tools
> Software connecting multicloud operations to IT service level reporting, data regulation policies, chargeback mechanisms, billing tools

Multicloud automation
> Use of APIs to automate deployment of aggregated resources based on templates, on- and off-premise

Multicloud operations and management skills
> AI- and ML-driven solutions for intelligent operations and management as well as managing network, API connectivity, access controls, and cost of cloud services in use

Virtualization and aggregation
> Software that detaches applications from hardware and aggregate resources to API, infrastructure as code (IaC)

Datacenter foundation
> Infrastructure facility, pure hardware, into cloud connectivity, colocation

# Partnering for Success: What's on Your Peers' Checklist?

Implementing and operating a multicloud architecture is complex and requires a huge investment in in-house skills using multiple cloud technologies.

Managed cloud services provide a fast track to multicloud, where the provider takes away the complexity of multicloud management.

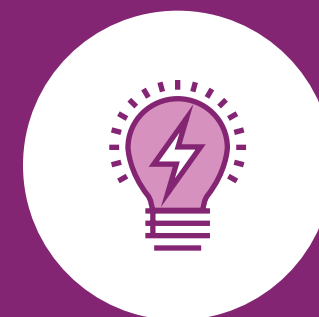When choosing a provider, the most valued criteria are:
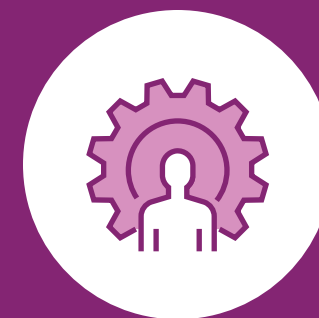
Deep technical expertise
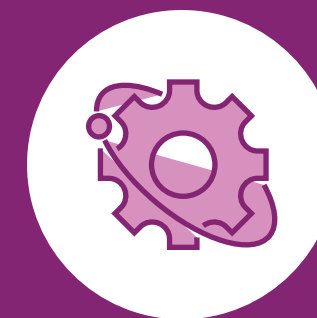
Industry expertise

Strategic provider

Innovative and transformative offerings
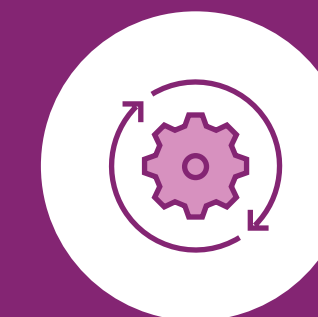
In-country datacenters

Software abstraction against lock-in

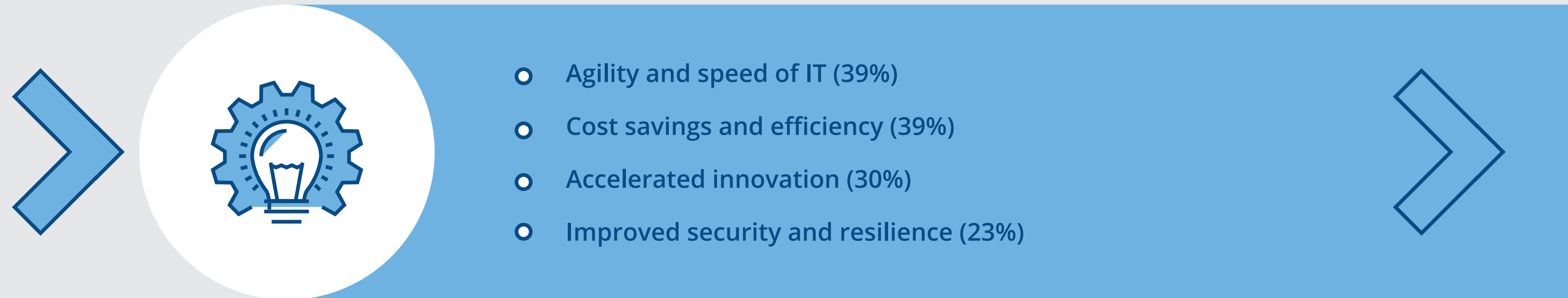**Managed infrastructure and applications**
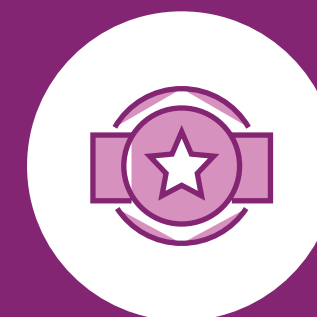
Best-of-breed approach
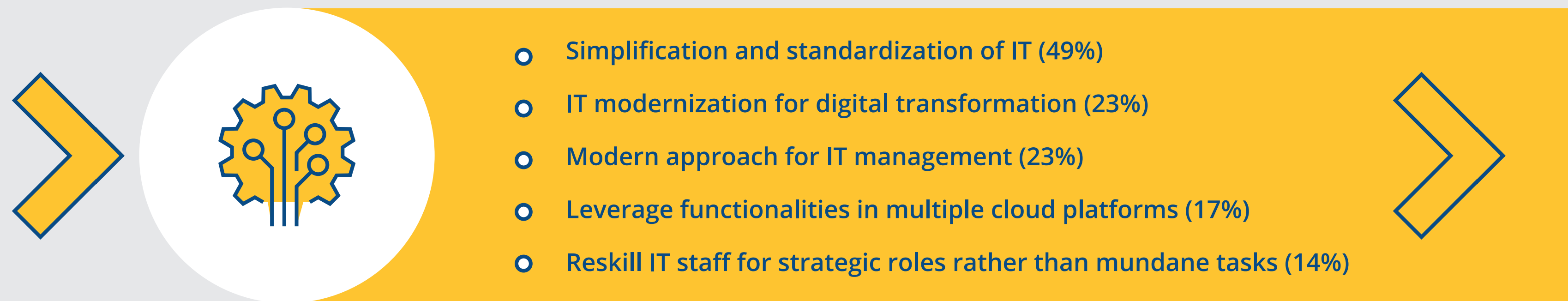
Ability to simplify and automate management

Source: IDC CloudView Survey, April 2018, n = 1,164

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Management, Support, and Automation: Three Pillars of Success on the Multicloud Journey

Many organizations are adopting managed cloud services for their multicloud strategies driven by both business and technology needs.

Business drivers

- Agility and speed of IT (39%)
- Cost savings and efficiency (39%)
- Accelerated innovation (30%)
- Improved security and resilience (23%)

Technology drivers

- Simplification and standardization of IT (49%)
- IT modernization for digital transformation (23%)
- Modern approach for IT management (23%)
- Leverage functionalities in multiple cloud platforms (17%)
- Reskill IT staff for strategic roles rather than mundane tasks (14%)

Source: IDC EMEA, IDC Multicloud Maturity Survey, 2018

Checklist for Multicloud Managed Services

Ensuring end-to-end multicloud management as the IT environment evolves dynamically can help organizations to focus on core business objectives and competencies with full confidence in IT. This helps to:

- Establish cost control and visibility of the infrastructure estate

- Leverage innovation in AI and ML to automate and standardize management, maintain control of self-adjustable (auto-scaling, self-healing) application architectures, and resolve potential problems before they become operational issues

- Free up staff and resources from integrating multiple cloud APIs to delivering IT services and making IT a business enabler

- Reduce management complexity

- Unify management to ensure high levels of portability of data and apps across clouds

- Ensure freedom from single cloud lock-in with high levels of abstraction

- Be in control of security and compliance

- Benefit from the best of both worlds — cloud (speed, agility, modern ways of collaboration) and enterprise IT (control, business continuity, security, compliance, cost management)

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Conclusion: Make Digital Transformation More Impactful and Sustainable with Orchestrated, Automated, Managed Multicloud

A managed multicloud environment provides a world-class technical foundation to become a **digital-native enterprise**. Multicloud acts as a springboard for using "innovation accelerators" such as IoT, robotics, blockchain, 3D printing, AI/ML, or cognitive to propel digital transformation.

All innovation accelerators run on cloud:

● ● ● ● Already using
● ● ● ● Planning to adopt
● ● ● ● Evaluating
● ● ● ● Not using and no plans
● ● ● ● Not familiar

IoT
23%
7%

Artificial intelligence
10%
6%

AR/VR
8% 8%

Robotics
11%
7%

3D printing
11%
6%
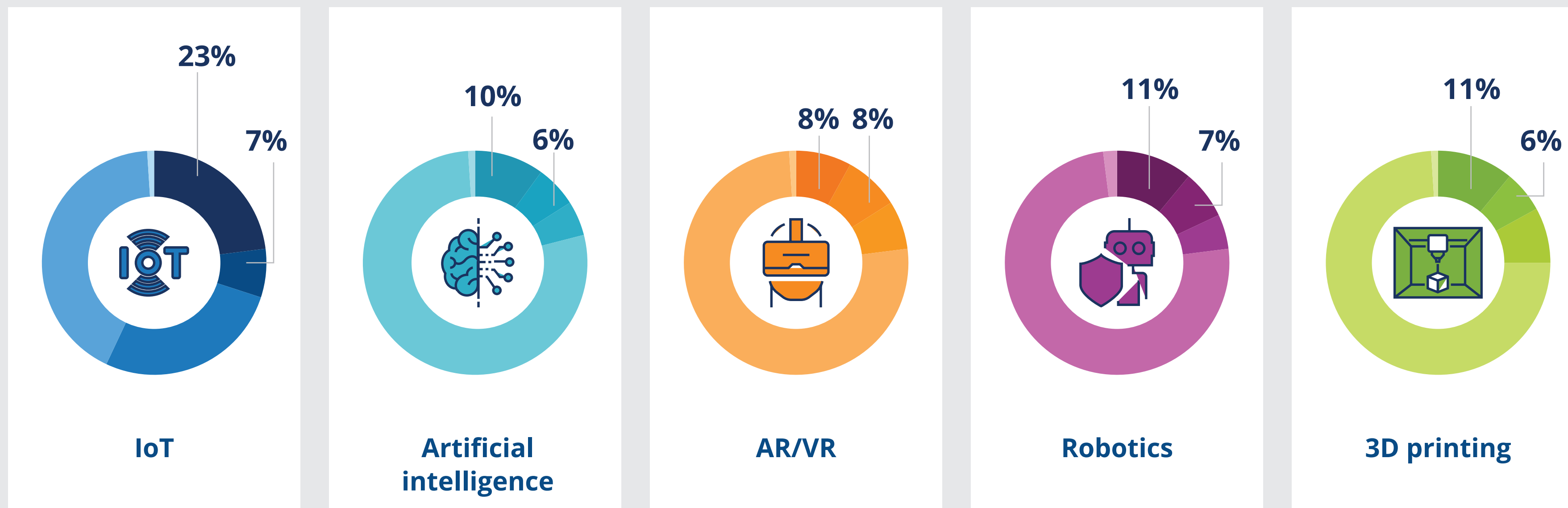
By 2029, 75% of enterprises will have become digital-native entities with a multicloud-led IT architecture.

Are you multicloud-ready?

Orange Business Services Specialist Cloud Division

Sales and support in 160 countries
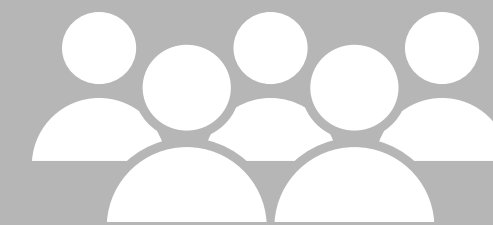

Over 2,200

multiskilled cloud experts worldwide

16 OCD SOCs
10 CyberSOCs
4 CERTs

End-to-end approach

with tailor-made solution fitted to our customer needs

Flexibility

We have an agnostic approach and we can operate on any cloud

24 x 7 x 365 service management
We are specialized in critical applications management through our 6 WW MSC in follow the sun mode

Highest accreditations

in cloud managed services

Key partnerships

with certified cloud partners including market leaders such as AWS, Microsoft, Google, Huawei, Dell EMC, and Nutanix

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IDC UK

5th Floor, Ealing Cross,
85 Uxbridge Road
London
W5 5TH, United Kingdom
44.208.987.7100
Twitter: @IDC
idc-community.com
www.idc.com

Global Headquarters

5 Speen Street Framingham, MA
01701 USA
P.508.872.8200
F.508.935.4015
www.idc.com

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