

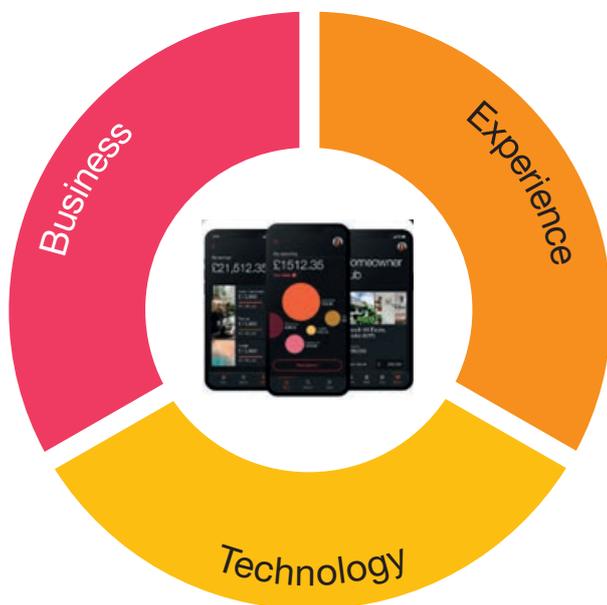
Our alliance relationships

Digitally reframing legacy transformation



Executive summary

Legacy core banking platforms are an increasing source of pain across the financial services (FS) industry. Legacy estates are a drag on cost, resilience and change agility. With UK banks likely to spend £1-2billion over the next three years on resiliency alone, PwC and Mambu have come together to share their experience of solving this challenge with their clients.



Transforming the legacy estate is the biggest challenge facing banking CIOs today. We have worked closely with our partner Mambu and our clients to develop this PoV. It provides an insight into what is happening and experience to date in the sector, but more importantly provides a roadmap for CIOs to use when defining their transformation plans.”

John Lyons

Partner, PwC Financial Service Transformation Leader



In recent years, advances in financial technology have been staggering. Unfortunately, many established banks struggle to take full advantage of the flexibility, agility, and cost efficiency that fintech platforms such as Mambu can now provide. We have worked with PwC to identify a path for banks to overcome the challenges of legacy estates, and seize emerging opportunities.”

Werner Knoblich

Chief Revenue Officer, Mambu

Digitally reframing legacy transformation

Despite the considerable investments they've made in transformation, banks remain challenged by issues such as platform complexity, lack of key skills and difficulties in identifying an effective approach to risk management. Data migrations at scale and making greater use of public cloud platforms also introduce considerable new risks and attract regulatory scrutiny.

We have also entered a new era in terms of what technology can do to deliver a digital experience. We now have the technology to rapidly respond to evolving customer requirements. We can: facilitate new FS distribution models such as embedded finance; dynamically use transactional data streams to make credit decisions and harness AI for personalisation and automation. A maturing fintech capability on cloud technology is also driving game-changing innovation in FS.

But to undertake a successful transformation, and take advantage of what today's technology can offer, banks need to develop a new mindset. They need an approach that focuses on creating an end-to-end digital experience and developing highly agile business capabilities. Trying to do everything in-house and/or extending the legacy estate with new technologies, risks repeating the failures of the past.

This paper draws on PwC's and Mambu's collective experience of supporting our banking clients over the past three years. In it, we propose a different approach to managing legacy transformation, with notable features and lessons learned including:

- Take an ecosystem approach to curate digital experiences quickly.
- Mobilise data to enable personalisation and a real-time experience.
- Lead with 'innovation' in mind, not legacy transformation.
- Decommission the legacy selectively
 - Build the ecosystem as a greenfield platform.
 - Orchestrate the servicing of legacy products via the digital channel and bring all customers onto the digital platform.
 - Selectively refactor critical legacy functionality and remove the legacy platform.



Take an ecosystem approach to curate digital experience quickly

Banks should move away from legacy ‘monolithic’ technology vendors, and adopt an ‘ecosystem’ approach. Under legacy architectures, banks would select a single vendor to meet many capabilities (e.g. credit decisioning, on boarding, KYC, product creation, product ledgers). Often, adding new product lines would mean an entirely new core banking platform, replicating functionality the bank already owns, and creating challenges for sharing data, adding new functionality, and curating customer experiences.

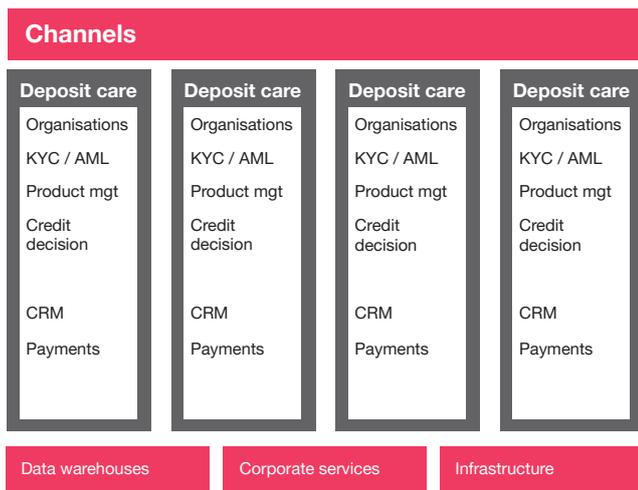
Within an ecosystem-enabled platform, banks are able to pick and choose the right applications for the capabilities they need to best enable their digital platform, rather than selecting a single vendor to provide core capabilities. An ecosystem approach to solution design creates an open architecture which delivers the right financial services to customers when they need them. It solves customer problems end-to-end, and offers them an attractive user experience.

This approach makes use of the universe of fintechs, with deep expertise in specific niches, that have emerged over recent years. Mambu, a leading software as-a-service (SaaS) banking platform, has, for example, partnerships with 70+ technology providers that enable banks to easily curate an ecosystem. It can also build bespoke integrations with any other vendors the bank would like to use.

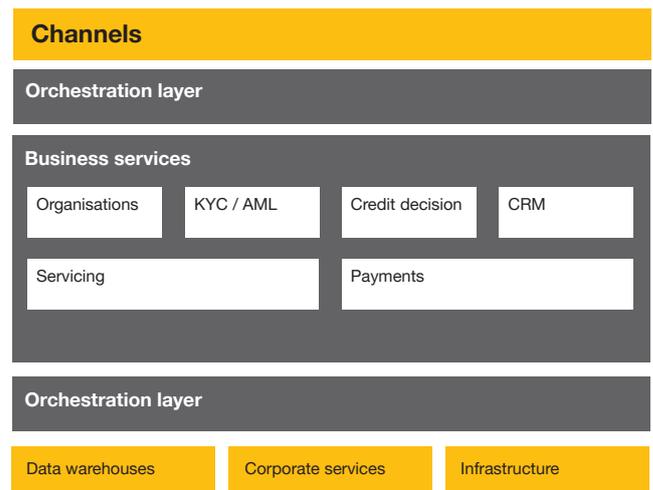
For banks that already have legacy stacks, transitioning to a new philosophy is challenging. Rather than attempting to gradually re-architect and migrate from one approach to the other, an ecosystem platform can be built ‘on top’ of the legacy, as a SaaS digital platform that looks as much like a greenfield bank (greenfield-on-top) as possible. The platform can pull data from both the external ecosystem and legacy systems, as required. This means that the bank can take advantage of the new ecosystem’s flexibility and functionality, and creates a fast track to replacing the legacy platform, without complex data migrations between new and old platforms.

The greenfield-on-top model

Legacy architecture (illustrative)



Greenfieldontop architecture



Mobilise data to enable personalisation and a real-time experience

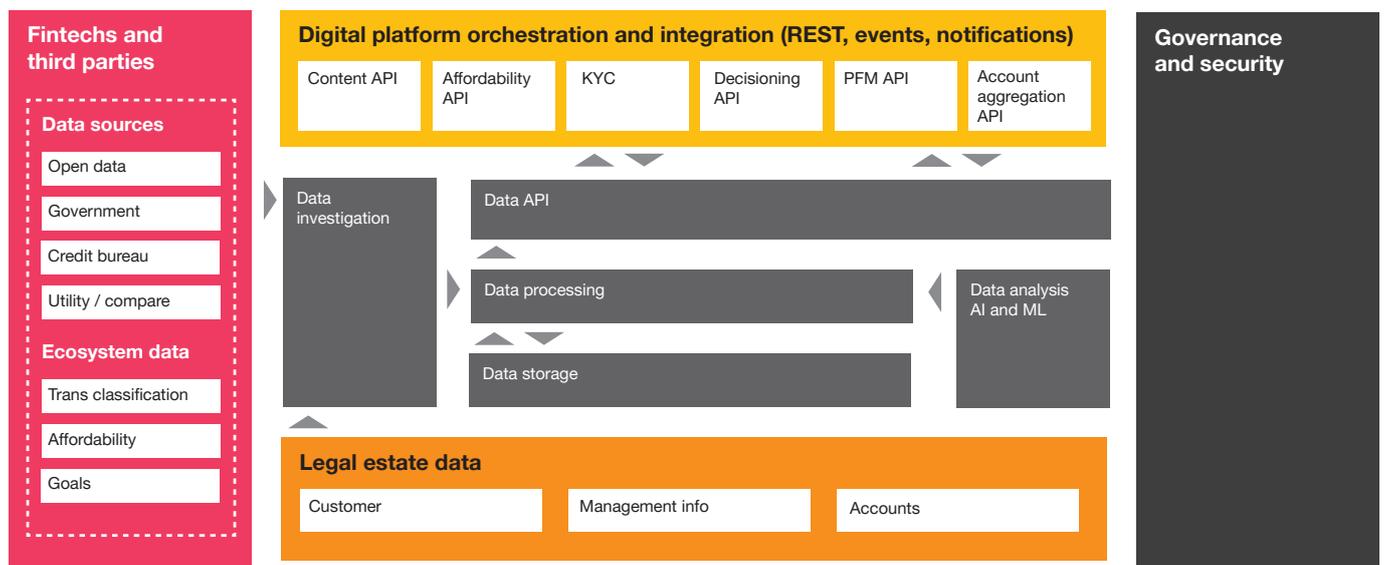
Data is digital's energy source. But it's of little use trapped in legacy data pools. The new platform must therefore be able to stream, aggregate and enrich data from disparate sources. An integrated view of both external and internal data benefits both the customer and the bank: the customer can see (and ideally manage) all their financial data from the whole ecosystem, without the need for a high-risk data migration from the legacy platform and / or the requirement to switch between platforms. Meanwhile, for the bank, the ability to stream and use transactional data in real time can drive credit decisioning, enable personalised product pricing, and shape meaningful and impactful insights.

In the ecosystem design, the data platform takes inspiration from today's Open Banking. Open Banking uses a robust customer consent model and APIs to call up data from other financial institutions and present a consolidated view of a customer's data. The 'greenfield-on-top' bank uses this approach within a customer engagement platform. This can pull in data (via APIs) from different parts of the legacy stack for a 360° view of the customer, and also enrich it with external data from, for example, credit bureaus and/or Open Banking. The legacy is treated as just another data source (or even like an external bank, as per Open Banking) for the customer engagement platform.

This change will have a profound effect on the technology ecosystem's 'centre of gravity'. Rather than relying heavily on an inflexible legacy core to provide data, a customer engagement platform can now be built that draws upon many data sources - of which the core is only one. Technology efforts can focus on which information to use, and how to use it. This has a direct impact on the quality and speed of insights delivered for the customer experience. Solutions built on Mambu's banking platform, for example, can help banks that had earned negative net promoter scores (NPS) under their legacy systems to achieve NPS of 60+.

Consideration should also be given to how the new platform draws upon data from legacy platforms. Over time, the goal will be to refactor and decommission the legacy. It is therefore important to minimise points of contact between the new and old platforms in order to reduce future refactoring effort and avoid legacy lock-in. Data-streaming APIs, rather than functional APIs, should be used to ensure that data sources can be easily changed in future.

A data streaming model



Lead with ‘innovation’ in mind, not legacy transformation

When thinking about how the new ecosystem-based architecture will integrate and interact with the legacy core(s), following some key principles can optimise the chances of success:

Connect digital strategy with business-led legacy transformation

Technology-led legacy transformation is failing. All too often, programmes to enable next-gen capabilities (often driven by business-defined needs), and to manage legacy transformation (often focusing on non-functional KPIs), are separated. Banks need to ensure that transformation programmes focus on delivering the business strategy first - modernising the architecture and reducing technical debt is the means to achieve this, not the other way around. Programmes must be led by business objectives, with business leadership throughout, to ensure the programme delivers customer value and business agility early.

Shape programmes around what new technologies can do – do not just try to replicate legacy capabilities

Banks need to ‘start afresh’ when it comes to specifying requirements. Because most legacy cores are monolithic systems that fulfil a wide range of functionalities, they dictate how processes are run, which becomes very difficult to change. In the greenfield model, because functionalities are componentised old methods can be challenged and reimaged. There’s a suite of tools that supports a composable and agile delivery model to do everything (and much more) the legacy core could do – but do it better.

Drive customer movement to the new platform through business-led incentives

Avoid complex and risky data migrations wherever possible. Instead, the business should consider how to lure customers organically to propositions hosted on the new platform. Moving customer accounts away from legacy solutions will be essential for decommissioning legacy technology.

Take advantage of fintech innovators to jumpstart the transformation

Speed is key to delivery success, so building off a SaaS digital product engine in the target architecture is crucial. Attempts to refactor and evolve existing technologies, or to build a digital product engine with legacy product features, will likely result in long timelines to realising benefits, and create additional execution risk. Next-generation banking platforms such as Mambu are designed to be launched rapidly (provisioning and go-live in months, rather than years – typically 65% faster than an implementation of a traditional system).

Focus on delivering rapid and regular business and customer value

Organic, tech-driven programmes to re-engineer/architect the core can take years to show any results for the business - with a high chance of failure. Practical business benefits should be targeted at a regular cadence to ensure that there is something to show for the investments made (such as launching new services and enabling new capabilities), and to maintain momentum and secure future funding.

Adopt a new solutioning mindset and ways of working

Ways of working in older institutions are often as much a product of what their legacy tech stack will allow as they are of the best conceivable processes and procedures. In a world with greater quantities of more powerful data, greater controls may be needed. The ability to create new products in minutes rather than months, requires new approaches to product management. Alongside the technical change, a comprehensive re-evaluation of the bank’s operating model will be required, to take advantage of the opportunities now available.

Decommission the legacy selectively

With a new digital platform in place, the challenging work of decommissioning the legacy can commence. This is step three in our transformation roadmap:

1

Build the ecosystem as a greenfield platform

- Establish the new ecosystem platform, and connect the legacy as a data node, via APIs, with the data stored on legacy applications.
- All new customers are on-boarded to the digital bank.
- Existing customers can access the new digital platform but legacy products are serviced on the legacy platform.

2

Orchestrate the servicing of legacy products via the digital channel and bring all customers onto the digital platform

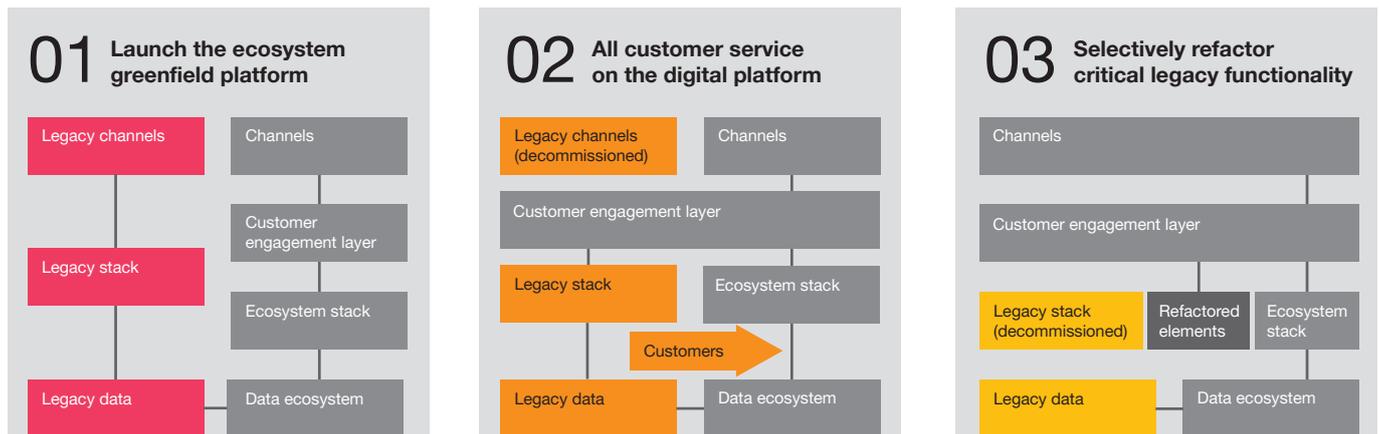
- Create a single customer dashboard to incorporate all product data associated with the customer portfolio, whether that's data native to the bank or from third parties via Open Banking.
- Create account switching tools for customers that enable them to move standing orders, direct debits, etc, from legacy accounts into the new digital accounts, and then close the legacy account.
- Use business incentives to encourage customers to move across to the new platform, where necessary (for example, where legacy products cannot be supported).
- Decommission customer access to legacy channel platform components.

3

Selectively refactor critical legacy functionality and remove the legacy platform

- Rebuild those legacy product features that cannot be provided on the digital platform as native microservices on the target technical platform, adjacent to the new digital core product engine (do not modify the digital SaaS product engine with legacy features).
- Over time, refactor data sources and functionality sitting in the legacy so that elements of the legacy solution can be decommissioned entirely, where possible maintaining the existing data model to avoid the need for any complex data transformation during data migration.
- There will be some customers that cannot or will not move away from the legacy platform (e.g. if they depend on products that cannot be supported on the new platform), and so some customer types may never move. These either need to be managed via bespoke low-cost solutions or via business-led initiatives designed to enable these customers to exit the products / portfolios concerned. Understanding the size of this community is crucial.

Three steps to decommissioning legacy



Key takeaways



Connect digital strategy with business-led legacy transformation.



Shape programmes around what new technologies can do – do not just try to replicate legacy capabilities.



Drive customer migration off legacy through business-led incentives.



Focus on delivering rapid and regular business and customer value.



Take advantage of fintech innovators to jumpstart the transformation.



Adopt a new solutioning mindset and ways of working.



A case study

UK specialist lender builds 'greenfield-on-top' and decommissions legacy in 12 months

1

Programme key outcomes

- Design, delivery, build and go-live of an end-to-end lending platform and digital customer service capability.
- Integrations with trusted third-party data sources to support pre-populating of customer applications and an enhanced experience.
- Real-time MI and dashboards to track, review and approve applications
- Legacy decommissioned within 12 months.

2

PwC and Mambu worked together

- Lead partner designing, building and deploying the solution, and now responsible for the ongoing operational management of the applications.
- Built out the underlying platform, integrations, user experience and content, working in close collaboration with the client.
- Worked with clients to provide assurance on the risk and operational controls, alongside mitigating cyber security risks.

3

Our approach

- We brought together a team with multi-disciplinary experience: business operations, technology, risk, cyber, regulatory and legal experts to build out the customer proposition, business and regulatory-compliant digital platform.
- We worked with the client to prototype the end-to-end journey (including customer-facing screens), prior to building this out over the course of three weeks. The build included integrations with accelerator technologies to enhance the overall customer experience.
- The solution went live within 12 months.

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About Mambu

Mambu is the cloud-native core banking platform where modern financial experiences are built. Launched in 2011, Mambu fast-tracks the design and build of nearly any type of financial offering for banks of all sizes, lenders, fintechs, retailers, telcos and more. Our unique composable approach means that independent components, systems and connectors can be assembled in any configuration to meet business needs and end user demands. Mambu supports hundreds of customers in over 65 countries – including Western Union, Commonwealth Bank of Australia, N26, BancoEstado, OakNorth, Raiffeisen Bank, ABN AMRO, Bank Islam and Orange Bank.

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RITM10434432