

Laying the right foundation for the future banking ecosystem



Abstract

Banking is undergoing a paradigm shift in the way transactions are conducted as well as products and services offered to customers. Customers' hyper-connected lifestyles present banks with a unique opportunity to be at the center of their lives by delivering value through innovations and the partnerships banks can forge with other players in the extended ecosystem. The top priority for banks today is to outpace nimble new entrants by distinguishing themselves in the prevailing intensely competitive, customer-centric, and low-margin environment. A combination of economic and regulatory pressures, the digital revolution, and the rise of the ecosystem model is profoundly impacting the banking industry. This whitepaper builds on our earlier paper, **Ecosystems: The Cornerstone of Future Banking**¹, which examined how the ecosystem model enables banks to drive sustainable growth and lead in the emerging reality. In this paper, we elaborate on the foundational pillars required to build purpose-driven ecosystems to drive sustainable growth and transform banks into future-ready financial enterprises.

Transition to ecosystem models: A must for incumbent banks

A critical imperative for financial institutions today is to leverage the insights they possess to offer products and services that help fulfil their customers' financial as well as non-financial needs in one connected experience. Such experience can only be delivered by building banking ecosystems that unlock network effects by integrating data and services of participating entities. Ecosystems enable banks to combine their internal capabilities with external innovations and evolve into value aggregators, advice providers, and access facilitators.

Next-gen banking ecosystems will mandate leveraging customer data, building new innovative business models, adopting new technology platforms and agile processes and practices, and developing the right partnerships with ecosystem players. Banks will need to extend and integrate their products and services with value providers across industries to create composite experiences within their own ecosystems.

Leveraging cloud technologies and application programming interfaces (API) is a prerequisite to building a portfolio of 'life' solutions that can be integrated and orchestrated to suit the individual consumer context at any given time or place through any channel or device. Banks will need to define an **eco-printing strategy** (a blueprint for leveraging ecosystem components) to own, deliver, and maintain their business capabilities. Building the future ecosystem will require banks to consider their strategic aspirations and existing contextual business landscape, which will necessitate analyzing their differentiating and non-differentiating services and making the right choice between proprietary development and leveraging fintech solutions and/or as-a-service or utility models.

[1] American Banker, *Ecosystems: The Cornerstone of Future Banking*, October 2020, Accessed February 2021, <https://www.americanbanker.com/whitepaper/ecosystems-the-cornerstone-of-future-banking>

Factors driving the evolution of banking ecosystems

Some key factors are pushing incumbents to double their focus on and investments in building banking ecosystems. Customers' digital attitude and growing appetite for hyper-connected financial services coupled with the global spread of Open Banking initiatives is driving the ecosystem trend. In addition, the rise of emerging technologies, such as blockchain, internet of things (IoT), artificial intelligence (AI) and machine learning (ML), augmented reality (AR), and virtual reality (VR), is fuelling the growth of fintech ecosystems, in turn compelling banks to collaborate with external players to augment traditional offerings.

Mapping the ecosystem journey

Broadly speaking, three levels of ecosystem play are available to financial institutions, to match their strategic aspirations, needs, and approach to the ecosystem journey.

- **Enterprise ecosystem:** interconnecting and leveraging the capabilities and systems across different lines of business within the organization.
- **Value chain ecosystem:** integrating and leveraging niche market solutions to equip specific business processes with additional capabilities.
- **Cross-industry ecosystem:** integrating with adjacent industry players to introduce new product propositions and bundled services to enhance the overall customer experience.

Adopting a four-phased approach can simplify defining and executing the ecosystem strategy (see Figure 1). The phased approach will help banks make faster progress on this journey and realize early returns

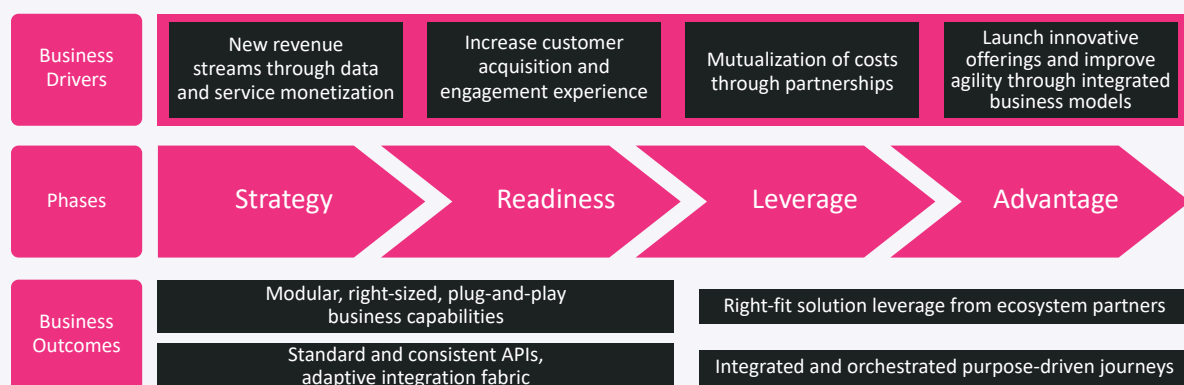


Figure 1: The Four-phase Ecosystem Journey

- **Strategy:** Explore, analyze, and develop purpose-driven business models with the capability to deliver the right products and partner services to end customers.
- **Readiness:** Understand existing business capabilities, flows, and service integrations and create modular business capability maps. Define a componentized application services architecture rooted in domain-driven design (DDD) principles and an integration fabric with standardized and consistent APIs.
- **Leverage:** Identify the right ecosystem partners for right-fit solution integration to complement existing offerings and create unique value propositions.
- **Advantage:** Integrate and implement the blueprint to accelerate innovation cycles, create competitive differentiation, and ensure long-term sustenance through robust governance.

Building thriving banking ecosystems

While banks have taken steps to enhance security controls across channels, these measures have been largely incremental as a response to emerging threats without a well-defined strategy in place. As banks tread the future-ready path by adopting purpose-driven ecosystems, enabling contactless banking, embracing adaptive distribution, and deploying new reality products and services, their security responsibilities will further widen. In our view, banks will need to embed future-ready capabilities into their cyber resilience strategy (see Figure 1).

Future financial institutions must have the capability to continually sense the environment and respond quickly and iteratively to developments, while ensuring that all initiatives align with the ecosystem strategy to realize aspirational business outcomes. Laying the right foundation is imperative to building ecosystems and becoming future-ready. We recommend an architectural approach for systems redesign (see Figure 2) where business and IT capabilities are clustered across four dimensions:

- **Experience and engagement layer** for the various channels and mechanisms where banks can leverage ecosystem partners to reach out to end customers for sales, distribution, fulfillment, and servicing
- **Differentiation layer** for proprietary competitive capabilities as well as those that can be consumed from and shared with the ecosystem
- **Integration and interaction layer** to orchestrate the seamless exchange of information and services
- **Data and records layer** to identify the data and transaction assets that can be exposed and monetized within the ecosystem

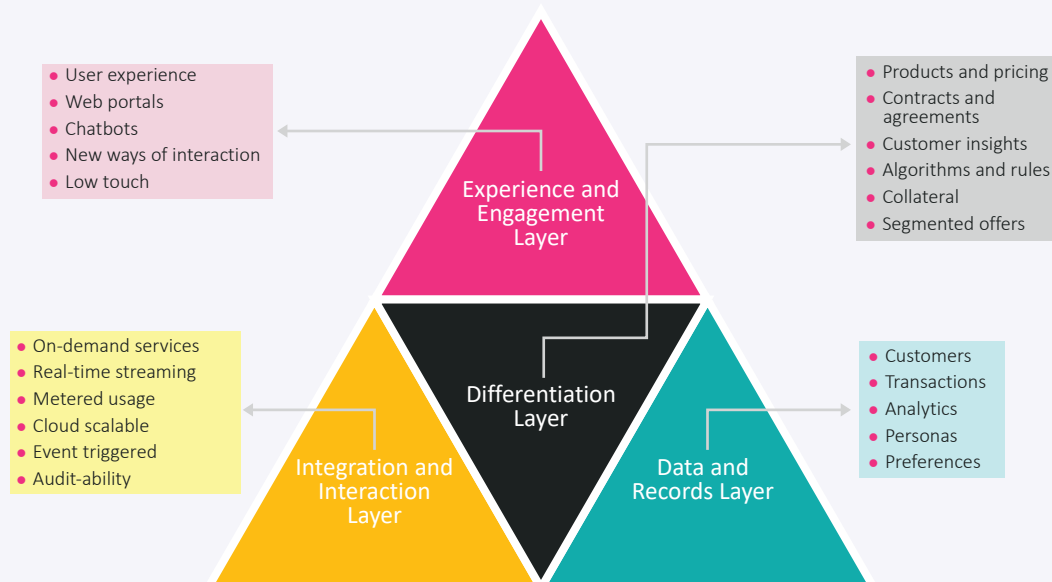


Figure 2: Architectural Approach for Systems Redesign

To successfully implement the new architecture, five critical aspects must be evaluated.

Business architecture design for ecosystem readiness

While leveraging ecosystem solutions for non-differentiating and commodity services, evaluating business capabilities and identifying the core differentiating functions are key. This exercise will need to consider business aspects such as market customization, core engines for different functions, and workflows as well as technology aspects such as automation, APIfication, and event-driven architecture. Adopting industry standards such as the Banking Industry Architecture

Network (BIAN) and the Interactive Financial Exchange (IFX) enables alignment between business and IT and helps create integrated business capabilities in collaboration with ecosystem partners.

Technology leverage and integration fabric

An integration fabric that enables core edge interfaces and event-driven adaptive orchestrations is a prerequisite to facilitating purpose-led customer journeys. We envisage an integration fabric, powered by APIs and microservice architecture, equipped to meet diverse and complex integration requirements and facilitate exchange of data, services, and transactions with different stakeholders, systems, and processes. We foresee the integration fabric evolving into an ecosystem fabric catering to multi-modal integration patterns for B2B, B2B2C, marketplace, everything-as-a-service, and cross-industry integrations, possibly driven by regulation. Ecosystem security will be crucial to building trust in the digital environment that enables the integration fabric and orchestrates adaptive customer journeys.

Risk management and mitigation of perceived threats

Embedding strong risk management and cyber-security practices into the ecosystem is critical to retain customer trust. Leveraging biometrics for authentication, data encryption, and tokenization will go a long way in securing cloud data and preventing data loss. Regulatory compliance, standard and secure policies, and mandatory monitoring of social channels can protect against hackers. Access restrictions, usage monitoring, API registration, and auditing must be put in place to ensure the security of data flowing into mobile apps, cloud services, and ecosystem partners.

Right partnerships to achieve business aspirations

Partnerships aimed at leveraging niche and differentiated value features often do not deliver the expected business outcomes owing to challenges faced by both incumbents and startups. Moreover, incumbent banks are attempting a federated approach to leveraging fintech without a holistic view of the entire product or portfolio value chain, leading to extensive overheads in governance, integration, and solution management.

Several elements define successful partnerships with fintechs- type of partnership (strategic or tactical), pricing and remuneration models, partner onboarding process and relationship management, partner metrics, and nurturing partners through events, conferences, promotions, and feedback. In addition, governance, security, compliance monitoring, and risk management also play a role.

Future-proofing infrastructure for ecosystem banking

We visualize a hybrid cloud infrastructure with the capability to address the needs of all types of workloads and align with business processes, applications, and existing IT landscape of banks. The capability landscape will include differentiated, indispensable and/or critical capabilities such as core banking, risk and fraud management, customer master, general ledger, advanced analytics, and payment platforms on their enterprise data centre and/or private clouds. The remaining capabilities such as digital core, customer experience, and digital channels would be hosted on the public cloud or consumed through different options like software-as-a-service (SaaS), platforms, industry utilities, fintech services, and marketplaces.

A fit-for-purpose ecosystem fabric in a distributed hybrid cloud infrastructure that integrates capabilities from various ecosystem players will become a key constituent in the future architecture. This will enable banks to monetize certain functionalities and services by allowing partners and peer banks to white label them. Moving to an **API-centric ecosystem on a hybrid cloud infrastructure will enable banks to co-create value at speed and scale, while opening up new revenue streams.**²

[2] American Banker, *Heading to the Cloud: A Strategy for Banks and Financial Institutions*, January 2021, Accessed February 2021, <https://www.americanbanker.com/whitepaper/heading-to-the-cloud-a-strategy-for-banks-and-institutions>

In a nutshell

The key question facing banks is- do we transform into a technology company with a banking license, or do we move toward purpose-driven ecosystem banking models? Many banks have already answered this question: they have begun to tread the latter path by embracing open banking and ecosystem collaboration to create innovative products and services to find their niche under the digital sun.. However, banks will have to go further and embrace transformative business models by leveraging extended ecosystems to enable a complete, integrated customer experience and drive revenue growth. Achieving this will require banks to reposition their core services from a discrete, standalone activity into one with several integrated elements for wider end-to-end consumer interaction. The good news is that the technologies to enable this evolution are available — hybrid cloud infrastructure to build digital ecosystems, APIs for distribution, exposition, and consumption of services, and omnichannel apps for an integrated, intuitive, and contextual customer experience. This evolution will once again shift the contours of the financial services industry, and banks must act with alacrity to retain their relevance and supremacy.

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