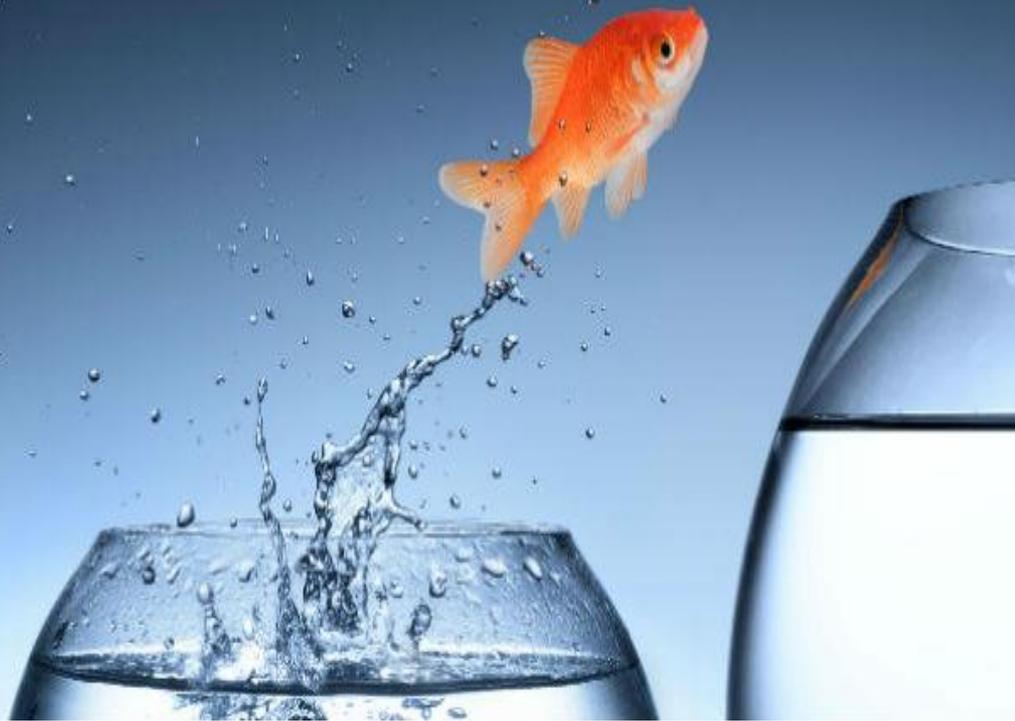


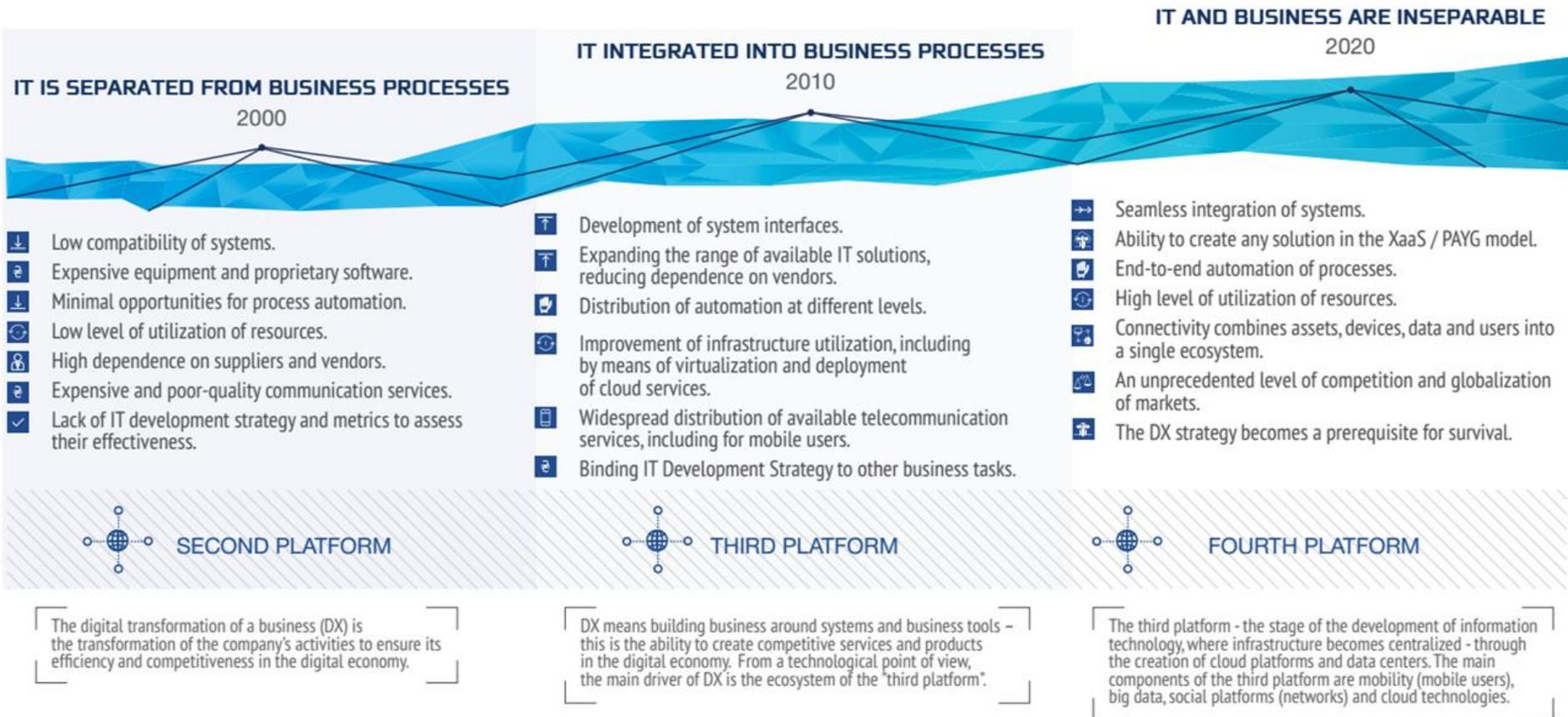
Multi-cloud Strategy in Digital Era

Alexander Zagnetko, PhD

DX programs' coordinator, IDC



Transformation: Stages of ICT Implementation in Business



Multi-cloud Approaches Can Vary, But Share Common Ground on Setting a Trajectory



No Approach

Uncoordinated consumption and lack of management



Basic Multi-cloud

Monitoring of cloud costs
Software-driven on premise
Basic GDPR strategy for cloud providers
Ad hoc data bridges
Occasional native multi-cloud solutions



Programmatic Multi-cloud

Multi-cloud software stack including automation, IP protection, and cost policies
Advanced chargeback mechanisms
Docker container strategy
Geo-location strategy
Holistic connectivity
Tiger teams of "IT generalists"

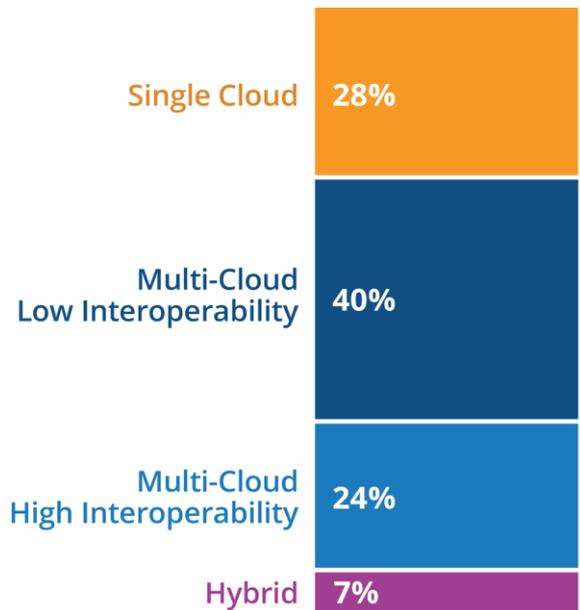


Customers Default to Multi-cloud Environments

The Journey Begins with Private Cloud

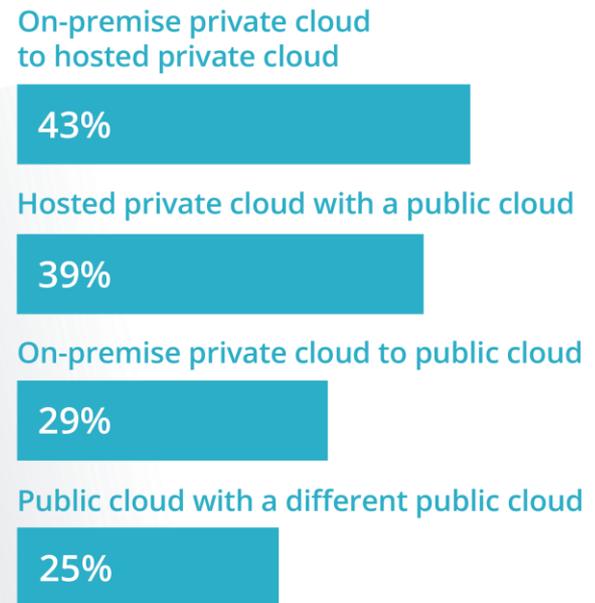
Multi-Cloud Adoption by Type

Q. Over the next two years, how would you describe your organizations use of different on-premise & off-premise cloud environments? [SR]



Multi-Cloud Connection Points

Q. Has your organization enabled any of the following clouds to interoperate? [MR]



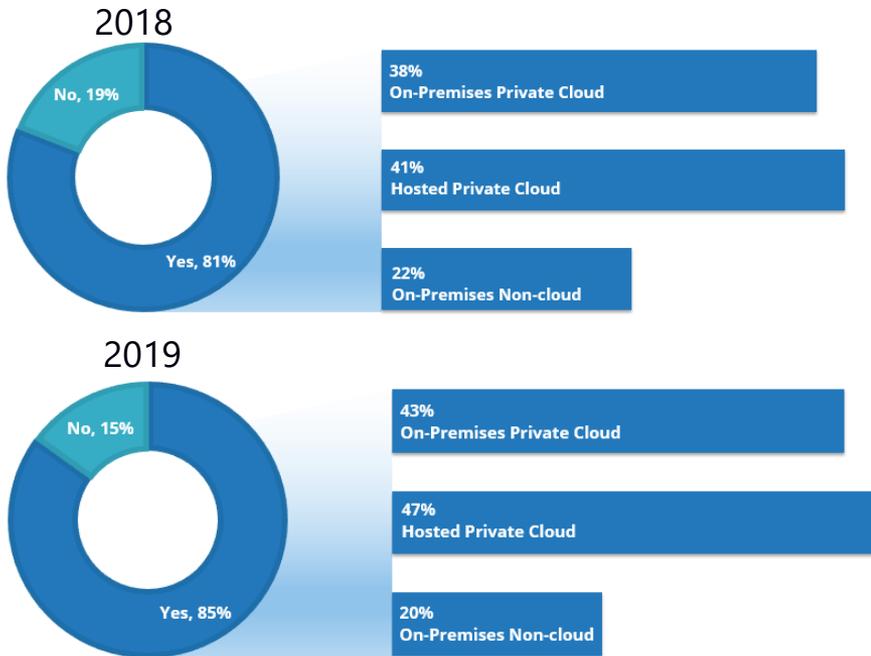
n = 400
Source: IDC's Cloud and AI Adoption Survey, January 2018

80% of Customers Report Cloud Repatriation Activities

More customers expect to repatriate workloads next year

Public Cloud Repatriation Rates

Q. In the last year, has your organization migrated any applications or data that were primarily part of a public cloud environment to a private cloud or on-premises environment?



n = 400
Source: IDC's Cloud and AI Adoption Survey, January 2018

Percent of Public Applications Expected to Repatriate Over the Next Two Years (Average)

Q. Using your best guess, what proportion of the public cloud applications installed today will move to a private cloud, hosted private cloud or non-cloud environment over the next two years?

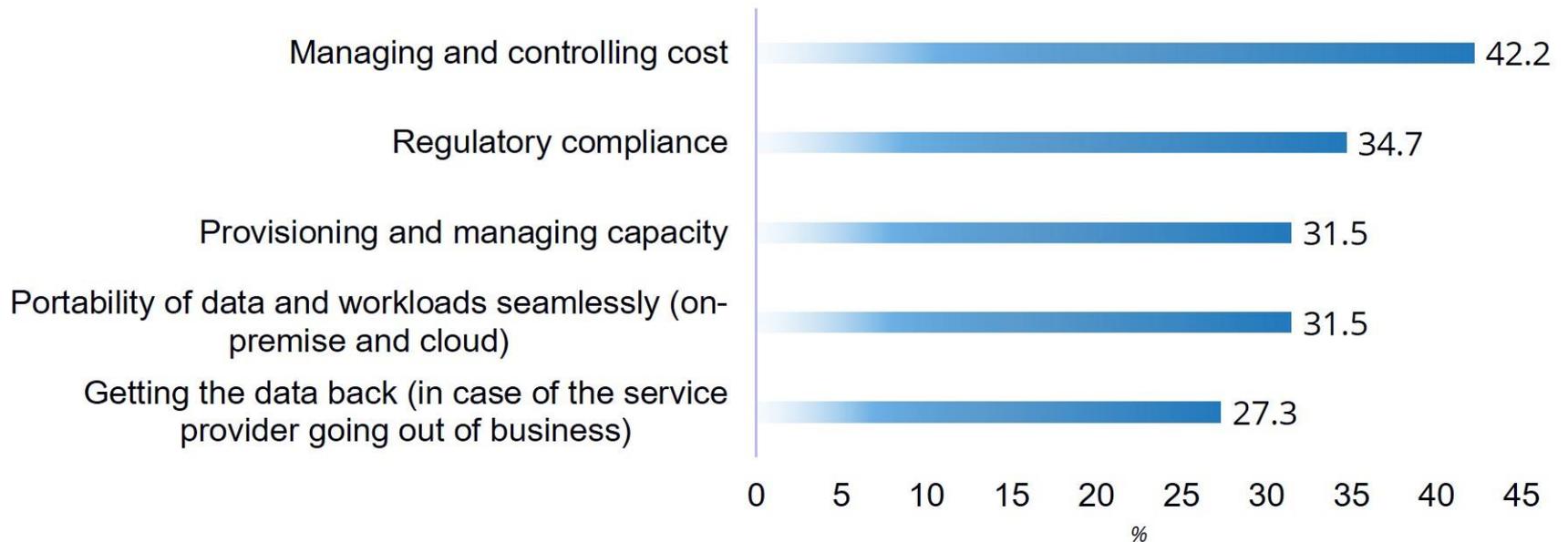
50%

Top Repatriation Drivers

Security	19%
Performance	14%
Cost	12%
Control	12%
Centralize/Reduce Shadow IT	11%

Cost control and compliance are the most visible challenges in a "multiple cloud" world for senior IT decision makers, but data portability is rising.

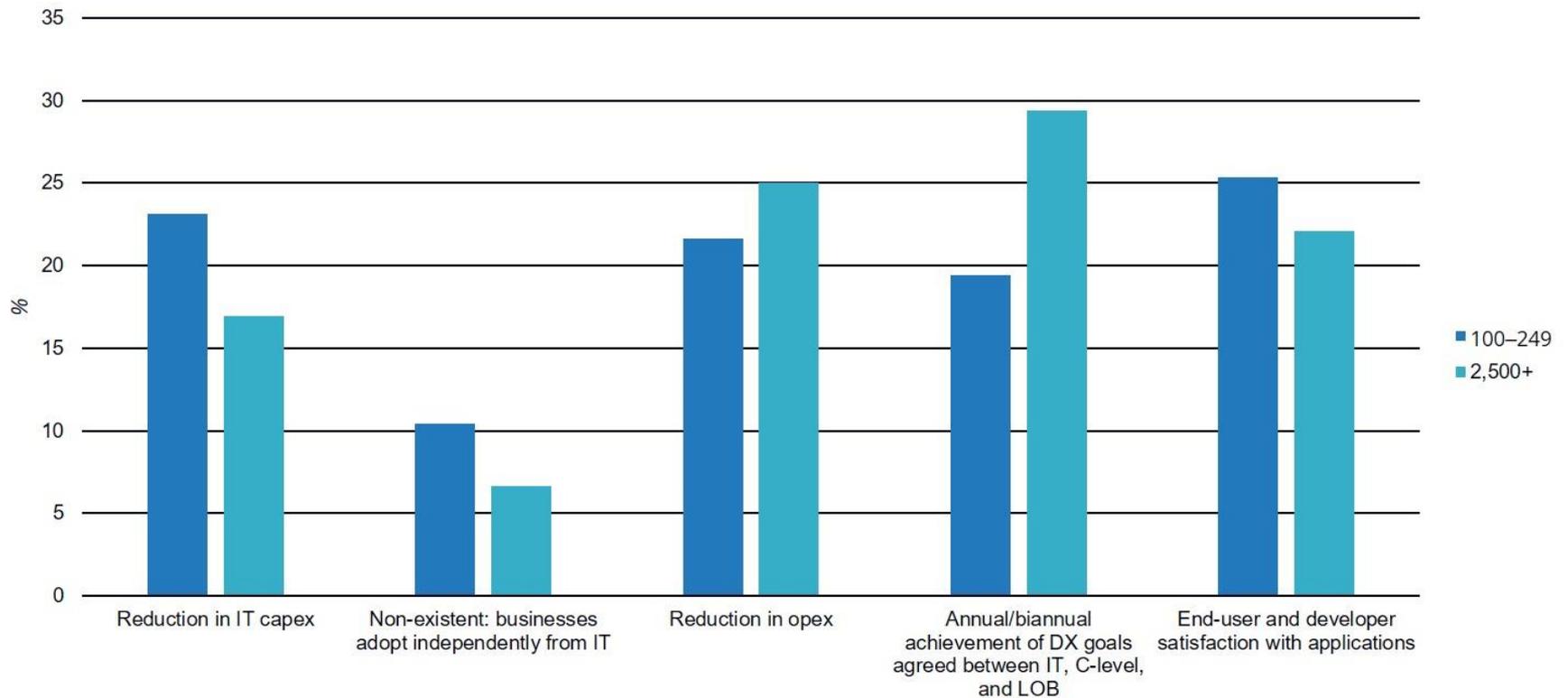
Thinking about your current infrastructure, what are the most pressing multi-cloud data management priorities?



Source: IDC European Multicloud Infrastructure Survey, March 2018 (n = 651)

Digital transformation strategies — for which multi-cloud is a key component — are most used in large enterprises for benchmarking, while SMEs fall behind.

The dominant key performance indicator for cloud usage in our company is:

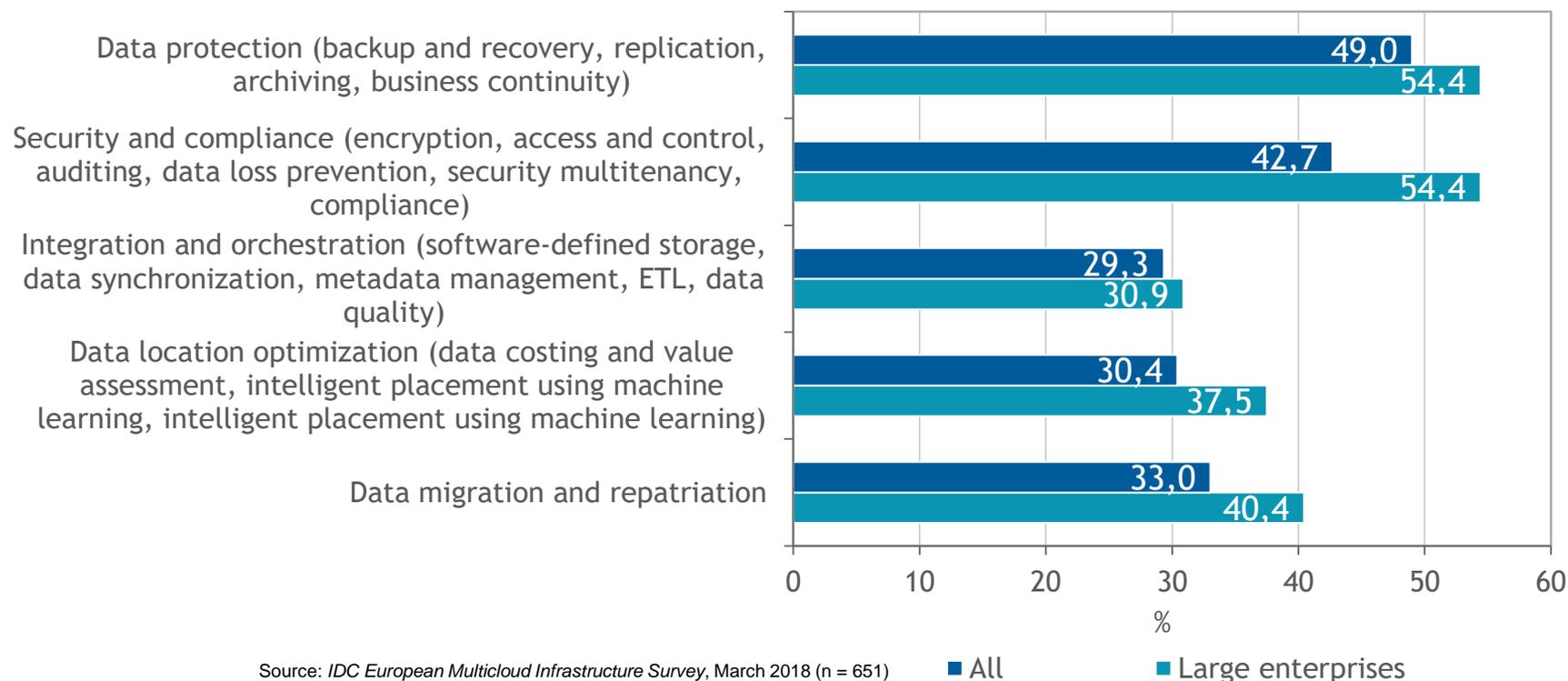


Source: IDC European Multicloud Infrastructure Survey, March 2018 (n = 651)

IDC Survey Spotlight

What Data Services are Most Challenging for Large European Enterprises in Hybrid and Multi-cloud Environments?

In your hybrid and multi-cloud journeys, what are your key data services challenges for the next 12-18 months?



Portion Of Market Controlled by Big 16 Over Time

(Cloud Service Providers likely to generate >US\$1B WW in 2017)

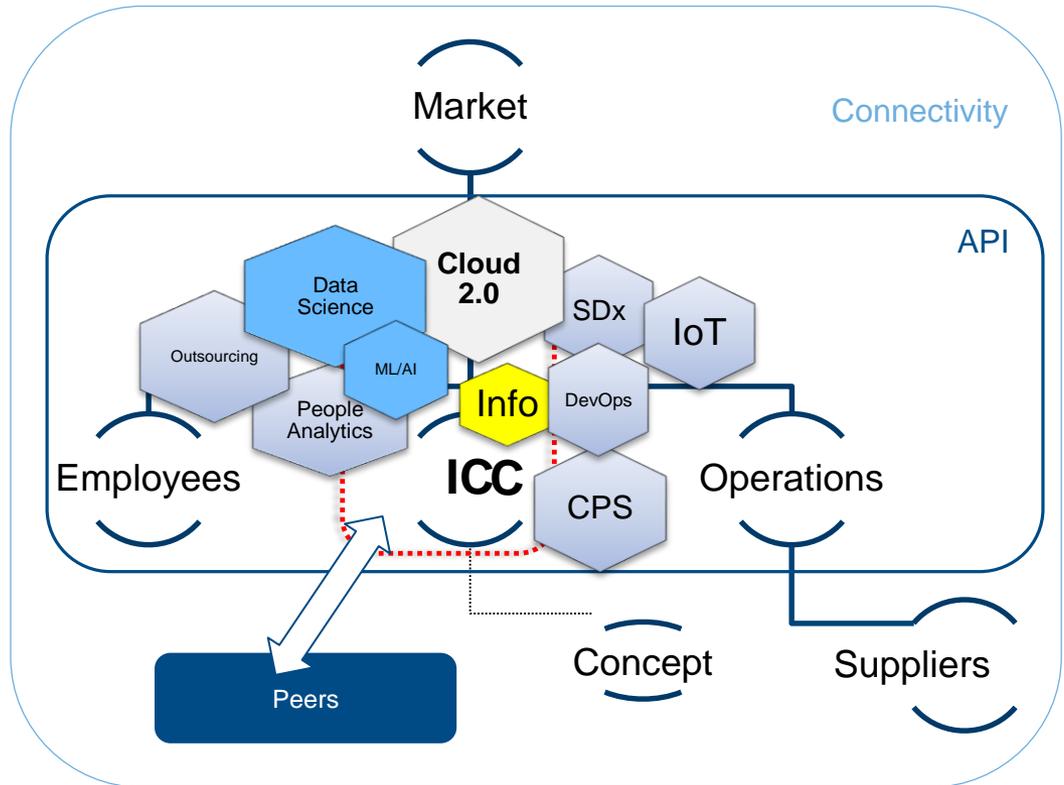


Source: IDC Public Cloud Services Tracker (Final Historical 2017H2 Release, April 2018)

Industry (Collaborative) Clouds

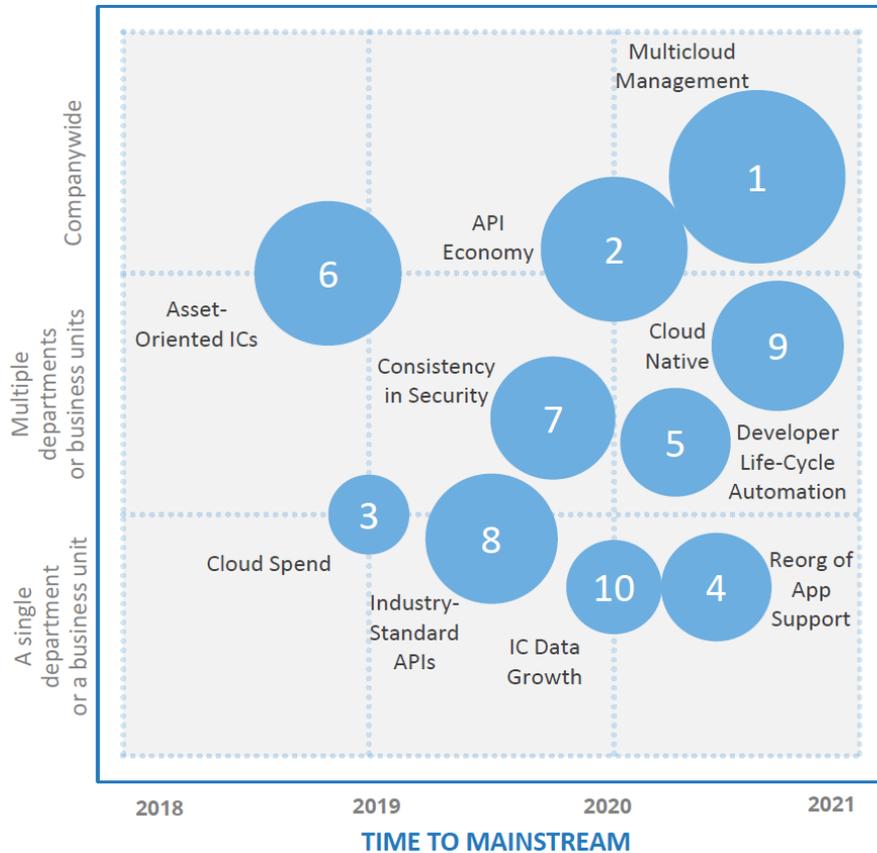
IC: industry-specific, cloud-based, pre-integrated, elastic, scalable set of capabilities/resources/information, that complies with industry information security level requirements, offers API's, and is delivered as-a-service

ICC: A cloud-based platform through which multiple companies in an industry collaborate in some fashion towards a common goal, such as improving industry insight and/or capability



Worldwide Cloud Predictions

ORGANIZATIONAL IMPACT



- 1 By 2020, over 90% of enterprises will use multiple cloud services and platforms — a transition supported by investments to manage resources across platforms — with more than one-third of these organizations having established mechanisms to operate their multi-cloud environments.
- 2 In three years, 75% of organizations will have core cloud API strategies as part of their digital transformation architectures to enable an API-driven economy, with new products built on digital platforms that orchestrate information exchange between multiple organizations in their ecosystems.
- 3 Over the next 12 months, enterprises will see a shift in IT operations spend from on premises to public cloud, with over 30% of enterprises spending more on public cloud operations than on their other datacenter IT operations combined.
- 4 By 2020, 25% of enterprises will reorganize to separate support for SaaS solutions from development and delivery of custom applications, which will primarily use cloud native technology.
- 5 Within the next three years, automation will improve development efficiency by up to 25%, supported by analytics-based real-time decisions in configuring IT environments and a low/no code approach to building business solutions.
- 6 By 2019, more than 40% of industry clouds serving manufacturers, oil and gas companies, and utilities will include data from operational assets, supporting these companies' increasing maturity in operational transformation and their ability to monetize such data.
- 7 In two years, enterprises will be able to execute 50% of core security actions, such as policy setting and monitoring, with consistent workflows across all major public cloud platforms.
- 8 Within 2 years, at least one-third of Industry Clouds will support industry standard APIs, helping companies connect more easily and securely, accelerating the DX Economy.
- 9 By 2021, 80% of application development using PaaS will include microservices and cloud functions — essentials in making real-time decisions in response to events emanating from asset-intensive digital business.
- 10 Industry-cloud-stored data shared between enterprises will more than double over the next 24 months — from the current 300 exabytes to over 700 exabytes — as sole reliance on internal proprietary enterprise data becomes increasingly insufficient to combat industry-wide problems.

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Executive Summary

1

Multi-cloud is no longer a nice-to-have, but is the necessary path forward for companies looking to increase productivity, reduce costs, and enable DevOps initiatives

2

Less than 10% of European organizations are truly multi-cloud ready (pathfinders). Many are ahead in technology but lack sufficient strategic planning and internal expertise

3

Managing sprawling costs and ensuring data security are two of the greatest concerns for European organizations over the next 12 months, as they introduce new workloads and work toward compliance with the General Data Protection Regulation (GDPR)

Executive Summary

1

Multi-cloud deployments are now the norm for enterprise organizations - less than 30% of customers report using single cloud environments. Most customers leverage different cloud platforms across multiple service providers

2

80% of customers report repatriating workloads from public cloud environments. On average, those respondents expect to move 50% of their public cloud applications to hosted private or on-premises locations over the next two years, but this doesn't mean customers will consume 50% less public cloud

3

The modern enterprise, wants to extend the value of its classic applications. It has multiple options as it evaluates best fit and as its technical expertise with emerging cloud technologies improves. All enterprises have more opportunities and capabilities to migrate or extend applications by leveraging alternate landing zones

Questions?

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