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Deloitte Boardroom Programme
Tech Series - Part 1: Cloud

Tuesday, 16 May 2023

Everyone is Talking About Cloud

Cloud is top-of-mind for business leaders in the marketplace today

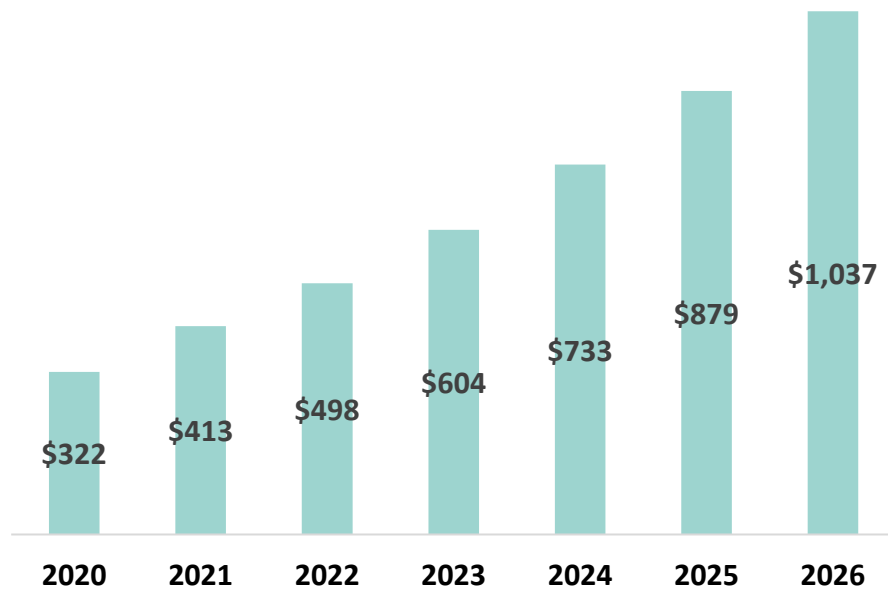


Cloud continues to be the fastest growing consulting market segment

As the cloud market continues to grow there are key trends driving this growth




Cloud Market Growth

Forecast: Public Cloud Services (\$BN)



Source: [Gartner Cloud Market Dynamics Report 2022](#)

Key Trends

- IT spending is shifting from the non-Cloud (traditional) solutions to **Cloud based solutions**
- Buying patterns moving from tactical, IT-driven buying to **business outcome buying** – Move away from Cloud models driving use cases to **use cases driving Cloud models**
- Key capabilities **influencing buying decisions** for Cloud in the coming years:
 -  ESG
 -  Sovereign Cloud
 -  Industry Cloud
- Integrated CIPS will continue dominance in Cloud with the **Cloud market consolidating around the market leaders** - AWS, Azure and GCP still currently the key players in the region

What Cloud Offers

An endless array of capabilities that can be “assembled” to realise business ambition and transformation

An Enabler

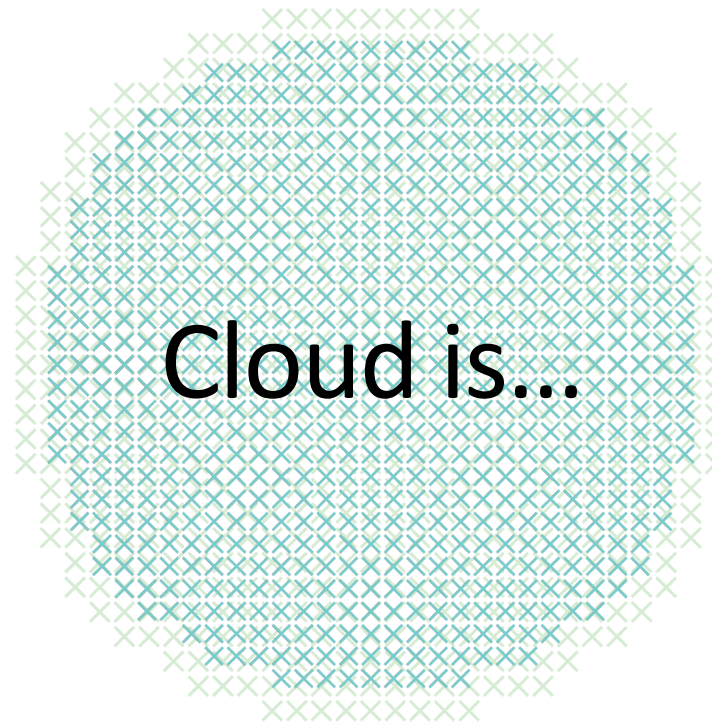
A platform for enhanced business

A Paradigm Shift

A new way of thinking and working

A Core Element of Strategy

A digital era requirement



Secure by Design

Security at the core by principle

DevOps by Default

Automation possible at all levels

An Accelerator

Focus on the activities unique to your business

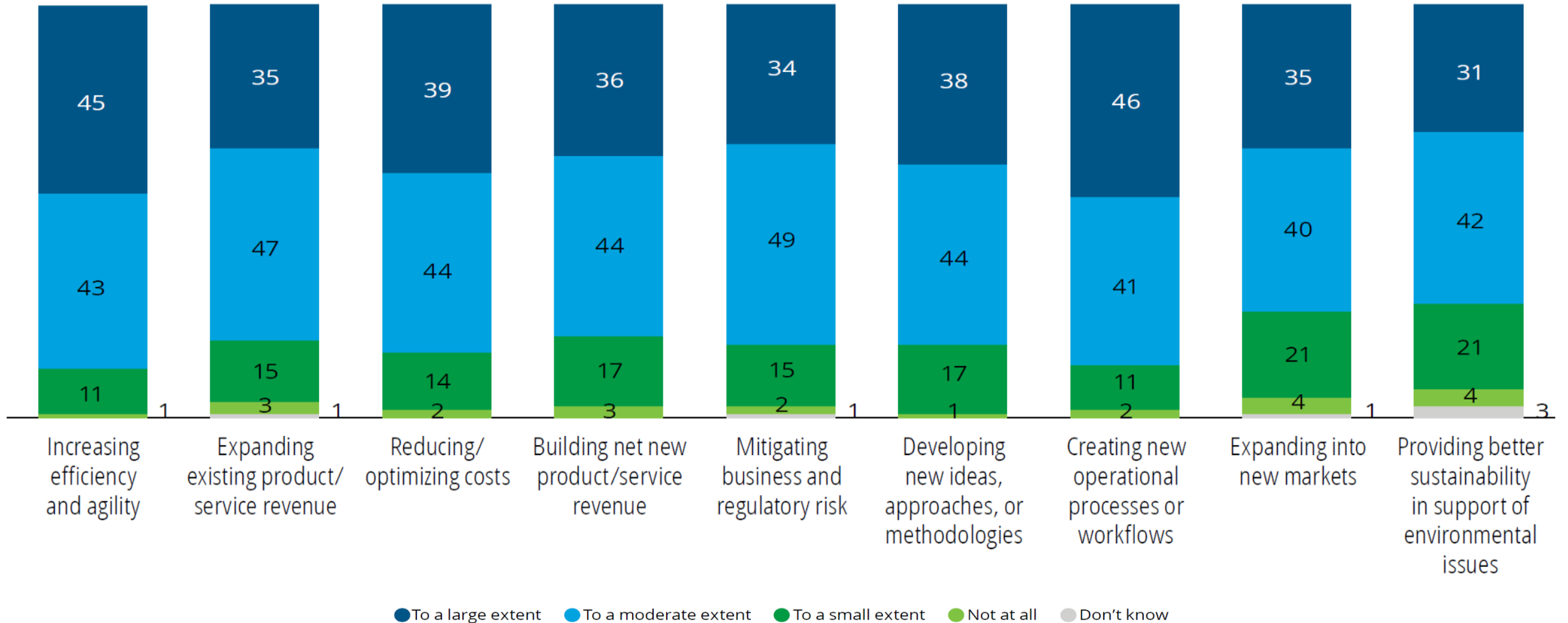
Strategic Business Drivers

Market Agility	Compliance	Product Flexibility	Big Data Analytics	Challenge Competitors	Serve Customers
Elasticity	Enhanced Security	Speed to Market	Automation	Variable Cost	End User Enablement

It is not just about technology... Cloud drives strategic business objectives

Snapshot of the Deloitte 2022 US Future Cloud Survey

CXO feedback about how Cloud is driving a positive outcome in...





Cloud Technology

Fundamentals of cloud, adoption models & hosting options

Fundamentals of Cloud Technology

At its most basic level, Cloud is the shift of data centre ownership from on-premise to a third party

On-premise

The traditional model.

Companies own and operate their own servers, including compute and storage capacity.

Fixed assets prevent scalability on demand but allow for control and customisation of configurations.

On-premise hosting



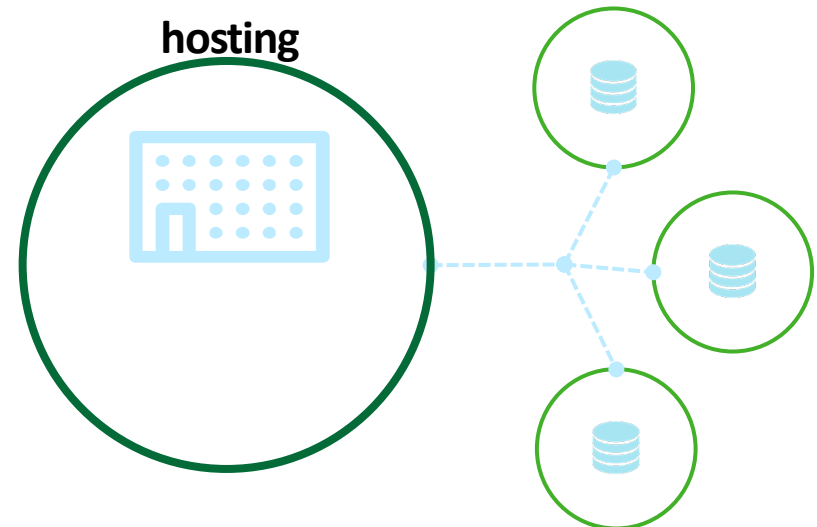
Cloud

The cloud model.

Businesses rent the server capacity they utilise rather than own it.

Renting from a Cloud provider allows business to take advantage of the providers scale to reduce cost and add flexibility.

Cloud hosting



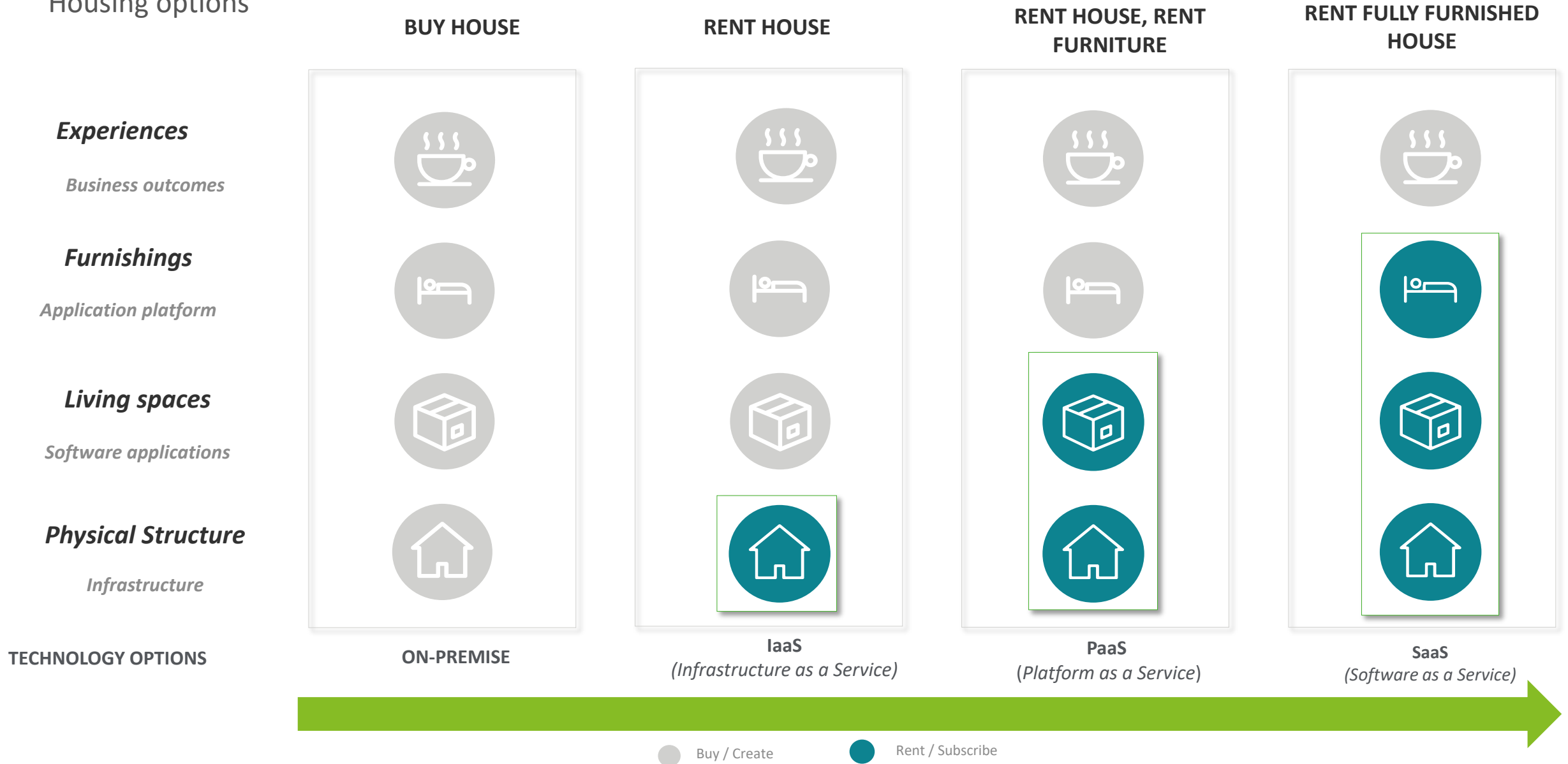
Understanding Cloud

A House Analogy



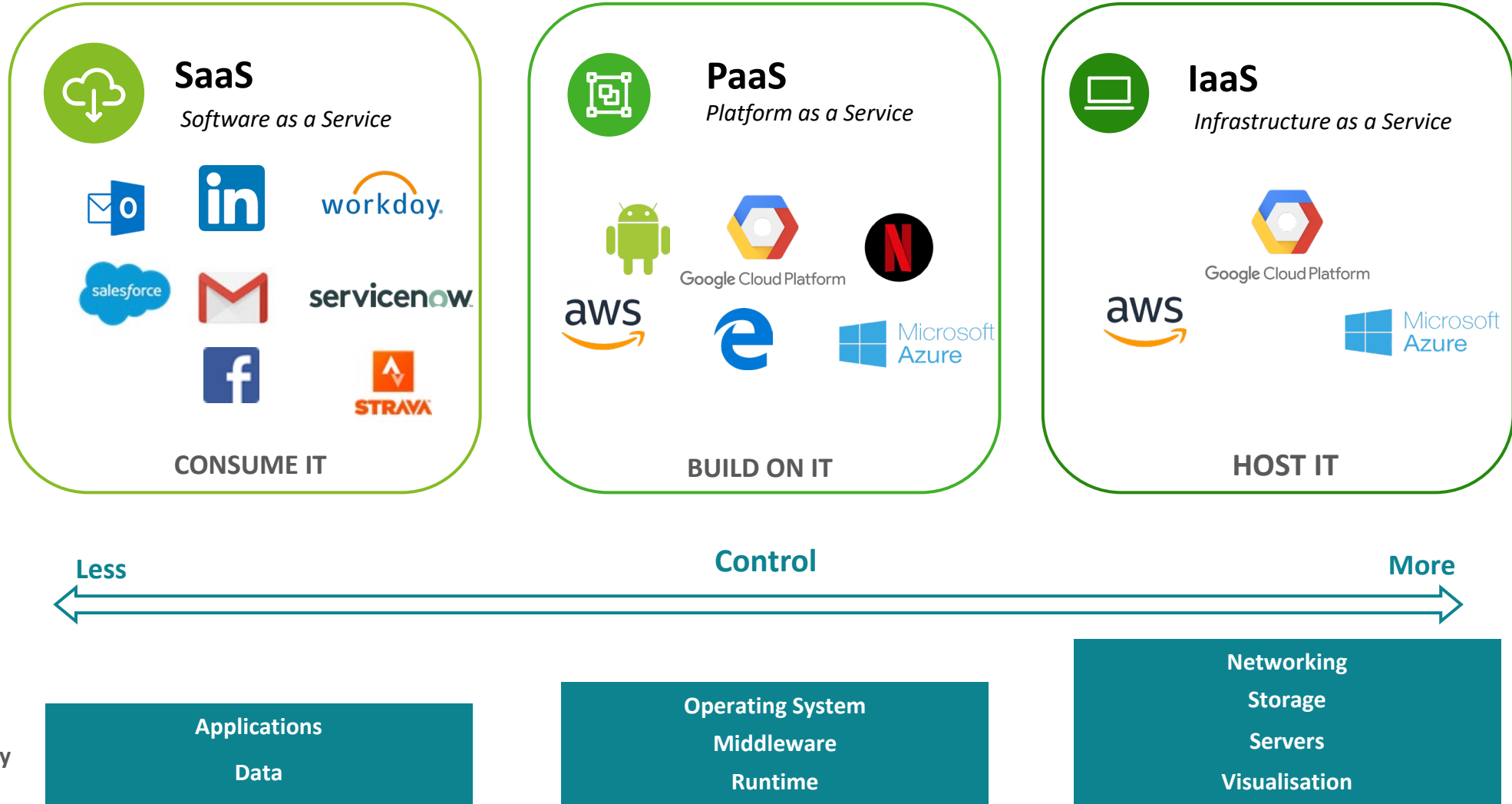
Buy or Rent?

Housing options



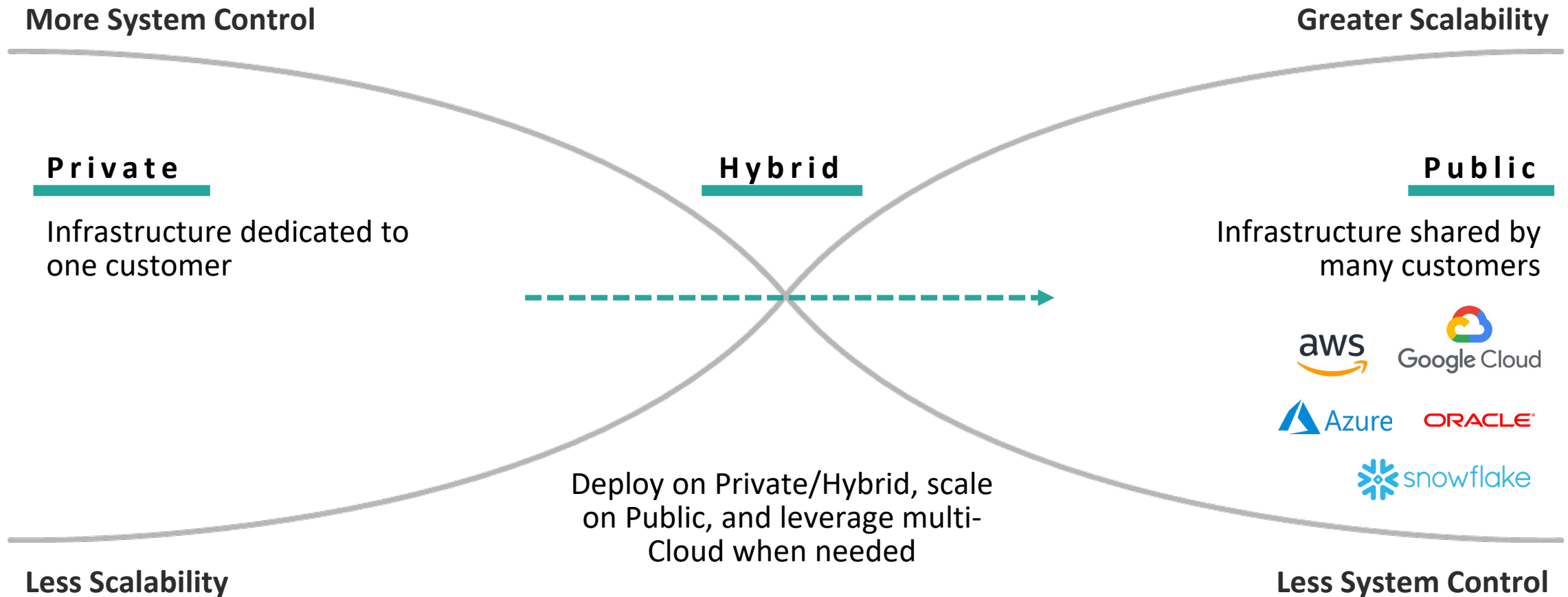
Cloud Service Models

Key examples across the main cloud service models



Different Cloud hosting Options

The transition from on-premise to Cloud doesn't necessarily need to happen overnight





Cloud Adoption

Successful adoption is a journey, getting the foundations right is key to success

Organisations are facing common challenges within IT

Existing systems often lack agility and cannot meet the rapidly changing technology and business requirements



Rising Cost

- Infrastructure cost has gone up rapidly in last few years
- Need to redeploy whole code for each release – slow and costly
- Increasing operational costs - more and more to keep the lights on



More Channels

- Customer demand for omni channel digital experiences
- Existing systems single channel and/or no consistency across channels
- Siloed approaches across systems or lines of business



Technical Debt

- Legacy hardware, legacy technology
- Single Deploy, Runtime, Codebase - inconsistent implementations
- Trapped data and value

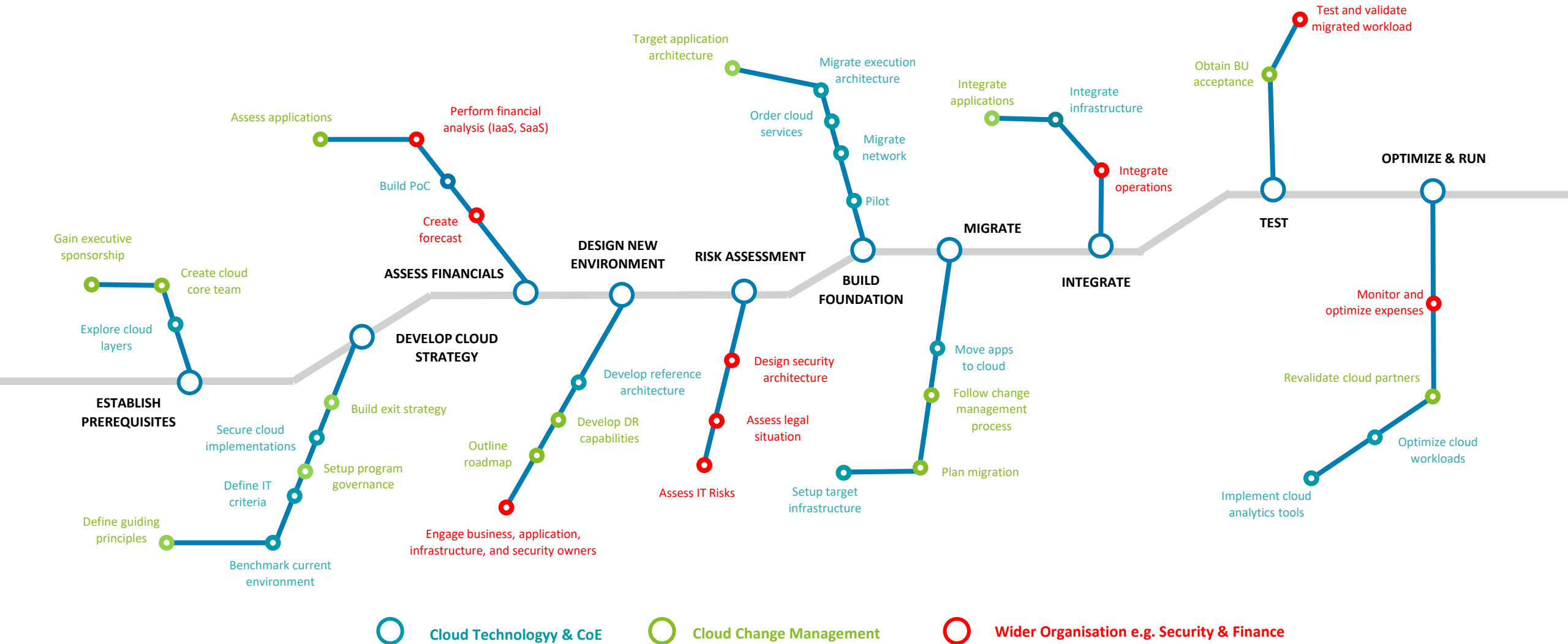


People & Processes

- IT Operating Model reflects existing technology landscape
- Skills shortages, lacking modern skills and practices e.g. Agile, DevOps, Cloud
- Disparate strategies and approaches

Cloud is an enterprise-wide journey

Successful adoption impacts People, Process & Technology at an enterprise scale



Key requirements for cloud adoption

Notable fundamentals that should be in place to ensure success

Some of the guiding principles to follow for successful migrations to Cloud:



Executive Sponsorship

Executive sponsorship is vital to create strategic alignment, set vision & goals, and assign resources to propagate & sustain the cloud initiative



Program Governance

A well-designed governance enables consistent and efficient execution of the day-to-day activities through the migration design and execution



Business Case

It is essential to create a business case and perform financial analysis to assess expected business benefits, migration costs, and cloud TCO



Application Assessment

Application assessment enables identification of cloud suitable candidates and drives concentrated efforts to migrate shortlisted applications



Cloud Strategy

It is critical to define cloud strategy, charter and guiding principles focused on cloud adoption, migration repeatability and efficiency



Operating Model

The right Operating Model lays the foundation of success for both, the ongoing migration efforts and the target state objectives



Security & Risk Management

Security and risk management aspects (encryption, access controls etc.) need to be taken into consideration while designing the app target state

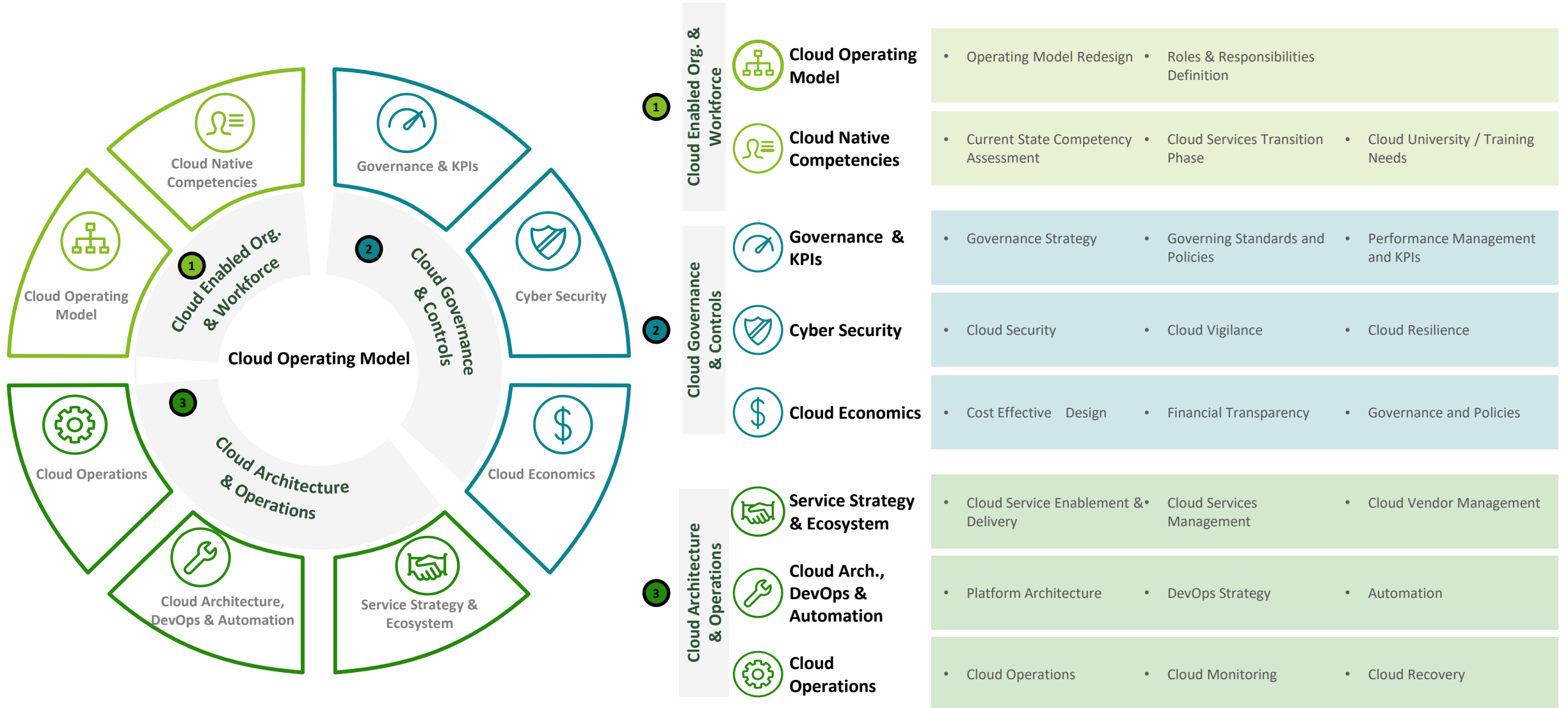


Migration Approach

Migration approach which is designed based on industry best practices and has a proven record is crucial to program's success

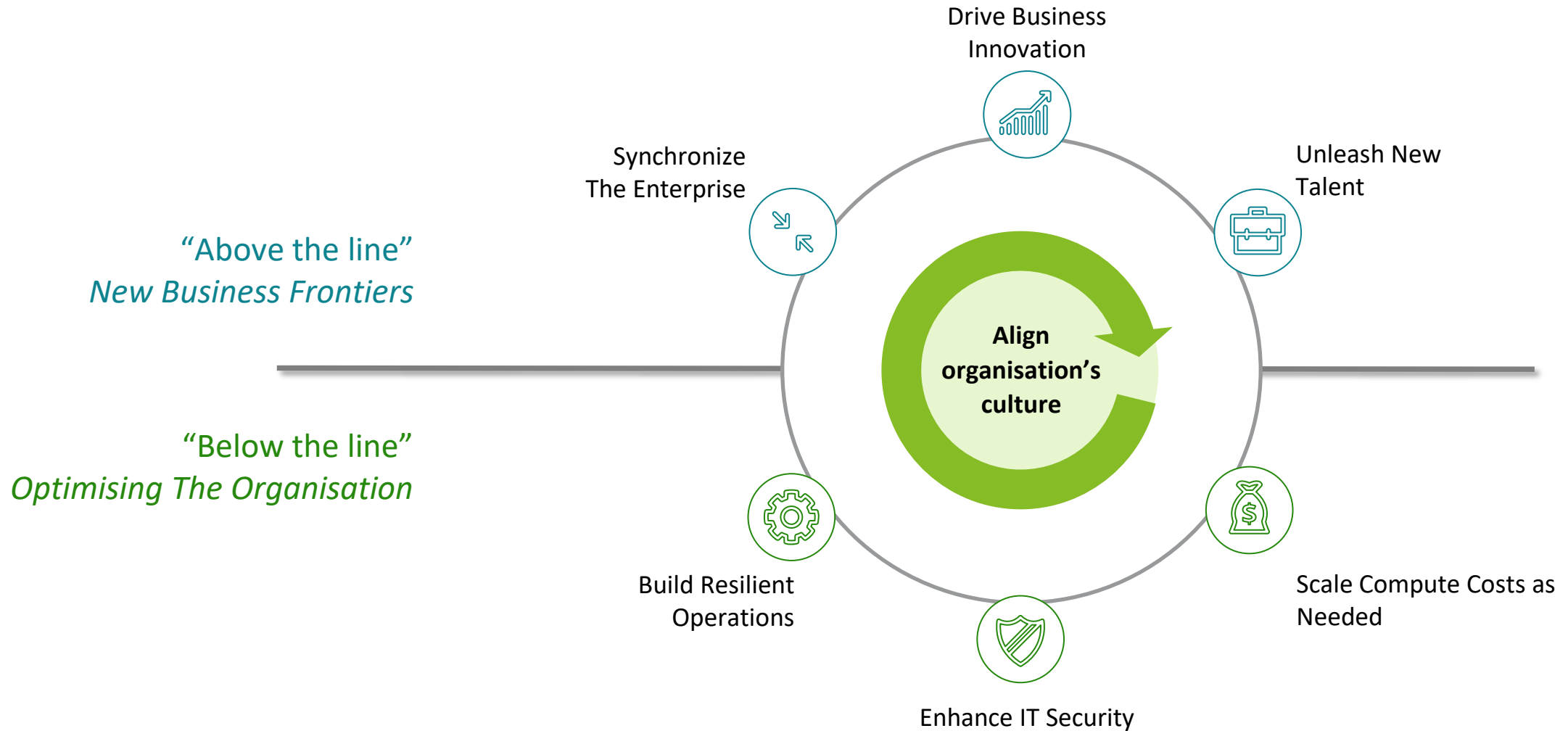
Cloud Operating Model Framework

Focuses on 8 key aspects of an organisation that ensure the right foundations to realise the benefits of cloud adoption



Cloud isn't just a CIO responsibility/conversation

The conversation is shifting towards the C-Suite and Boardrooms



The challenges leaders are facing

How cloud solutions can provide solutions to these challenges



CEO, CFO, CHRO, Business Heads



How can we remain competitive against emerging entrants?



Building Greenfield environments on which new services can be built quickly to meet increasingly changing customer requirements



CRO and CISO



How can I effectively manage risks and respond to regulators?



Building technology on Cloud Platforms that augments multi sources of data to respond to regulatory requests



CIO, CDO, CTO, and Technology Leads



How do I modernise IT services, which solutions can / should be migrated to Cloud Platforms?



Implementing a Cloud Centre of Excellence to coordinate and manage cloud migration activity, with frequent engagement with Business stakeholders

See appendix for more detail on C-Suite Personas for Cloud Adoption

Cloud | Outsourcing Considerations

Key areas of regulatory focus

Concentration risks

- CSP market concentrated among a few large actors, operating **outside the regulatory perimeter**.
- CSP acting as **single point of failure** in case of failure of cyber-attack. Potential domino effects on customers and the financial system.
- Imbalance of power between large CSPs and individual firms.

Operational resilience

- **Execution risks** are significant when migrating critical functions.
- They also test the **maturity** of firms' security, governance and risk and controls frameworks.
- Failed IT changes caused 20% of the operational incidents reported to the FCA

Shared responsibility model

- Misalignment between commercial and regulatory requirements.
- Operational resilience if the sharing of responsibilities is not clearly defined and understood.

Shared responsibility model

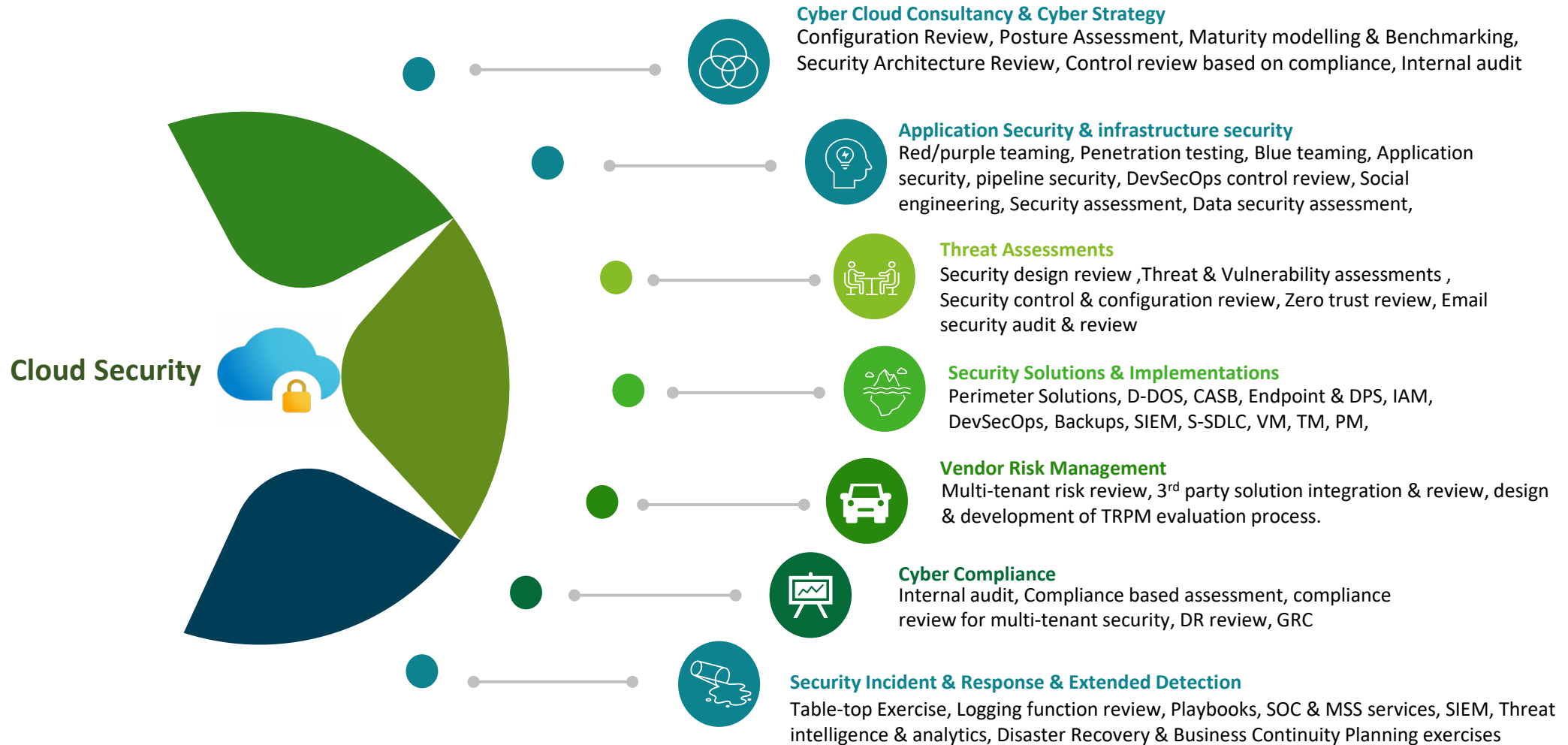
Responsibilities	On-premises	IaaS	PaaS	SaaS
Data classification and accountability	Cloud customer	Cloud customer	Cloud customer	Cloud customer
Client and end-point protection	Cloud customer	Cloud customer	Shared	Shared
Identity and access management	Cloud customer	Cloud customer	Shared	Shared
Application level controls	Cloud customer	Cloud customer	Shared	Cloud provider
Network controls	Cloud customer	Shared	Cloud provider	Cloud provider
Host infrastructure	Cloud customer	Shared	Cloud provider	Cloud provider
Physical security	Cloud customer	Cloud provider	Cloud provider	Cloud provider

Cloud customer
 Cloud provider
 Shared

Under the **shared responsibility model**, while the CSP retains responsibility over the lower level layers of infrastructure, the outsourcing firm is accountable for the data stored and processed, as well as the overall security of the solutions developed on the Cloud.

Cloud Security

Security and Privacy by design, Trust by default



Q&A



Key contacts

Ruairi and Richard would be more than happy to speak to you if you have any queries around Cloud.



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Appendix

C-level personas

Navigating the different stakeholder conversations around Cloud

CEO / Board

Maximising business agility and value

CEOs and boards seek ways to enter new markets on demand while defending existing markets against new entrants. Cloud can help launch new products at the “speed of need,” and to adapt the overall business to the speed of the market.

Three questions they’ll ask:

- How can cloud help us move at the speed of tech startups?
- What systems and data should we keep in-house, under our control?
- How can I use cloud to enter new businesses or markets?

Challenges & Opportunities:

- Organisation’s ability to embrace change
- Cost not well defined, nor is the risk, particularly cyber
- Competitors that can more quickly disrupt existing business models
- Scrutiny by regulators
- Ability to launch new businesses rapidly and accelerate deployment
- Increased speed to innovate and Improved business agility

CIO / CTO / tech execs

Reimagining the role of technology.

Tech executives aim to leverage new technologies to drive growth and competitive advantage. By evangelising solutions that demonstrate how technology empowers the business, technology leaders can elevate their roles across the C-suite.

Three questions they’ll ask:

- What technologies and vendors will best position us to achieve top objectives?
- How do I take advantage of emerging technologies given my current tech stack?
- How can I shape cloud solutions across the business for short- and long-term needs?

Challenges & Opportunities:

- Current talent may lack skills to establish and run the new environment
- Change can trigger exposure to security risks and disruption to business
- Complications, costs and complexity of upgrading / replacing legacy systems
- Greater business flexibility, scalability and agility
- Moving technology upstream as a driver of strategy and business models

C-level personas

Navigating the different stakeholder conversations around Cloud

CFO

Strategic “future-of” investments & corporate financial stability.

CFOs are keen to manage cost structures and grow shareholder value. While cloud can help achieve both, concerns about the cost certainty of such a major project must be thoroughly addressed.

Three questions they’ll ask:

- How much will it cost now? What is the total cost of ownership?
- When will I realise cost savings?
- How fast should we be moving and what’s the cost implication?

Challenges & Opportunities:

- Accounting and tax implications of a shift from Opex to Capex
- Now-or-later considerations, measuring the benefits and risks of moving to cloud
- Compliance and financial exposure from potential cloud risks
- Opportunity to address the exponential growth in technology systems and data
- Grow EPS quarter to quarter

COO

Optimizing operational efficiency.

Cloud makes it possible for the COO to gather and connect whole new realms of data and gain actionable insights through the use of analytics and AI. It also impacts efficiency by increasing productivity and streamlining operations

Three questions they’ll ask:

- How does my operating model shift with cloud?
- What processes need to shift / change to adapt to the new organisation?
- How do we stage this to manage risk?

Challenges & Opportunities:

- Scarce new talent due to speed of technology advances
- Maintain business performance while transitioning to / scaling cloud
- The impact of rapid technology advancements on overall operations
- Support new business models at scale, operationally
- Provide and enhance data-driven insights
- Achieve business benefits by changing the way we operate

C-level personas

Navigating the different stakeholder conversations around Cloud

CISO/CRO

Plan, implement and operate secure, efficient IT

Risk and compliance leaders seek to increase IT efficiency by delivering faster products and services – while at the same time securing IT assets and corporate data and addressing the rising cost of technical debt.

Three questions they'll ask:

- How do I effectively protect against cyber threats?
- How does cloud affect my IT governance model, including compliance?
- What moves to cloud and what stays inside under our control?

Challenges & Opportunities:

- Security / Cyber risks of cloud are complex and unclear
- New DevOps / Agile methods can add operational complexity
- Major legacy systems (Windows, SQL, etc...) no longer receiving security patches
- Drive out expensive license costs
- Consolidate data silos to rapidly improve analytics and insights
- Address technical debt for systems nearing end of life





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