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Modern Cloud Economics

Unlocking business value of cloud for enterprise mission critical workloads

A C-Suite's guide to build and execute the Enterprise Cloud Strategy that delivers cloud's full business value potential

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Executive Summary

The current circumstances have accelerated the pace of digitization across every industry. In the 'new normal', cloud adoption is no more bracketed as a technologically forward move for progressive enterprises. It has become an imperative for all enterprises to survive, innovate and grow. And the interest and focus of cloud adoption in enterprises are now steered towards mission critical domains as a next logical step in their digital transformation journey.

Adopting cloud in mission critical domains is, however, proven to be challenging due to the requirements and risks unique to these domains. Large majority of enterprises lack confidence that they have the right guiding principles and capabilities to overcome challenges to achieve the expected value outcome. In absence of these drivers for success, a decision to adopt cloud in mission critical still largely depends upon the will and risk appetite of C-suite toward making trade-off between higher returns and higher risks. This suggests that adhering to the generally accepted principles of cloud economics underpinning cloud's benefits and costs as well as risks and returns advantages, is no longer adequate for enterprises to unlock full business value potential of cloud across the broader business and functional domains.

The hyperscale cloud providers are not standing by in the sideline. Their second-generation cloud offerings are being built to enable enterprises to apply the extended principles of cloud economics, that is, the **principles of Modern Cloud Economics**, for addressing the unique requirements, challenges and concerns of adopting cloud in mission critical. When applied in concert, these principles, and the associated enablers, can break the barriers for cloud adoption in mission critical, thereby raising organizational capability to unlock full business value potential of cloud across the enterprise.

Oracle's second-generation cloud, Oracle Cloud Infrastructure (OCI), has been recognized as the most mature among such offerings in the market today, providing the enablers across all principles of Modern Cloud Economics. OCI has been built ground-up by embedding these principles into the core designs of its technology, operational, commercial and value management enablers; therefore, making a holistic adoption of cloud and business value realization achievable.

Cloud is a business value creator, not a cost center, and the primary focus of cloud adoption in enterprises is on achieving full business value potential created by cloud spend, instead of reducing the IT cost per year or month. Achieving full business value potential of cloud for mission critical domains remains to be a challenging undertaking for any enterprise. Success requires embracing the principles of Modern Cloud Economics and shifting of the organization to new technology, operational and financial management practices, that is, the practice of DevSecFinOps. Any enterprise cloud strategy encompassing mission critical, therefore, must adopt these principles as a base framework for target operating model design. And the cloud sourcing strategy must ensure the selection of cloud service provider offering the enablers across all principles of Modern Cloud Economics.

Cloud Adoption as a Mandate

The appetite for cloud adoption in enterprises is at an inflection point. Adopting cloud is no longer an option, but it is a mandate. And adopting cloud in mission critical domains is the next logical step for enterprises to gain competitiveness in the 'new normal'.

In the last few years, enterprises have experimented with adopting cloud across the peripheral applications for team collaboration, back-office efficiency, and front-office enablement. Based on the proven benefits from this phase, C-suite is now looking at cloud as an enabler to answer many top-of-mind questions, such as:

- **Achieving greater cost efficiencies** by leveraging cloud's variable cost and consumption-based model, built-in elasticity, and ability to lower unit cost through economies of scale;
- **Launching new services faster** to grow customer base, provide a personalized experience to take a larger share-of-wallet, and capture a larger market share;
- **Improving operational resilience** of business-critical applications;
- And **staying ahead** of ever rising cybersecurity risks and tightening regulations.

Technological advancements in cloud have also brought in nuanced capabilities to address a larger base of applications and workloads. In fact, the question of 'on-premise vs. cloud' is no longer relevant. Taking Oracle's Dedicated Region Cloud at Customer offering as an example, enterprises now have an option to buy as-a-service and deploy a full public cloud region on-premise in their datacenters.

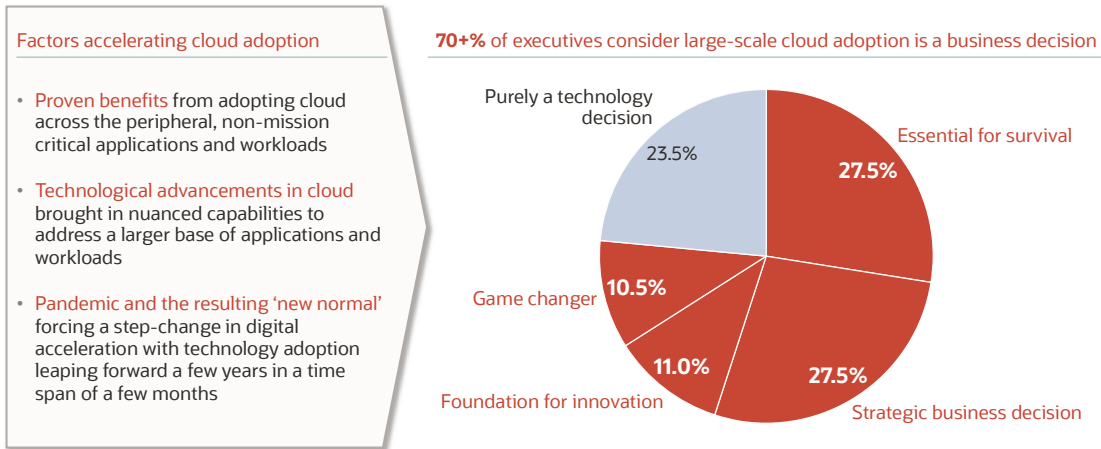
And then came the pandemic in 2020. The resulting 'new normal' has forced a step-change in digital acceleration with technology adoption leaping forward a few years in a time span of a few months^(*1). This means the post COVID-19 world will likely pose an even starker divide between digital leaders and laggards. Enterprise technology demand has surged especially for cloud infrastructure, security and collaboration tools^(*2) to respond to the disruptions caused by the pandemic – enabling remote workforce, scaling rapidly, amongst others. This coupled with the mandate to drive higher efficiency and effectiveness from 'every dollar spent', due to revenue headwinds, have forced enterprises to explore cloud adoption in a more holistic manner.

Today adopting cloud is no longer an option, but it is a mandate – over 70 percent of executives consider large-scale cloud adoption to be a strategic business decision for survival, innovation and competitive differentiation^(*3).

Exhibit 1

Adopting cloud is no longer an option, but it is a mandate

Over 70% of executives consider large-scale cloud adoption is a business decision



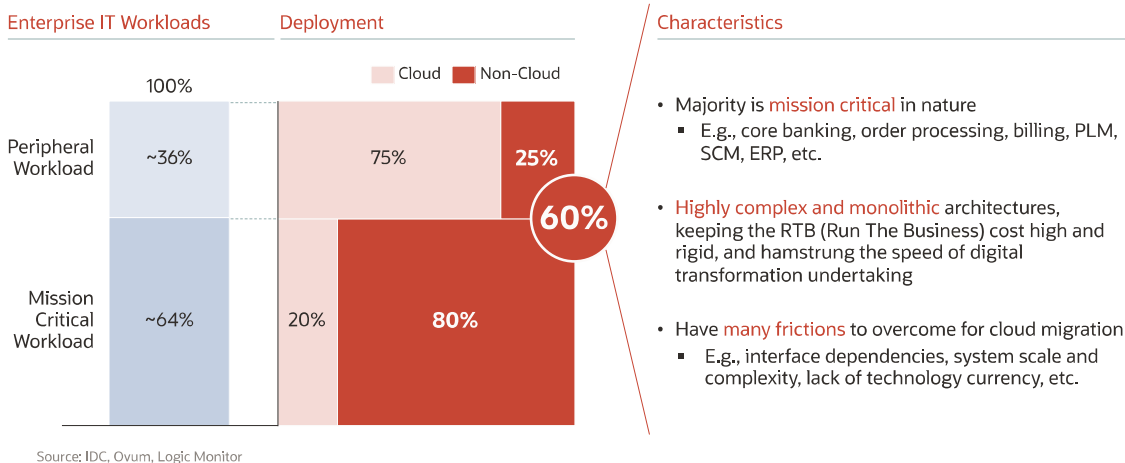
Source: IDC

But for many enterprises, approximately 60 percent or more of applications and workloads still remain on-premise (*4), and a majority of which is mission critical in nature, be it core banking, order processing, billing, product lifecycle management, supply chain management, enterprise resource planning, and many others. And because of their highly complex and monolithic architectures, these on-premise mission critical applications and workloads have kept cost of running the business high and rigid, and hamstrung the speed of digital transformation undertaking.

Exhibit 2

60% of workloads still remain on-premise, and majority is mission critical

Kept the RTB cost high and rigid, and hamstrung the speed of digital transformation



Source: IDC, Ovum, Logic Monitor

Therefore, enterprises are staring at a very real challenge to adopt cloud in mission critical domains in order to break structural cost rigidity as well as long innovation lead time in these domains and realize cloud's full business value potential.

Challenges of Adopting Cloud in Mission Critical Domains

Adopting cloud in mission critical is, however, proven to be challenging for most enterprises due to the requirements and risks unique to these domains. Adhering to the generally accepted principles of cloud economics is no longer adequate to achieve the expected value outcome.

While cloud's potential to unlock multi-dimensional business value is unquestionable, adopting cloud in mission critical domains remains to be a challenging undertaking for many enterprises. Full value realization is proven to be more challenging than originally expected. Today just 37 percent of enterprises has fully achieved their expected value outcomes from cloud, basically holding steady from 35 percent in 2018^{(*)5}. This stagnation may be because many have not yet made serious attempts to adopt cloud in these domains – among those enterprises most affected by the pandemic, only 30-40 percent plan to move new types of workload to the cloud through lift and shift, decommission and replace on-premise with SaaS, refactor or rebuild^{(*)6}. But even those high cloud adopters seem to be struggling, with over half reporting they have failed to achieve the expected business value from their large-scale cloud transformation initiatives^{(*)5}.

One reason for this is because enterprises are presented with not only far stringent requirements around service levels (availability, performance, and manageability), security, data sovereignty and regulatory compliance, but also real concerns over the risks of losing architectural, operational, and financial controls.

Examples of the voices heard from C-suite include:

Loss of architectural control

- “Moving my mission critical system will make my architecture more complicated since I need to integrate cloud with the surrounding subsystems still running on-premise.”
- “I will lose portability in the future. I will also lose openness to integrate with external ecosystem players.”

Loss of operational control

- “I will expose my mission critical systems and data to the increased risk of non-authorized access, data theft, and data tampering.”
- “I will lose control over infrastructure operations. But I am still the one who has to bear the reputational damage and the financial burden when service level is not met.”

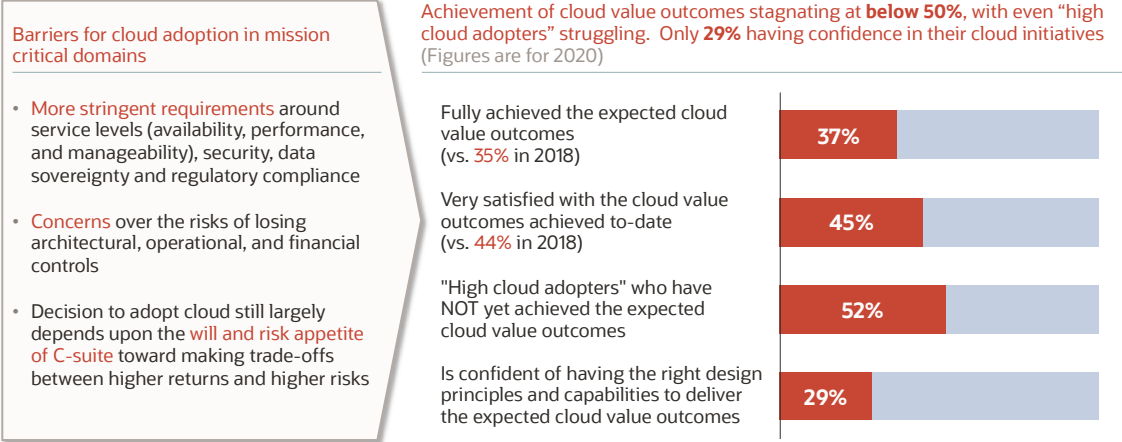
Loss of financial control

- “My actual cost becomes unpredictable, and I will lose plannability of IT spend unless I restrict usage or gain precise knowledge upfront about the usage requirements.”
- “I have invested so much to build and maintain what I have now on-premise. But the cloud provider does not let me leverage my on-premise spend for the same system.”

Only 29 percent of enterprises have confidence that, in their cloud transformation initiatives, they have the right guiding principles and capabilities to address concerns, overcome unexpected complications in migration, and deliver the expected value with the expected speed ^{(*)5}. In absence of these drivers for success, a decision to adopt cloud in mission critical domains still largely depends upon the will and risk appetite of C-suite toward making trade-offs between higher returns and higher risks.

Exhibit 3

Achieving cloud outcome in mission critical is proven to be challenging
 Adhering to the generally accepted principles of cloud economics is no longer adequate



Source: Accenture

This suggests that adhering to the generally accepted principles of cloud economics underpinning cloud's benefits and costs as well as risks and returns advantages, is no longer adequate for the enterprise to unlock full business value potential of cloud across the broader business and functional domains.

5. *Exploit infrastructure evolution as a catalyst for innovation:*

- **Modular core platform services** which can be assembled rapidly into technology platform solutions like Data Mesh Architectures, that enable enterprises to deliver high value outcomes at speed to their end customers.

6. *Select machine-power over manpower for enterprise-grade service assurance:*

- **Evolving Autonomous and Automation services**, such as Autonomous Database, Autonomous Linux, Terraform Resource Manager, to eliminate operations overhead and increase productivity and focus on activities that deliver business value;
- **Smart Security services** such as Cloud Guard which detects misconfigured resources and insecure activity across tenants and automatically remediate the identified security problems using security recipes;
- **Integrated Observability and Manageability platform** for all telemetry (metrics, logs, traces) enabling seamless traversal as well as AI and Machine Learning powered operational analysis of all software components and data types deployed on applications, database and infrastructure across OCI, other public clouds and on-premises.

OCI enablers for Commercial principles

OCI offers a range of commercial enablers to optimize rate, de-risk cost overruns and maximize financial productivity across the investments in Oracle on-premise licenses and cloud subscriptions.

The key enablers are:

7. *Delink data and network linear usage from cost:*

- **Best price performance guarantee** in the market across Compute, Network, Storage and Database. This advantage is particularly stark in:
 - **Network:** OCI's outbound networking costs are lower than other hyperscale cloud providers like AWS by 74 percent and inbound networking service is free of cost;
 - **Database:** OCI offers per-second billing model for Autonomous Database while other providers offer per-hour billing model for database.

8. *Avoid service deployment lock-in:*

- **Universal Credits with Annual Flex Model** offering true fungibility and flexibility of utilizing these credits across any of the OCI services offered, instead of limiting the enterprises to an exact service commitment which requires high level of predictability in the usage pattern.

9. *Re-purpose on-premise license support spend to acquire future cloud capabilities:*

- **Bring Your Own License (BYOL)** pricing, at a fraction of the total price, for those enterprises already owning Oracle database and middleware licenses;
- **ULA-to-Cloud** option for those enterprises on unlimited license agreements (ULA) with Oracle to repurpose the license support spend into Universal Credits;

Minimize frictions to ensure migration velocity

- Tooling to enable friction-less workload migrations from various on-premise platforms, e.g., Zero Downtime Migration, support for multiple virtualization modes (Native, Paravirtualized and Emulation)

Eliminating risks of losing architectural, operational and financial controls as a result of cloud adoption in mission critical

- Full replication of functionality and service levels of public cloud region to on-premise
- Separation of the control plane, the data plane and the management plane
- Control and flexibility in deciding the timing of applying patches and security fixes
- Retention of cloud cost plannability and predictability.

But above all else, what eventually pushed them forward was a growing realization of the shifting source of competitive differentiation for their core business. That is, their own recognition that their source of competitive differentiation is no longer about building and maintaining infrastructure on their own. They realized that it would be better off to leverage OCI since its built-in enablers were far more advanced than what they could bolt-on.

The Path Forward

To unlock business value of cloud for mission critical, enterprises must embrace the principles of Modern Cloud Economics as a base framework for target operating model design and select the cloud service provider offering the enablers across all principles.

Cloud is a business value creator, not a cost center, and the primary focus of cloud adoption in enterprises is on achieving full business value potential created by cloud spend, instead of reducing the IT cost per year or month. Achieving full business value potential of cloud for mission critical domains remains to be a challenging undertaking for any enterprise. Success requires embracing the principles of Modern Cloud Economics and shifting of the organization to new technology, operational and financial management practices, that is, the practice of DevSecFinOps. The resulting effect would be:

- Breaking down cost rigidity and long innovation lead time in mission critical domains;
- Improving all dimensions of enterprise IT performance metrics, from efficiency and efficacy to cost of quality, time-to-market, resilience and unit economics;
- And raising organizational capability required to unlock cloud's full business value potential across the enterprise.

Any enterprise cloud strategy encompassing mission critical, therefore, must adopt these principles as a base framework for target operating model design. And the cloud sourcing strategy must ensure the selection of cloud service provider offering the enablers across all principles of Modern Cloud Economics.

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About Oracle Insight

Oracle Insight is an executive engagement and business value advisory team in Oracle. The team comprises of enterprise strategists with points of view and expertise in the leading and emerging technology business management practices. The team directly engage customer C-suite to identify unmet needs, paint the future state, identify what matters to move the needle, and jointly define a roadmap to achieve the expected business value from technology investments.

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