



Softchoice InfoBrief

Workload Placement in Legacy and Cloud environments

August 2019

Outline

- Slide 3 – Changing World, Changing Deployment Methodologies
- Slide 4 – IDC's Take: One Size Doesn't Fit All
- Slide 5 – What are my Deployment Options?
- Slide 6 – Spending is Up on Datacenter Infrastructure...
- Slide 7 – ...While Confidence is Down.
- Slide 8 – How Are Your Peers Utilizing Cloud?
- Slide 9 – Where are Workloads Deployed Today?
- Slide 10 – Vertical Preferences for Deployment Types
- Slide 11 - Drivers and Inhibitors to Cloud Deployments
- Slide 12 – Which Flavours of “As a Service” Deployment Will Dominate?
- Slide 13 – Hybrid Cloud Enables Two Way Workload Migration
- Slide 14 – Which Workloads Are Most Likely to Exit the Cloud?
- Slide 15 – Key Factors Determine Workload Placement
- Slide 16 – Workload Placement: Questions to Address
- Slide 17 – IDC's Take: Measure Twice, Deploy Once
- Slide 18 – Enabling Hybrid Cloud Solutions With Softchoice

Changing world, changing deployment methodologies

Every IT department is being challenged on how they should deploy existing and next generation workloads. The critical question for IT executives is, "How do I know which moves will create value, and which ones won't?" On premise, hosted, or public cloud? Conventional infrastructure, or cloud native? Is there a SaaS replacement for this workload, or do we need PaaS or IaaS?

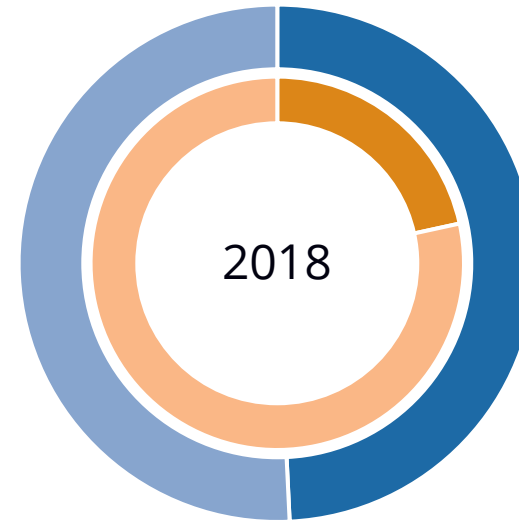
Equally true is that every company has a uniquely correct answer to this question (or more realistically, several correct answers) depending on the requirement of the workloads being considered. Digital transformation maturity, business and cultural appetite for cloud adoption, and the technological capabilities of resources and partners will all inform these decisions. A cloud adoption strategy enables an organization to understand and incorporate all these factors into a clear technical and financial target to create maximum value.

IDC's Take: One Size Doesn't Fit All

While many of our most critical workloads continue to reside in traditional datacentres, the vast majority of our workload capacity, in terms of both compute and storage, are heading into cloud deployments.

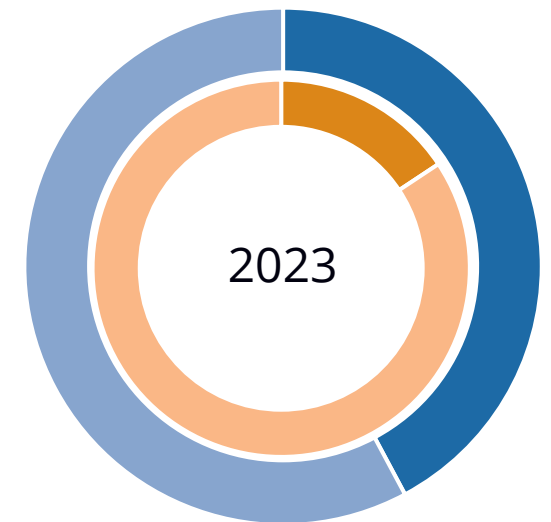
Cloud native on-prem deployment is proving to be the on-ramp to hybrid and multi-cloud adoption, as fewer than 1 in 5 private cloud users choose NOT to share applications and data with resources deployed in either traditional IT or in public cloud.

Organizations who already have private clouds deployed tend to share applications and/or data with traditional IT resources while those who plan to deploy private clouds in the next 12 months lean toward sharing data with public cloud resources.



Last year in North America, half of spending, but only a quarter of capacity was on-premise




By 2023, two-thirds of spending and 85% of capacity will be deployed to the cloud



■ On-prem spend
■ Cloud spend

■ On prem capacity
■ Cloud capacity

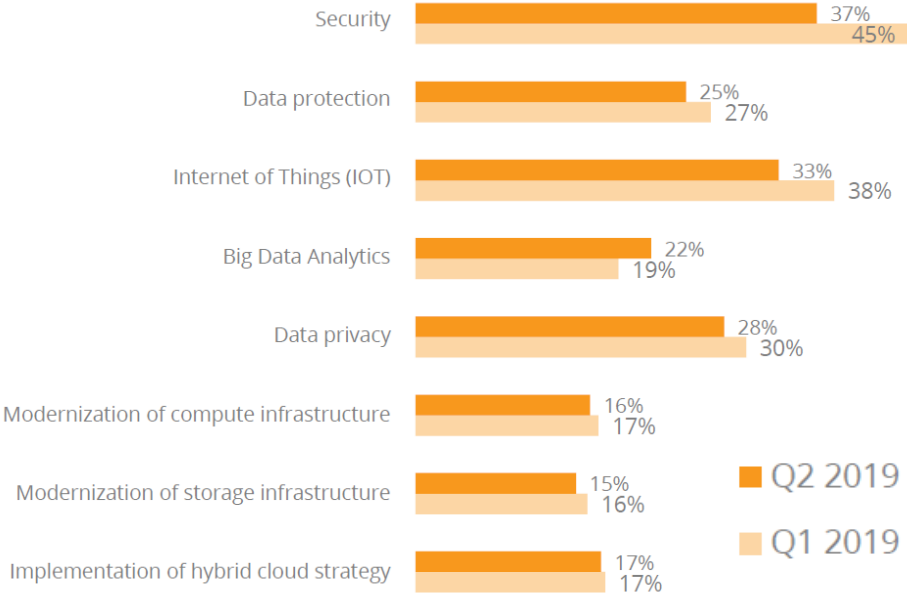
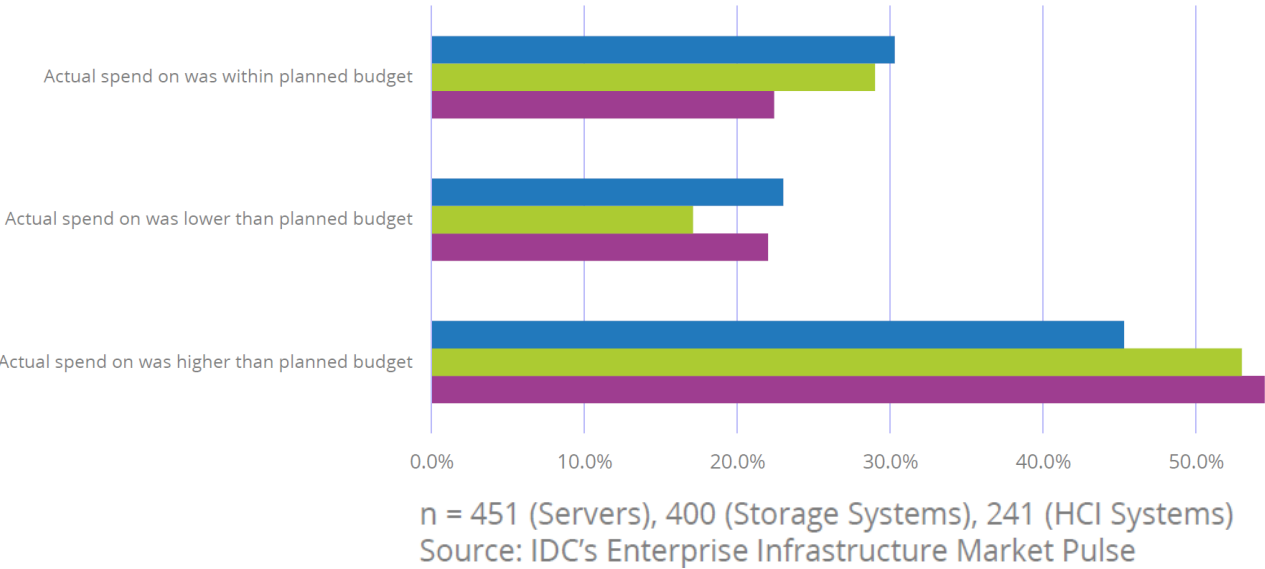
What are my deployment options?

	ON-PREMISE			HOSTED		PUBLIC CLOUD		
	Appliance	Conventional	Private Cloud	Hosted Private Cloud	Hosted App Management	Public IaaS	Public PaaS	Public SaaS
Tenancy	Dedicated app, DB, infrastructure	Dedicated app, DB, infrastructure	Shared app, DB, infrastructure	Dedicated app, DB, infrastructure	Dedicated app, DB, infrastructure	Dedicated app, Shared data tier & infrastructure	Dedicated app & data, shared infrastructure	Shared app, data tier & infrastructure
Infrastructure Ownership	Mixed	Customer	Customer	Provider	Provider	Provider	Provider	Provider
Cost model	Typically based on capacity used	Perpetual license and maintenance	Perpetual license and maintenance	Perpetual license and maintenance + hosting & optimization	Perpetual license and maintenance + hosting & optimization	Perpetual license and maintenance + IaaS charges	All-in middleware & infrastructure	All-in application, database, infrastructure
Infrastructure Management	Provider	Customer	Customer	Provider	Provider	Customer	Provider	Provider
Location	Customer DC	Customer DC	Customer DC	Provider DC	Provider DC	Provider IaaS	Provider	Provider

Spending is up on datacenter infrastructure...

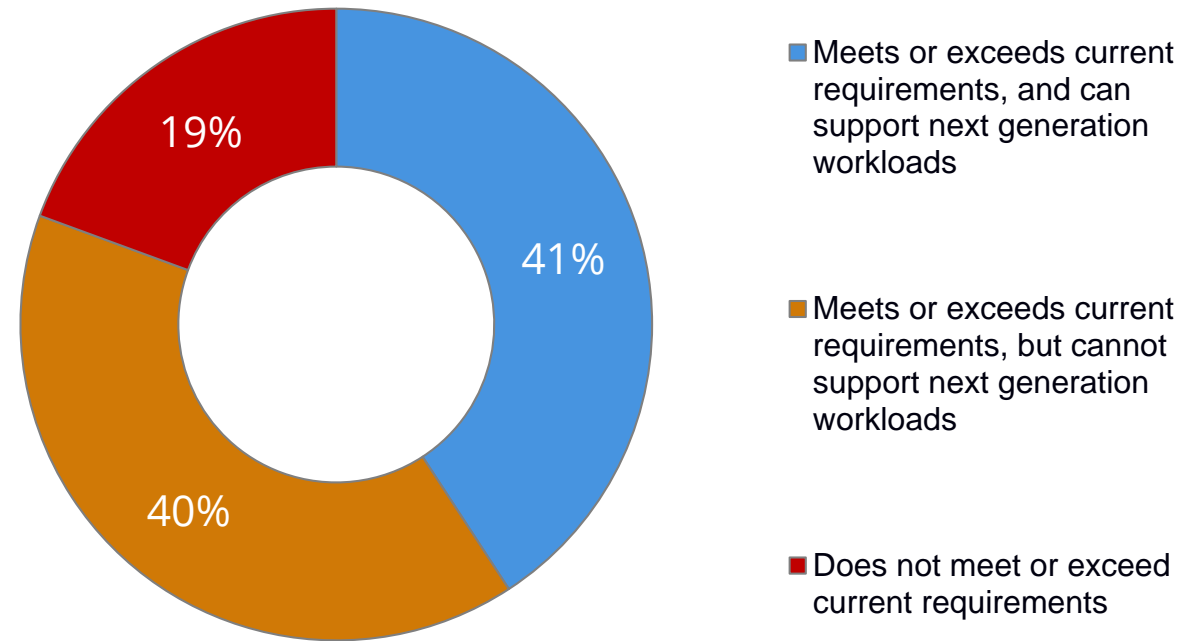
495 North American respondents were asked about infrastructure spending in early 2019. Roughly half of respondents indicated they were over budget for key technologies such as storage, servers, and HCI.



The projects driving this spending were led by security and privacy, but also emerging technologies and modernization efforts. Our current infrastructure is not capable of supporting these key initiatives.

...While Confidence is Down.

At the heart of the problem is the current state of our datacenters. 2/5^{ths} of Canadian organizations feel their infrastructure is not adequate to support the next gen workloads required to digitally transform their business. Another 1/5th feels they cannot even support TODAY'S business needs!

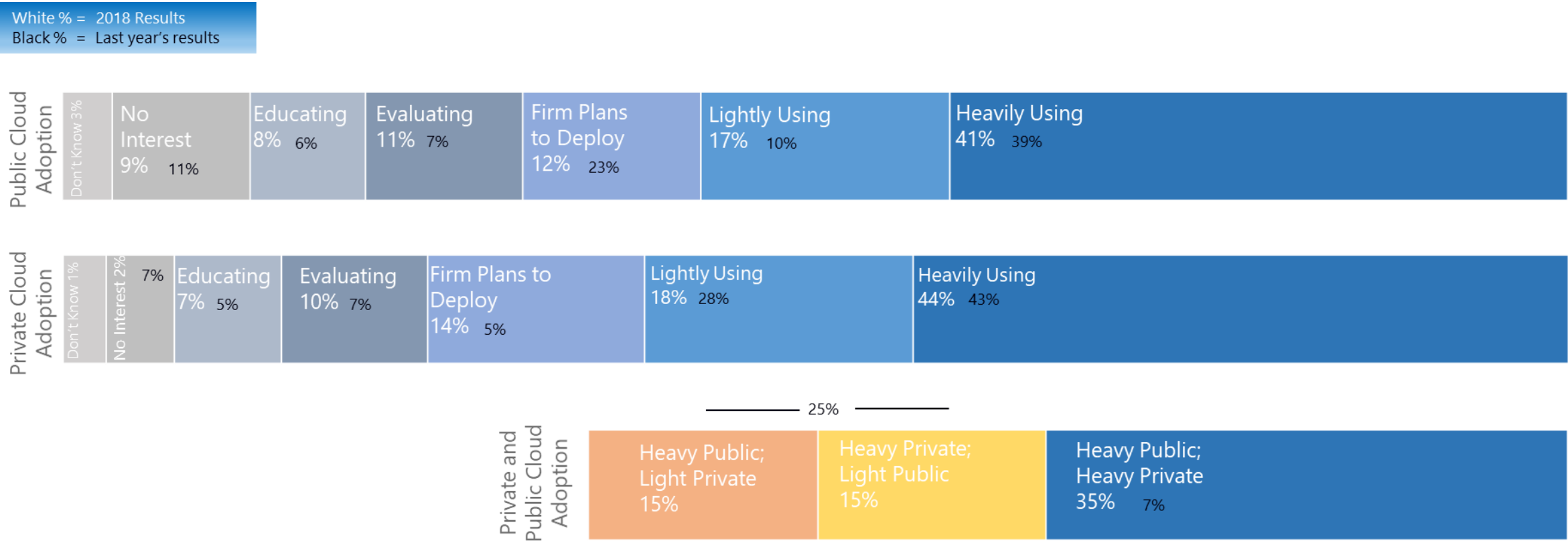


Sample Size = 504

Source: IDC Canada IT Advisory Panel (ITAP) n8 2018 Survey, October 2018

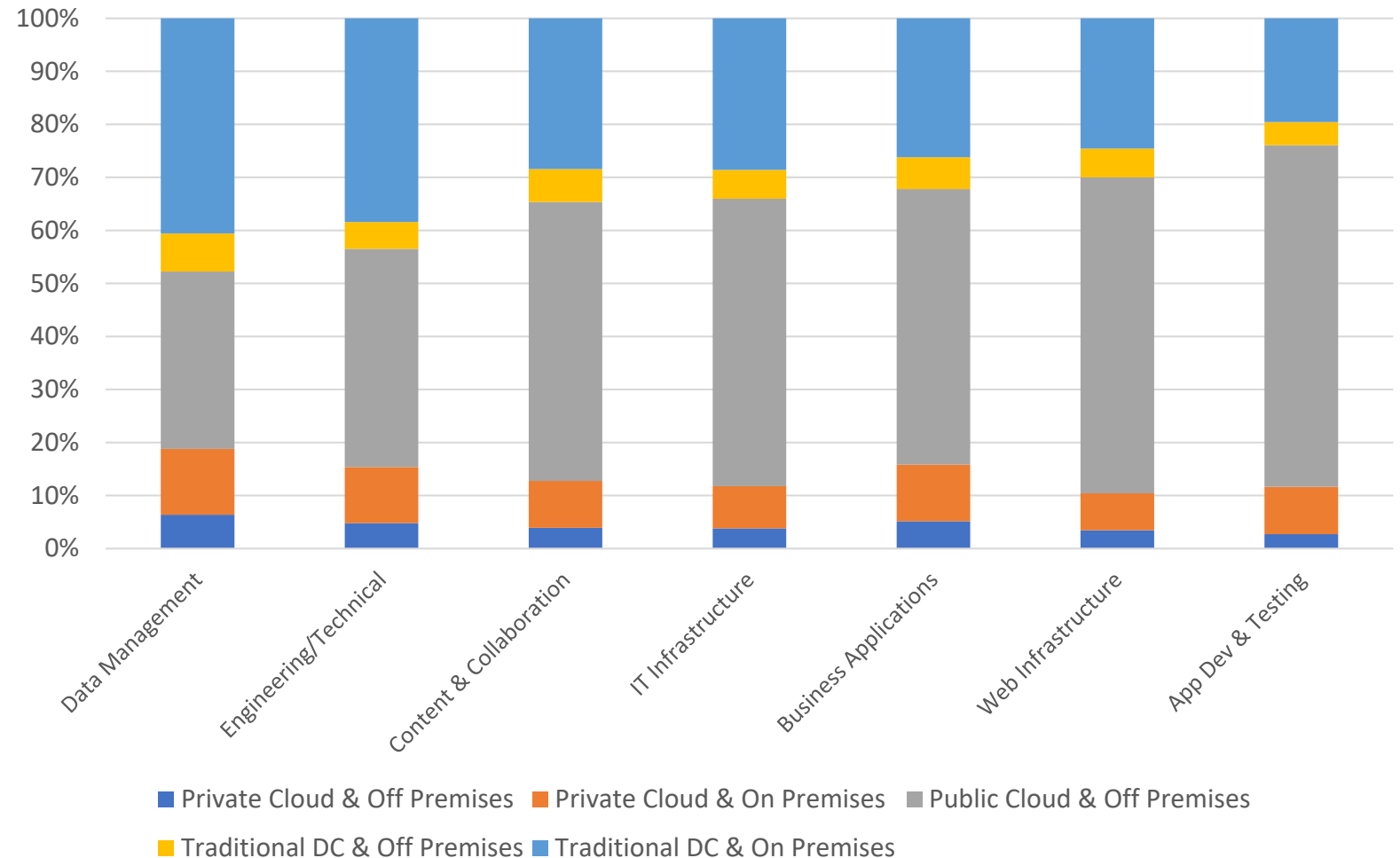
How Are Your Peers Utilizing Cloud?

Public cloud adoption grew ~10% from 2017 to 2018, up to just under 60%, while private cloud adoption fell the same amount, to just over 60%. The number of firms ruling out public or private cloud deployments continues to fall annually.



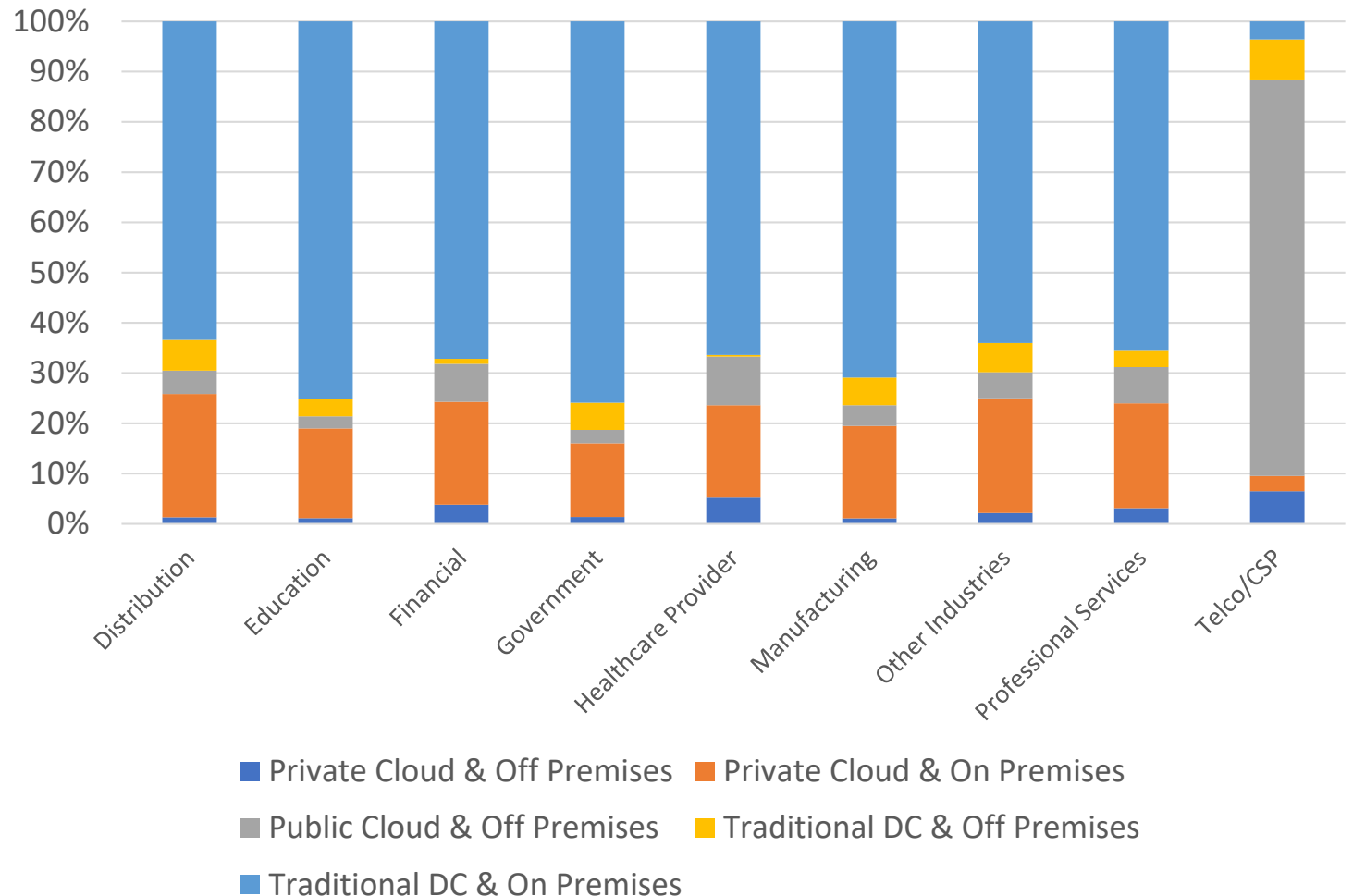
Where are workloads deployed today?

North American storage array revenue by deployment type & workload



Vertical Preferences for Deployment Types

North American storage array revenue by deployment type & vertical



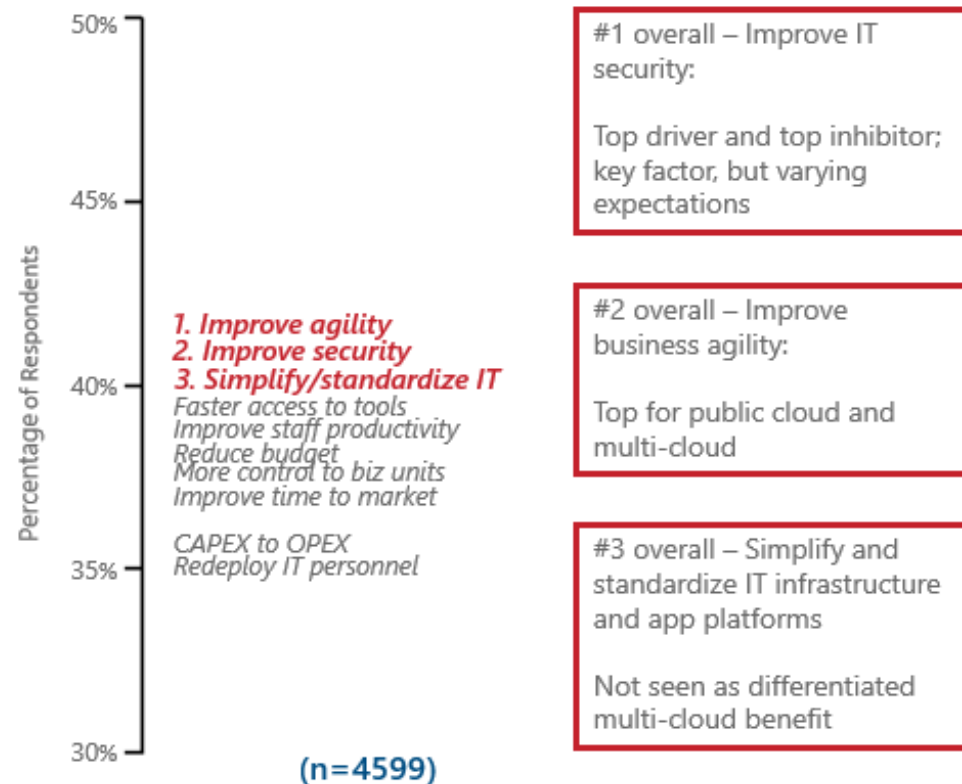
The obvious outlier in this view is the huge appetite for public cloud by Telcos and CSPs in North America.

Professional and financial services make up a distant 2nd place group in terms of private and public cloud adoption for workloads.

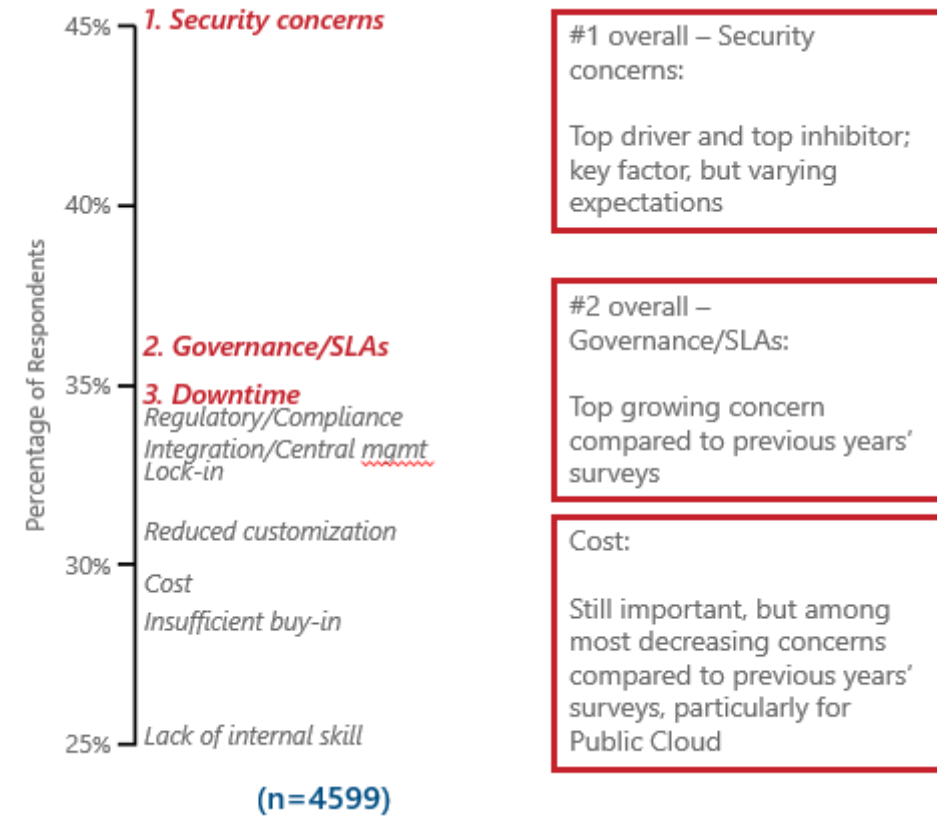
Within all other industries, traditional on-premise deployments dominate, with public sector and education segments being particularly slow to move to cloud.

Drivers & Inhibitors to Cloud Workload Adoption

Drivers

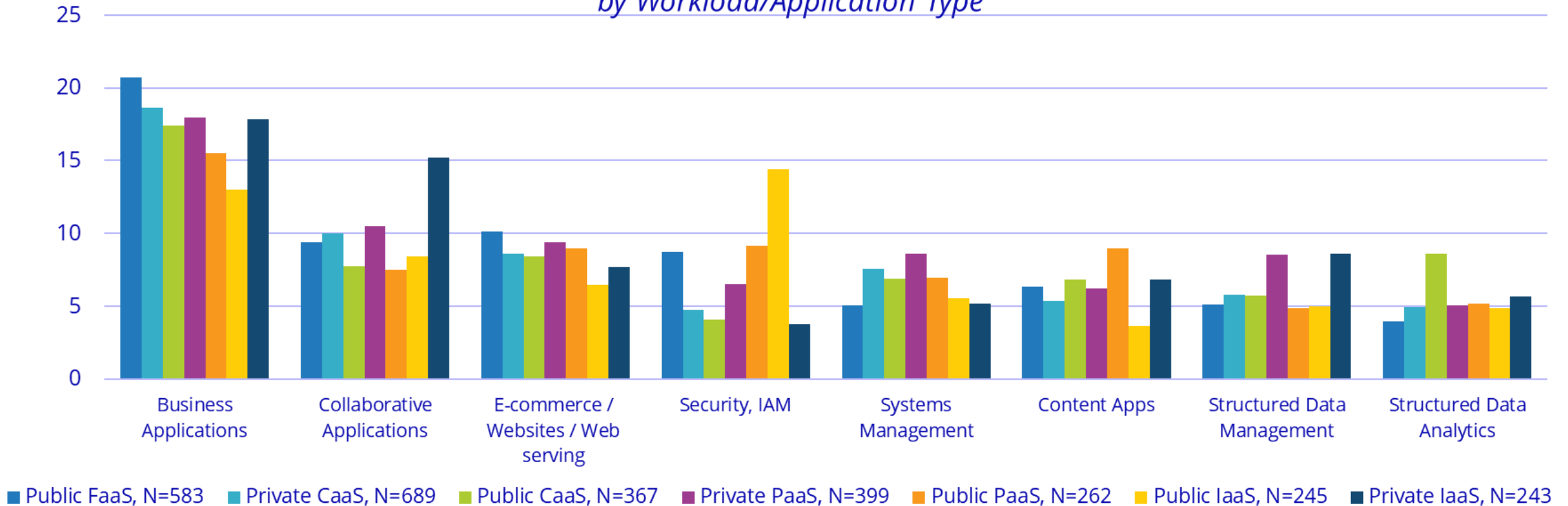


Inhibitors

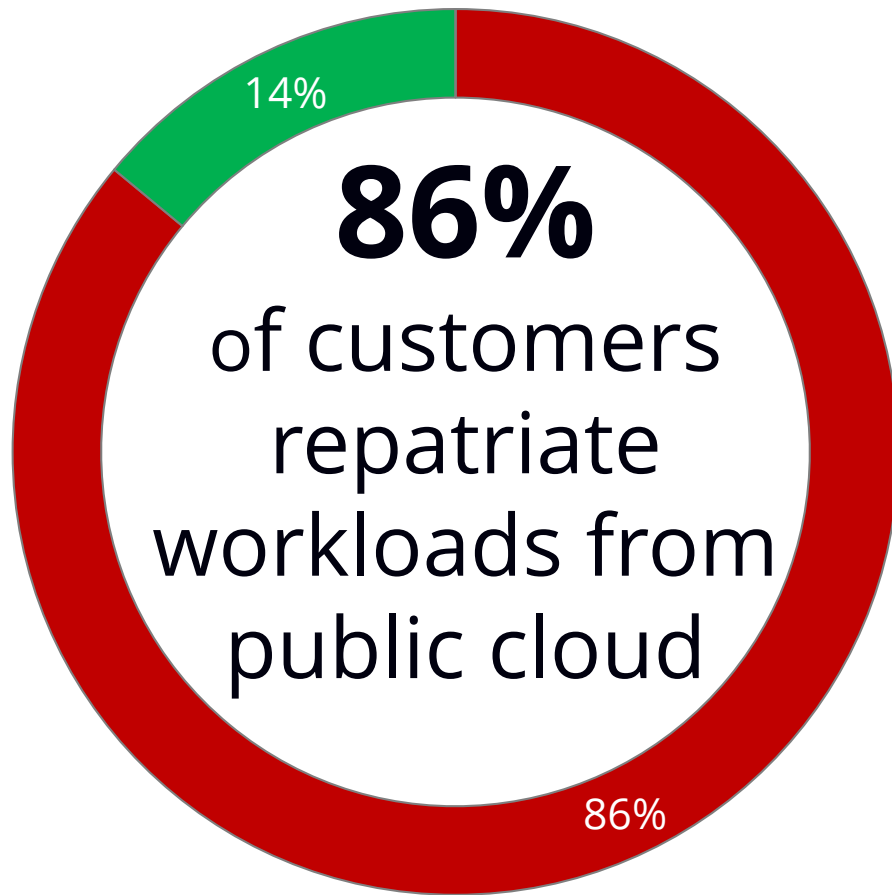


Which Flavours of “As a Service” Deployment Will Dominate?

Existing Apps Likely to Deploy in Next 12 Months to as-a-Service
by Workload/Application Type



Hybrid Cloud Enables Two Way Workload Migration



50% 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?

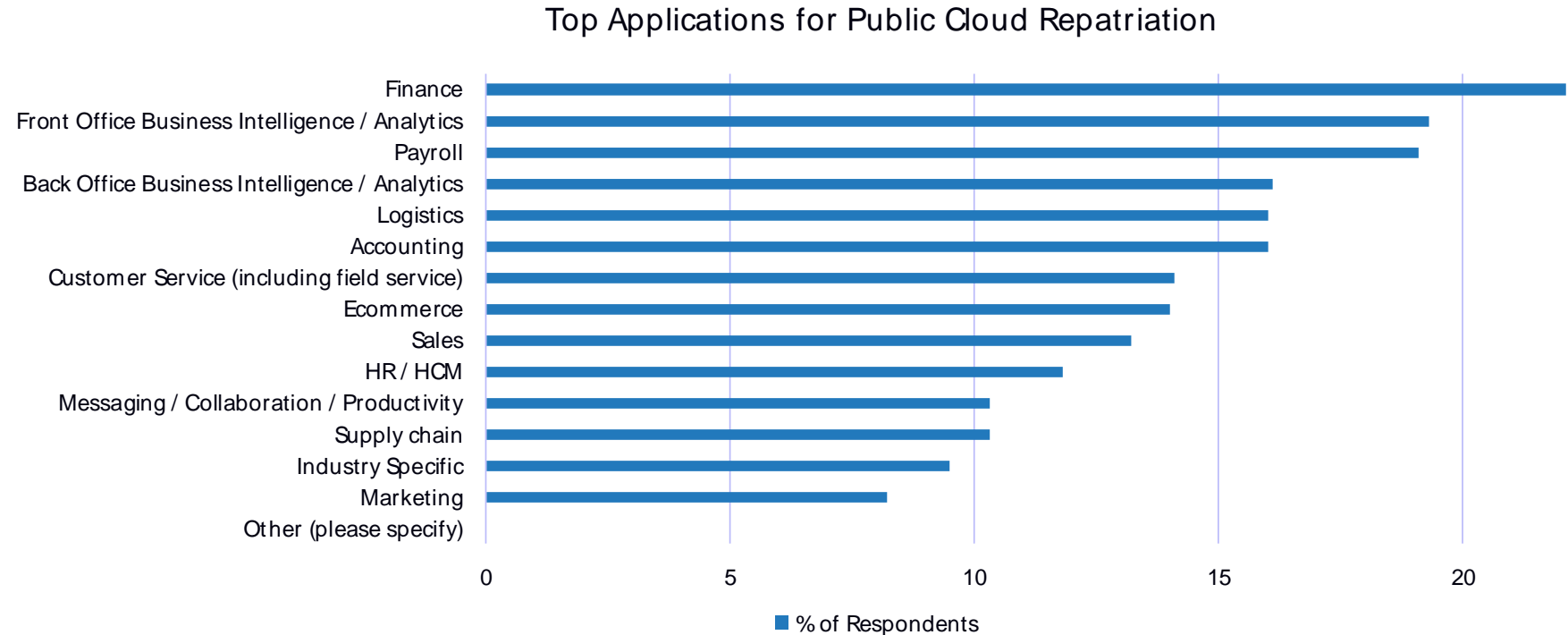
Top Repatriation Drivers

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

Which Workloads Are Most Likely to Exit the Cloud?

From data egress charges to migration downtime to the cost of expertise required to re-architect applications that need to exit or change public cloud environments, failure to correctly assess the right choice for your workloads can create a variety of unexpected risks, financial and otherwise.

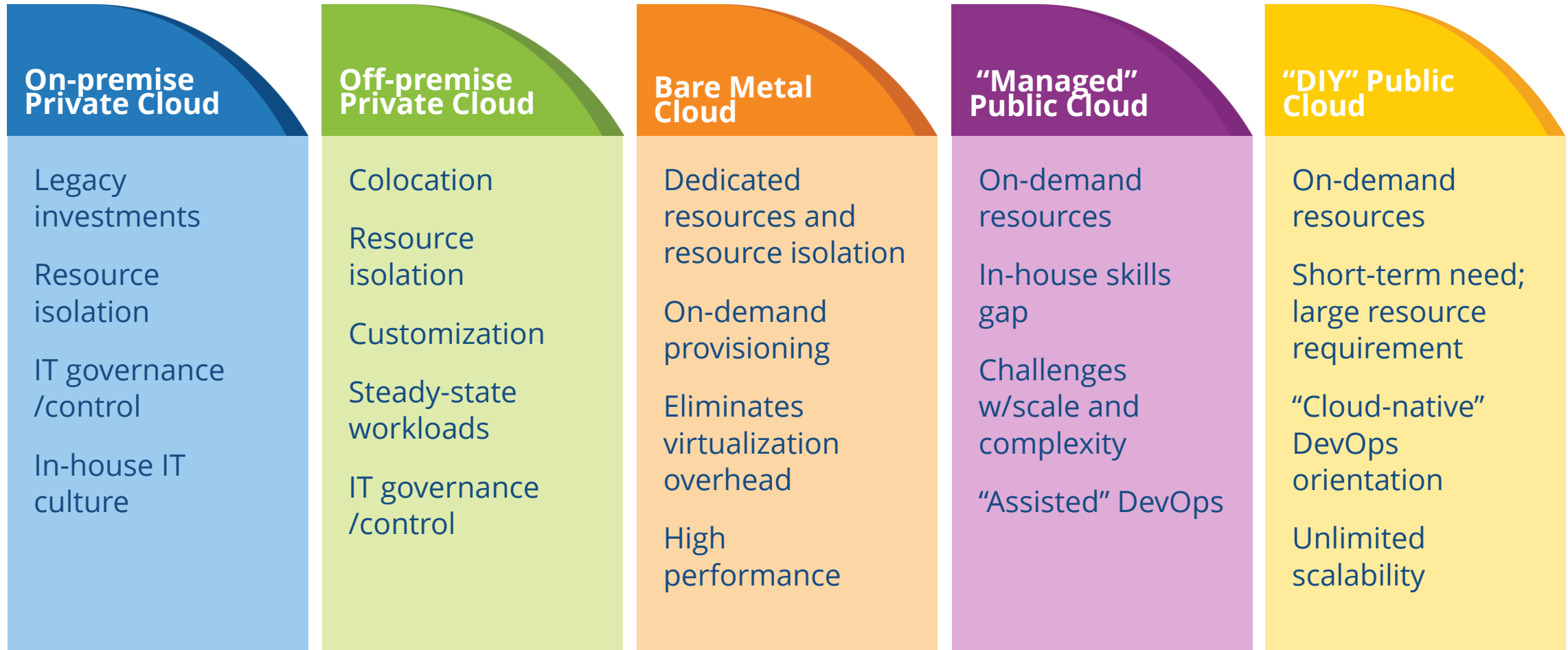
Measure twice, cut once.



IDC# US45005416 (April, 2019)
Source: Q4 2018 IDC Application Services
Survey, N=501

Key factors determine workload placement

What does your organization have? Need?



Workload Placement: Questions to Address

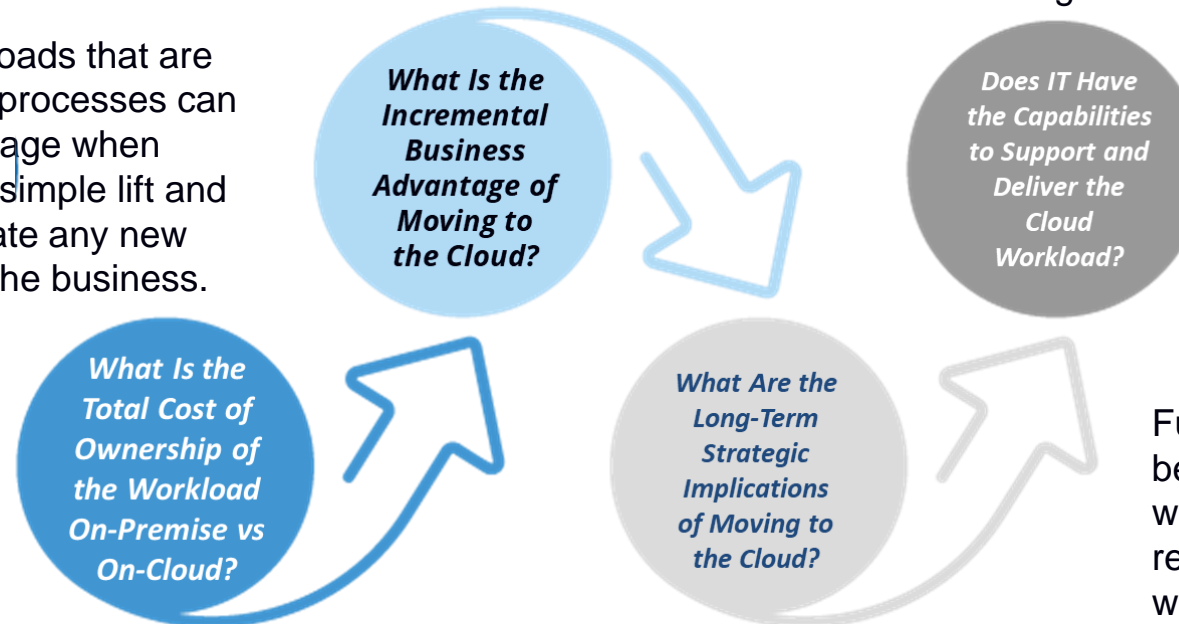
Identifying and delivering the business benefits of strategic high-priority digital transformation initiatives is the prime motivator for workload placement. Easy wins exploit the innate advantages of the cloud, such as on-demand provisioning and lower unit costs.

However, some legacy workloads that are already supporting business processes can generate little relative advantage when moving to the cloud where a simple lift and shift does not necessarily create any new advantages or use cases to the business.

Baseline costs, migration costs, and ongoing costs need to be compared in a competitive benchmark to provide management with the financial information needed to evaluate the investment.

Since the cloud requires an entirely new set of skills, resource allocations, and service delivery processes, the impact of each cloud workload on the IT organization must be evaluated as input to the cloud adoption strategy. The IT capabilities required to run a workload on the cloud are not purely technical, and include IT service management, product management, and IT financial management.

One area where cloud providers typically exceed internal IT functions is in the information that they have at their disposal to help manage and measure the performance of their workloads.



Fundamental architectural principles need to be established and designed into every new workload to avoid technical debt and costly rework. Long-term issues around on-premise workloads need to be considered, including upgrades or product end-of-life.. This equates to long-term on-premise technical debt that needs to be factored into ROI calculations.

IDC's Take: Measure Twice, Deploy Once

The right data in the right place at the right time requires planning, measurement.

While customers continue to deploy public cloud infrastructure and PaaS solutions at a rapid rate, they are also making investments in on- and off-premises private cloud solutions to address security, performance/latency, cost and control requirements. In such circumstances, organizations should be cautious about utilizing a variety of public clouds and hosting solutions for their applications. Utilization of more public clouds to support speed and IT flexibility can yield unintended consequences for application portfolio financial management.

The complexity of managing an increasingly diverse workload portfolio across multiple landing zones is driving a sharper focus on TCO and performance for each element. The advent of new, more mature private cloud solutions presents customers with the capability to migrate workload components back (or near) on premises.

On average, organizations expect to move 50% of their public cloud applications to hosted private or on-premises locations over the next two years. Yet, IDC data also indicates that application workloads such as sales, service, marketing, and HR/HCM are prime for shared/public cloud environments.



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