



# Unlocking value from the cloud – and how GenAI is changing the game

Unlock real business outcomes with a strategic approach to cloud implementation

KPMG: Cloud whitepaper



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March 2024

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# From disruptor to BAU and beyond

In recent years, the cloud – once seen as a disruptor – has become standard practice.

Most businesses have migrated some or all of their technology landscapes to the cloud. Having moved from the ‘crawl’ to the ‘walk’ phase of their cloud journeys, most are now starting to realise the benefits: cost savings, faster innovation and greater agility.

But presence in the cloud is just the first step. The priority now is to stay ahead of the curve. That means to continuing to embrace new technologies on their cloud estates, and getting the maximum value from them. That’s why organisations are forecast to invest 45% of their IT spend in the cloud by 2024<sup>1</sup>

But there’s a problem: the cloud is maturing too rapidly for most firms to keep up. Cloud service providers (CSPs) – the hyperscalers in particular – are releasing new features faster than ever.

And as if the landscape wasn’t moving quickly enough, enter Generative AI.

GenAI is a gamechanger for the cloud – and is a central focus for the hyperscalers as a result. Gartner predicts that by 2026, more than 80% of firms will have used GenAI models or APIs; and/or deployed GenAI-enabled applications in their production environments. That’s an eye-watering acceleration – in 2023, the proportion was just 5%.<sup>2</sup>

Cloud adoption is no longer purely a technology decision; it’s an enterprise-wide strategy. The challenge is to balance speed and value, while enabling continuous transformation and harnessing the power of GenAI.



## Key Takeaway:

The reality of the cloud is here: it’s now a business necessity, not a technological choice.

1. <https://datacentremagazine.com/critical-environments/gartner-cloud-computing-is-becoming-a-business-necessity>
2. <https://www.gartner.com/en/newsroom/press-releases/2023-10-11-gartner-says-more-than-80-percent-of-enterprises-will-have-used-generative-ai-apis-or-deployed-generative-ai-enabled-applications-by-2026>





# Driving cloud value: challenges and success factors

If businesses' priority is to realise value from the cloud, what might be preventing them from doing so? And how do they overcome the barriers?

## Challenges

Many organisations still lack a properly defined cloud strategy, and so may be tempted to follow their competitors or industry leaders. But the reality is that there's no one-size-fits-all solution to optimising the cloud.

**A lack of focused strategy can lead to lost or delayed value in three main ways – which together, can erase the cloud's potential value altogether:**

- delayed adoption of cloud services
- adoption of 'shadow' (redundant) cloud services
- unrealised use cases, mostly focused on cost reduction, not value creation

**This last point is especially important. As organisations invest more in their cloud estates, they must focus on two imperatives: minimising cost and generating value:**

1. Most firms have a cloud cost-management capability, but in many cases, it's maturing gradually. Many therefore struggle to get their product teams to prioritise cost while delivering functions and features for the business.

And there are additional upward pressures in the current climate: inflation, the rising cost of AI workloads, and a growing regulatory burden. These are bringing more volatility to the cloud's economic model.

2. A properly defined cloud strategy is vital to the ability to generate value – as it should drive a focus on productivity, automation, speed, agility, and control over how product features are rolled out.

## Success factors

The ability to maximise cloud value depends on many aspects of an organisation: its technological landscape and maturity, and pace of innovation. How good it is at revamping existing systems and architecture (brownfield projects), and creating them from scratch (greenfield initiatives).

And crucially, its understanding of whether it's ready for the cloud in the first place. There's no framework in which to judge this. It comes down to a combination of the leadership team's subjective, and objective inputs such as quantitative data.



## Start with functional transformation

Don't try to take a big-bang, all-at-once approach to cloud adoption. Begin with the business function (or functions) that will benefit the most from cloud transformation.

That will have two key advantages. It will narrow down the scope to a manageable level; and provide key learnings for enterprise-wide migration.

Where to start should be informed by your business strategy. For example, if your overarching objective is cost reduction or optimisation, then you might want to start with cloud-enabled HR transformation. In the HR function, cloud technology can reduce overheads, automate manual procedures, and streamline global processes to remove redundancies and overlaps.

From there, broader implementation can be an iterative process, with future waves of investment focused on each next function or group of functions to adopt the cloud.

### You'll also need to think about the right implementation method for each function – for example:

- lift-and-shift for low-criticality applications
- lift-modify-and-shift for end-of-lifecycle workloads
- private cloud configuration for highly sensitive data
- SaaS for customer-facing processes
- cloud-native and/or microservices-based architecture for some advanced functionalities.

### Set accountability for cost control

Without proper planning and implementation, it's easy to misconfigure and underuse cloud resources. That can lead to poor performance, downtime and security issues – all of which will drive unexpected costs.

Cloud optimisation stems from economies of scale, abstraction and shared services. However, accountability frameworks are vital to ensure that cloud spend is properly tracked and managed. Without a designated individual or team in charge, your spend will quickly mount up.

### To establish that accountability, we recommend using a Cloud FinOps strategy – which involves:

- capturing your cloud costs
- allocating them to specific projects, functions and stakeholders via robust charge-back mechanisms
- setting up budgets and alerts
- regular reporting on cloud spend
- reducing cloud waste, so that ineffective services don't go unnoticed.

### Capture synergies between cloud and GenAI

Integrating Gen AI into your cloud environment can transform the return on your investment, by boosting productivity and innovation. As the major CSPs are also the main providers of GenAI services, there are inherent synergies between the two technologies.

### Organisations can exploit these synergies by:

- **Using cloud to support GenAI initiatives.** The cloud is an ideal platform for the massive compute, storage and networking demands of GenAI applications, as its scalable architecture can handle complex GenAI models.
- **Using GenAI to accelerate cloud transformation.** GenAI can radically transform functional processes automation and remediation – a capability we can expect huge demand for.



### Key Takeaway:

Functional transformation powered by GenAI can deliver immense value.

# Generative AI: the next level for the cloud

GenAI has changed the artificial intelligence landscape beyond recognition over the last couple of years. Its progress has been astonishing for what's still a new technology. Forrester sees 2024 as the year that it will move out from the fringe, and become a central pillar of businesses' AI strategies.<sup>3</sup>

GenAI marks the beginning of a new age for cloud computing and operations – but comes with a series of risks and challenges.

## Opportunities

GenAI has the potential to revamp how cloud services are deployed, managed and optimised. Distributed cloud architectures, combined with GenAI's powerful data handling and modelling capabilities, can take innovation and efficiencies to new levels – on a number of fronts:

- **Functional transformation**

GenAI is rapidly becoming part of enterprise applications across business functions and units: from the early precursors of chatbots to today's generative solutions. For cloud-friendly apps, GenAI is the natural next step, and together they can help achieve radical functional transformation.

- **Intelligent automation**

GenAI is reinventing how applications are developed, delivered and maintained. In particular, it offers multiple use cases for intelligent automation applications – such as simplifying complex tasks, analysing data in real time and generating insights.

- **Cloud operations**

The cloud is increasingly influenced by AIOps, which is essentially AI-supported IT operations. AIOps can help improve operational efficiency, thanks to robust automation, and highlight insights on the right usage to inform decision-making.

- **Data handling**

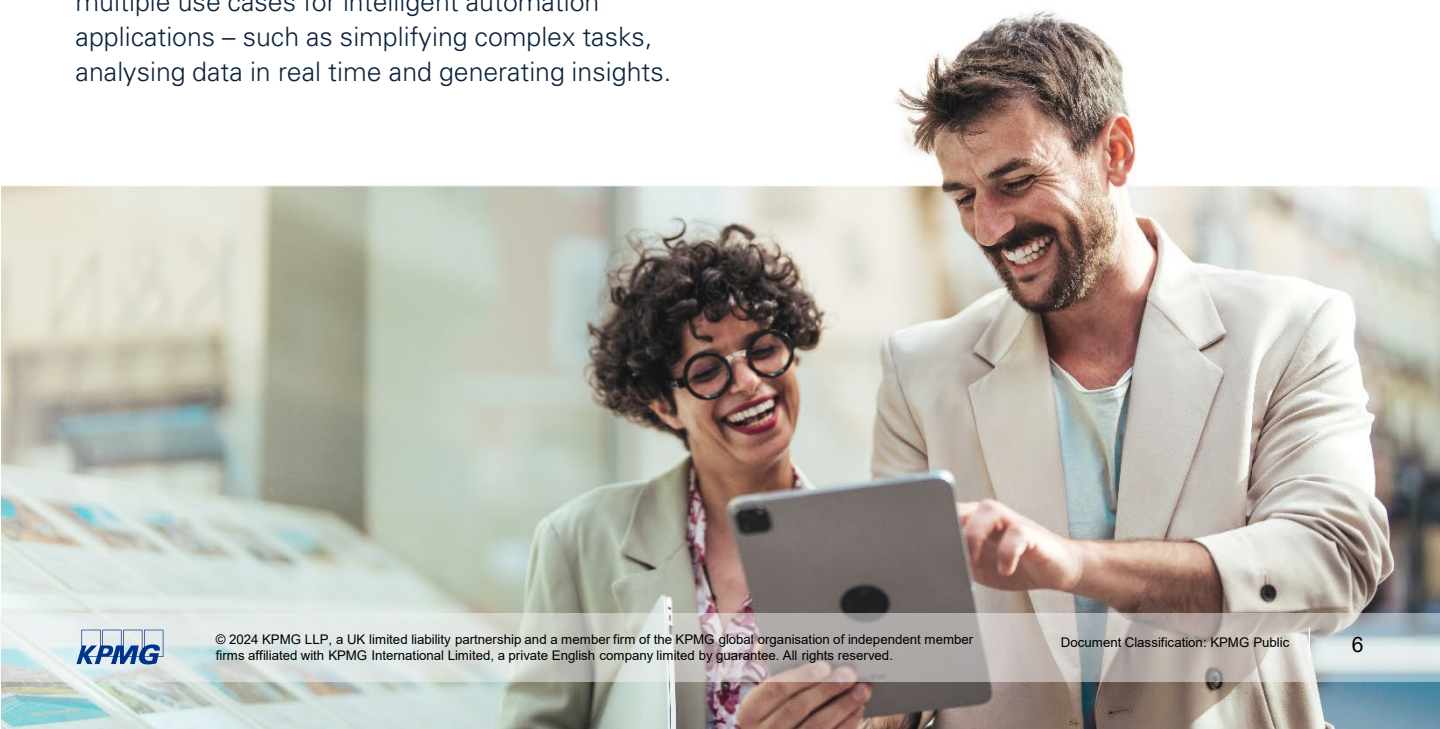
GenAI can create synthetic data from real databases, for use in testing and development without compromising data privacy. It can also support data augmentation and robust backup methods.

And with the rising demand for edge AI, GenAI can help strike the right balance between highly intensive, real-time data processing at the edge, and meeting privacy regulation requirements.

- **Cloud cybersecurity**

GenAI can help build a detailed understanding of cyber incidents, by analysing data from multiple streams. The outputs can be presented as easy-to-understand incident reports to inform mitigation strategies.

3. <https://www.forrester.com/blogs/predictions-2024-artificial-intelligence/>





## Pitfalls

GenAI has immense potential to transform cloud adoption. But as with any new technology, it comes with challenges and risks that organisations must be aware of:

- **Data privacy and security**

The outputs from an AI model depend on the data fed into it. There's a risk that the data used to train models could be misused for purposes other than what's intended.

That can lead to inaccurate and biased outcomes, and expose critical data to breaches. The anticipated rise in the use of synthetic data poses a challenge to data integrity and confidentiality. That's because synthetic data can be easily confused with the real thing (as we've seen with the spread of convincing deepfakes).

- **Ethical imperatives**

GenAI is rapidly taking centre stage in organisations' transformation initiatives and business-as-usual operations. Given its power and increasing importance, its use must be evaluated for fairness, privacy and regulatory compliance.

Ethical frameworks for the responsible use of AI will therefore be vital; but establishing them will be a new challenge for businesses and governments.

- **Lightning speed**

AI has evolved at blistering pace. From basic, single models built on limited data, we now have large language models using almost all forms of structured and unstructured data, and developing a wide range of outputs.

2023 saw a marked spike in AI innovations – a trend that will only continue. Businesses must stay ahead of developments, regulations and policies, while upskilling their workforces with the latest tools.



### Key Takeaway:

The synergy between the cloud and GenAI offers endless possibilities – but also presents risks and challenges for organisations.



# Why KPMG

Our market-leading team of cloud specialists and advisors helps business leaders to harness new technology, and improve the strategic value of their investment in it.

We're continuously on top of the latest AI developments, and intuitively understand their implications for organisations' cloud estates. We know best practice, and have our own, proven methodologies that accelerate transformation, and help organisations reach their goals at optimum speed.

Through our proprietary assets, and our strategic alliances with cloud and technology vendors, we're at the forefront of AI adoption.

**We'll bring you best-of-breed solutions, and accelerate value creation wherever you are in the cloud lifecycle:**

- **Cloud vision** – strategy; business case; operating model; financial management.
- **Cloud implementation** – architecture; migration planning; modern hosting; legacy modernisation.
- **Cloud operations** – managed services; architecture and service governance; compliance, risk and controls; value optimisation.
- **Cloud value** – AI readiness and maturity assessment; AI centre of excellence, responsible use of AI; GenAI deployment.







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**Document Classification: KPMG Public**

Create: CRT154130A | March 2024