Capgemini

HOW TO AVOID TURBULENCE
IN **CLOUD**
MIGRATION

CLOUD ADOPTION IS ACCELERATING, CLOUD STRATEGY IS LACKING

These days companies are eager to move their operations to the cloud. Recent statistics by Gartner back this up: 80% of companies will shut down their traditional data centers by 2025,[1] and 92% of enterprises already have a multi-cloud strategy.[2] But there's a lingering question:

how well does the cloud strategy line up with the company's long-term business objectives? Without a strong strategy and skilled people, a business will be unprepared if it runs into strong headwinds that threaten to knock it off course.

[1] https://www.gartner.com/smarterwithgartner/the-data-center-is-almost-dead
[2] https://resources.flexera.com/web/pdf/report-cm-state-of-the-cloud-2021.pdf

THE DIFFERENCE WILL BE IN THE STRATEGY

Most organizations have legitimate reasons for wanting to transition from on-premises domains to distant cloud provider servers. After all, it's expected that they want to make use of cloud technology's many business-changing capabilities. The benefits speak for themselves:

IT modernization:

- Reduced TCO through app and infra consolidation

- Sustainability through on-demand IT services

- Improved security through codified and automated security decisions and policy

- On-demand scalability using cloud providers' capacity, automation, and orchestration

- Faster service delivery through automation of processes and operations

Business innovation:

- New, advanced use cases that create added value for the business

- Fast reaction to market disruptions with agile cloud-native technologies

- Optimized business operations using cloud-based AI/ML

- Smarter decision-making driven by real-time data insights

- Better customer experiences through instant customer feedback and insight

- Improved employee productivity through IT self-service

Cloud migration can be motivated by various reasons. They may range from practical concerns like an expiring data center lease to ambitious goals like modernizing applications, driving innovation, expanding the business, reducing IT carbon emissions, and taking advantage of the cloud's advanced AI/ML and IoT services, which are not available on-premises.

Since moving to the cloud typically involves transferring digital services, databases, applications, and other IT resources through rehosting, replatforming, and redeployment, many solution providers' migration methods will be similar in nature. However, their approach to helping organizations decide on the right motivation and strategy for a cloud move could be either spot on or completely off. That's why it's essential to carefully evaluate the options available and select an experienced partner that can prove they can effectively meet an organization's needs and goals. This proof will be evident in the early planning stages.

STRATEGIZING FOR SUCCESS:
KEY CLOUD MIGRATION FACTORS

Which cloud transformation strategy is best? Should it include one or multiple cloud providers? Public or hybrid? Agnostic or platform-dependent solutions? The whirlwind of questions can seem daunting. But a good partner will have the right answers and together with the organization will consider key parameters before planning any cloud move:

The business needs. Prioritizing business needs and targets is crucial, as organizational changes can directly or indirectly impact business. Defining business objectives is the first step in public cloud adoption, including evaluating current problems and expected benefits.

Choosing the right cloud provider. Although this is crucial, it can also be very confusing. Cloud providers will handle confidential transactions and impact the core of an organization's IT strategy. Thorough evaluation and consideration of various parameters and service comparisons are necessary to determine the best fit for what the business wants to accomplish. Many cloud providers have sector-specific services. For example, a pharmaceutical company

can make the most of a provider's pre-built healthcare functionalities, which could entail leaving behind some of their on-premises applications. As part of this implementation, the focus on an agnostic solution and/ or a sovereign cloud should also be considered.

Cost of cloud migration and tools. Cloud migration is a complex project that involves several phases and significant costs. Along with considering the financial impact, companies should also weigh the potential carbon footprint savings. Fortunately, many cloud providers offer cost estimation calculators to help tally up the expenses involved in the migration, including the services of cloud experts. It's also essential to factor in the effort needed to adapt the organization and reskill employees.

Cloud service model. Public cloud providers offer different service models, such as infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS). The service model should be considered based on the type of compute, data, storage, applications, and existing software licenses.

Sustainable IT. IT operations have a significant carbon footprint, but they also have the potential to contribute to CO_2 savings. One effective way to reduce this footprint is by migrating to a cloud-based IT landscape with a better PUE (power usage effectiveness) value and optimizing architectures through cloud services. Additionally, selecting data centers in regions with a cleaner energy mix can help reduce carbon emissions. It's also important to develop a corporate social responsibility strategy that addresses environmental impacts across different business areas.

The cloud approach. Opting for a hybrid or multi-cloud approach helps avoid vendor lock-in and reduces the risk of a single point of failure. Recent research suggests that large enterprises are increasingly adopting at least two cloud providers to run mission-critical workloads and applications, and this trend is likely to continue in the future.[3] Adopting a hybrid approach also offers additional benefits such as improved data security and high availability.

Security and compliance. Although the cloud is equally secure as an on-premises environment, security is still a top concern for organizations during any migration process, as new environments can introduce vulnerabilities. To address this, it's essential to prioritize security and compliance by implementing appropriate frameworks and access controls in advance.

Training IT staff. Organizational change requires staff to adapt to and work in an unfamiliar environment, and the introduction of modern technology in a company is no exception. To ensure a smooth migration, there must be a plan to train IT personnel on cloud management areas such as AWS, Microsoft Azure, GCP, and other cloud vendors.

Lastly, managing the strategic movement of cloud and operations requires expert assistance. Partnering with an expert solution provider to manage cloud infrastructure and applications can help organizations meet their SLAs, ensure system uptime, and receive timely 24x7 support.

[3] https://www.prnewswire.com/apac/news-releases/97-percent-of-enterprises-in-asia-pacific-using-public-cloud-have-adopted-a-multicloud-infrastructure-provider-strategy-301787935.html

A DISCOVERY ASSESSMENT CAN ENSURE A SAFE AND SMOOTH DEPARTURE

Almost every organization has some technical debt. According to a recent OutSystems report, "The growing threat of technical debt," a survey of 500 global IT leaders revealed that 69% acknowledge that technical debt is slowing their organization's progress.[4] That's why, in addition to a solid cloud strategy, it's often a good idea to assess the current IT landscape, as moving rarely used or low-performing applications will only increase cloud storage and run costs, not to mention complexity. Although cloud services can significantly transform IT operations, if something isn't working well on-premises, it probably won't run any better in the cloud. That's why a simple lift and shift — redeploying the on-premises application infrastructure in the cloud with few to no changes — will bring unsatisfactory results.

Conducting a thorough IT landscape assessment is essential for organizations to gain visibility into their applications, servers, and infrastructure, and understand their management locations. This assessment can help determine which IT assets are eligible for migration, which ones should be retired, and which may need to undergo replatforming (upgrade and revise the application to make it cloud ready), refactoring (re-architect

the application for a cloud platform), or rebuilding (create a better version of the application in the cloud). If none of these options are suitable, replacing the application with software delivered as a service is also a good alternative. The design of the software architecture in the cloud determines how much hardware/network and electrical power is required. Therefore, a good practice is to prioritize extensive architecture modernizations, especially for legacy applications.

Capgemini has created a unique approach to IT modernization that provides organizations with fact-based decisions to accelerate change. Our economic application portfolio modernization (eAPM) Studio is a SaaS application that can create a digital twin of any IT landscape. Because humans respond to and process visual data better than any other type of data, all IT assets are shown using bubbles, treemaps, and Sankey diagrams. These visual representations show exactly how application data is interlinked across key services, making it easier to identify which applications and services can be safely redeployed in the cloud and which should be replatformed, refactored, rebuilt, replaced, or retired.

[4] https://www.outsystems.com/1/growing-threat-technical-debt/

DETERMINING THE CLOUD POTENTIAL OF BMW's HEFTY APPLICATION PORTFOLIO

Leading global automaker BMW Group recognized the importance of optimizing its product and service development process by modernizing its IT landscape. With an increasing demand for software solutions, the company aimed for shorter development cycles, greater scalability, and automation. They wanted to leverage cloud technology to provide improved network services for production and logistics, with a specific focus on customer, vehicle, and factory areas. However, before migrating to the public cloud, they needed to evaluate the cloud readiness of thousands of applications and determine the real value of moving them.

Thanks to a comprehensive application assessment, the automaker was able to collect, analyze, and visualize application data from its existing sources. The results of the assessment provided insights into the cloud migration potential of the company's IT portfolio. Based on their objectives, they received detailed recommendations for each application, including calculations for the migration effort for all possible scenarios as well as potential blockers and impediments.

The cloud roadmap supplied to the automaker included a simulation of instance pricing for databases and application servers for different cloud providers. Moreover, the roadmap highlighted the potential CO_2 savings by shifting applications from the current server structure. With this information, the company can now confidently manage their cloud transformation journey, fully understanding the risks and benefits, and take advantage of the latest technology advancements to outpace its rivals.

More info on this story here.

LET OPPORTUNITY COINCIDE WITH PREPARATION

While moving to the cloud can offer numerous benefits and opportunities, it also comes with many challenges, such as multi-cloud complexity, security, cost, legacy operations, and skills shortage. It's only a truly wise decision if accompanied by a well-planned and executed strategy that lines up with expected business outcomes. But first there must be a motivation for going to the cloud, and it must be clearly defined and agreed upon by all company stakeholders before proceeding with implementation.

With the right skilled guide at the helm, navigating the cloud can be smooth sailing. By taking a strategic and deliberate approach to cloud migration, organizations can unlock the full potential of cloud technology and soar to new heights of productivity and innovation.
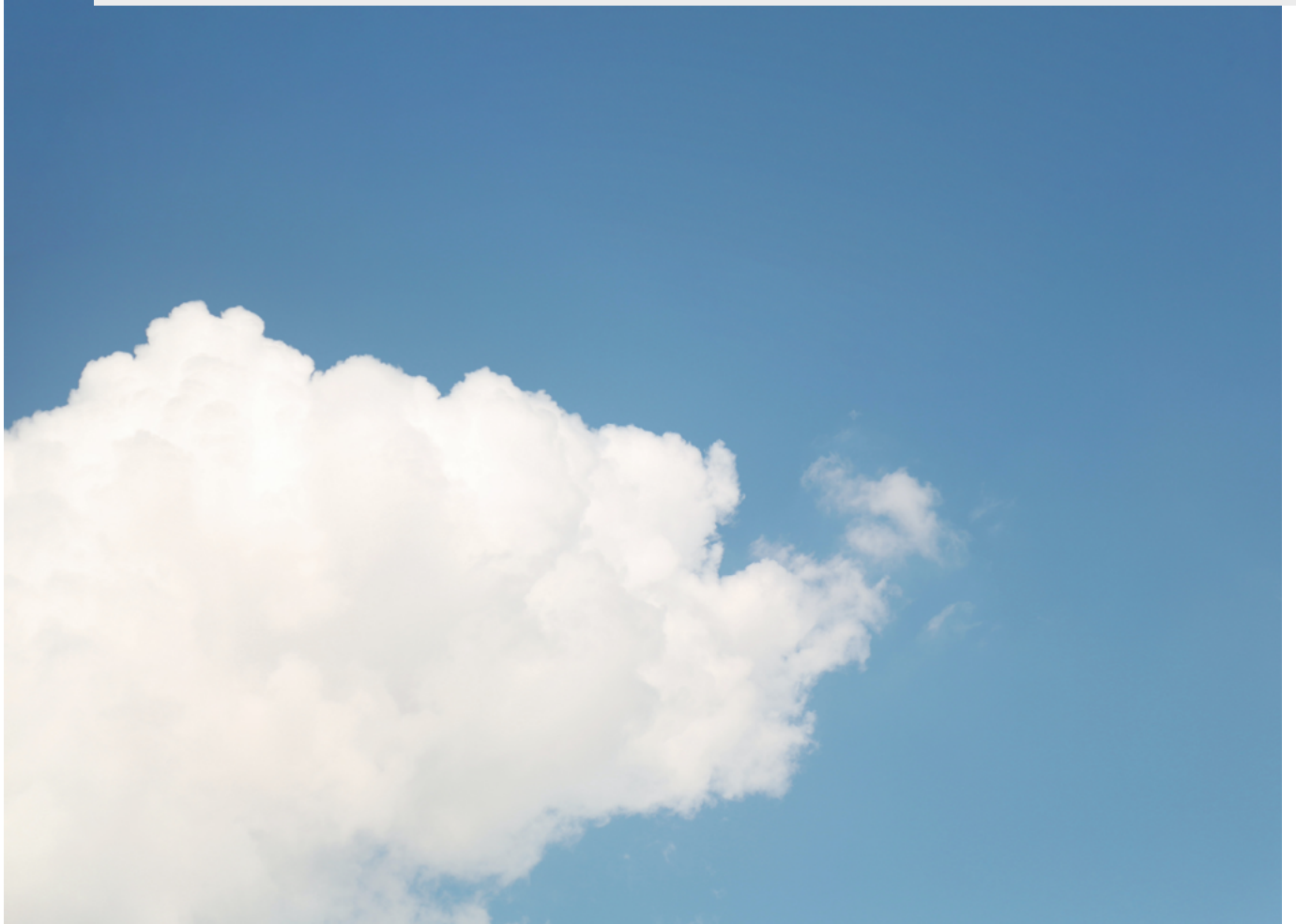
Capgemini

About Capgemini

Capgemini is a global leader in partnering with companies to transform and manage their business by harnessing the power of technology. The Group is guided everyday by its purpose of unleashing human energy through technology for an inclusive and sustainable future. It is a responsible and diverse organization of over 360,000 team members in more than 50 countries. With its strong 55-year heritage and deep industry expertise, Capgemini is trusted by its clients to address the entire breadth of their business needs, from strategy and design to operations, fueled by the fast evolving and innovative world of cloud, data, AI, connectivity, software, digital engineering and platforms. The Group reported in 2022 global revenues of €22 billion.

Get The Future You Want

www.capgemini.com

For more details contact:

Marius Vöhringer
Leader for Cloud Transformation & Sustainable IT
marius.voehringer@capgemini.com

GET THE FUTURE YOU WANT