

Cloud imperative for banking

- Growth Markets



Banking faces unprecedented structural shifts in its landscape

For a number of years, banks in Asia-Pacific had outperformed their global peers across a number of financial metrics. However, the balance is now tilting as Asia-Pacific banks find balance sheets under greater pressure as well as having to face new competition from digital attackers. Banks in the region are grappling with low margins, declining efficiency ratios, a low-interest rate environment, high foreign exchange debt, flattened revenue growth and growing NPLs (non-performing loans). Add the impact of the pandemic, and the whole Asia-Pacific region's economy is expected to contract by 1.3 percent in 2020, contrasting sharply with the 4.7 percent growth that was projected for 2020 before the outbreak.

These unforeseen impacts will make it harder for banks to drive business transformation to achieve accelerated growth, efficiency improvements and robust operations. What's more, the emergence of virtual banks is redefining competition. This is likely to lead high-street banks to cut fees and charges to protect their customer base. It's more important than ever, therefore, for banks to respond faster to rapidly changing market and business dynamics, and become more agile by harnessing the power of new technologies.

During the pandemic, technology has proven to be the most important enabler of business continuity in a socially-distanced market. Cloud sits right in the centre. And it is powering significant banking industry transformation. To drive maximum value from the cloud it has to be seen as much more than just virtualized infrastructure. Cloud technology and services can offer greater availability, elasticity and security. The innovative power of new technologies can also support new business models, such as banking as a service. And cloud creates a new culture of technology services within banks, enabling them to become more agile and to operate faster.

The state of cloud in growth markets banking today

Despite the clear advantages that the cloud can offer, and the potential it offers for innovation, cost transformation and greater agility, banks have yet to truly embrace the potential the cloud offers. They're not alone. Our recent research into cloud outcomes in companies in 11 industries across 17 countries suggests that while public cloud consumption is increasing rapidly, there's also a level of disillusionment in the results being obtained. We **found that only 37 percent of companies** say they have fully achieved the benefits they expected from their cloud initiatives.

But there is hope for those mired in a challenging cloud migration program. Our previous research study suggests that banks that invested early in bold cloud moves are now reaping the benefits. Cloud leaders are growing revenue at twice the pace of the laggards and claim to be able to systematically track cloud ROI. In contrast, only 30 percent of laggards have made major public cloud commitments and less than half of this group claim to be able to track the ROI of their cloud programs.



Strategic responses to COVID-19 and beyond and why cloud is at their heart

In the midst of the pandemic, banks are responding to this changing landscape with a mix of business strategies. These aim to disrupt the future with more relevant, personalised, data-driven services. They're seeking to harness digital to drive greater efficiency and become more agile in the face of volatile market conditions and to compete with new disruptive competition. And they also need to restructure operations and address technical debt in order to be lean enough to survive in the post-pandemic world.

Regardless of the strategies they pursue, cloud will need to be at the heart of their execution. That's because it enables:

1. Data-driven, digital banking @ scale

2. Speed to market

3. Exponential innovation

4. A transformed cost-curve

5. Security

6. Sustainability

7. Shared commercial risk

Let's take a look of these seven key capabilities in detail





01. Data-driven, digital banking @ scale

The amount of data that banks generate and store is growing at an extraordinary rate and their demand for Al-related computing power is also increasing exponentially. Yet for most banks, data storage and compute power are already reaching available capacity. It's clear that satisfying the increasing demand for storage and compute capacity using legacy, on-premise data lakes and analytic environments will become increasingly costly, slow and ultimately self-defeating. Once successfully scaled up, it's time to scale up again.

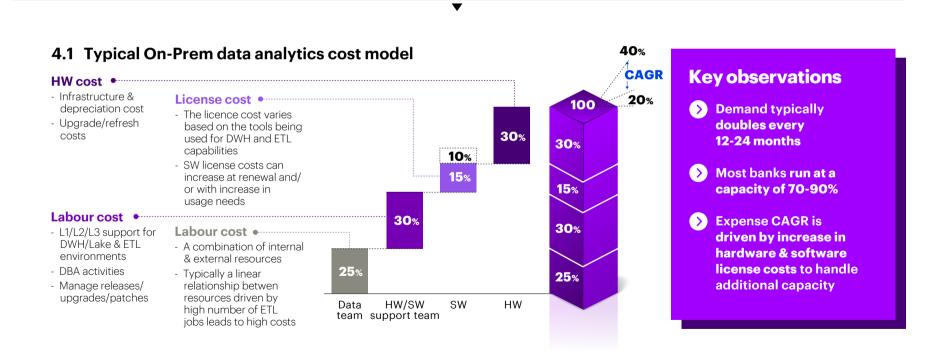
The only way to effectively overcome this challenge to becoming a data-driven bank at scale is to embrace the elastic storage and compute characteristics that cloud provides. By doing so, AI and machine learning models are no longer restrained by the infrastructure powering them. This frees banks to explore new data sets, increase the sophistication of their analytics models and to focus on the necessary cultural and process changes required to unleash the true power that a data-driven bank represents.





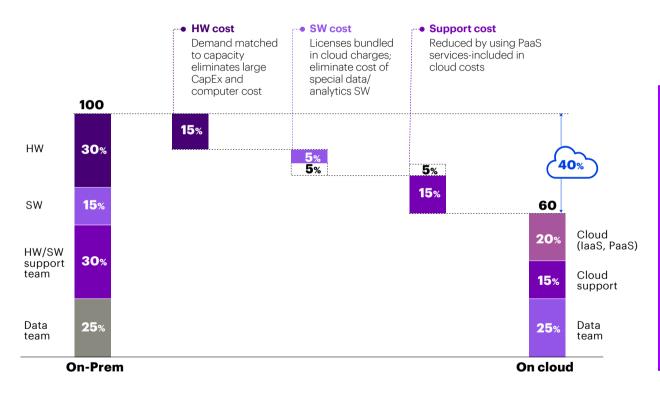
04. A transformed cost-curve

Asia-Pacific banks in mature markets have seen their cost-income ratios exceed 65 percent. In contrast, born-digital banks have been operating at between 20-30 percent. Traditional banks spend considerable amounts on software, systems and data infrastructure just to 'keep the lights on'. In stark contrast, moving to cloud can reduce costs by up to 40 percent. That's achieved through software savings of between 5-10 percent, support savings of 15-20 percent and hardware savings of 15 percent (see graphics below).



4.2 Potential cost saving from migration to cloud

Cost savings-Moving Data & Analytics from On-Prem to Cloud Percent, Indexed total to 100

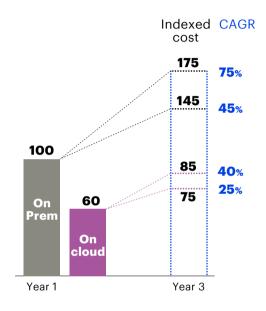


Key observations

- Moving to the cloud reduces run rate costs by ~40%
- Driven by reduced support needs, lower hardware and software costs
- Eliminate large capital upgrades and reduce software and maintenance costs

4.3 Bending the data & analytics cost curve

Three year forward cost to serve percent, indexed total to 100



Cost benefits



One-time baseline cost reduction



Lower marginal cost CAGR on cloud vs on-prem



Ability to match expense/capacity to demand



High direct visibility to cost of use for end users

Additional benefits



Reduce data movement

Leading to lower costs-reduced data preparation time & effort



Improved scalability

Improved scalability & reliability with fewer downtimes



Enhanced capabilities

Deliver more business value-increase speed to market etc.



What's more, based on Accenture's clients' experience cloud can achieve ongoing cost avoidance of between 7-12 percent each year. This results from the lower marginal cost CAGR of cloud vs on-premise, greater visibility into spending and the ability to match supply and demand that cloud's inherent elasticity supports.

While cost is a critical driver, it should not totally eclipse broader business benefits. For example, rearchitecting legacy custom applications on a cloud-native platform could achieve ten-times reduction in total cost of ownership. While this may take between three to five years, there will be more immediate advantages in terms of speed to market, agility, and greater developer productivity.



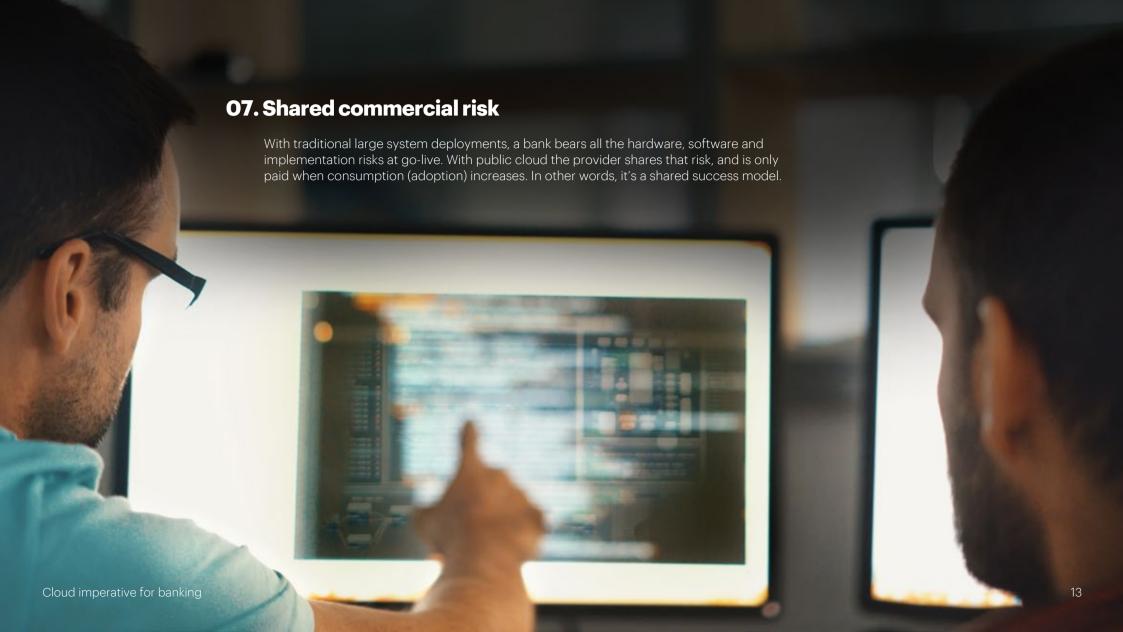
05. Security

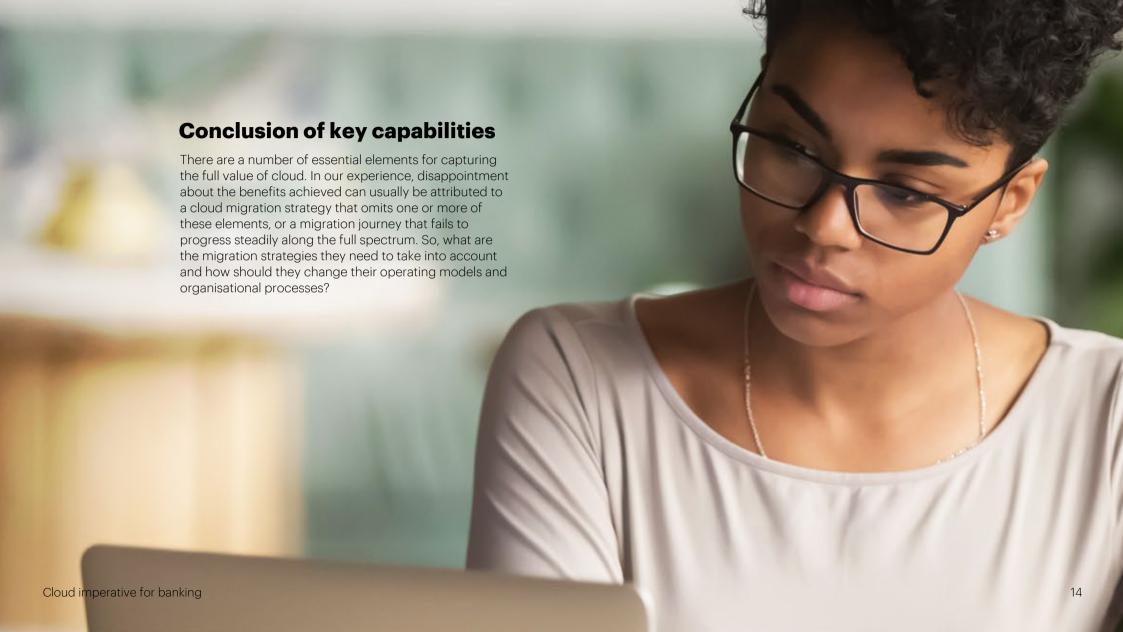
Risk managers will understandably often raise concerns about the security of public cloud. What's more, security and risk management are clearly areas where technology's growing sophistication is both escalating the threat of cyberattacks, data breaches and fraud, as well as enhancing cyber-defence capabilities. CSPs recognize that this is a critical issue for banks and are, in response, investing heavily in the security and resilience of their infrastructure. That said, banks bear responsibility for their use of the cloud and need to make sure that any strategy they develop pays close attention to local compliance and data protection standards. However, compliance should not be seen as a barrier. Solutions do exist and banks should take advantage of these to take regulators with them on their journey.

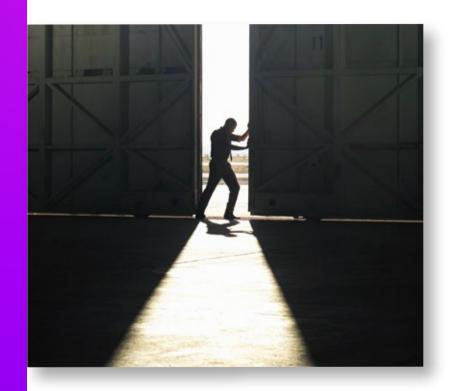
06. Sustainability

Most banks now have environmental, social and governance (ESG) targets. Public cloud can make a contribution to achieving these. Migrations to hyperscalers can realise significant improvements to CO2 emissions by achieving greater efficiency across a range of key hardware performance metrics.









What migration strategies are available for banks and which are most suitable?

Many banks have made a start on their cloud journey, but are yet to fully commit. Others have advanced further and their challenge is how to move deeper into the cloud and take greater advantage of the capabilities it promises. Whichever migration approach they decide to adopt will depend on their priorities across business, people and technology. (Ref. figure 1)

Figure 1: Migration approaches

Organic	Rehost and Replatform	Rearchitect and Replace
Description		
 New applications and data are placed in the cloud and legacy applications are phased out over time 	Existing services are augmented with cloud Legacy applications and staff are migrated systematically to new cloud services & operating model	 Cloud sevices separated from existing IT environment with clearly defined technical and organizational segmentation All applications are migrated onto new services & legacy staff replaced
Business area		
Customer Experience, Omni channnel management, Data Analytics, Algorithms etc.	Digital content management, API ecosystem management, Process & rules Execution, Service integration, New Business Models, Data Center migration, Security, Data etc.	Core & Cross Product, Identity and Access management, Finance, Risk, ALM/Treasury, Knowledge Management etc.
People		
New employees with cloud experienceExisting employees will need to re-skill	Existing employees re-trained in new technical & operations model, augmented with new expertise	New resources are brought on to stand up cloud capabilities, legacy resources released as migration progresses
Technology		
 New workloads built on cloud native platforms Purchasing new cloud native solutions Application retire/decommissioning for phased out functions 	 Hybrid cloud platform, with mix of cloud native and virtualization/containerization Retain certain core functions and augment with cloud native functions 	Hybrid cloud platform, with use of overlay orchestration (e.g., OpenShift) and technology to clearly delineate environments (e.g., API)
Timing	•	
 Unlikely full environment will migrate over time, will always be a legacy environment 	Extended time to migrate as resources upskill (e.g., 5+ years for full migration)	Faster time to adoption due to limited interaction with legacy technology

Regardless of their approach and priorities, making progress requires strong leadership commitments to targeted business outcomes, the right focus on creating a cloud-first culture, and creating an environment in which engineering talent can thrive. In reality, a hybrid approach across all three migration types – based on specific business requirements and context – is likely to be the best way forward.

If people and culture changes don't happen in parallel with any move to cloud, banks won't be able to reap its full benefits. 65 percent of senior IT executives across all industries struggle to achieve these benefits because of the complexity of the business and organizational change required, a lack of cloud skills and continuing misalignment between IT and the business.

It's also essential for banks to engage with regulators as they plan their journey, in order to understand the demands of specific rules and seek approval and/or co-create solutions that both optimise cloud's value and have the regulator's blessing. This will be a particularly relevant concern for banks in growth markets that typically have operations spread across a number of territories and, as a result, must comply with a patchwork of regulations. In some markets, regulatory barriers will apply to both core banking and some enterprise applications. A detailed case-by-case analysis is essential to determine the specific regulatory

requirements attaching to cloud in each jurisdiction. There may be a balance to manage between moving applications to cloud providers in the same territory as a bank's existing data centre (even where they're hosting data from different countries in that data centre) and/or having to rearchitect applications and data in a distributed way.

For leadership to develop a strong business case for cloud, they need to focus on the value it creates. As outlined above, this value spans a broad range of transformational benefits from enabling data-driven digital banking at scale, to exponential innovation and a radically different cost curve.

Regardless of the specific strategy a bank seeks to pursue to realize these benefits, our experience suggests that in designing the journey to cloud, most banks will be working from a common playbook. This has a number of priorities.

The value case and business benefits of growing and analysing data in the cloud means enterprise applications can move immediately and rapidly to cloud. Meanwhile, core banking applications typically need decoupling – a costly and risky undertaking that makes it harder to build a financial case for complex migration.

Key features of this staged approach include:

Short/immediate term: Corporate functions

Applications that support customer relationship management, human resources and finance are well developed in the cloud or as SaaS. Core solutions represent an important first step in moving the application estate. These first steps have a secondary benefit: they help a bank establish key principles and standards for the rest of the cloud journey.

Medium term: Data lakes and analytics

Apps where very significant value can be realised through cloud migration – but where higher levels of risk can also be part of the journey. These include data-intensive apps, where the costs of storing petabytes of data (and applying the compute power needed to analyse it) are already high on-prem – and set to grow rapidly as data volumes surge.

Switching to cloud provides powerful benefits here, in terms of reduced cost and increased scalability. But close cooperation with local regulators will be essential before initiating any such migration. Regional banks in growth markets operate in a complex regulatory environment: they'll

need to prove to regulators in each of the countries where they have operations that their data is being stored securely and within data-residency guidelines.

Cloud also provides a flexible solution for 'bursty' apps with massive peaks/troughs of compute power (apps that handle month-end processing, for example, and can be powered down when not required).

Longer term/future: Core/mainframe solutions

Mission-critical applications such as core banking apps, risk platforms and trading systems are typically large and complex, usually written in COBOL, and often run on mainframes. Their wholesale migration to cloud is likely to be both extremely costly and high risk. While running these apps on mainframes may be more expensive, any payback from cloud migration will likely take years thanks to high transformation costs. To be persuasive, the business case here will typically need to be built on the specific and significant value that cloud's extra agility could provide.

A more modular "decoupling" approach is a good way to start unlocking the value of cloud while avoiding a high-cost, high-risk 'big bang' (Ref. Figure 2).

Figure 2: Modular decoupling approach

Mature

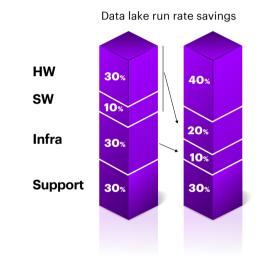
Systematically move enterprise applications

- Manage infrastructure spend & existing vendors
- Realize global economies of scale & leverage commoditized infrastructure with high levels of automation
- ~20-40% cost savings across different areas: labor, software, data center, network, server, storage & security (Assumes 80% public cloud, 15% private & 5% non-cloud infrastructure)

In flight

Move data, analytics, channel, digital, & "bursty" workloads

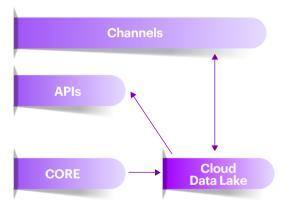
Significant cost savings as well as enablement of new business models powered by analytics and digital



Prepare now, De-couple

Simplify complex legacy landscape & extract the value from its core

Decouple and hollow out over time & reduce mainframe costs while unlocking business agility & value.



Most front office & Risk platforms are in flight to public cloud, due to analytic & "bursty" nature

Middle office will have a mix of on and off prem, with off prem having heavy data/ analytics elements

A **'Data plane'** acts as a single source of truth & offers a digital decoupling layer from front to back

Some Back office apps won't have a compelling business case, rather focused on decoupling to enable broader transformation

of workloads

Selecting the right cloud journey

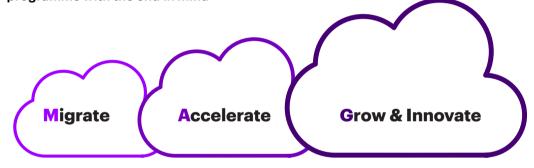
Picking the right migration path depends on each bank's priorities and current degree of cloud maturity. We categorize these journeys into three main areas:

Migrate; Accelerate; Grow and Innovate in the Cloud (MAGIC, see figure 3). But critically, these routes are not a linear progression and the entry point could be anywhere on the journey.

Our experience shows that this MAGIC approach provides a successful execution framework. Each bank needs to decide which actions best suit them and the order in which they should be undertaken.

Figure 3: Cloud-enabled transformation: MAGIC approach

Cloud is not just a technology transformation. Banks should set their cloud goals based on priority business objectives and execute a phased transformation programme with the end in mind



- Accelerate and de-risk data centre exits
- Migrate key applications and dataset to the Cloud
- Start to fully leverage data using cloud analytics resources
- areas e.g., Retail FO transformation, CIB CEX. partnerships leveraging cloud capabilities

Transform key business

- Become a Data driven organization
- · Accelerate revenue from data and analytics initiatives. e.g., 360 client views, data monetization. hyper-personalized advice, real-time data-led insights

Value drivers

Cost & Resilence (~30% cost savings) Moderate IT (+10-20% and Agility) Transform & Innovate

(+15-20% revenue acceleration)

Migrate

For a range of reasons – technology, security, complexity, legacy, data sovereignty, human psychology – many banks' workloads remain in on-premise data centres. Unless they migrate the majority of their workloads to cloud, they will be unable to realize full business value from these workloads – whether that's making the business more resilient, efficient or customer-focused. This stage is essential to get workloads to the cloud rapidly, securely, and with confidence by selecting the right infrastructure for business needs.

Typical benefits include:

- 30-40 percent infrastructure cost take-out (when combined with data-centre consolidation/closure)
- On-demand, flexible IT services
- 360-degree customer insights from data analytics in days, instead of months.

Australian financial institution

This bank's existing architecture presented challenges in capacity management, under-used systems, and lengthy installation processes. To overcome these issues, it wanted to move to a commodity infrastructure requiring lower maintenance and energy spend, as well as implementing a scalable system and providing faster availability of products and services to customers.

Working with Accenture, the bank created standardized platform-as-a-service offerings for its business units to consume on demand, 'blueprinting' rapid middleware deployment, and consolidating price-book items into simplified standard offerings. This involved migrating workloads from 30 legacy environments to cloud – a physical-to-virtual (P2V) migration achieved with minimum service disruption.

As a result, the bank has significantly cut operating expenditure across each of its platforms, with an estimated US\$1.5 million in savings over three years for applications targeted for migration. The speed of application server delivery has been cut from 13 weeks to three days. And there have been major improvements in support for around 16 million customer accounts.

MONETA Money Bank

MONETA Money Bank ('MONETA') knew it needed a fresh approach to keep up with fast-changing customer needs. An aging legacy IT infrastructure prevented it from rapidly launching new products and services. And the costs of maintaining that infrastructure were delaying MONETA from investing in innovation in other parts of the business. Working with Accenture, the bank defined a new IT strategy built on public cloud.

Having designed and deployed the new cloud environment, Accenture guided the migration of 200 priority applications in less than two months with no disruption to MONETA's services. Thanks to its new flexible, secure cloud-based infrastructure, the bank's developers can seamlessly respond to changing customer requirements and market conditions, creating and launching new products and services with unprecedented agility.

Looking ahead, MONETA plans to consolidate its status as a digital leader by further reducing its data-centre footprint and running up to 50 percent of its applications in the cloud. This will free the bank to regularly refocus investment towards innovation and digital services – with opportunities to accelerate and automate development processes and continually improve the customer experience.

Accelerate

Just getting to cloud doesn't mean a bank has become a cloud-native enterprise. To do that, they need to modernize. That means building applications and services specifically for a cloud environment – and changing the operating model to drive new business agility. The accelerate stage is where banks can ramp up their organizational speed and agility by restructuring architectures, applications and data for cloud.

Typical benefits include:

- The ability to bring new capabilities to market with weekly and daily releases of new functionality
- Combining infrastructure and apps using agile and DevSecOps enabling speed and agility
- Hyper-automation reducing complexity and further reducing costs.

Grow & Innovate

With the speed provided by cloud, and by working with cloud hyperscalers and other service providers, enterprises can free up people and funds to focus on adapting systems to what the business and its customers will need next. The grow and innovate stage is where banks can use cloud as a digital transformation lever, creating a foundation for rapid experimentation, innovation and new business models.

Typical benefits include:

- Creating new business models and improving market position.
- Increasing usage/adoption of new IT capabilities (AI, ML, etc)
- Greater customer penetration
- Near real-time predictive insights and enhanced business resiliency to react to changes in market/customer demands.

Fukuoka Bank

Fukuoka Bank is harnessing Accenture's Cloud Native Core solution to enable its fully cloud-native challenger bank on public cloud. It leverages key components of the cloud provider's platform such as Infrastructure as Code to support the large-scale availability and resilience that financial services require. Using an event-driven microservices architecture, it provides:

- Hyper-personalised, connected and real-time mobile experiences with a new marketing solution powered by the CSP's dedicated cloud data warehouse
- The ability to scale up and down instantly handling changes in traffic and batch calculations
- Interest calculations for all accounts, run in parallel, and highly scalable.

With the Cloud Native Core solution in place, Fukuoka Bank has been able to build a customer-centred challenger bank that could not be achieved through the bank's conventional on-premise systems. It takes advantage of security baked into the public cloud architecture, as well as new chat and communication capabilities that are transforming sales and operations.

In summation

Whatever stage a bank has reached in its cloud journey, there are certain 'no regret' steps that can be taken to accelerate the journey and enhance delivery capability. For example:



Appoint a C-suite executive sponsor to visibly champion the 'Cloud First' agenda and communicate with all internal stakeholders on why the cloud journey is important to the bank (cost, availability, security, business value etc)



Prioritise application-led transformation bundled by business services

De-risk by

establishing a

coordinate across all

transformation teams and

stakeholders, with KPIs



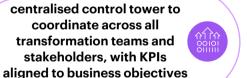
Involve security, risk and compliance teams from the very start of the programme and bring them on the journey. Engage regulators early too and collaborate with them throughout the programme



Have a robust organisational change management (OCM) plan and execution capability to reskill staff and evolve processes for the Cloud First world



Design the target environment around any 'big rocks' and plan the cloud journey based on prioritised business value



Import key skills and capacity from external partners to run the change programme without disrupting day-to-day business



The smarter route to maximizing value

Finally...a bank's intelligent journey needs to balance speed and value. While there is no one-size fits-all approach, each should start with defining the value, mapping out the journey and determining how cloud will enable the overall business strategy and ambition. There are five essential elements to capturing the full value of cloud.

Read more on maximizing cloud's value

Migrate and scale up

Get your workloads to cloud rapidly, securely, and with confidence by selecting the right infrastructure for your

Get the most from the hyperscalers

Apply the innovations and investments from the big cloud providers to create value for your business.

Run and optimize Adopt new ways of

operating that push your cloud estate to ever higher levels of business performance and sustainability.

Innovate and grow

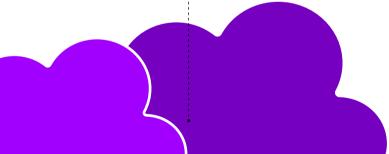
Use cloud as a digital transformation lever creating a foundation for rapid experimentation. innovation and new business models

business needs.

Ramp up your organizational speed and agility by restructuring architectures, applications and data for cloud.

Modernize and

accelerate



Why Accenture for cloud?

We recently announced the formation of Accenture Cloud First, which provides the full stack of cloud services to help organisations become 'cloud-first' businesses so they can accelerate their digital transformation, innovate faster, and create differentiated, sustainable value.

Powered by 70,000 cloud professionals, and a \$3 billion investment over the next three years, we bring together an unmatched depth and breadth of cloud experience and skills, industry cloud solutions, ecosystem partner capabilities and assets that help clients realize greater value from cloud at speed and scale.

Our end-to-end cloud services combine value-led and technology-agnostic approaches for rapid delivery of cloud solutions at speed and scale, as well as organisational change management that helps embed, new 'cloud-first' behaviour. We help organisations find new and better ways to leverage cloud, from migration to cloud management to the evolution of their cloud estate. This allows us to help clients achieve the full promise of cloud, from cost control to elasticity and innovation.

Because identifying the right cloud solution can be complex, we have a dedicated toolset to help banks navigate these complications, understand their potential cloud economics and get ready to start their migrations within just a few weeks. Specially adapted for the industry, Accenture myNav is unique in the market, an Accenture proprietary tool offering the ability to take the guesswork out of cloud by discovering, assessing, architecting and simulating an end-to-end solution at scale. This lowers risk, cost and the time required for banks to achieve their strategic business objectives.

Why myNav?

Accenture myNav enables you to assess your needs and build a business case before identifying an optimized cloud architecture based on Accenture's unmatched expertise with 30,000+ cloud projects. myNav then simulates that solution at scale-validating it's the right fit, the first time.

A better business case

Quickly create a cloud business case enriched with industry benchmark data.

Improved solution accuracy

Enhance the accuracy of cloud engineering requirements through architectural simulations using powerful analytical models.

Leverage cloud experience with AI

Benefit from AI that can mine Accenture's extensive cloud experience to arrive at the right solution for your needs.

Migrate with confidence

Reduce risk with a cloud migration plan based on proven industry and business specific migration rules.

To find out more about our end-to-end cloud capabilities, please visit our Cloud services page.

Getting started

Every bank's journey to cloud will be different. Each will be driven by a specific business case with its own strategic priorities and value objectives. But there's one feature that's common to them all: the time for cloud is now.

In a marketplace transformed by the pandemic, fast-growing digital competition and new consumer behaviours, banks in growth markets need cloud's flexibility, scalability and cost benefits more than ever before.

That's why, if they haven't already done so, they need to get started on their cloud journeys now. If they have set out, they need to accelerate their journey, with business value as the overriding priority. The alternative? Being left behind.

There are a number of key building blocks to keep in mind as they plan, structure and accelerate their journeys. We've provided a high-level view here. For a more tailored discussion, please contact our cloud leads mentioned here.

Fergus Gordon

MD, Banking Industry Lead - Growth Markets fergus.gordon@accenture.com

Duncan R. Eadie

MD - Cloud, Infrastructure & Engineering, Growth Markets duncan.r.eadie@accenture.com

Rajeev D. Nair

MD, ATCI (Banking) rajeev.d.nair@accenture.com

Satish Janardhanan

MD, Technology, India satish.janardhanan@accenture.com

About Accenture

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