

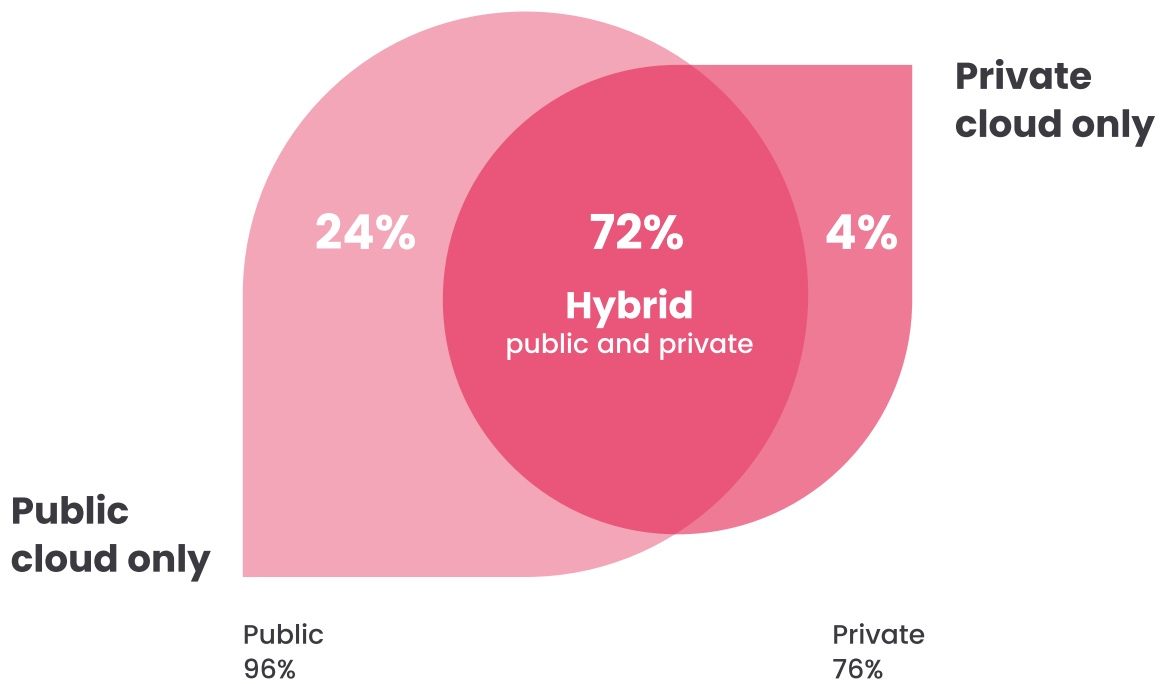
5 Steps to a Successful Cloud Migration

Best practices
and pitfalls

Cloud technology is fundamentally reshaping the way businesses run and operate. It does so by facilitating and enabling organisations to deliver services faster, cheaper, and more efficiently on a global scale, thereby unleashing tremendous operating efficiencies. Smart organisations are either already tapping into the power of a multi-cloud environment and the benefits that it offers or gearing up for the imminent transformative transition. That’s why nearly all (98%) of organisations of all sizes, industries, and regions surveyed for the Flexera State of the Cloud report have adopted at least one cloud service.

TYPES OF CLOUDS USED

% of all respondents



Source: Flexera State of the Cloud Report

Today, the question for businesses is no longer whether or not they should use the cloud. But rather, how to build the right cloud strategy and choose the right combination of clouds to realise key benefits.

To answer the how question, Altamira summarised key insights. The following is a synopsis of recommendations for those, who are looking to make a successful leap of migrating to the cloud, while avoiding common pitfalls.

1. Define your purpose

The successful cloud migration must start with a clear vision and understanding of your organisation's digital strategy. This understanding comes with knowing two factors:

- < Your business model, i.e. how you drive value to your customers, and
- < How available technologies can help your business model evolve

There are three aspects to consider:

RETURN ON INVESTMENT:

The cloud tends to deliver greater efficiency at potentially lower cost than alternative on-premise solutions

AGILITY:

The cloud offers capabilities that allow organizations to adapt in near-real-time to changing market conditions and demand

GEOGRAPHICAL REACH:

If you need to service customers around the world, the cloud can provide vital network benefits, such as reduced latency thanks to local data centers that are available for usage

Another important aspect to consider is sustainability. The average power usage effectiveness score (PUE)—that is, the ratio of energy used for cooling and other infrastructure for energy used for computing—of an on-premises data centre is 1.8. That means the data centre uses almost as much energy maintaining itself as it does on its primary function.

This is another area where cloud solutions bring real value. The major providers use AI to absolutely optimise the energy usage. They achieve a PUE of around 1.125. This will be a growing factor as Enterprises focus on meeting energy and carbon targets over the coming years.

2. Perform a thorough assessment

As the next step, it is recommended to make a thorough assessment of your organisation's readiness. Namely, the investigation should involve answering three of the following questions:

< **Do you have the right people?**

This question drives the other two since talent makes everything else possible

< **What is the maturity level of your processes?**

The Gartner IT Score or Capability Maturity Model Integration can help you in making this judgement

< **Is your organisation ready and willing to change?**

In other words, does it have the right mechanism to produce a change of this magnitude? And is the reason behind the change compelling enough to justify the efforts that will be required to carry out the transition? It covers the efforts required to overcome the challenges that will prop up during the process.

In addition, if you do not have the right skill sets in-house, you will have to invest in training. You can't go and just hire all sorts of new people. Instead, take a look at your team's potential to train in the skills you need.

Working with clients is about building a development culture and competency framework that produces champions with crucial skills. These champions can then share knowledge and lead teams through the transformation. It is these people who will help you get through the initial application steps - the low-hanging fruit - to tackle the really hard pieces of transitioning from legacy applications and infrastructure to the cloud.

After defining your digital transformation strategy and assessing your organisational capabilities, it's high time to investigate which cloud-managed services will best help you achieve your goals. Most likely, the best solution will comprise a combination of cloud providers.

3. Understand the strengths and weaknesses of cloud offerings

Every cloud service has its unique advantages and offerings. There are three largest players being:

AMAZON WEB SERVICES (AWS)

is the leader of cloud services and very strong in areas of computing, databases, IoT/IIoT, messaging and notification, governance, infrastructure as code, SDK libraries, and other services

MICROSOFT AZURE

offering is the second-most popular cloud provider; it has solid security, identity and access management, machine learning (ML), Dev/DevOps, operations tools, and governance capabilities. It also has the best geographical reach among cloud providers. A lot of people look no further than Microsoft Azure. And for good reason, it is a go-to cloud to integrate into your business. Especially if the business is already heavily reliant on a Microsoft technology stack for powering its software solutions, adding Microsoft Azure to the ecosystem seems like a no-brainer

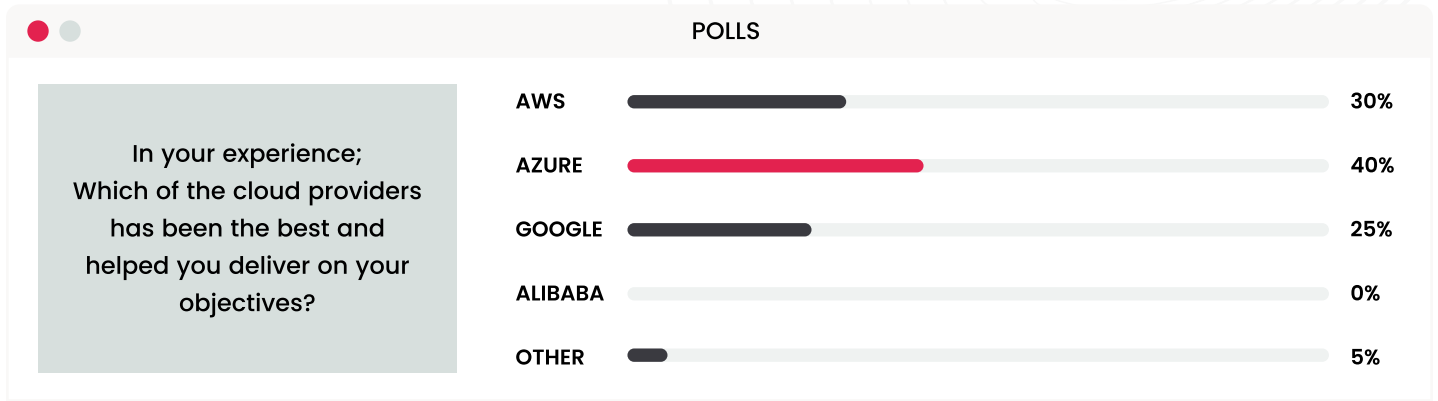
GOOGLE CLOUD PLATFORM (GCP)

has strong offerings in serverless and container-managed services, AI and ML, big data, network and API management, hybrid and multi-cloud support, mobile capabilities, and security

Although AWS, Azure, and GCP are the three biggest providers, they are not the only cloud providers with robust service offerings. Oracle, IBM, and Alibaba are working hard to increase the reach of their clouds. And the big three are not available everywhere. For example, only Oracle operates in Saudi Arabia, making it the only option in that country.

Even so, when going with a cloud with a smaller customer base such as IBM, Oracle, Alibaba, or any other cloud outside of the big three group, the main challenge becomes getting the right talent in place to set up and manage the deployment and integration of cloud systems. This is due to the fact that fewer specialists have experience with the cloud software offerings of these smaller players. Sometimes, it is hard to find relevant professionals to employ, or it becomes more difficult to train existing employees in these technologies.

Technafresh floated a poll to gauge what cloud services best served their audience. Members of the audience voted Microsoft Azure to be their favourite at a greater rate (40%) than for any other. AWS came next, with nearly a third (30%) of respondents saying it was most helpful for meeting their objectives.



As a result, there is a curious interrelationship to examine between Amazon coming second in the poll, whilst enjoying unequivocal statistical leadership in global cloud services in terms of market share. This is likely reflective of Amazon’s head start in the cloud space. However, Microsoft Azure, although playing catch-up, is now seeing tremendous growth and momentum in expanding its customer base. A quarter of the poll respondents (25%) named cloud services from Google as their top choice. Finally, no respondents elected Alibaba as their cloud provider of choice. And just (5%) of participants selected “other providers” as their favourites.

4. Know how technology can benefit your business and customers

Sometimes organisations focus on technologies rather than the benefits they provide. That is a danger because getting distracted by the next big thing in technology can lead businesses to waste resources on technology that they do not truly need to create value.

The best technology in the world will do your organisation no good if you cannot get your business leaders to sign off on it. That is why it is critical to present technology to business leaders in terms of what it can do for them and the company. One obvious business case to make for the cloud is the predictable costs of using only what you need. This is a completely new way of looking at costs when you come from a data centre where you have a fixed rate of costs. That means when you do not have anyone using it, your costs go almost down to zero.

It is also important to focus less on cloud technology itself and more on cloud-enabled business functions. Technology is seen as a cost that does not necessarily directly give value to the business. The things [applications, experiences, and interfaces] on top of it—that generate the data and the insights—that is where the value is.

Now when you understand what you want from the cloud and what it can do for you and your business, and you have selected the right providers for your use cases, it is time to make the move. Consider following a simple four-step playbook for when it comes time to implement your cloud solution:

1. ASSESS

Review your existing application and data assets to find those with the greatest potential for ROI in the cloud

2. PILOT

Start with a relatively small project that will allow you to test ideas and architectures and help build the business case

3. MIGRATE

Define the best cloud migration strategy for each of your assets and move them to the cloud

4. GOVERN AND OPTIMIZE

Bring together a multidisciplinary team to collaborate on growing and maintaining your cloud implementations. That should include establishing policies for security, cost, access, and data cleansing

When assessing pilot project opportunities, you need to give a lot of thought to data. At the initial phase of the migration to the cloud, it makes sense to plan and gather data in a Data Warehouse, if possible, or, alternatively, in a Data Lake. This will enable you to structure the data, get rid of duplicates, and remove corrupted or no longer valid data. Valid and structured data can become a powerful basis for intelligence in all forms (AI and BI). Moreover, this will simplify the cloud migration process. When the company moves its assets to the cloud and adopts a cloud-native approach, there might not be a need to keep all of the data in one place or even one cloud.

The concept of Service Mesh as a flexible mechanism of communication between the assets across hybrid cloud platforms will enable the organisation to use the data and get the most out of it.

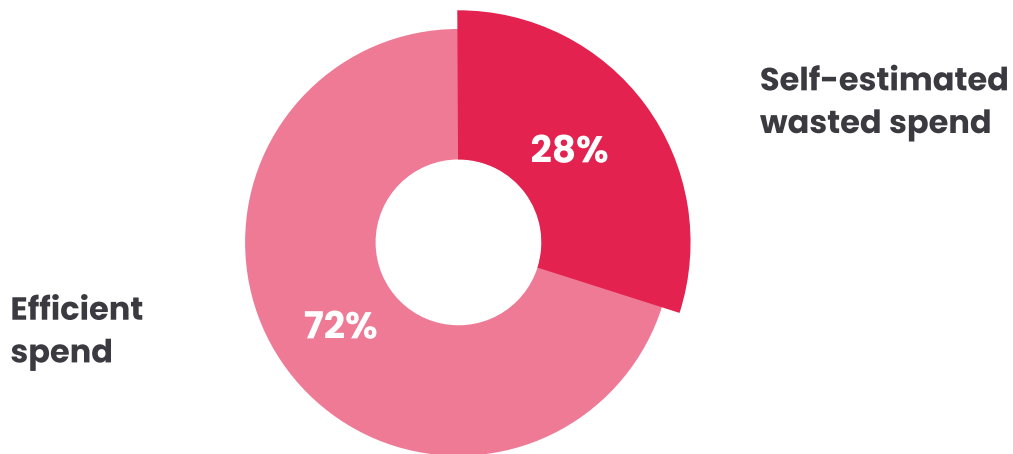
One of the common pitfalls is the Jevons paradox, which stipulates that as soon as resources become cheaper and easier to attain, people start using them more.

For example, it can take weeks to increase in-house IT capacity. Although that has its drawbacks, it also makes overspending harder. However, in the cloud, IT teams can spin up groups of virtual machines, for example, within hours or even minutes. This can result in teams acquiring excess capacity without enough forethought, for “temporary” testing purposes, and “just in case” because it initially seems so easy and cheap.

The Flexera survey found that organisations overspend on cloud services by an average of (23%) and waste (30%) of their cloud investments.

PERCENTAGE OF CLOUD SPEND WASTED

% of waste of all respondents



Source: Flexera State of the Cloud Report

However, as companies become familiar with the flexibility and power of the cloud and the access it provides to the latest technologies, such as text-to-speech, computer vision, big data, and other Machine Learning and AI capabilities, it is clear that applications and services can evolve in interesting ways, much faster than in the past.

Looking to the future

To sum up, cloud use will only grow in all kinds of businesses for the foreseeable future. More organisations are going to need to be technology companies.

It is anticipated that increasingly distributed architectures and mesh networking will be the future of the cloud. Companies and individuals will lend and borrow CPU time on their devices to form distributed platforms where everyone is part of a huge service mesh.

Also, we may expect the growing data sovereignty concerns to drive customer choices in cloud providers and offerings, as well as the increasing value in disassociating data from specific cloud platforms to enable greater flexibility to operate in different regions and more agility for responding to market shifts.

In the meantime, follow the steps outlined here to transform your business with the help of the cloud and gain needed technological traction and momentum for enhanced efficiency for your business in the shortest amount of time possible.

About Altamira

Altamira is a global digital transformation partner, specializing in helping organizations scale faster and more sustainably than anyone else.

With market-leading capabilities across all aspects of product and technology development, we make a difference where it matters, when it matters.

- < Mobile and web product development and delivery
- < Fast and efficient scaling of your in-house development team
- < Boosted time to market
- < Rapid MVP creation and deployment
- < Expert consulting and technical auditing

We know what it takes, where the issues arise, what to do to solve them, and critically have the ability to affect change quickly and cost-effectively.

Not only do we provide the dedicated teams and experts, but also help our customers to use them effectively, enabling them to continually track project status and time, assess analytics, make quality decisions through smart dashboards, and be able to take an active part in the project development.

Have a question? Let's talk.

We love to help our clients be successful!

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