WHITE PAPER

RE-IMAGINING BANKS AS TECHNOLOGY COMPANIES

Abstract

Swift progress in disruptive technologies and increased competition have brought about a significant shift in banking experience. This shift has the potential to shrink the role and relevance of today's banks, unless banks change how they change. The paper outlines the complete overhaul that the ubiquitous bank needs to undergo to re-engineer technology-enabled banking to technology-led banking. Banks that embrace this technological and mindset shift are best placed to ensure their continued relevance and success.

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Introduction

Digital has become inherent to banking today - perhaps to the extent that we do not need to prefix "digital" anymore. A larger question that banks need to address is that of their very own relevance and existence – with changing customer expectations, competition from non-traditional players, and technological advancements. The erstwhile ubiquitous bank faces the stiffest challenge to its own survival.

Mere technology-enabled transformation is not enough

Banks today face the risk of disintermediation like never before. A checking account from Google - under codename 'Project Cache' confirms the plans of Bigtechs' foray into financial services. Powered by transformative technology, a robust platform and reliable infrastructure, these Bigtechs can embed banking services with ease into customer journey. At the other end of the spectrum are nimble and agile fintechs – that are not riddled by monolithic mid and back offices and can disaggregate the existing banking value chain. They have conceptualized new and disruptive models in P2P payments, alternative lending, third party product distribution platforms and credit scoring that have found root outside the existing banking model and technology infrastructure. Continuing with the existing business models and using technology as an enabler, therefore, is no longer a choice.

Banks have traditionally been used to operating as manufacturer banks in a heavily regulated industry. Legislations like PSD2 mark the advent of enabling regulations that herald openness and collaboration. Banks today need to transition from selling products to selling experiences, that too in ecosystems where the customers are present. The bank therefore needs to accept that it no longer owns the customer, and this is going to be the new normal.

Last but not the least, is the role of transformational technology and the change that it is bringing. 5G allows an augmented banking experience to reach millions without a corresponding increase in the branch network. Self-sovereign identity powered by Blockchain will start allowing customers to be custodians of their own identity ridding banks of the need to maintain customer KYC records. In the next 2-3 years, a significant number of banking transactions are expected to originate from Amazon Alexa and Google Home than the bank's own channel. Traditional banks therefore need out-of-the-box thinking and execution to win in the new world.

How can banks go about this massive change?

Re-imagine the internal organization:

Banks have traditionally been used to working in their internal product R&D units, often working in silos, churning out products and then working towards adoption. What is required is a fundamental shift to reverse engineering, starting from experiences – analyzing customer expectations, market dynamics and emerging technologies. Traditional R&D units need to re-morph themselves as 'Innovation Labs' churning out experiences that customers want and not offer force fitted products. South Africa's Discovery, as an example, is launching a bank with product features that are influenced by behavioral science and incentive-design

The next logical step is to embrace enterprise wide digital strategy, and an agility shift requiring a top down approach. Organizations today have a Chief Transformation Officer, Chief Data Officer and Chief Innovation officer which were unheard of till a few years back.

It is also important to embrace Open Innovation – learning from outside. Goldman Sachs recently made its proprietary code available to developers in an open forum – enabling Goldman Sachs' in-house developers to get feedback and insights on optimizing the code further.

Now comes talent. Bankers today need to ask themselves the number of engineers they are hiring. For it is these coders who will create the bank of the future and radically shift the skill landscape. The advent of a handheld micro ATM in India has re-shaped agency banking, and the accompanying people and skill requirement. Marcus (by Goldman Sachs) digital lending platform has reshaped the lending lifecycle and the manpower requirement. As more and more customers demand a hyper personalized experience, re-skilling, redeploying talent and hiring newer skill sets will be the industry norm.

Leverage Data and AI

While banks face the combined onslaught of Bigtechs, and the agility of fintechs; it is important to leverage the goldmine that banks have. Enter Data. Banks are sitting on huge amounts of customer data – demographics, transactions, customer channel preferences - which can provide pointers into customer behavior for actionable insights. For this to be a reality, it is important that banks accelerate their pace of data aggregation from siloed systems and perform data cleansing for moving towards real time and intelligent data integration.. Traditionally, a large credit in a savings account would only be a flag for an AML-KYC system. Today, the same data point can also be an opportunity to sell a financial investment

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product – the opportunity lies in assessing the action (Credit), in time, identifying the relevant experience fitment and executing appropriate action (contextualized e-mail to the customer, for example) This is where the role of AI comes in.

In very simple terms, AI helps in executing preprogrammed rules across structured and unstructured data. This capability helps retrieve behavioral pattern and predicts customer intent. Data is put through an AI model to train the model and subsequently the model is tested against fresh data for validation. These algorithm-based solutions can improve the conversational interface in the front end while also enhance operational efficiency in the back end. Santander has been one of the first banks to allow customers to use their voices to check their accounts and execute in-app payments.

AI in Banking

Front Office	Personal financial management, Digital sales Ex. HSBC Pepper, an AI based robot in US branches, helping employees sell products. In 2019, Huntington Bank launched Heads Up, artificial intelligence-powered software that provides customers advice on financial planning and management.
Middle Office	Fraud prevention and transaction monitoring ML based customer name matching across databases Ex. HSBC has partnered with Ayasdi and Quantexa for AML
Back office	Credit decisioning bringing together traditional, social, business and internet data Predicting higher probability delinquent accounts for strategizing collection efforts Ex. Balance in a savings account could be self-optimized for return based on financial behavior and spend patterns without needing to transfer it to a separate high-yield deposit or trading account.

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Re-think the use case

Traditionally, banking has been about taking banking as is, improving the experience and optimizing cost through technology. However, what technology enables us to do today is complete re-imagining of the use case itself.

With the technology framework re-architected, it is time to re-imagine the bank as a technology company that distributes financial products. Existing processes and practices must now be re-evaluated for their utility, business case and technology provided alternatives - to form the new building blocks of the technology transformed bank.

Mobility	Hearables / Wearables
5G	Enabler removing latency and brining new possibilities. Ex. Implementing facial recognition technology in Branches and ATMs
Iot	ATM as Devices tracking usage pattern Connected Warehouses sharing inventory levels with bank's for working capital financing Connected cars providing inputs for dynamic Insurance premium calculation
Blockchain	Use cases in Payments, Remittances, Traceability, Digital Identity
API	Account Aggregation, Payment Initiation
Data & AI	Personalization at Scale
Cybertech	Biometrics, Multi factor authentication, Digital Signatures

Emerging Technology use cases in Banking

AI, along with Open Banking, Cloud Processing, blockchain, and wearables, constitute the new banking reality today. A note of caution – these technologies need to be suitably aligned to the bank's vision for achieving the required success. While robo advisory, for example, may assist in wealth management in recommending suited investment options, the human touch may still very well be required.

Organizations that can successfully navigate capturing and leveraging data, generating actionable analytics, harness the power of technology to re-imagine business processes and integrate themselves seamlessly in ecosystem journeys, are the winners of tomorrow.

Collaboration is the key

Collaboration allows an entity to compete in a marketplace with not necessarily all skills, expertise and technology developed in-house.

Industry Collaboration
Fintechs to build banking as a Service(BaaS) enabled banks
Industry utilities for mutualized infrastructure
Supply chain partners and vendors through permissioned Blockchain ledgers

Banking as a Service (BaaS) enabled banks can collaboratively build a suite of financial solutions on a single platform transforming the customer experience. From being end to end service providers, opening up bank's platforms to suite of custom centric solutions can provide omni-market presence and wallet share. There is also a case for efficiency play as a participant on blockchain networks, especially in trade finance and cross border transactions where traditional processes and procedures have been beset with lack of transparency and operational inefficiency.

Customer Collaboration
Open APIs

Collaborating with customers holds the key to navigating from being a traditional provider of products & services to a provider of experiences. SEED, a new business bank in the US, has industrialized a customizable interface to allow small business customers develop their own tools. Firms have to apply for membership to the bank, post which they can use the APIs exposed by the bank to build their own tools.

Eco system Collaboration
Ecosystems and API marketplaces

Lastly, to stay relevant, comes the 3rd dimension - collaborating in eco systems and market places. DBS Bank Singapore has made its Loan Mortgage API available to external developers, which allows them to integrate it with the Loan Comparison tool on 3rd party product distribution platforms. Extending this further, open banking could allow banks not only to sell the customer a mortgage, but the most competitively priced one, as well as offer insights on house prices, provide home insurance and find the best deal on gas and electricity.

A combination of the above – an internal reboot, a technology led transformation framework with re-imagined use cases and collaborative go-to-market can radically shift the bank's very business model. Revenues are not assumed from loyal customers but drawn from an enterprise wide BaaS enabled strategy. Products are unbundled and Services re-bundled in an Open API environment for platform play. Costs mean investments into technologies of tomorrow to future-proof the bank, while mutualizing BAU costs.

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What will it take for the bank of today to future-proof its tomorrow?

Recognise your strength. While the onslaught from Bigtechs is a reality, banks need to leverage their traditional strengths while re-architecting themselves for the new normal. Customer trust as a custodian of their savings, a Phygital presence and decades of brand recall are clear differentiators for banks over Bigtechs. Similarly, while fintechs have technology prowess and agility, it is banks that have the war chest and appetite to take risks , absorb temporary losses and sustain long gestation periods.

Enterprise technology adoption. Banks have typically functioned in silos - with focus on individual systems and application behavior. The shift now must be in adapting these transformative technologies enterprise-wide and integrating them into the DNA of the bank achieving scale and speed of execution in a secure environment.

Full digitization. Investments need to be made in technologies and systems that make a difference to customer experience, add to operational resilience and help the bank compete effectively in the future. Further investments in Core Banking systems or existing channel augmentation may not justify a return on investment in the current landscape.

Cloud banking. Subject to local regulations, banks also need to start opening to Public Cloud, to facilitate quick roll outs with lean operating structures. Public Cloud enables seamless delivery of functions while optimizing costs. While higher workloads are migrated to Public cloud, critical applications with sensitive data understandably will continue to be hosted in a single tenant infrastructure. Successful migration to the Cloud helps unlock crucial funds for new technology investment.

Security. With Digital technologies and new work models emerging, Security considerations and Cyber Resilience will assume greater importance. As the footprint of banking expands through BaaS and IoT enabled touchpoints, accompanying new and emerging security challenges need to be visualized as well.

Rehashing IT budgets. Overcoming budgetary challenges and diligent allocation of resources to new and emerging technologies and unlocking funds by shifting existing costs will play a crucial role in making this tectonic transformation.

Measuring success

From being a bank that deploys technology to a Technology company distributing financial products, how does one measure / track the progress of the transition?

Measuring revenue by digital. Digital (i.e. separately tracking and reporting), defined by product purchases, share of transactions, or upgrades via digital channels i.e. all acquisition, servicing, transactions which were made possible by technology. DBS Bank Singapore has shown the way here.

Change in source and mix of revenue. This is the indicator of this transformation. Revenue from BaaS and Data monetization, digital sales of 3rd party products on bank platform and bank products on non-bank platforms, prospects converted to customers from non-bank channels all point to building blocks of the Bank of the Future.

	Banking Today	Banking of the Future
The Customer	The end customer or consumer	Google Assistant, Amazon Alexa could become 'customers', acting on behalf of their owners
Channel	Bank's primary channels	Third party platforms providing access to products from different banks
Customer service	Assisted banking : Branch Walk-Ins, contact centers, internet banking, mobile banking	Next level of self-service channels with intrinsic security features: Facial recognition, Touch ID, and Iris scanning, voice banking, VR and AR; accompanied by reduction in branch network
Customer data	Customers have been focused on products and transactions. The data passed on to the bank was not the prime focus.	Customers have a digital identity and are willing to authorize use and monetization of data after due consent.
Product selection	Product recommendations based on customer profiling by bank RMs	Product recommendations powered by AI powered recommendation engine
Documentation and processing requirement	Simplifying forms, Using OCR, pre populating data	Mutualize cost and efforts through industry utilities
KYC records and processing	KYC stored, processed and authenticated by bank	Self-sovereign identity
Legal Vetting of documents	Creating checklists 4 eye principle - Maker Checker	AI for contract analysis
Customer experience	Banks 'own' the customers, customers buy bank products	Customers are looking for experiences and pay for what they value. Millennials view on (not) owning assets like homes and vehicles will impact corresponding banking products.
Banking relationship	Relationship concentrated with a Primary bank. Other banking relationships are also there.	Combining products from different providers on one platform

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Conclusion

The journey therefore needs to become from that of technology-enabled change to one of technology-led transformation. The business view of IT needs to transform from a function that maintains legacy applications to a strategic pillar delivering an agile, responsive, real-time, frictionless and integrated experience.

It will take multi speed delivery models for big banks to be Big Techs of tomorrow. To disrupt, rather than be disrupted, banks will have to combine the agility of fintechs with the scale of Big Techs to future proof their very existence. Change the bank initiatives need to become the new operating model for running the bank.

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