

# CLOUD RETROSPECTIVE

# Into the cloudscape and beyond

Welcome to BBD's Cloud Retrospective 2024, a comprehensive exploration of the evolving landscape of cloud computing and its impact on businesses worldwide. In this retrospective, we delve into the multifaceted dimensions of cloud adoption, migration, sustainability, digital transformation, and security, offering insights, strategies, and best practices to navigate the complexities of the cloud ecosystem effectively.

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# Unlocking cloud excellence

A pragmatic exploration

Why are we still talking about cloud? Cloud, cloud, and more cloud—it's everywhere. Businesses worldwide have embraced it; applications, infrastructure, and services have migrated, becoming a standard expectation in an organisation's digital strategy.

**It's not new, it's not the latest ground-breaking technology, and it's not even really a buzzword anymore... Because it's expected to be a part of an organisation's digital strategy.**

However, the continued conversation about the cloud stems from a critical truth—success lies in the details. The efficiency of your cloud demands refinement.

## **Navigating cloud challenges: It's not all sunshine and roses**

In 2019, Accenture reported that 40% of businesses experienced cloud initiatives failing to deliver expected value. Deloitte, a year later, found data migration, integration, security, and governance to be top challenges in cloud adoption.

In 2021, Forrester found that 40% of IT leaders faced challenges with cloud cost management, with 37% exceeding their budget. Flexera reported 76% of surveyed businesses wasted money on unused cloud resources, with 35% estimating a wastage of at least \$100,000 per year.

**Organisations using cloud services, on average, achieve a 21.7% improvement in time to market compared to their competitors.**

This trend suggests that, amidst growing comfort with cloud technology, organisations are facing financial losses. What if this isn't a trend but a result of insufficient attention to setup intricacies in the rush to the cloud?

*Cloud native development is the process of building applications specifically for the cloud, taking advantage of cloud infrastructure, platforms, and services to better enable elastic scalability, reliability, and performance.*

# Unlocking cloud excellence

A pragmatic exploration

## **The devil in the detail: Cloud native development**

Deploying applications in the cloud without proper setup is akin to swimming in jeans—weighed down and tiresome. Cloud native development where you craft applications specifically for the cloud, becomes paramount.

## **Who can benefit from the cloud?**

This doesn't mean that companies with existing infrastructure or applications can't benefit from the cloud. Should organisations wish to migrate – details of which are covered more thoroughly in the chapters to follow – there are a variety of cloud adoption strategies that encompass various approaches tailored to accommodate different setups. Regardless of the approach chosen, cloud adoption strategies are designed to address the diverse needs and circumstances of organisations, ensuring a smooth transition to the cloud while maximising the benefits of cloud computing technologies. Moreover, the cloud can be useful for organisations of different shapes and sizes. Its benefits can be seen and felt even for smaller businesses – how and why is unpacked in greater detail in chapters to come.

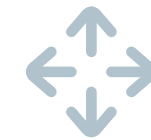
# Cloud migration

From on-prem to on-point

## Unpacking cloud migration: Assessing, mobilising, and modernising for success

As mentioned earlier, embracing the cloud in today's business landscape has become nearly unavoidable. Many companies recognise the unparalleled benefits of improved agility, increased uptime, and near-instant scalability that cloud computing offers. The prospect of these advantages is too enticing for businesses to overlook, leading to a significant shift in IT budgets towards cloud spending.

### Key cloud benefits:



#### Agility

The cloud enables businesses to quickly adapt to new business opportunities, market changes and customer demands



#### Collaboration

The cloud allows businesses to collaborate more effectively with partners, customers and suppliers



#### Cost savings

Cloud migration can help businesses reduce their capital expenditures as well as lower their operating expenses



#### Disaster recovery

Cloud computing can provide businesses with robust and reliable disaster recovery and business continuity solutions



#### Flexibility

Cloud migration gives businesses the ability to work from anywhere, at any time, on any device



#### Innovation

Cloud migration can provide businesses with access to advanced technologies and services, such as AI, ML and big data analytics



#### Scalability

Cloud computing enables businesses to easily scale their resources up or down to meet changing demand



#### Security

The cloud offers ways to improve data protection, risk management and regulatory compliance

# Cloud migration

From on-prem to on-point

**Gartner predicts that by 2025, more than half of IT spending will have shifted to the cloud.**

Fortunately, the landscape of cloud migration has evolved, and a myriad of tools and techniques are now at the disposal of those equipped with the necessary skills. Whether you are migrating existing on-premises workloads or developing cloud-native solutions from the ground up, these tools have accelerated the initiation of cloud migration journeys.

**The plethora of tools and techniques available to those with the skills to implement them have made kicking off a cloud migration journey much faster.**

However, the ease of starting the journey doesn't negate the challenges, pitfalls, and complexities involved in gaining a true competitive advantage through cloud utilisation.

Although these tools and techniques make your journey easier, there are multiple pitfalls, obstacles, and routes you must travel to gain a true competitive advantage in how you're utilising the cloud.

In navigating this intricate landscape, having the right partner is paramount. A partner with experience in advising, migrating, architecting, managing, and optimising workloads in the cloud becomes a critical asset.



# \$927.51 billion

The global cloud services market is projected to reach \$927.51 billion by 2027, witnessing a Compound Annual Growth Rate (CAGR) of 15.7% from 2020 to 2027.

# Cloud migration

## Migration strategies:

To begin planning your architecture in earnest, you'll need to understand and plan how your migration team will handle each application throughout your migration journey. Here you're shifting your focus from a portfolio level to an individual application level. There are 6 core migration strategies (the 6 Rs):

From on-prem to on-point

1

### Rehost

When you rehost, you are essentially moving applications into the cloud without making any changes to them.

2

### Replatform

Replatforming is when you make a few cloud (or other) optimisations to achieve some tangible benefit but you aren't otherwise changing the core architecture of the application you're looking to migrate.

3

### Repurchase

The third migration strategy involves moving a legacy system from a perpetual license to SaaS (Software as a Service) model that provides similar capabilities.

4

### Refactor / Rearchitect

Rearchitecting is a strategy that allows you to re-imagine how an application is architected and developed using cloud-native features.

5

### Retire

The best strategy often involves cutting the fat and rather focussing on what drives value for your business.

6

### Retain

Consider keeping the current situation as is if you're still dealing with depreciation, not ready to prioritise upgraded applications, or hesitant to migrate certain apps.

7

### Relocate

Using this strategy, you can transfer a large number of servers, comprising one or more applications, at a given time from an on-premises platform to a cloud version of the platform without impacting the overall architecture of your application.



# BBD in the cloud

At BBD, a leading software solutions company, our extensive experience spans the full spectrum of cloud solutions. Our expertise in a suite of cloud enablement offerings positions us uniquely to guide you through the intricacies that must be considered before taking the plunge into cloud migration.

With experience delivering across a full spectrum of cloud solutions, we deeply understand the nitty-gritties involved in what you need to consider before you take the plunge.

# Cloud migration

From on-prem to on-point

Steps for a successful cloud migration journey:

# 1

**Assessment:** Before making the leap, a thorough assessment of your existing infrastructure, dependencies, and business structure is crucial. Our experienced team at BBD ensures a meticulous evaluation to lay the foundation for a seamless migration.

"A key benefit of engaging with BBD is in how we work with your team to not only complete the migration seamlessly but also upskill and transfer knowledge to your team – empowering your business."

**Cloud migration can lead to an average cost reduction of 15-20% for organisations.**

# 2

**Mobilisation:** Once the assessment is complete and a business case has been drafted, the next step is to ready your organisation for cloud adoption. Werner de Jager emphasises that a successful cloud adoption goes beyond simply migrating the workloads, but starts with preparing for cloud adoption by planning the migration, upskilling your team, and architecting the environment to suit your use case.

"Once you know that you want to move some workloads to the cloud and you know which ones they are, a make-or-break point of your journey is preparation and planning. This is where you identify and avoid the majority of the pitfalls that often cause migrations to fail or lead to buyers remorse. Your future self will thank you for having focused on this part of the process."

# 3

**Migration and modernisation:** Adopting the cloud in part or for your full estate will often have a mix of migration and modernisation strategies. This is where you and your new team execute on the planning you've done. Using this opportunity to modernise your workloads to be more cloud native pays off because this is where the majority of the cost reduction and efficiencies can be achieved.

**Organisations that prioritise cloud modernisation achieve, on average, a 37% increase in application delivery speed.**

# Fortifying the cloud

## Understanding cloud and security practices

After understanding the best strategy for migrating or modernising your environment, cloud security (and security in general) becomes a hot topic, especially in a time where personal data has become sacred, and where privacy regulations around the world have become tighter than ever. Companies are at constant risk of being breached, and should they become the target of a cyberattack on their intellectual property and other sensitive data, they stand to lose reputation and customers. No one is spared: from financial or governmental institutions, healthcare providers and password managers, any asset has become a target.

To mitigate these risks, there are key principles your technology partner and cloud provider can utilise.

### Key security principles:



#### Least privilege access:

Precision in system authorisation, insulating production and non-production environments



#### Multi-Factor Authentication (MFA):

Enhanced protection against password-based attacks for clients and employees



#### Encryption

Comprehensive data protection, covering data in transit and at rest in various cloud storage locations



#### Secure Software Supply Chain:

Minimising risks through automated package updates, security scanning, and code integrity checks



#### Cloud-specific security best practices:

Leveraging the Well Architected Framework and the included compliance tools to manage both cloud-specific and regulatory compliance frameworks (such as PCI DSS, ISO, etc.)

*"Navigating regulations seamlessly—BBD's sector-specific understanding ensures compliance, providing added peace of mind to our clients."*

# Sustainable skies

## Navigating environmental responsibility with the cloud

Aside from security, the other big S concern in the cloud is sustainability. In an era where climate change looms large, and economic sustainability becomes integral, businesses are seeking avenues to align with ESG (Environment, Social, Governance) goals seamlessly. Leveraging the cloud emerges as a nuanced yet impactful method for organisations striving to contribute to global sustainability without compromising day-to-day operations.

On the precipice of irreparable climate change with a global recession knocking on our door, environmental and economic sustainability is being recognised as a critical factor for good business practices as ESG principles take root around the globe.

### **Sustainable synergy: Cloud-driven solutions for tomorrow's businesses**

Major cloud providers, including Amazon Web Services (AWS), Microsoft Azure, Oracle, and Google Cloud Platform (GCP), are steering the shift towards sustainability.

AWS and Azure have set ambitious goals to use 100% renewable energy by 2025, with AWS already showcasing 3.6 times more energy efficiency than the median of US enterprise data centres. Oracle, recycling 99.9% of retired hardware, powers 100% of its European data centres with renewable energy. GCP, carbon neutral already, aims for carbon-free energy across all data centres by 2030.

By utilising sustainable data centres and shared resources inherent in cloud computing, businesses actively contribute to offsetting carbon footprints. de Jager highlights the cost-saving aspect: "Collective buying from hyperscalers includes automatic savings, contributing towards ESG goals while saving costs."

**Cloud providers are among the top purchasers of renewable technology and energy globally, solidifying their commitment to environmental responsibility.**

*Offloading cloud-related tasks to specialists allows businesses to concentrate on meaningful, purpose-driven work, enhancing employee engagement and innovation.*



# Sustainable skies

## Navigating environmental responsibility with the cloud

### Modernisation and environmental impact reduction

Advancements in virtualisation, software-defined infrastructure, and hyperscaler services bring about substantial reductions in environmental impact. Concepts like auto-scaling, serverless technology, and right-sizing allow businesses to optimise energy consumption in real-time, eliminating wasteful practices.

Modernisation not only makes the cloud environment more efficient but also ensures long-term sustainability.

**By 2025, 85% of organisations will see a 35% increase in sustainable efficiencies using software and cloud-related infrastructures.**

### Beyond environmental benefits

Beyond environmental advantages, the cloud facilitates business sustainability, predicting that 45% of organisations will consider sustainability crucial for technology buying decisions by 2024. Cloud services offer fault tolerance, disaster recovery, and automation, ensuring business continuity in unpredictable situations.

**"Efficiency equals sustainability; it's about architecting setups for long-term effectiveness."**

### Well-Architected Framework: A pillar for sustainable cloud practices

BBD, an AWS Advanced Tier Partner, incorporates Well-Architected Reviews and use tools such as the Customer Carbon Footprint Tool to provide a definitive impact rating to work against. Aligning with principles like understanding impact, setting goals, maximising utilisation, adopting efficient technologies, and reducing downstream impact, BBD ensures clients' cloud infrastructures are efficient, cost-effective, and sustainable.

**Implementing cloud environments requires architects to design solutions for effectiveness, efficiency, and long-term sustainability.**

# Rightsizing the cloud

Guiding SMEs to digital eminence

Embarking on the journey of IT infrastructures can be a daunting challenge for SMEs lacking in-house resources. But with the right partner, the cloud really can be transformative for organisations of any size.

**Why the cloud works for SMEs:**



## Cost efficiency

Pay-as-you-go models and flexible licensing options eliminate substantial upfront investments



## Managed services

BBD's MServ team handles the technical aspects, allowing SMEs to focus on core competencies



## Flexibility & scalability

Cloud platforms offer agility, crucial for adapting to fluctuating workloads

# Rightsizing the cloud

Guiding SMEs to digital eminence

## To note:

- **Existing infrastructure investment:** Careful evaluation of compatibility and cost-effectiveness is crucial before migrating
- **Learning curve:** Upskilling, though initially disruptive, attracts a wider talent pool and enhances productivity
- **Vendor lock-in:** Expert insights help SMEs avoid dependency on a specific provider, ensuring long-term flexibility

**"Unleashing possibilities for SMEs—BBD's commitment to innovation and strategic partnerships ensures tailored cloud solutions for thriving in the digital landscape."**

The cloud holds immense potential for SMEs, offering cost efficiency, managed services, and scalability. BBD's dedication to innovation unlocks new possibilities, ensuring SMEs thrive in the digital landscape with

*Cloud adoption is a transformative dance, complementing current systems without causing disruption—a melody of innovation orchestrated by experts.*

# Cloud catalyst

Unleashing business potential through digital transformation

To thrive in an ever-evolving market, companies must embrace new technologies, meet customer demands, and align with market trends. At the heart of this transformation lies cloud computing, revolutionising how businesses operate, innovate, and unlock their full potential.

## Enabling digital evolution

BBD, with its team of experts, has been instrumental in helping numerous businesses achieve digital transformation through cloud computing. Cloud technology empowers organisations to access unprecedented data, automate processes, and innovate rapidly.

"Digital transformation is critical for our clients to remain competitive and relevant. By leveraging digital technologies, businesses can streamline processes, improve efficiency, and create new opportunities for growth." - Tony van der Linden, BBD CIO

## The digital transformation imperative:

**Digital transformation goes beyond upgrading technology – it's about reimagining core processes with a customer-centric focus. It demands a shift in mindset towards innovative strategies and value propositions. Successful transformation requires constant adaptation, a clear vision for the future, and the development of both technological and human capabilities.**

# Unpacking the numbers

According to the International Data Corporation (IDC), organisations implementing digital transformation initiatives experience up to 2.5 times more growth in revenue

MIT Sloan Management Review found that digitally transformed companies are 26% more profitable than their peers

# Navigating cloud in the year ahead

As the technological horizon unfolds, the integration of Artificial Intelligence (AI) into everyday business operations becomes an imminent reality. By the close of 2025, a significant portion of companies will have initiated the deployment of AI solutions, marking a transformative shift in production processes. Notably, statistics project that by the end of 2025, approximately 65% of companies across various sectors will have integrated AI into their operational frameworks, showcasing a substantial adoption rate that underscores the pervasive influence of AI technology.

At the forefront of AI implementation, the focus predominantly revolves around enhancing customer interactions. Whether through streamlining services or personalising experiences, businesses harness the power of AI to cater to evolving consumer demands. A pivotal enabler in this transformation is the omnipresent cloud infrastructure, serving as both a driver and a support mechanism.

Moreover, the landscape will see a proliferation of smaller AI models integrated directly into devices. Notably, tech giant Apple's acquisition spree of AI companies underscores the strategic investment in developing local AI chips, indicative of a broader industry trend towards on-device AI processing. Recent market analyses suggest that by 2025, the global market for on-device AI processing is expected to surpass \$10 billion, underscoring the burgeoning demand for efficient and localised AI solutions.

Despite the allure of the cloud, questions linger regarding its cost-effectiveness. While cloud adoption offers unparalleled flexibility and scalability, it is not devoid of complexities. The need for meticulous evaluation, exemplified by tools like the Migration Assessment Program

(MAP). Moreso, clients are discovering that the cloud is perhaps not the utopia that was once promised. Instead, questions of what becomes even more critical, and even, a reverse of these tools, to really understand what and where the cloud can indeed benefit organisations, to fully maximise cost and application efficiency.

Furthermore, the discourse shifts towards the modernisation imperative, transcending mere lift-and-shift approaches. This means more effort will be made on the cloud provider end to incentivise partners to aid clients in modernising applications and data, ensuring alignment with evolving cloud paradigms. The focus pivots towards pragmatic migration strategies, prioritising efficacy over haste.

Looking ahead, the trajectory veers towards client empowerment, with a pronounced emphasis on developing proprietary Software-as-a-Service (SaaS) offerings. Concurrently, providers advocate for centralised licensing through cloud marketplaces, streamlining procurement processes and enhancing operational efficiency.

**As organisations navigate the complexities of cloud, strategic partnerships, and a steadfast commitment to innovation emerge as guiding principles. With agility and foresight, businesses stand poised to harness the full potential the cloud has to offer, to propelling them towards unprecedented growth and success in the digital age.**



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### Get in touch

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