



# Building A Cloud-Agnostic Ecosystem

A guide for enterprise-level modernization to unlock maximum business value from multi-cloud investments and emerging technologies.

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## Introduction

In the post pandemic world, cloud adoption is forecasted to grow at a rapid pace. As businesses increasingly look at upgrading their IT infrastructure and building new digital capabilities to create customer delight, **opting for a highly agile and secure cloud infrastructure is a business imperative.** The forecast for end-user spending on public cloud services alone in 2021 stood at 23.1% in an August 2021 Gartner report, as opposed to an 18.4% growth forecast just last year, in November 2020, by the company. And most of these users are working with multiple cloud providers. In fact, prior to the pandemic, more than 80% of organizations were already working with multiple cloud providers, as per a survey done by Gartner. Needless to say, this percentage is bound to be significantly higher owing to a digital and cloud-first approach adopted by businesses in the last two years.

However, such rapid acceleration in public and private cloud adoption requires business leaders to look beyond immediate operational needs; they must consider long-term cloud infrastructure demands. In the absence of the same, they run the risk of investing significant budgets in a cloud strategy that is likely to fall short of their high integration, high agility vision.

## The big technology shift for businesses

IT and digital are becoming increasingly integral to business resilience owing to a massive shift in consumer behaviour, greater thrust on sustainability, and a highly uncertain industry environment that calls for absolute agility. This has created a sense of urgency for greater adoption of enterprise technology. The mandate for technology leaders is to revolutionize their IT and digital infrastructure for a service-focused market, where secure and agile operations translate into converged experiences for end customers.

In fact, high agility and speed have become the key factors for businesses to consider cloud as opposed to benefits such as cost-effectiveness and access to new functionality, as per the IDC report IDC **FutureScape: Worldwide Cloud 2020 Predictions** – APEJ Implications. Further, this fundamental shift in how businesses view cloud as an enabler is set to drive hybrid and multi-cloud adoption at exceptional speed.

However, such complex IT environments can be difficult to manage, implement, and upgrade without compromising on hyper interconnectivity, flawless integration, and robust and secure management. And therein lies the need for a cloud-agnostic approach led by an industry expert for successfully building and managing a cloud-agnostic deployment model.

## The need for a cloud-agnostic approach

Enterprises are rapidly embracing multi-cloud, especially for their business intelligence systems. Hence, **any gap in such as complex environment involving multiple cloud and traditional systems is bound to significantly impact key business drivers** such as custom applications, data and intelligence, and AI and analytics.

In fact, these top three business intelligence drivers in a highly digital and innovation-driven economy demand a cloud-led approach:

### Custom applications and the need for a cloud-agnostic approach

As enterprises opt for highly powerful custom applications, they can only do so using a variety of technology stack. To leverage the benefit of running these applications on cloud, it becomes critical that such applications are modernized using cloud-native principles which support cloud-agnostic deployment features.

### Data engineering tools, hybrid data sources, and cloud computing

As data engineering tools evolve faster and facilitate connectivity between hybrid data, businesses seek applications that can process such a large amount of data to provide specific desired results. While cloud computing is becoming a widely used technology to deliver on such big data needs, the data engineering tools and methodology involved are critical to bring large data from existing on-premise data warehouse to cloud. Hence, businesses need to invest in building data pipeline architecture which is both, cloud agnostic, and portable across multi and hybrid cloud scenarios. It is also important that pipeline technologies are compatible with multiple data sources for ingesting data at scale to data warehouses and data lakes.

### Analytics, AI, and the need for a cloud platform

In today's industry environment, analytics and AI are critical for enterprises to maximize their digital investments. In fact, they are key requisites to ensuring customer-centricity, impacting the top line, increasing operational efficiencies, and successful innovation. Since AI and analytics platform preferences can evolve as per changing business needs, a cloud-agnostic approach can help ensure continued integration with the overall environment while allowing you more platform flexibility.



## Key business challenges in case of late adoption

Despite a strong understanding of the fact that cloud cuts across technology and digital, a majority of business leaders are unable to extract expected benefits and value from their investments in cloud. In fact, according to the IDC report referred to earlier in this white paper, more than 85% of APEJ organizations struggle to cross the cloud maturity chasm and gain agility from cloud adoption. While the report attributes this to low international competencies within organizations to support cloud adoption and migration activities, it may only be one of the contributors.

The fact is that the complexity of an environment consisting of various clouds purchased over a broad time range and each with a different set of goals, poses an orchestration challenge for internal stakeholders. Ironically, while the limited returns on investment might keep several business leaders from further investment towards a cloud-agnostic approach, a delay will cost more than the price of adoption; it could cost business opportunities.

These are some of the major opportunity areas business and technology leaders typically risk when they are late to adopt a cloud-agnostic approach:

- Business resiliency
- Insight-based innovation at hyperscale and speed
- Robust and consistent security and governance
- Easy powering of distributed users, devices, and applications
- Ready availability of a standardized approach for new technologies and applications
- Cost optimization related to policy design and deployment across environments

## Implementation

The real question for most successful business and technology leaders today is no longer about whether they should consider a cloud-agnostic approach; the big question **is how do you ensure safe and successful implementation in an increasingly complex, costly, and data-sensitive environment?** And the second most important question they are asking is what are the risks associated with evolving to an ecosystem that requires factoring for the lowest common denominator?

The truth is these are difficult questions to answer or rather, there isn't a universal answer that holds valid across enterprises. However, it is precisely why businesses and leaders need to evaluate multiple approaches to implementation and the advantages that the right partner can unlock for the enterprise.

## Typical risks

While some of the risks involved in adopting a cloud-agnostic approach could be unique to each enterprise, there are several risks that we have identified at LTIMindtree, which are universal, basis our discussions with business leaders and clients across industries.

- Selecting the right mix of technology and platform stack from the large number of choices available
- Keeping pace with rapid changing platforms and services
- Skilled workforce spanning multiple technologies
- Inability to predict cost with varying demand of infrastructure and services
- Security and governance
- Securing investments in the right initiatives
- Setting clear ROI or business value realization metrics

Transforming an IT environment into a digital-focused ecosystem poses **one fundamental risk – exposing the environment to multiple challenges posed by rapid-changing technology, including high costs, without having a clear picture of the business value such a transformation can offer.**

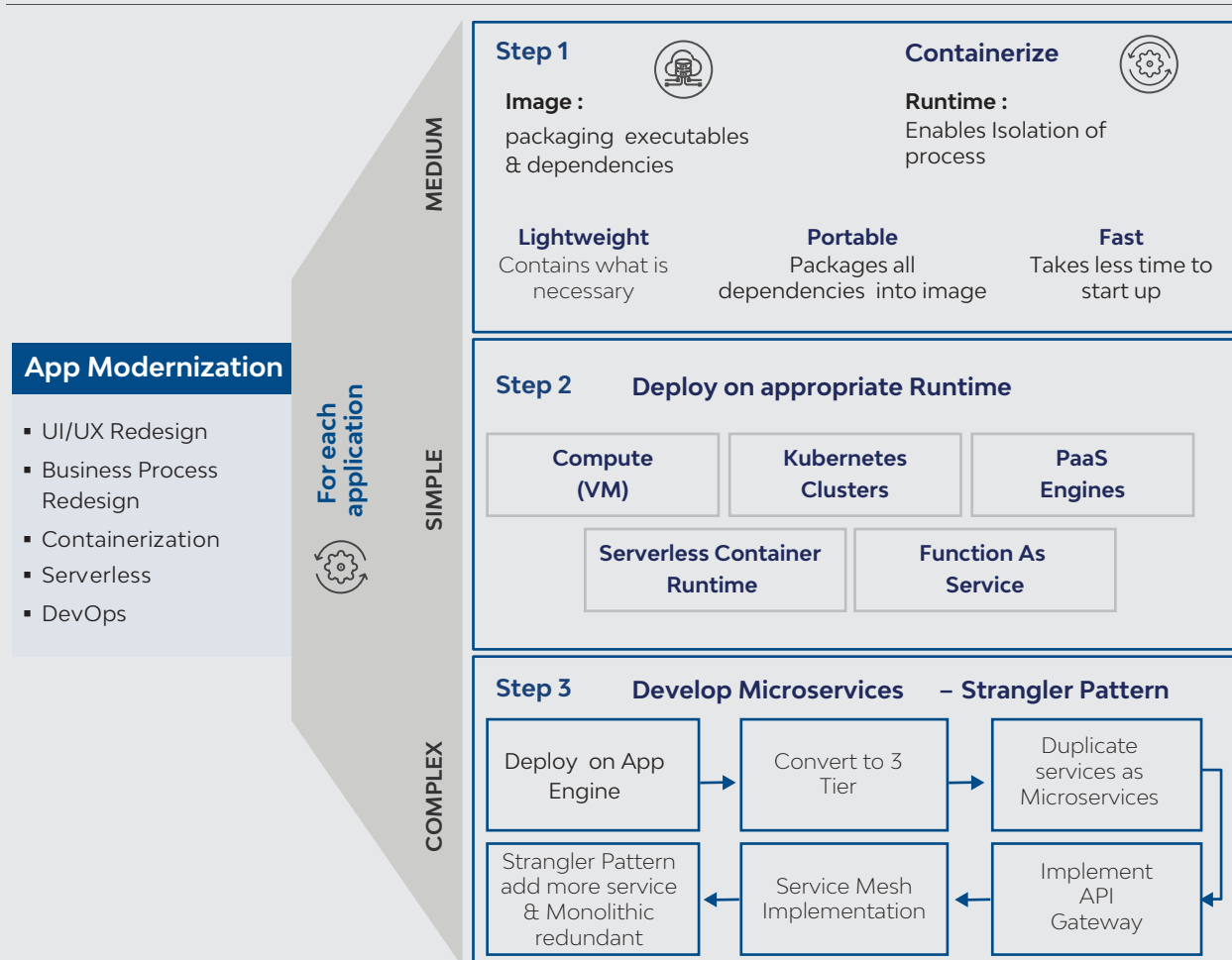
The best way to mitigate such risks isn't a delay in adoption and risk business resilience in a highly dynamic market environment. Instead, businesses need to opt for a transformation partner that

can offer an end-to-end assessment, strategy, implementation, and management service model in the context of specific business goals.

## Best practices







A global enterprise-grade IT and digital business transformation partner can not only help you mitigate the typical risks associated with cloud-agnostic transformation; it can maximize the potential benefits of the entire initiative for your business. Some key best practices that such a partner should be invested into are as below:

### 1. A three-step approach in case of app modernization using cloud-native principle supporting cloud-agnostic deployment features.



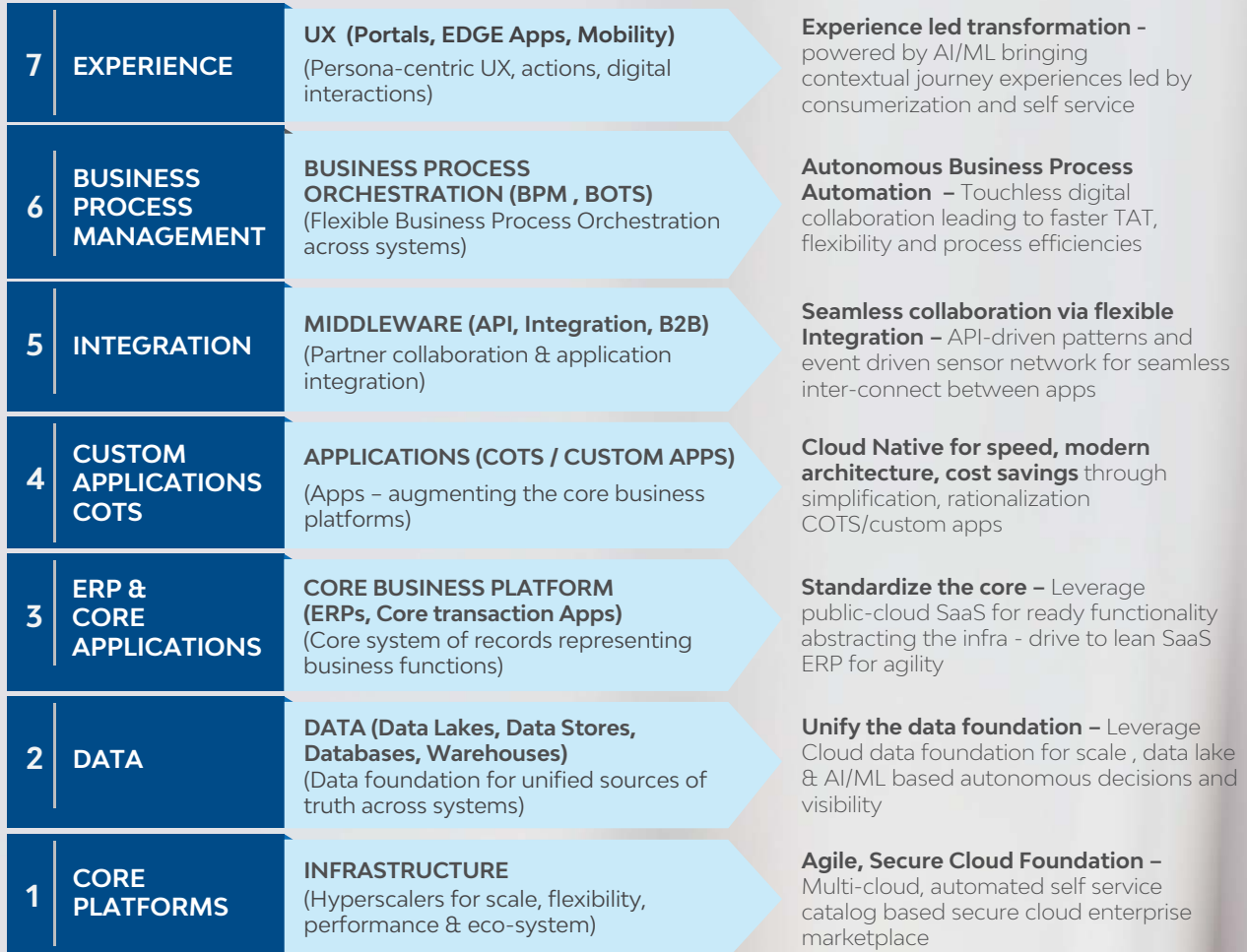
## 2. Deployment of robust custom platforms and tools for accelerated realization

### Infinity - Cloud Lifecycle Framework

|   |                      |   |
|---|----------------------|---|
|    | <b>PaaSify</b>       | App Assessment framework for deep cloud compatibility assessment  |
|    | <b>Rapidadopt</b>    | Infra assessment of on-premise application portfolio for cloud readiness  |
|    | <b>Autopod</b>       | Toolset for application assessment and containerization   |
|    | <b>Canvas DevOps</b> | Self-service DevSecOps platform for automated enablement & persona-based governance                                     |
|   | <b>Cloud Ensure</b>  | A self-service SaaS platform which performs over 1000 checks on your cloud setup  |
|  | <b>Botzer</b>        | Enterprise artificial intelligence platform for faster AI Adoption<br><b>Enterprise Chatbot for business automation</b> |



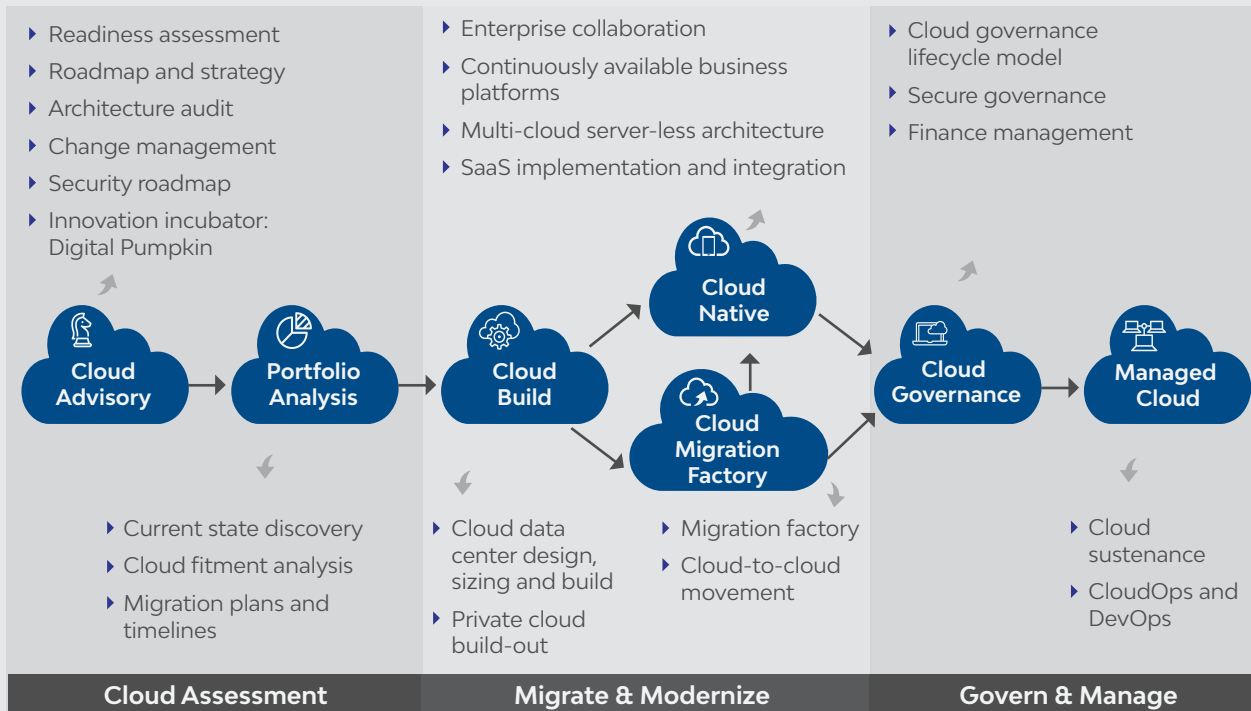
### 3. Modernization across all 7 OSI layers to ensure maximum interoperability and a high performing cloud-agnostic ecosystem



#### 4. Emphasis on unified view and visibility with regards to security across the entire IT and digital ecosystem.



#### 5. End-to-end solutioning across the to deliver on success metrics that align to business goals.



## Summary

Becoming cloud-agnostic is the only way organizations can ensure future-readiness. However, it would be a costly mistake to consider it only a future business requirement. This is because **such modernization is key to unlocking maximum business value from cumulative cloud investments thus far**. Moreover, it is also the only way to fully realize the impact of emerging technologies.

Hence, it is critical that organizations and business leaders take the first step in their cloud-agnostic transformation journey even as they continue to adopt multi-cloud to meet urgent business and operational requirements.

## Cloud ways of working mindset

However, for such transformation to deliver results, it needs to be acknowledged as an ongoing practice rather than a time-bound project. Organizations and leaders must admit to the challenges of a highly digital and integrated environment. Such a complex and sophisticated ecosystem calls for continuous intervention to harness newer technologies and more importantly, the business opportunities they present.

Such a shift in perspective and policies isn't all that easy. It requires leadership at all levels to understand the impact of a cloud-led future on business. More importantly, **it requires them to prioritize budgets for the same without pressing the pause button on ongoing cloud adoption exercises**. This can be a tough path to navigate.

And herein lies the decisive factor. Organizations and leaders that can create an ROI-centric case for such dual approach to cloud adoption and modernization will be the ones who will have a definite edge not just in the future, but as early as months into the transformation.

## The need for expert partnership

Despite it being a business-imperative, cloud-agnostic transformation does come with its own set of challenges. After battling a pandemic economy, organizations can simply not afford risking business stability owing to operational and execution shortcomings. And hence, such enterprise-level transformation calls for an expert partner.

Such a transformation partner would bring exceptional levels of capabilities across the entire cloud lifecycle. They would also have heightened business acumen and industry insights to **drive maximum ROI for all your cloud-led assets**. Of course, data and system security would be paramount to them and as such, they would be invested in tools, talent, and frameworks to cut down risks to negligible levels.

At the end of the day, an expert partner can not only transform your ecosystem for significant business impact, but also help you identify new business opportunities by harnessing the real power of multi-cloud and an agnostic approach.

## About the Author



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20+ years of experience in enterprise architecture & design, experienced in helping large enterprises to transform using cloud agnostic approach.

LTIMindtree is a global technology consulting and digital solutions company that enables enterprises across industries to reimagine business models, accelerate innovation, and maximize growth by harnessing digital technologies. As a digital transformation partner to more than 700+ clients, LTIMindtree brings extensive domain and technology expertise to help drive superior competitive differentiation, customer experiences, and business outcomes in a converging world. Powered by nearly 90,000 talented and entrepreneurial professionals across more than 30 countries, LTIMindtree – a Larsen & Toubro Group company – combines the industry-acclaimed strengths of erstwhile Larsen and Toubro Infotech and Mindtree in solving the most complex business challenges and delivering transformation at scale. For more information, please visit [www.ltimindtree.com](http://www.ltimindtree.com).