



# Cloud redefining the technology landscape in Vietnam

EY Cloud Readiness &  
Adoption Survey Report

October 2022





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# 1 Introduction

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One of the major avenues of disruption post-COVID times has been the adoption of cloud technology. Although cloud adoption has accelerated over the past several years, it has truly emerged as a catalyst in driving business transformation amidst growing uncertainty. Cloud now plays an integral role in helping businesses bridge geographical boundaries, sustain momentum, and address inconsistencies in non-scalable on-premise Information Technology (IT) infrastructures.

Cloud adoption among organizations is gaining momentum every day. Globally, cloud services spending increased by 49% to over US\$450 billion during the pandemic. Cloud computing is becoming the fabric for new digital business models fostering extreme fluidity among business, IT, product design, marketing, and the organizational workforce.

With companies across sectors adopting cloud technology, and modern platforms being cloud-native, clients are increasingly exploring the cloud option for their enterprise applications. In addition, cognitive services on the cloud are a profound shift in empowering client developers and data scientists to accelerate product development and reduce time to market.

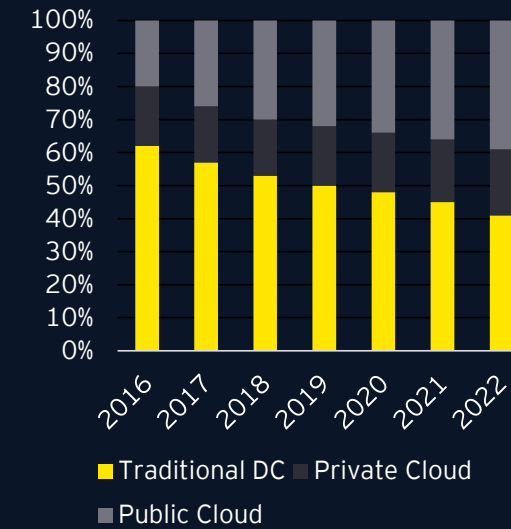
According to the findings of the survey conducted by EY Vietnam, the cloud market in Vietnam is expected to grow to about US\$475-500 million by 2025. Organizations in Vietnam have shown a high likeliness to explore and adopt multi-cloud, embark on enterprise-wide cloud transformation, and seek verticalized industry solutions in the cloud. But they are finding it challenging to transform, operate, and govern with increasing cloud adoption.





According to International Data Corporation (IDC)'s Public Cloud Services Spending Forecast 2018, the adoption of public cloud services has drastically increased by approximately by 20%.

According to the Ministry of Information and Communication, there are 27 cloud computing data centers invested by 11 domestic firms with more than 270,000 servers in Vietnam. The market is forecast to be worth US\$500 million by 2025.



Source: IDC 2018 - Worldwide Cloud IT Infrastructure Market Forecast by Deployment Type, 2016 - 2022 (shares based on Value)

# EY Cloud Readiness & Adoption Survey

The Cloud readiness and adoption survey was conducted by EY Vietnam across more than 150 businesses in Vietnam. The survey participants include large domestic businesses as well as multi-national corporations which have operations in Vietnam. The respondents included CXOs like CIO, CTO, CFO, CDAO and/or CDO.

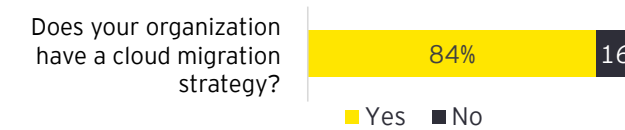
**84% of surveyed organizations have a keen interest in designing a cloud migration strategy. The survey had major participants from banking, insurance, and the rest comes from various other sectors.**

Cloud, regardless of its model types, has become one of the key terms when local organizations from different sectors talk about transforming themselves to adapt to the current fast-paced and competitive market. EY Vietnam's cross-industry survey shows that 84% organizations surveyed have responded saying that they have a cloud migration strategy already in place (Figure 1). This cloud adoption trend is happening in both the private and public sectors, resulting from several key drivers.

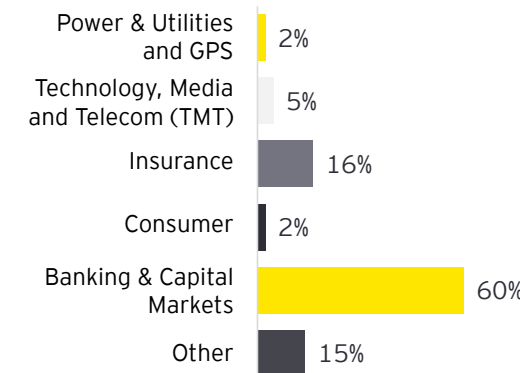
We realize that these key drivers are quite diverse and without any noticeably differentiated group amongst themselves as shown in Figure 2.

Most organizations agree that their service performance is of utmost importance and needs to be enhanced and benefited by adopting cloud.

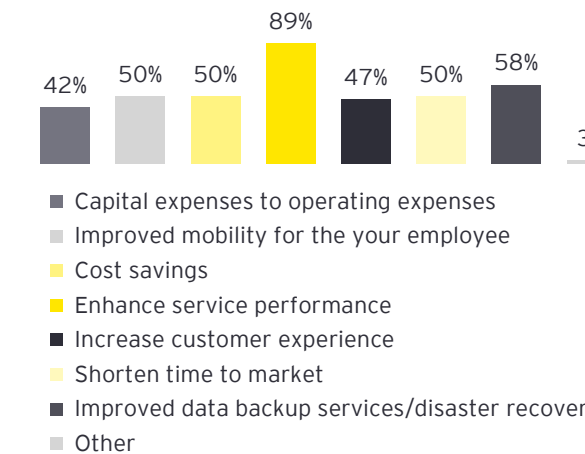
**Figure 1:** Percentage of organizations per industry participated the survey



**Participants per sector**



**Figure 2:** Key drivers of potential benefits for cloud adoption amongst local organizations



The results also show that there is quite a balance between customer-servicing and operational-efficiency perspectives, showing the fact that local organizations are still undecided in terms of what should be their top goals and priorities to adopting cloud, beyond enhancing service performance.

Given the high cost of on-premise infrastructure, it needs to be analyzed further as to why cost-saving does not figure as one of the top considerations to adopting cloud.

Banks are the most active players in the Vietnam market embark on the cloud adoption journey. All the models' area of interest:

- ▶ Public/Private cloud
- ▶ Hybrid cloud/Multi-cloud

and we have noticed significant openness towards adopting public cloud.

Close to 80% of the survey participants have the technology, risk, and governance as the primary agenda for embarking on the cloud adoption journey while maturing the process and creating an organizational model.

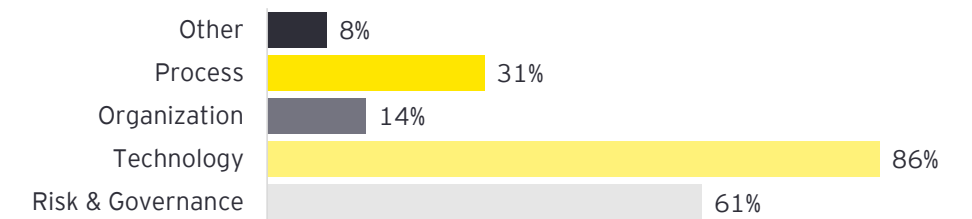
However, the terms multi-cloud and hybrid cloud are often confused and used interchangeably. While multi-cloud refers to the use of multiple public cloud services mostly from different cloud service providers, hybrid cloud refers to the inclusion of at least one private cloud together with other public cloud services.

However, the way the choice of cloud models is being done and the key drivers that organizations are adopting reflect that they a holistic approach to cloud adoption is still missing in most cases. One of the

reasons could be that cloud adoption is still viewed as a technology initiative and should be known and led by the IT and technology people only.

EY believes that a complete cloud adoption approach should involve various parts of the organization, as part of the overall transformation journey to adapt, achieve business strategies, and becoming sustainable. However, the organizations surveyed reflect a different opinion (Figure 3).

Figure 3: Dimensions assessed by local organizations while starting cloud adoption journey



We also observed that in the best-case scenario, the cloud strategy is being defined but the implementation timeline is very stretched, normally much behind the targeted pace (Figure 4).

Figure 4: Organizational cloud journey stage



Every organization's cloud journey is unique. The key phases of a journey to the cloud include:

- ▶ Discovery and Evaluation
- ▶ Readiness assessment
- ▶ Cloud adoption and Migration roadmap
- ▶ Cloud migration implementation
- ▶ Others (e.g., Business case development, Continuous improvement, etc.)

To succeed in the transition, an organization needs to visualize its desired goal state, understand cloud availability and adopt an agile approach to narrow the gaps. EY market survey shows that while the majority of businesses are in the cloud migration deployment phase in some shape or form, a few are still in the process of assessing their readiness for the move to Cloud Technology.

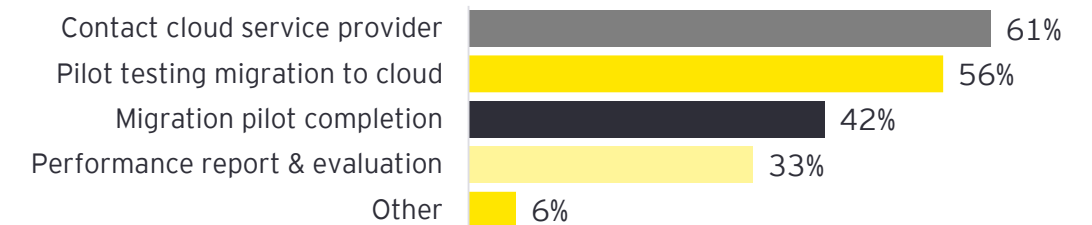


25% surveyed organizations are in progress to evaluate the "Total cost of ownership" to "Benefits" from the cloud and 28% are working on designing their cloud journey. Approximately 35% are looking at a go-to-market strategy.

To establish a strong cloud foundation for the organization, an organization needs to define a clear cloud adoption strategy in advance. We appreciate the value of the Proof of Concept (POC) right at the "Design" phase approach in helping organizations to reduce business and technical risks associated with their cloud migration journey. Thus, Design is important for businesses to experience

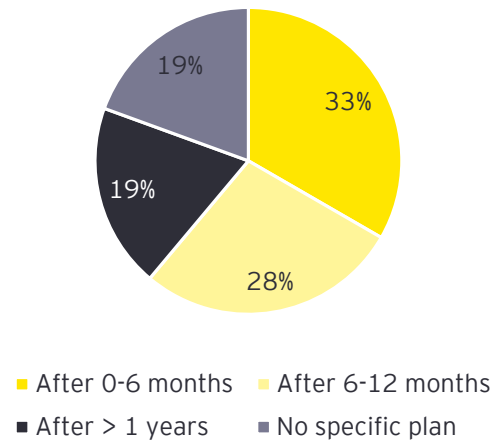
the benefits of cloud technology. The EY survey shows that organizations have implemented various activities to migrate business applications to the cloud such as contacting service providers for conducting POC sessions, evaluating the application, and piloting after migration in terms of performance in the cloud computing environment (Figure 5).

Figure 5: POC activities for cloud migration of business applications



In the plan for the upcoming migration of business applications to cloud computing, most businesses share their intention to complete in one year or less, which seems to be good news for the local cloud market in Vietnam (Figure 6).

Figure 6: Business applications cloud migration plan



Nevertheless, the realization of strategy/ implementation is always the hardest part, and the situation is the same with local organizations. Without a holistic and business-driven approach as mentioned earlier along with a well-designed POC plan, we do see organizations struggling with their cloud adoption journeys. This is when we need to look at the challenges in

the local context to understand why there are still many cases where businesses moving to the cloud proved to not only be inefficient but also costly. Among the various listed common challenges, the EY survey shows that changing technology while ensuring information security at the same time are the two most daunting challenges facing businesses today.



The hybrid model of private and public cloud has proven well and clients have started adopting this model to cover up for delays coming from cloud service providers to set up data centers in Vietnam.



# So how should organizations overcome the various challenges for successful cloud adoption?

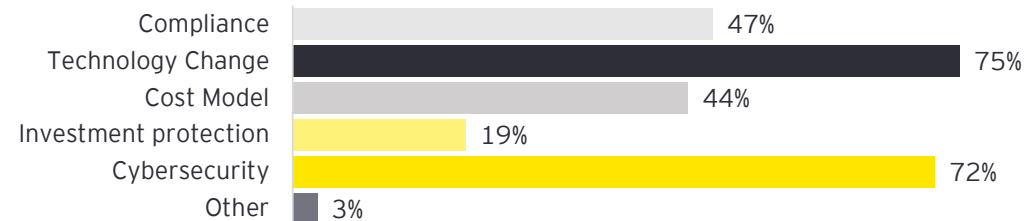
We observe the need to train people on appropriate awareness and mindset about cloud, as well as on the technology audit capabilities to clear the apprehension about regulatory compliance.

We also emphasize the importance of a comprehensive risk management framework, which will help organizations develop a risk-prevention approach for their cloud adoption. This will require changes at the organization-wide level, across people, processes and technologies.

We will discuss this more in the next section when it comes to a broader topic of cloud and other technology roles in the digital transformation journey.

The mentioned challenges are the root causes of the disconnection between ambition and the reality of local organizations. Also, complying with the cloud regulations has also been the focus of various businesses. While there have been multiple Circulars related to the cloud, there is a lot more clarity desired in terms of fully adopting the cloud. This leads to the fact that half of the surveyed organizations see compliance as a barrier to their cloud adoption journeys (Figure 7).

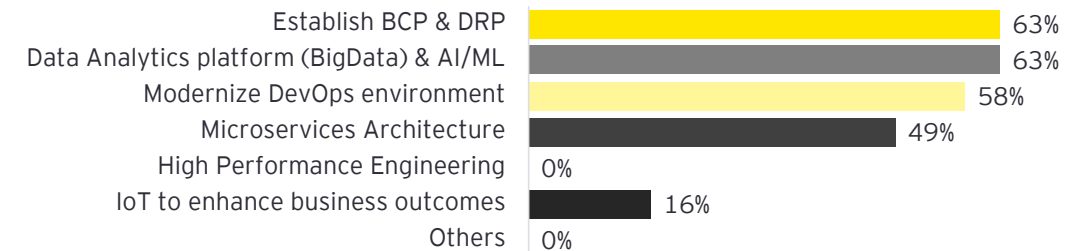
Figure 7: Organizational challenges for cloud adoption



Today around 65% of the key objectives to adopting the cloud are around establishing Business Continuity Plan (BCP), Bigdata, Artificial Intelligence (AI), Machine Learning (ML), Development and Operations (DevOps), and integrating microservices. Such large-scale demands will eventually result in cloud adoption to support customers' needs.

Cloud in the Digital Transformation context - Cloud technology is probably one of the most transformative initiatives for driving digital transformation, laying a foundation for innovation and efficiency. If the cloud adoption strategy, as well as the implementation, are not well executed, it will create technical debts for an organization. Let's look at the list of initiative categories that local organizations focus on the most while embarking on their digital transformation journeys (Figure 8).

Figure 8: Most focused initiative categories in Digital Transformation journeys



We see that ensuring the BCP & Disaster Recovery Plan (DRP) are the top priorities, together with Data Analytics. This could be a result of the pandemic where most organizations experienced the disruption of their business-as-usual (BAU), so this could be a natural reaction to mitigate that risk during digital transformation. Local organizations are also catching up with the transformation trends in Big Data, Microservices architecture, etc. The

interesting point here is that none of the surveyed entities have initiatives with a High-performance engineering perspective.

Internet of Things (IoTs) is also regarded as a lower priority by local organizations, given their dependency on devices. Also, we find that IoTs can be costly to start with, especially in local market context.

When conceptualizing Robotic Process Automation (RPA) and AI/ML, clients have found it helpful to think of AI/ML as the brain, and RPA as the hands. When the two are combined, clients find most of the complex tasks could be completed in short span of time.

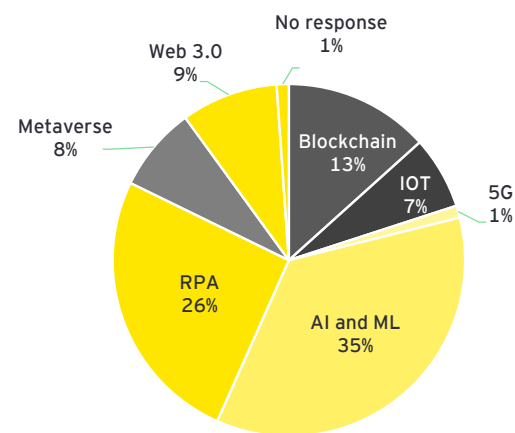
As organizations continue their digital transformation journeys, the culture of decision-making with the use of data has significantly increased compared to traditional approaches. Via the use of applications hosted on the cloud that interact directly with end consumers, organizations have benefited from boosting sales through cloud and big data analysis to serve customers and capture customer footprint. Big Data technologies play a critical role with the growing volume of digitized data, consolidating and mining different data sources via focused data architecture solutions (e.g., Datawarehouse, Datalake, Customer Data Platform, etc.). At scale, AI/ML, and Blockchain use Big Data concepts and cloud solutions to produce meaningful insights and actions for organizations. (Figure 9).

RPA has been implemented but overall, we see it executed in a fragmented manner. Most of the time, the end-customers journeys including both front-end and back-end processing are not 100% automated by RPA, instead, automation has been done piece-by-piece. In the local market, Blockchain and Metaverse are still in their very early days. Globally there are cloud solution vendors who package these emerging technologies

(AI/ML, Blockchain, etc.) into their cloud platforms, making it easier for the organization to integrate, develop, and make use of the benefits of all those.

At this point, we may have a certain understanding of the current cloud adoption status at local organizations. In the next section, we will analyze how they should move forward given all their current challenges and approach.

Figure 9: Focus on other emerging technologies



## How to move forward with the cloud adoption journey

To embark cloud journey, an organization must have a holistic view of the objectives and outcomes expected from the adoption of cloud services. A clear, business goal and outcome will assist in aligning key success factors.

Also, an understanding of and having a strong risk and compliance governance framework (GRC) are very important. The development, security, and operations (DevSecOps) model should be matured and maintained to have a holistic and transparent approach.

On the people front, the leadership should emphasize awareness and change the mindset of all employees of the organization. This cultural change is time-consuming, and it is quite underestimated by local organizations in Vietnam. Along with upskilling existing employees to meet the pace, in some cases

we do see that organizations also need to look for fresh cloud talents from the market as well, to make sure they have the right skill sets and mix in a timely manner.

Organizations are also worried about the huge investment required in the technology to move to the cloud, due to their current lack of readiness. We also recommend that investment and cost of ownership should be clearly defined with respect to the benefit and outcome of cloud adoption. As far as the cost model is concerned, including Operating Expenses (OPEX), Capital Expenditure (CAPEX), Total Cost of Ownership (TCO), Return On Investment (ROI), etc., it is a must to decide how much to invest by phases.

A holistic approach covering all these various aspects will help many organizations contemplating Cloud Adoption to actually be successful.

# 3 How EY can help

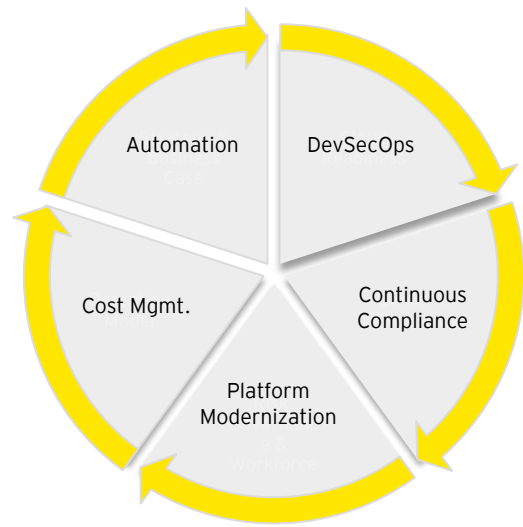
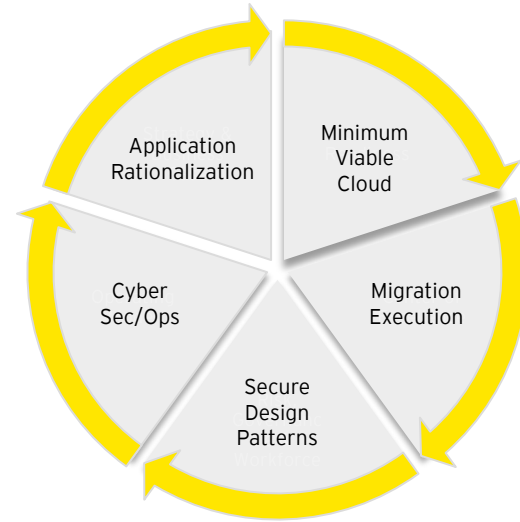
EY is named a Leader in IDC MarketScape Worldwide Cloud Professional Services, 2022. We offer various services to help clients achieving end-to-end cloud adoption journeys over Strategy, Adoption and Optimization.

Source: IDC MarketScape: Worldwide Cloud Professional Services 2022 Vendor Assessment

EY Cloud strategy services include not only assisting clients to develop technical cases but also the business cases and cloud strategy to help ensure alignment to the overall business and IT strategies; cloud readiness assessments across key domains including risks, compliance, technology, process, and organization; designing and building cloud governance and operating model, cloud risks and controls, Cloud Center of Excellence (CoE) with charter and Responsible, Accountable, Consult and Informed (RACI) matrix.



As clients move to the cloud adoption phase, we provide cloud architecture services to help enable ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction; design and execute cloud adoption plans including application disposition, prioritization, and application migration; design and deploy cloud environments with secure guardrails to help ensure compliance for innovative cloud-native development. All of those will be done in an Agile manner where clients can have Minimum Viable Cloud as a realization of Minimum Viable Product (MVP).



Lastly, as clients ramp up their cloud environments across the enterprise, we provide cloud optimization services to drive scale, optimal use of Cloud Service Provider (CSP) services consumed by the applications and developers; deploy new cloud operation models; financial related services such as deploying new tagging for chargeback/show-back and reserved instances.



# What makes us different



EY has over 330,000 professionals across more than 150 countries and we continue to focus on our purpose of “Building a better working world” through our transformation-realized approach, which focuses on realizing business transformation through the power of people, technology, and innovation. As part of EY broad technology consulting services, EY provides end-to-end cloud professional services, ranging from strategy to implementation. We provide a broad approach to cloud technology services by providing deep business and industry knowledge, attention to risk management, experienced practitioners, and service centers. EY integrates its cloud leadership and experience into its wider technology and business transformation capabilities, helping every client adopt and optimize their cloud program as

a component of a comprehensive and sustainable transformation.

EY Global Wavespace innovation centers, with over 50 locations, round out the firm’s technical and regulatory experience with dedicated space and personnel to assist clients in ideating, messaging, and socializing their cloud journeys, supporting a consistent business- and technology-aligned vision behind each transformation. EY has opened its own Cloud Enablement Center to help enable clients in highly regulated sectors such as financial services to navigate complex cloud transformations. Lastly, in collaboration with Alliance and Ecosystem relationships, we help clients unlock new value through true business transformation.



# 4 Conclusion

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This EY Cloud Readiness & Adoption Survey Report identifies the key drivers of clients moving to cloud adoption, their current state, and the challenges facing them. This report also provides our view on appropriate matters and suggests key points that help clients have a more holistic approach to adopting their cloud migration strategies.

As cloud is one of the fundamentally transformative elements in the era of digital transformation, we can help clients respond to digital disruption. EY insights, together with our ecosystem partners' solutions, enterprise cloud platform, and digital technologies create services, can help accelerate digital transformation, reduce risk, and increase value faster. Security and trust are at the core of EY services and our partners' technologies. Together, we will help you unify your data and workflows to boost innovation, get closer to your customers, and enhance your operations.

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