# Application Migration
# to the Cloud

## Application Migration to the Cloud – Critical Considerations and Building the Business Case

Today's rapid digitization of products, operations, and buyer experience is generating unprecedented change in business ecosystems across every industry and geography. At the foundation of this digital transformation, embraced by thriving upstarts, are flexible and scalable cloud platforms that foster disruptive innovation and customer intimacy.

To compete with "born digital" upstarts, such as Airbnb, Stripe, and Zenefits, many industry leaders are embracing digitization. Cloud platforms and their compute models provide an opportunity to speed the digitalization journey and respond to customers in a secure and scalable environment. Critical to this strategy is migration of existing portfolio from legacy platforms to public, private and hybrid cloud environments.

To realize the broad benefits of the cloud and application migration from legacy platforms, it's critical for business and IT leaders to not only understand the possible gains, but also to critically analyze the factors impacting migration success. It's vital to then present a comprehensive business case to the C-suite that justifies the investment.

This Point of View paper presents Trianz' perspective on evaluating the critical migration factors and justifying the why and how to migrate applications to the cloud.

## Critical Considerations of Application Migration to the Cloud

Before embarking on the transition of applications from legacy platforms to the cloud, it's important to thoroughly assess the following considerations to determine the migration benefits and costs for each application. After this evaluation, business and IT leaders should have a prioritized list of applications to move, possibly broken into stages, and likely some that should stay on premise. The considerations that form this list can be separated into two parts – application level and enterprise level.

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> "

# Application Level Considerations

The following factors must be considered for each application under review and a score should be applied, which leads to a ranked list.

## Architecture, Data Migration, & Integrations

Monolithic applications are harder to migrate versus those with a service or modular orientation. Further, applications with significant data governance requirements or tight enterprise integrations likely require various storage solutions and movement or replacement of technologies. Thus, it's prudent to understand architecture considerations and start with applications that have a loosely couple architecture.

## Performance & Availability

Public cloud platforms provide strong performance and availability, but there are cases when it's not enough or expensive to achieve such as with high-speed trading, bandwidth intensive, and frequent data transfer workloads. Further, new configurations, system architecture, and network design may require sizable optimization.

## Security & Privacy

Moving applications and data to the cloud may add security risk and disrupt governance strategies - often a top business concern. Thus, it's critical to compare the security, governance, risk, and compliance needs of each application, including data residency, to capabilities of cloud platforms under consideration.

## Application Lifecycle

Applications that are in critical need of upgrades may be attractive ones to migrate to the cloud as new investment is required regardless of its succeeding platform. On the contrary, new or end of life applications may not be good candidates.

## Migration Cost

The analysis of the above four items, in addition to application compute and storage needs, will provide a good measure of the financial investment for a specific application migration. Those with a large need for redesign, data migration, integrations, and security will cost more. However, strong benefits may offset this cost.

## Business Considerations

It's critical to understand the business value gains from migration to the cloud for each application including agility, innovation, customer reach, and time to market. Based on business analysis, some will gain more from cloud platform digitization and analytics. In this evaluation, close cooperation between IT and business leaders is essential.

# Enterprise Level Considerations

In addition to evaluating each application and ranking migration benefits and costs, there are three enterprise considerations that determine your overall readiness.

## Enterprise & Cloud Strategies

It's important to have a set of guiding principles that provides direction to application and infrastructure owners and support teams when

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addressing architecture and business problems as well as cloud models under consideration (public, private, hybrid, IaaS, PaaS, and SaaS).

## Enterprise Security & Control

Equally critical are enterprise security requirements and guidelines including governance methods and procedures, breach response, failover, and disaster recovery. Within these areas, it's vital to understand the remaining control over hardware, software, security, and data residency for each viable cloud.

## Vendor & Provider Lock-in

When considering a public cloud provider, it's essential to evaluate the ability to switch between suppliers.  Those embracing open standards, APIs, and management tools are less likely to foster dependency and inability to substitute.

In summary, it's important to thoroughly analyze the many application and enterprise level considerations in order to prioritize workloads and understand overall migration readiness. And to optimize technical benefits and business

outcomes, it's prudent to consult with professionals that have significant and successful application migration experience.

## Building the Business Case and Migration Plan

Once the benefits and cost have been considered and there are clear advantages to application migration, it's time to build a business case and cloud migration plan. This critical step involves compiling specific metrics, goals, and timelines that can be presented to management to justify the investment.

According to Gartner, "CIOs who have a rounded view of the financial impact of cloud are more likely to have progressive discussions with their finance business partners about when and how to deploy cloud services."[1]

## Business Case

A strong business case should clearly demonstrate the meaningful technical and business advantages of application migration by framing the current state and showing the

> " *You may need a strong partner to help build the business case and migration plan.* "

https://www.gartner.com/smarterwithgartner/the-financial-case-for-moving-to-the-cloud/

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end-state benefits and timeline. Furthermore, it'simportant to show the gains versus the cost items listed above in the "Application Level Considerations" section of this document.

## Framing the Problem

A strong business plan for application migration to the cloud starts with the current state, including business and technical challenges, and the high-level strategy to address these challenges. This section should roughly define the security and performance needs for your application environment.

## Showing the Benefits

The next section should contain quantified metrics of the expected technical and business gains covering - cost, speed, flexibility, and scalability. This includes estimating the expected impact to new and existing business process in the form of increased revenue, faster time to market, higher customer satisfaction, or similar measurements. And both technical and business gains should be specific, quantified, and tie back to the current state problem.

## Cloud Platform Performance

This section should first define the cloud platform to which your applications will migrate including the location, architecture, and ownership of each level of the stack. This is the place to define and specify which applications will go to public, private, or hybrid cloud environments. Also, specified should be the specific performance and security levels expected in each new cloud location, and confirmation they are at or above required levels.

## Time Line

Finally, a timeline should be presented of phased application migration, that justifies the priorities based on previous analysis. This is a good place to show some immediate benefits expected in the first phase of the migration.

## Migration Plan

Coupled with a solid business case, a strong migration plan should drill down into the technical details of the transition from legacy to cloud platforms including the new cloud architecture(s), integrations, migration tools, skills development training, systems monitoring and management, security, performance, scalability, and business continuity.

This section will include the technical approach and transition timeline including design, pilot, testing, and production.

In summary, a strong business case and migration plan, jointly constructed by technical and business teams, are critical to justifying the application migration investment and achieving success. As the cost of missteps can easily offset potential gains, these documents will ensure you realize the returns you set out to achieve.

However, resources are often too constrained to conduct this analysis. Thus, you may need a strong partner to help build the business case and migration plan. One that understands your business and technology and has strong cloud credentials. And one that has deep application migration experience including frameworks, perspectives, and methodologies.

> *A strong business case should capture the current and the desired end state, workloads to be migrated and a robust execution plan with quantifiable metrics and risks.*

# How Trianz Can Help

To fully leverage the benefits of application migration to the cloud, organizations need to formulate and align a migration strategy with an execution plan that drives measurable and sustainable advantages. Trianz specializes in combining technology with business acumen, to help business and technical leaders achieve tangible benefits from application migration projects.

To help clients' build a cloud business case and execution plan, Trianz draws on its Cloud practice services including:

## Cloud readiness analysis

evaluates multi-region reference cloud architectures, cloud deployments, application migration, and change management.

## Application portfolio assessment

utilizes a structured framework that maps application architecture, security, and data governance requirements to the appropriate cloud computing model; includes review of reference architectures that deliver maximum cost and operational benefits.

## Assessment scorecard development

iterative approach that captures the following elements across multiple axes: business needs, application lifecycle, application architecture, data  models, data technologies, security, integration, and risk.

## Risk and compliance framework

structured approach to fostering a secure and scalable cloud including four elements: directive, preventive, detective, and responsive.

With deep domain expertise, Trianz can help analyze cloud migration benefits and costs, and assist with building a strong business case and migration plan that emphasizes execution-driven success.

In summary, through a holistic approach that combines business and technology expertise, Trianz can provide support for all stages of application migration, helping you envision, architect, deploy, and operate workloads in public, private, and hybrid-cloud environments.

# ABOUT TRIANZ

Trianz simplifies digital evolutions through effective strategies and excellence in execution. Collaborating with business and technology leaders, we help formulate and execute operational strategies to achieve intended outcomes by bringing the best of consulting, technology experiences, and execution models. Powered by knowledge, research and perspectives, we serve Fortune 1000 and emerging organizations across industries and geographies to transform their business ecosystems and achieve superior performance by leveraging Cloud, Analytics, Digital, Infrastructure and Security paradigms.

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