MAMBU

Core banking in a **cloud world.**

A guide for incumbent banks navigating through the fintech era.

Table of contents.

— Introduction
Financial services are at a tipping point. 03

— Section 01
Taking the ‘usual’ route is the biggest risk. 06

— Section 02
Closely explore your choices. 08

— Section 03
Four options dominate banks’ core banking decisions. 10

— Section 04
The evolution or transformation question. 17

— Section 05
Evolve and treat change as a constant. 19

— Section 06
Achieve true agility with cloud. 21

The future of banking
Meet ABN AMRO’s digital lender, New10. 23

Meet Santander’s new small business lending app, Asto. 25

Sidebar
So what is composable banking? 26

— Section 07
How do you begin to evolve in an uncertain market? 30

Compose your bank. 32

MAMBU

Introduction

Financial services are at a tipping point.

In an age where technology has changed how we interact, both with one another and service providers, businesses not embracing this change will be left behind - particularly in financial services.

Perceived as a threat for most incumbents, these outside influences can also be an incentive to change, the opportunity to redefine financial services for consumers, and for themselves.

For challengers, the change isn't a threat at all: it's a major opportunity and a serious competitive advantage.

Challengers— mostly startups and spin-offs — are taking a completely fresh approach to their core banking infrastructure challenges.

They deploy in the cloud, configure instead of customise and instead of enduring major, risky releases, they continually improve.

Financial services is at a tipping point

For new organisations, choosing the cloud approach is straightforward since they start with a blank sheet of paper. However, if incumbents take a digital approach, they can leverage their experience and resources to lead instead of chasing challengers.

This guide looks at how banks need to approach their core banking options and how traditional banks can achieve agility by embracing new technology.

Section 01

Taking the ‘usual’ route is the biggest risk.

The future of banking is a moving target.

Banks were ‘built to last’ but today they need to be built to change. Changing regulations, customer demands and margins being squeezed by maintenance costs and challengers has made it evident that this is not the time for indecision.

Challengers look nothing like their predecessors as they understand the need to be adaptable to changing market dynamics. They are lean, agile, provide a best-in-class customer experience and are able to grow and scale rapidly.

This embodies a strategic threat with McKinsey estimating that legacy financial institutions will see profits decline by up to 60% by 2025 if they fail to evolve, a figure which should be motivating incumbents to look outside of traditional practices for growth and sustainability.

Section 02

Closely explore the choices.

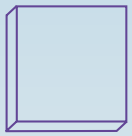
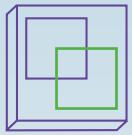
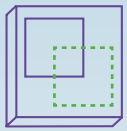
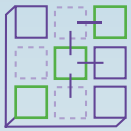
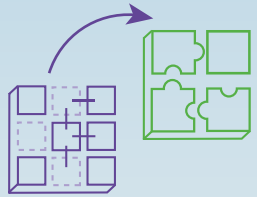
New digital banking technology is offering a world of choice.

Available choices

Deloitte explores five paths banks can take in their report: "Digital transformation hits core banking".

Legacy core

New core

Bank profile	Wait and see (do nothing)	Re-platform	Re-factor*	Augment	Replace
					
	• Retain existing system with current functionality	• Migrates code with minor upgrades to a platform (e.g. version upgrade) that does not change application functionally or require significant new skillsets	• Updates the codebase without changing baseline behavior • Improves readability, maintainability, and potentially enables cloud-readiness	• Implement parallel core that meets advanced needs not offered by legacy code • New core can run for a differentiated business, and/or be target for migrating from legacy core	• Replace existing core with new/modern solutions • Accelerates launch of new products for banks willing to pay a higher initial investment
Suitability of existing platform	++	++	++	+-	--
Risk averseness	++	++	+-	+-	--
Innovation/growth objectives	--	--	+-	++	++
Transformation urgency	--	+-	+-	++	--
Complexity of data strategy	--	+-	++	++	++
Cases/typical indicators		Nothing is broken but may be reaching support expiration on existing version	• Bank has invision for modernisation but not willing to switch • Two steps jorney - Refactor from legacy to modern code base (e.g. COBOL to Java) - Enhance platform once modernised	• Has unique business purpose for a new core: - Digital-only bank/brand • Once platform is stable and proven, migrate more legacy to new core	• Legacy core unable to meet financial, operational, and/or business needs • Contracts coming due • Replacement as a last resort

Source: Deloitte - Digital transformation hits core banking. Understanding a bank's choices for modernization.

MAMBU

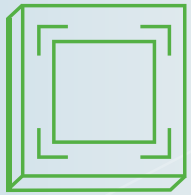
***Core re-factor is a process of restructuring existing code without changing external behavior to improve non-functional, technical performance.**

Section 03

Four options dominate banks' core banking decisions.

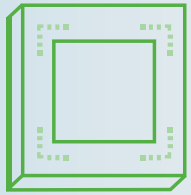
Real evolution means treading a new route. But let's look at all the options.

Wait & See



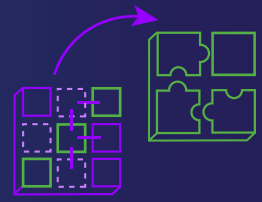
Sit back and wait for the market to settle, the dust to clear. There is a working core banking system - why fix it if it isn't broken?

Buy



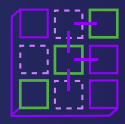
Search the market for challengers performing well and purchase the business in order to jumpstart a move into digital banking.

Replace



The conventional starting point is replacing old technology through a long, expensive and risky implementation.

Evolve or Augment



Build new to replace the old or progressively change systems instead of going big bang.

Option 1: Wait and see what competitors are doing.

Similar to the approach that Kodak took in the mid-2000s. They could have pushed innovation and pursued digital photography. Kodak developed the first digital camera, but did not believe digital photography would dominate the market nor did they leverage the opportunities their discovery offered. They chose to focus on film, not innovation, and fell after a century in business. It could have led them to new customers and products to secure their place in the market, but they chose not to evolve their focus. The same applies to financial institutions. They cannot keep moving in the same direction if they want to be seen as relevant.

Banks, which have had little competition for decades, find themselves threatened by the rise of fintechs and nimble new challengers. The new entrants bring innovative products, services and slick delivery using the latest technology. Enabled by regulators and fueled by venture capital, they take a lean approach which is beginning to earn significant revenue. **Wait and see can only ensure one thing, a slow road to ruin and irrelevance.**

Option 2: Buy a challenger.

Banks naturally could try to buy their way into evolution, but there are far fewer options to buy than there are banks and few of the best ones are for sale. However this is not really an option for many. It's akin to starting from scratch like all the challenger banks do. Banks like BBVA have followed by acquiring companies like Finland's Holvi and neobank Simple.

It is an expensive option complicated by having to find a company with the right fit for the business. There are also only few acquisitions to go around, and making old and new cultures and processes work, while retaining the top talent of the fintech is a challenge. **Depending on their own complexity, integration will always prove a challenge with the possibility of the acquisition becoming stuck in the same change cycles as the owner.**

Option 3: Rip and replace.

The conventional starting point is replacing old technology through a long, costly and painful implementation that only serves to build legacy technology of tomorrow: a vicious cycle of rip, replace and repeat. **These transformations mean building the legacy of the future and the risk of failure is a real threat to business.**

The traditional approach is all or nothing, building an end-to-end solution which relies on a single vendor that is responsible for the implementation, depends on an army of developers and consultants for integration, execution and customisation.

There are numerous horror stories of implementations gone wrong. The UK's Co-operative Bank attempted to replace its core banking systems, a programme that was cancelled in 2013 at a cost of almost £300 million.

More recently the UK's TSB bank was rocked by serious tech issues in April 2018 after attempting to move to a new IT system. It left thousands of customers locked out of their accounts and some reporting that they were able to access other people's details. The failure cost the bank £330m, while 80,000 customers switched their account to a competitor.

This failure prompted a parliamentary inquiry with the UK Treasury Committee issuing a report in October 2019 that looked 'under the bonnet' of the financial services sector to ask why IT failures were happening, and how the industry and the regulators could have prevented such incidents.

The UK Treasury Committee releases a report titled IT failures in the Financial Services Sector, which stated that amongst other factors:

"Many financial institutions face the challenge of aging, legacy infrastructure that is hard to maintain, yet expensive and risky to replace. We do not believe enough is being done by firms to mitigate the operational risks they face from their own legacy technology, such as by moving to newer technology.

"Firms are not doing enough to mitigate the operational risks that they face from their own legacy technology, which can often lead to IT incidents. When firms do embrace new technology, poor management of such change is one of the primary causes of IT failures."

Of course, no-one ever sets out to fail. Both projects would have helped the banks leapfrog the competition, gaining an advantage through improved customer relationship management and quicker delivery of new products. Instead, **it cost them millions, thousands of customers and untold reputational damage.**

Option 4: Evolve and augment.

Build new to replace the old and progressively change systems instead of going big bang. Both mean embracing cloud and taking a composable approach with partners who specialise (instead of one-size-fits-all) which gives the business agility and control. A gradual transition where individual systems are targeted and changed in a surgical approach which allows a controlled change. A new technology stack is built for business units giving them enhanced functionality and interoperability with current systems and wit.

A part of the argument to augment is to create a spin-off by building new outside of the old and have an independent operation with a new identity, processes and banking charter. This provides the ability to test new markets, products as well as scale quickly.

This is the evolutionary approach.

Choosing to evolve lets banks run like tech companies which will dominate this century. Banks have to learn to run like them. This approach means new technology, people and processes.

The aim is to build and test a new bank to determine the best way forward, then migrate from old to new in less time, with low risk and easily configurable to changing market dynamics. This allows businesses to optimise for what matters: growth to some, profit margins to others, innovation for others.

Some institutions have implemented what can be seen as a shortcut to a full upgrade - wrapping systems in a more modern tech sticky tape wrapper. This might give developers access to APIs and tools to help them build, but it doesn't fundamentally solve the fact that they are working off legacy systems that are inflexible and incapable of seeing institutions through market changes. This approach doesn't fundamentally change business dynamics, unit economics or gives institutions the ability to create highly customised customer products.

The aim should be evolution - to invest in lean, flexible technology that will push innovation and help respond to customer demands quickly.

Banks are risk-averse, so why have so many continued to choose large-scale technology transformations that negatively impact customers, reputations and the bottom-line? There is a safe, controlled path that can be taken.

Contrary to how the industry has operated for decades, new technology allows institutions to mitigate risks, test models and strategies and implement in a controlled environment.

	Mambu cloud banking platform	Traditional core banking systems
Platform capabilities	**As little as necessary.** Keeping the core light and generic allows us to serve many use cases with little cost and deploy rapidly. It also forces us to put the capabilities for the ecosystem easily in the grasp of our customers through technical means.	**As much as possible.** Given they do few and expensive projects, the goal is to sell as much as possible (software and service) to cover as many use cases as possible and get as much value per customer as possible.
Platform experience	**Seamless continuous improvements with no touch.** Improve weekly and daily and leverage single product ecosystem and cloud to continuously change. Change should have no cost or impact on customer and high frequency reduces risk.	**High touch project-based improvements.** Change is complex to roll out and is done infrequently in exchange for services revenue for managing the change and reducing risk of failure.
Partner ecosystem	**Strongly strategic.** Interested in selling high-value consulting mindset on strategy while minimising low-value integration man-days.	**Strongly transactional.** Interested in maximising implementation man-days on projects which translate to dollars.
Service mindset	**Our customer success is our success.** Aligning all sales, implementation, product and customer success activity to ensure our customer is successful in what they're trying to achieve such that their business grows with us and allow us to grow into the account.	**Our sales success is our success.** Our implementation success is our partners' success. The focus here is on selling the solution and the customisation and the rest of it can be figured out in projects. Contracts signed closed matter most.
Commercials mindset	**Value-based.** Customers pay based on the value and services they get from us not necessarily who they are as a buyer and the funding available. Aligned to long-term success for both side and not for maximising revenue extraction.	**Transactional.** Customers pay based on how big they are and how much they can afford to pay to extract the maximum amount of revenue per customer through a combination of licenses, maintenance, and professional services.

Section 04

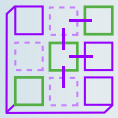
The evolution or transformation question.

The Deloitte report *Digital transformation hits core banking*, confirms what banks already know - they have a complex decision to make on how to change. Because every bank is different, a one-size-fits-all approach is ill-advised. Rather, an in-depth analysis of current infrastructure, market dynamics, customer needs, and organisational capabilities is required. Banks need to be:

- **Agile enough to move, explore and test new markets and products**
- **Customer centric and able to personalise services to compete**
- **Future proof to be able to navigate internal and external changes**

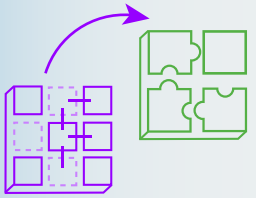
To achieve this means a change of technology, in particular, the core banking software. Distilled to its essence, a core banking system is the software used to support a bank's most common transactions from daily banking to lending and interacts with accounting and reporting systems.

The face of banking is change but this heart of the service remains. These core capabilities that drive all banking services and processes can be identified, optimised and integrated. These are core functions that don't in themselves help you differentiate your services—they help do the heavy lifting behind the services so banks can focus on the products and services that do allow differentiation.



Evolution:

- **Begins with a fresh slate**
- **Starts with the client needs**
- **Offers with world of possibilities**
- **Tackled one segment at a time**
- **Built to constantly change**



Transformation:

- Begins with the existing world
- Starts with internal needs
- Works within a world of constraints
- Attempts to move to a defined end state
- Moves from one static state to another
- Leaves no process/role/client behind

Section 05

Evolve and treat change as a constant.

Of the four options listed, one stands out due to the flexibility it offers: **evolve and augment.** Choosing to take this path ensures changes in the business model still keep the bank in control of infrastructure and resources.

- Centralising control of the balance sheet but decentralising deployment of services.
- The ability to continue using the old core for some functions like regulatory reporting compliance.
- Reviewing every system to determine what is needed and what should be replaced.
- Externalising all the business-driving and client, product or service related capabilities.
- Decentralised deployment by individual businesses instead of the whole organisation.
- A modular or componentised approach. Increased agility to innovate and deploy a myriad of services to address specific needs at lower risk and cost.

Build the new to replace the old.

By launching greenfield tech-enabled businesses to tap market opportunities and embark on a lower-risk technological evolution. Spin-offs draw on the resources and experience of the parent institution while operating independently, embracing the technology and culture of fintechs. They deliver significant results in a short period of time, free of organisational and technological legacy that holds back traditional organisations. Once the spin-offs has proven the business model, customers and business can be migrated to the scalable new platform, without the pressures associated with rip and replace transformations.

Section 06

Achieve true agility with cloud.

Turning to cloud for core components makes it dramatically easier to connect to legacy and emerging technologies to orchestrate new processes and compose new experiences.

A move to cloud changes the banking dynamic - it enables agility.

A cloud core, also referred to as a cloud banking platform is flexible by its very nature - fast, capable of dynamic change and scalable.

While many businesses talk about being agile, only those able to quickly respond to evolving customer expectations and opportunities will make real progress.

Real agility matters for three reasons:

Speed to market – the barriers to entry are lower but the barriers to switching are lower too.

Speed in market – when banking technology is the front office, banks can release new products, services and features in weeks (instead of months or even years!).

The solution landscape is evolving fast – so delivering the best services means having the flexibility to use new services as new needs emerge.

Agility in action

Meet ABN AMRO's digital lender, New10.

New10 is a bank offering a fully online lending experience for small and medium enterprises, initiated by Dutch banking giant ABN AMRO. What's unusual about this institution is that it went from concept to go-live in just 10 months.

New10 was launched in pursuit of the three goals:

- Innovation driven by the arrival of fintechs
- Improve Net Promoter Score (NPS) for underserved Dutch SMEs
- Decrease time to market by setting New10 as a separate start-up

It was clear to ABN AMRO they could not respond to competitors on their existing technology and operating model in order to enter the new market.

Embracing the bank's digitalisation and innovative approach, a decision was taken to make the new operation independent, fully digital and cloud-native.

Relying solely on cloud-based and cloud-native services from partners and third-party suppliers, New10 was built embracing a composable architecture on a cloud-native core. Being able to choose the best services to simply integrate into their architecture allowed New10 to go from concept to launch in just 10 months.

ABN AMRO's approach of launching an independent business that operates like a fintech is the optimal model for incumbents looking to succeed in a constantly evolving banking environment.

They have taken an agile approach and leveraged best-in-class technologies to address an underserved yet potentially high opportunity market. Their approach is also an illustration of how cloud technology can be used to innovate quickly and simply.

ABN·AMRO Bank

new10

New10 accesses the best of two worlds; the speed and agility of a fintech and the reputation, financial expertise, customer base and resources of the parent bank.

New10's Key Build Characteristics

Low code, high business self-service platform, e.g. Salesforce.

• Focus all development efforts on customer facing value creation: creating their own digital presence (site, funnel) was key to be in control of their user experience, customer experience and customer journey as well as data aggregation.

• Picked a few providers and use them a lot. Given the breadth and depth of the platforms they use as much native capability to off-load burdens. Strive to be cloud optimised, not cloud provider agnostic.

• Build stuff that matters, not plumbing, focus on business value code and configuration.

• Think and act lean, delivering every sprint and deploying frequently.

• Worked with compatible partners to plug into their platform and deliver specified services

Santander

asto

Santander joined forces with eBay in a lending partnership that saw the launch of Asto which is an app that offers loans to small and medium-sized businesses. The aim was to empower small business owners with secure access to funds in a matter of minutes from their phone, versus traditional several weeks.

The future of banking: Santander's new small business lending app, Asto.

According to the Financial Times, Asto is one of several in-house "start-ups" developed by Santander as part of a four-year, €20bn technology investment plan designed to fight back against challengers and big technology groups encroaching on banks' business.

The key realisation for Santander was that there's a two pronged strategy for digital transformation. One is, you have to bring these into the 21st century. So host it in the cloud, and do disruptive innovation at arms length. To do this means innovating outside existing structures which prompted the move to build a startup outside of the company with access to the company resources but with a different governance.
Being API-first, they can build a new service quickly instead of going into development and reprogramming.

Asto was launched in the UK in June 2019 with possible growth to other markets. Asto's key differentiator is the ability to go from downloading the app to money in the bank account in less than 10 minutes. In that time they do a full credit risk assessments and credit decisioning.

Today, even the simplest banking service involves a complex orchestration of core systems, transaction processing, decisioning, reporting, analytics, authentication, security and beyond.

Instead of locking these functions together for dedicated applications and workflows, **composable banking** separates the functions so they can be combined and recombined in new ways to deliver new services and customer experiences.

“rapid”

Applying agile principles to build, test and release new capabilities in days or weeks.

“flexible”

Pick and choose to combine systems in unique ways creating competitive advantage.

“assembly”

Choose off-the-shelf cloud solutions, as well as custom-built value-generating IP, to differentiate in the market.

Composable banking is an approach to the design and delivery of financial services based on the rapid and flexible assembly of independent, best-for-purpose systems. It helps banks create modern customer experiences to compete in the fintech era — and constantly evolve them to respond to change.

“independent”

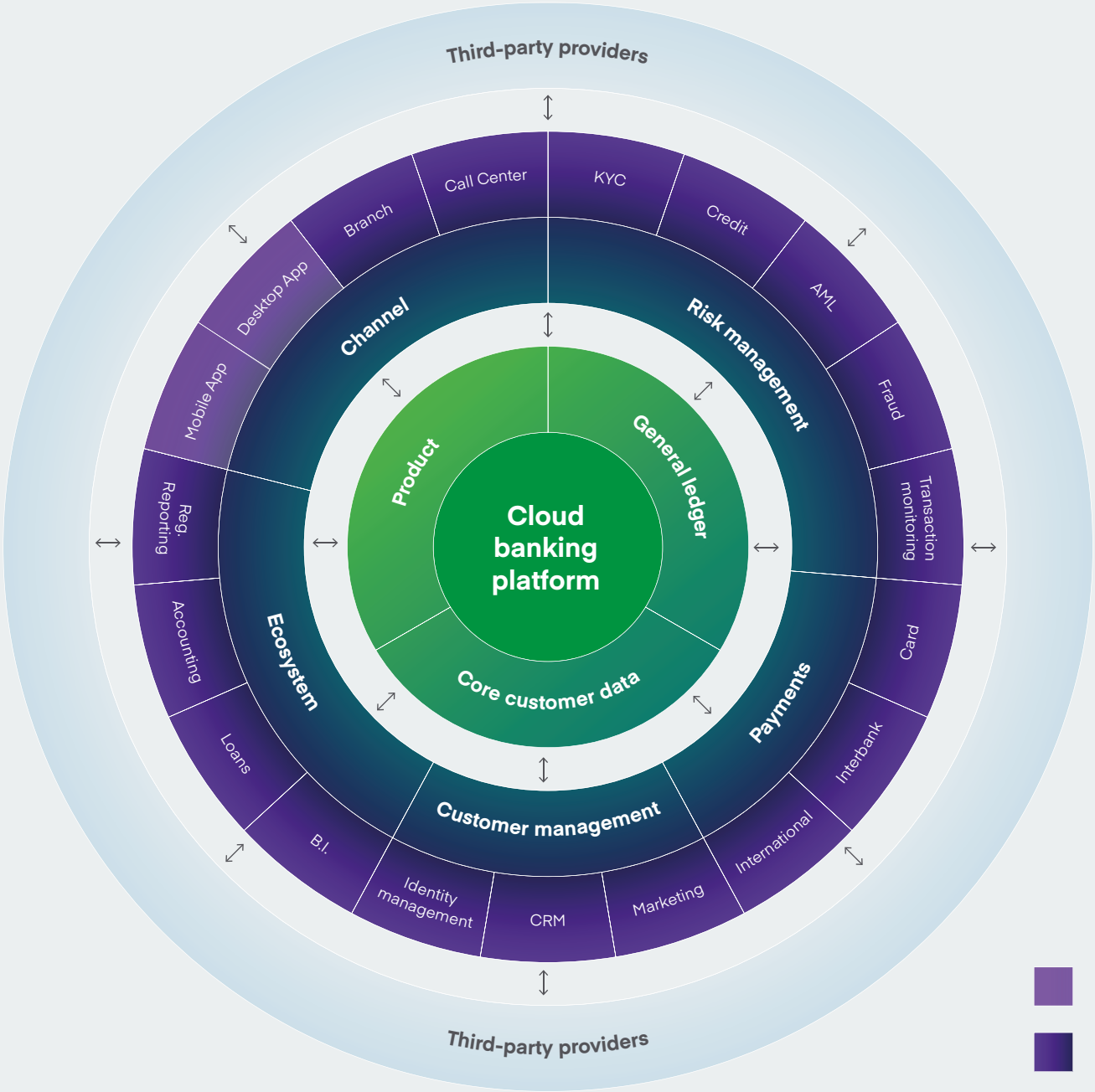
Avoiding massive monoliths or excessive dependencies on single companies as potential bottlenecks.

“best-for-purpose”

Based on the need of the stakeholder and the problem set, be it customer-facing or an internal process.

With a composable approach, your ecosystem of **available components** will include third-party APIs as well as the services and tools you built in-house.

You choose the components you need, combining best-for-purpose software instead of simply the modules your mono-vendor offers.



Source: McKinsey, "Next-generation core banking platforms: A golden ticket?"

Through the use of an agile core platform, cloud and APIs, it is possible to be proactive instead of reactive in an evolving market. These tools are key to building a dynamic digital bank. It gives banks the ability to harness differentiated services, choose only the applications that support growth and ease of business, and just as easily change them as technology evolves.

This is composable banking, which is dominant in thriving technology companies. Instead of locking these functions together for dedicated applications and workflows, composable banking separates the functions so they can be combined and recombined with new partners or services in new ways to deliver new services.

This means being able to combine independent components, re-use, swap in or swap out any component and work with best-of-service providers.

Section 7

How do you begin to evolve in an uncertain market?

Customers have been influenced by the digital experience of technology companies like Netflix and Google. They want more intuitive and personal service, no matter the provider. Most new banking entrants understand this and offer simple and personalised products to win customers and eat into market share once held by traditional banks. The rules of engagement have changed, and will continue to change.

So where to begin?

Starting with a blank slate

Banks have to leave ‘the way we’ve always done things’ thinking behind and shift their paradigm by starting with a blank slate. It is not about abandoning old brands and customers, but leveraging the resources and market knowledge to start afresh with a new digital bank.

Set them free

These new digital banks would have infinite options to provide new experiences, empower users, and understand customers better. The caveat being they have to be independent, able to define their own processes and empowered to test markets and customer strategies in order to learn and iterate quickly.

Focus on the customer

Take an outside-in view, starting with customer expectations and consider the business impact of changing regulation, competitor offerings and new technology. It would be a mistake to view any of these in isolation as a change in one can impact others. The institutions with the best ability to cope with these factors are fintechs.

Cultivate culture and talent

Processes and technology can create a new entity, but only people who embrace the fintech culture can give it life. People tied to old processes and procedures are slow to embrace change, but the right talent can elicit a paradigm shift to create a culture of innovation, challenging conventional thinking.

Choose composable and easy-to-change technology

Technology is not the driver of fintechs but a key enabler of the business strategy. Through the use of an agile core platform, cloud and APIs, it is possible to be proactive instead of reactive in an evolving market.

Mambu was built so banks can run at the pace of change.

Change used to be a bank's biggest liability, today, it can be your biggest asset. Build to change. Constantly. Rapidly. Boldly.

Compose the bank you want to be.

MAMBU

www.mambu.com