A Lender's Secret to Thrive

– A Cloud-based Lending Platform

Introduction

As the banking and financial services industry is evolving in the next normal, it's apparent that we are entering **a new era of customer-centric digital sophistication.** The pandemic forced banks and financial institutes to transform their lending landscape by digitizing and automating core processes like deposits and lending.

In the process of lending specifically, all the way from loan origination, credit assessment, fulfillment, disbursement, servicing, to collections, no process is left behind. In fact, advanced technologies such as cloud, AI/ML, biometrics, AR/VR, blockchain, and metaverse are being integral enablers of a future-ready lending platform. The adoption of technology and developing a resilient lending platform has become 'must have' from a 'good to have.'

The pandemic was the catalyst that influenced banks and financial institutions in thinking differently - not just in terms of automating manual workflows or digitizing processes, but reimagining the customer experience and empowering employees. Remote loan origination, lightning speed in credit underwriting, efficient loan processing and disbursal in shortest cycle time have become the need of the hour. With the spurt in the number of startups and small businesses, there is **a significant rise in demand for funds along with an increase in deal size.** There is a clear shift in the mindset of banks and lenders from the traditional practice of granting loans based on strict terms into a more flexible lending practice of attractive and personalized loans in this growing competitive market. . This also calls for superior fraud and risk management that adheres to the changing regulatory environment.

As customers' expectations evolve, there is an increasing demand to deliver financial services through non-financial products or interactions, popularly known as embedded financing. Home, medical, travel, fashion, entertainment and other types of financing options have started providing integrated experiences to the end consumers. For instance, 'Buy Now Pay Later' is a lending capability which has become popular in consumer retail in recent times. Similarly, in the gaming world or real estate industry, metaverse is converging with credit and loan facilities. The span of lending as a platform is growing wider and at the same time, the line between industries is overlapping. Innovation has become so fast-paced that it certainly needs a flexible, composable core and infrastructure. To ensure banks and financial institutes keep up with this momentum in lending transformation and the sheer volume of loans, it is evident that the **adoption of cloud in the lending space is the way forward.**

Costs incurred on legacy applications

Even with several challenges plaguing them, banks are reluctant to modernize or replace their legacy lending applications as they occupy a central position in the overall operations - and any change will have a widespread impact. Hence, they are only investing in the maintenance of these applications. However, is it worth it? The questions that the senior management normally pose can be addressed with the below statistics –

- The big four banks – Wells Fargo, Bank of America, JP Morgan and Citibank – spend anywhere between **$8 billion** to **$11 billion** on their IT every year.[i]

- Overall, banks & FIs in the US are spending around **$86 billion** every year on IT. Although big banks spend 0.44% of their total assets size on IT, regional banks spend around 0.51%. Credit unions spend 0.42% and community banks spend 0.22%. Out of which on an average, **70%** to **80%** of this IT budget is being spent on the maintenance of these legacy applications. [ii iii iv]

- A typical tier-1 bank spends more than **$300 million** a year on the maintenance of legacy applications and a mid-sized bank spends more than **$100 million** a year for the same purpose.[v]

Challenges banks and FIs face in lending

Across commercial and retail lending, banks and FIs are going through several significant challenges:

Fragmented and outdated systems

Fragmented and legacy lending systems in banks and FIs don't interact on a real-time basis with other areas such as treasury, billing, and payments.

Inefficiency and mainframe dependency

Inefficient processes decrease the speed at which loans can be originated, processed, disbursed, closed, and serviced.

Cost-heavy legacy applications

The maintenance and operation of the legacy lending applications is becoming difficult and costlier because of the small and shrinking pool of experts with the knowledge to support these different defunct applications.

Long time-to-market

Because of outdated operating models that are spread across numerous systems, the time-to-market for new loan products and enhancements tends to be very slow.

Changing regulations

Ever-changing regulatory requirements bring additional pressure on banks and FIs.

Customer expectations

Customers today expect personalized lending offerings that exactly fit their need in shortest possible time with the least hassle.

Growing competition

Competitors and FinTech startups are gearing up with latest technologies to offer customers best services at lower costs.

Continuous innovations

Digital innovations are disrupting the marketplace and the existing lending applications and other systems are not capable of taking advantage of new technologies.

Cloud-based lending – Why and how

Since the banking and financial sector is evolving rapidly because of increasing customer expectations, innovation, and regulatory requirements, banks and FIs need the right technology that will help them deal with these changes, stay agile and prepare for the future. This is where cloud can become a differentiating factor.

Banks could cut down IT costs by **75%** if they move their data and applications to the cloud. Depending on the area where it is used, cost savings could range from 50% to 90%.[vi]

···→ Remain competitive & stay ahead of the curve

Several large banks have already started embracing cloud in modernizing their lending platforms. They are slowly replacing their legacy systems with cloud-based lending applications and migrating all their loans to cloud-native lending applications.

Banks and FIs have started adopting cloud technologies in some form or another, and organizations are keeping some of their core lending activities on-premises and other activities like client and employee facing workflows on the cloud.

- Capital One Bank from USA was one of the first to commit to cloud. It is now benefiting from the cost reductions, as they cut down their data centers from eight to three in a period of four years.[vii]

- In the middle of the pandemic, US-based Live Oak Bank, a leading SBA (Small Business Administration) lender, wanted to offer PPP loans (Paycheck Protection Program) to their customers quickly. However, when its legacy core provider gave a turnaround time of six months, it turned to a cloud-based bank technology company – Finxact – and implemented PPP loans in just few weeks. The bank then completely migrated all its core systems to Finxact's core-as-a-service.[viii]

- Wells Fargo selected nCino, a salesforce-based cloud-native system, as the technology partner for transforming its commercial lending, consumer banking and small business banking operations.[ix]

- JPMorgan Chase announced that it will replace its existing retail banking system with a cloud-native system developed by Thought Machine called Vault.[x]

- US Bank has partnered with the nCino cloud-native platform to digitize processes and transform the lending experience to drive growth and speed-to-market.[xi]

Hence, it is evident that migrating to cloud can increase operational resiliency, security, efficiency, regulatory compliance and enhance business growth.

Cloud-native architecture is a design methodology that could enable a lending platform to take full advantage of cloud computing by constructing and operating applications and data in the cloud through dynamic application development tools and technologies like containers, microservices, modern design, automation and APIs. Because of these techniques, banks and FIs can build loosely-coupled systems that are resilient, easy to manage and can incorporate high impact changes frequently with minimal effort.

···→ Benefits of a cloud-native lending platform

→ Scalability

- Public cloud-based lending solutions give banks the ability to strategically scale as per their requirement.
- They can increase or decrease their computing capacity when needed.

→ Cost Reduction

- No need to spend on maintaining and updating legacy lending applications.
- No huge initial capital expenditure on the computing infrastructure.
- Cost reduction also happens due to increased productivity and efficiencies.
- Reduces loan servicing costs and possible savings from day one.

→ Availability

- Cloud-based lending applications can be accessed anywhere anytime through any device unlike standalone applications.
- They also offer omni-channel support so that users and customers can switch devices and continue the same journey.

Security

- In most cases, Cloud Service Providers have stronger security mechanisms than most individual banks can maintain and manage by themselves.
- Since Cloud is their core business, CSPs employ large teams of security engineers and they continuously invest in meeting the strictest and newest security standards to adapt to evolving threats.
- Documents are stored securely in an encrypted centralized remote server.

Agility and Speed

- Cloud offers the ability to rapidly develop, test and launch applications in a constantly changing environment.
- Cloud increases the speed to market new loan products and services.
- Decreases the customer onboarding time and loan closing time.

Reliability and Resilience

- Due to the distributed nature of the cloud lending applications, it gives the ability to spread and replicate data and app services across more than a single data center or region.
- Enhances overall resilience to respond quickly during physical outages, disruption, etc.

Integrated Systems and Seamless Processes

- Cloud transformation allows various systems to interact with each other, and the processes will become more seamless. This helps in solving the customer problems more quickly.
- Creating common datasets enables deeper and complex insights and analytics.

Improved Customer Satisfaction

- Due to the speed, innovation and personalized services, banks can serve the customer better and faster leading to improved customer satisfaction.

Drive Business Growth

- Cloud allows Banks to tap into new service models, offers new and better products/services to customers, improves, efficiency and flexibility of business processes. Thus, Cloud can become a basis for the digital transformation of the FI.
- Third Party integration with machine learning, IOT platforms, augmented reality and virtual reality, image recognition, natural language processing, etc. through Open APIs will drive business growth and ultimately contributes to the growth in Loans.

⋯⟶ Leveraging cloud in a lending lifecycle

Features of cloud-based lending solutions like the ability to scale up as per the requirement, customization, increased security, access control, data protection etc. make them the right choice for banks and FIs of all sizes. It acts as a Single System of Record that manages every aspect of the lending lifecycle – loan origination, underwriting, servicing, and collections.

Opportunity
- Lead generation
- Channel management
- Campaign management
- Prequalification
- Data lake & analytics

Origination & Underwriting
- Due diligence
- Loan pricing & fees
- Document collection
- Credit ratio evaluation
- Underwriting decision
- Document preparation
- Booking & funding

Servicing
- Account maintenance
- Reporting
- Repayments
- Loan modification
- Foreclosures
- Accruals
- Billing & statements

Collections
- Collection strategies
- Delinquency
- Default management
- Automated notification
- Collections workflow
- Customer interactions

Opportunity/Lead Generation: Cloud lending apps help banks generate leads and customers apply for loans online, and offer omni-channel support, which means that the application process can be started on one device and continued on another.

Origination and Underwriting: In cloud lending applications, customer data is captured in a centralized location and hence, lenders can access it from anywhere and track loan progress. Cloud lending applications help lenders in faster processing of loans by **replacing multiple legacy systems with a single platform**. It offers a scalable workflow-based platform for document management capabilities, integrates with credit bureaus to carry out credit checks, automates the underwriting process for faster decisions and reduced errors, prepares loan documents and generates reports, and books loans and disburses funds. It uses analytics for risk decisioning, **digitizes KYC verification,** and integrates with e-signature vendors.

Servicing: Cloud-based lending applications' servicing capabilities enable financial institutions to handle interest accruals, fees, and repayments efficiently. They also enable them to respond to customer inquiries and process their requests quickly and accurately. Cloud-based lending systems provide an integrated **straight-through processing** ability for loan servicing activities. Through the automation of manual servicing processes, it reduces the servicing costs for banks on loan maintenance and improves the customer experience.

Collections: Cloud-based lending solutions automate collection strategies and help banks in successful loan collection to maximize revenue. It gives collection agents the right priorities and tools to successfully contact the borrowers. It enables banks to contact borrowers through their preferred methods. It eliminates servicing errors by recording all the collection and billing interactions with the customer automatically. It also reduces the cost and effort by using automation in an agile manner to manage and configure the collections workflow.

⋯⟶ Prioritize cloud adoption based on business need

Commercial Lending: Cloud-based commercial lending solutions give banks the power to adopt and manage end-to-end commercial lending processes like customer onboarding, account opening, loan origination, underwriting, servicing, and collections through a single platform. It enables intelligent automation in every possible step of the commercial lending lifecycle, empowers banks to provide end-to-end tracking on large ticket loans, generates more loans in shorter cycles, reduces costs for commercial customers and ultimately increases the revenue for the bank for smoother operations. Typically, commercial lending processes are complex and specific to a client and hence, a cloud-based **commercial lending platform as PaaS (Platform-as-a-Service)** works better in most scenarios.

Asset Financing and Leasing: In the leasing and asset financing area, a solution that increases customer trust through efficient operations is essential to success. Cloud-based asset finance and leasing solutions enable lessors to rapidly originate deals – **helping streamline their workflows,** perform underwriting tasks, collaborate with members of the team and provide a customer-centric experience.

Real Estate Lending: Cloud-based commercial real estate loan solutions provide a **CRE Analysis** tool that allows banks to leverage existing customer data and evaluate real estate property. Bankers can analyze property performance over time by running multiple scenarios and calculating ratios to ensure profitability when issuing CRE loans.

Agriculture Lending: Cloud-based agriculture lending solutions provide banks with a seamless platform to onboard, service and manage agriculture relationships, end-to-end. It utilizes automated workflows to speed up the entire process.

SME Lending/SBA Loan: Even though the requirement for SME loans is on the lower side, it often takes the same amount of time as complex commercial loans. Cloud-based SME lending solutions enable banks and financial institutions to overcome the challenges of serving small and medium-sized businesses. The cloud-based secure SME lending system integrates key steps in onboarding, account opening, origination, underwriting and servicing in a single platform, **reduces the borrowing cost for SMEs and enables access of funds** from a period of a few weeks to hours or even minutes.

Syndicated Loans: Cloud-based lending applications provide effective tools like counter party reports and loan summary pages to FIs to manage complex syndicated loans. FIs will be able to maintain complete knowledge of their customers by analyzing loan structures in the underwriting process.

Retail Lending: Cloud-based solutions digitally transform retail lending by providing an intelligent, mobile-based platform that combines account opening, retail loan origination, automated underwriting, servicing, collections, and analytics. It empowers bankers to engage with their customers anytime, anywhere and helps banks monitor metrics, set goals, analyze customer behavior, and offer personalized loan products. Since retail lending products are heavier in terms of customer experience, a well-designed SaaS (Software as a Service) product mostly fits well, enabling quicker time-to-market.

Mortgages: Cloud-based solutions cover the end-to-end mortgage loan lifecycle from maintaining customer and third-party relationships, pre-approval, agreement, offers, underwriting, closing, and servicing. It transforms business processes, increases revenue, and creates a competitive advantage.

Credit Card: Cloud-based lending applications provide all the required features to FIs to originate, underwrite and service credit cards and other revolver loans at a rapid pace.

Personal Loan: Cloud lending applications enable banks and FIs to offer and service personal and other term loans to the customers in an accelerated fashion and personalized as per the requirement.

BNPL Lending: Cloud lending solutions enable embedded financing like Buy Now Pay Later loans to retail and business customers and make it easy for banks to adopt and expand their lending footprint. It deals with all aspects of BNPL lending, including loan application, KYC validation, customer onboarding, instant credit checks, purchase limit, loan creation, repayments, refunds and reporting.

⋯⟶ Critical success factors for cloud adoption

Sound migration plan: A solid cloud lending migration plan is the most important factor for successful cloud adoption. It should clearly identify what the objectives are and how the plan wants to achieve them. It should include the migration strategy, new cloud architecture and operating model.

Clear understanding of benefits: All the stakeholders should have a clear understanding of various benefits of embarking on a cloud lending journey so that their expectations are set correctly.

Right seed team: Having the right seed team and leader who have a clear understanding of various hardware, systems, and processes is important, since this require deep solutioning with appropriate integration decision and data strategy

Choosing an apt cloud lending product: Identifying the right cloud lending product that suits a bank's requirements, strategy and plan is necessary. It should be able to integrate easily with the rest of the applications in the bank.

Focus on integration and migration: When migrating to cloud, it is extremely important to have the right cloud lending product that integrates well with other applications and interfaces within the bank like core banking product, payments module, CRM, reporting system etc. It should also be able to connect with applications outside the bank like credit bureaus, fraud detection engines, regulatory bodies etc. through Open APIs for communication. The lending product should support such integrations and migration by providing the right connectors and tools. Also, care should be taken to integrate applications in a seamless way so that the there are no processing delays during their interactions.

Engaging the right fit system integrator: Identifying the right product is one thing, but to implement and customize it as per the needs of the bank requires an experienced system integrator.
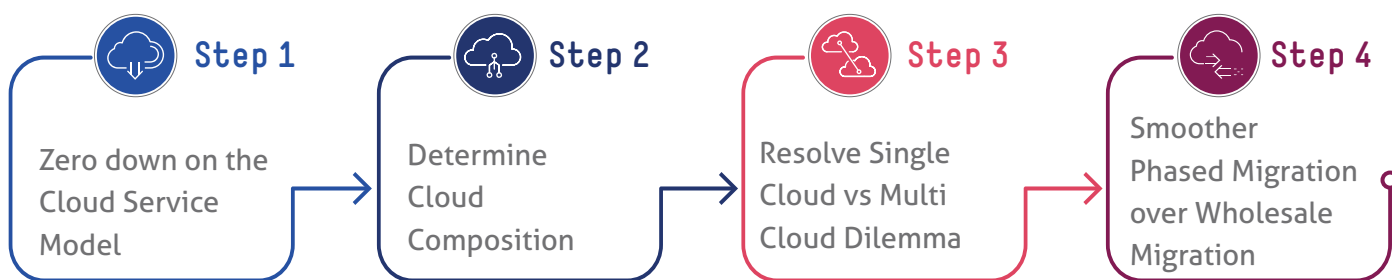
Involvement of key stakeholders at every milestone: Active involvement, communication and collaboration between various teams and stakeholders is very important for a successful cloud lending journey.

Breakdown into phases: Breakdown the journey into smaller phases, take a deadline-driven approach and celebrate key milestones along the way during implementation.

Evaluation with success metrics: Identify success factor and metrics to monitor and measure the success of the cloud lending migration. Some metrics include capacity utilization, response time, availability, and cost per loan etc.

Cloud-native lending adoption journey – a frame work for banks & FIs

Step 1
Zero down on the Cloud Service Model

Step 2
Determine Cloud Composition

Step 3
Resolve Single Cloud vs Multi Cloud Dilemma

Step 4
Smoother Phased Migration over Wholesale Migration

Step 1   Zero down on the cloud service model

Software-as-a-Service: SaaS is a cloud service model where the lending application is managed and hosted by a third party vendor on cloud and delivered to users through the internet. SaaS applications run directly on web browser, so they do not require any installations on the client side. FIs don't need IT staff as the cloud service vendor manages all technical issues related to data, application, middleware, servers, and storage.

Platform-as-a-Service: The delivery model of PaaS is like SaaS, except instead of delivering the lending application directly, PaaS delivers a platform over the internet so that the lending application can be deployed or developed from scratch on the platform. FIs can choose the lending application of their choice, and deploy and manage it without having to worry about physical infrastructure, OS, servers, storage etc.

Infrastructure-as-a-Service: IaaS delivers cloud infra like servers, storage, network over the internet. IaaS is like a traditional data center without the need to physically manage it. IaaS providers only manage the servers, storage, networking, and virtualization. IaaS tenants are responsible for managing operating systems, data, middleware, and lending applications.

Each service model has its own features and advantages. So, it is important for FIs to understand their needs and choose the right cloud service model accordingly.

Step 2   Determine Cloud Composition

Public Cloud: Public cloud is a multi-tenant environment where the FI subscribes to a cloud computing environment that is shared with several other tenants. Public cloud offers **high scalability,** flexibility, agility, and **low-cost pricing** that addresses the needs of FIs of all sizes. The CSP is responsible for maintaining and developing all the shared computing resources.

Private Cloud: Private cloud is a single-tenant environment where the physical infra, network and storage are dedicated to a single FI. The infra may be located within the premises of the tenant or in an off-site data center and delivered through a secure network. Private cloud offers greater visibility and control into the infra and security, but is very expensive compared to public cloud.

Hybrid Cloud: Hybrid cloud is a mix of public and private clouds with orchestration between the two platforms. It offers greater flexibility. Some FIs use private cloud for their IT workloads and public cloud to accommodate occasional spikes in resource requirements. Others use private cloud for sensitive data and public cloud for other regular data. The drawback of hybrid cloud is that transferring data between different clouds is a complex and costly affair as it requires strong integration.

Step 3   ## Resolve the Single Cloud vs Multi Cloud Dilemma

With a multi-cloud approach, FIs don't have to put all the eggs in one basket. If one CSP has capacity issues, they can lean on the other. With multi-cloud, they can also avail the best features of different providers. However, a major disadvantage is that clouds are not designed to work together. Having a lending app from one cloud to work with another application from a different cloud could be very challenging. Integration of applications and movement of data between clouds is very slow, costly and increases data vulnerability.
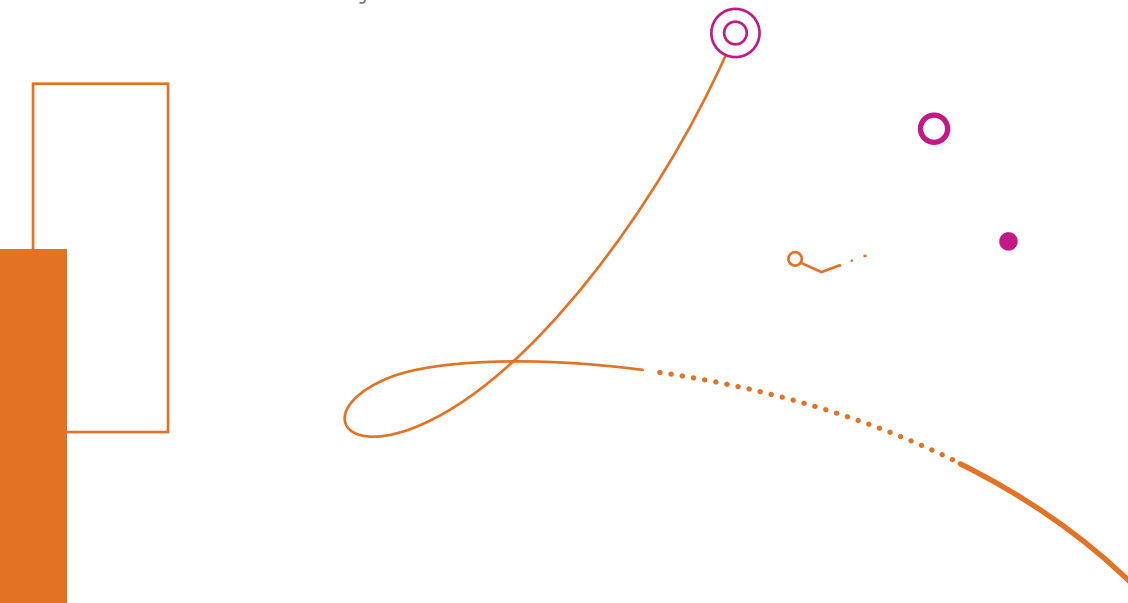
Usually, small and medium FIs stick to single cloud to leverage the ecosystem fully. Big FIs opt for multi-cloud as they can invest the time and money to get the best mix of performance, reliability, security, and scalability.

Step 4   ## Smoother Phased Migration over Wholesale Migration

The thought of migrating a legacy lending application to the cloud can be daunting. However, it doesn't have to be a wholesale migration. Rather, it can be phased. One can start with a small project, maybe with one lending group and then gradually expand it. Another tactic is to leverage the cloud lending app with new customers and continue the legacy app for existing clients. One can gradually migrate the volume on to the new cloud lending app. This way, one can reduce risks.

Conclusion

Lending is universally a core function at banks and FIs. As disruptive players started penetrating this market, it has become more competitive and there are significant volumes of customers moving towards new innovative offerings by these new entrants. Whilst the core function of lending retains its importance, there are several services that are also being tapped by FinTechs across the lending industry. Since the criticality of this business function is very high for banks and FIs, it is of utmost important for them to explore new avenues of sharpening their lending capabilities. While automation and digitization are priorities to be future ready, this is not enough today. Banks and lenders need to start thinking beyond just lending services and adopt an integrated offering that could reduce the burden from borrowers, be it financially or mentally. Personalized services along with advanced analytics and complex financial decisioning can yield better services for customers. Banks also need to keep innovating, organically or inorganically, and incorporate these new age features and services, be it Buy Now Pay Later, crypto lending or sustainable financing. In order to unlock new capabilities and ensure faster time-to-market, address the scale and capabilities to handle the sheer volumes of data on a real-time basis, cloud is becoming the prevalent trend across lending areas in the banking and financial services industry.

References

i.   https://www.forbes.com/sites/ronshevlin/2019/04/01/how-much-do-banks-spend-on-technology-hint-chase-spends-more-than-all-credit-unions-combined/?sh=28330819683a

ii. https://www.fnlondon.com/articles/banks-face-spiraling-costs-from-archaic-it-20170912

iii. https://www.emarketer.com/content/spotlight-us-bank-technology-spending

iv. https://www.mckinsey.com/industries/financial-services/our-insights/unlocking-the-banking-technology-workforce

v.   https://www.fnlondon.com/articles/banks-face-spiraling-costs-from-archaic-it-20170912

vi. https://www.fnlondon.com/articles/banks-face-spiraling-costs-from-archaic-it-20170912

vii. https://www.threatstack.com/blog/why-banks-are-moving-to-the-cloud-and-why-you-should-too

viii. https://thefinancialbrand.com/122655/banking-in-the-cloud-replaces-legacy-core-banking-technology-trend/

ix. https://www.globenewswire.com/news-release/2022/03/31/2414320/0/en/Wells-Fargo-Expands-Adoption-of-nCino-to-Transform-Small-Business-Banking-Experience.html

x.   https://www.americanbanker.com/news/jpmorgan-chase-moving-retail-banks-core-system-to-cloud

xi. https://www.usbank.com/about-us-bank/company-blog/article-library/expanded-agreement-to-enhance-wholesale-banking-lending-experience-for-clients.html

Author profiles

Abhik Kar

Abhik is the Director Consulting, and Practice Lead for the Banking CoE at Mindtree Ltd. He holds deep domain experience, with expertise in business consulting, leadership, client management, strategy, innovation, and program management. Abhik has worked closely with large global banks in the US, UK, and Australia. His current focus includes solutioning, thought leadership and consulting on disruptive innovation based on emerging technologies like AI/ML, cloud, and the FinTech ecosystem.

Bhanu is a Senior Consultant at Mindtree Ltd. He has proven experience in business and data analysis, consulting, solution design and implementation, and thought leadership initiatives in the banking and financial services domain. He has demonstrated expertise in requirements gathering, solutioning and impact analysis, and has worked on both Agile & Waterfall methodologies.

Bhanu Prathap Govind

About Mindtree

Mindtree [NSE: MINDTREE] is a global technology consulting and services company that enables enterprises across industries to drive superior competitive advantage, customer experiences and business outcomes by harnessing digital and cloud technologies. A digital transformation partner to approximately 275 of the world's most pioneering enterprises, Mindtree brings extensive domain, technology and consulting expertise to help reimagine business models, accelerate innovation and maximize growth. As a socially and environmentally responsible business, Mindtree is focused on growth as well as sustainability in building long-term stakeholder value. Powered by more than 37,400 talented and entrepreneurial professionals across 24 countries, Mindtree — a Larsen & Toubro Group company — is consistently recognized among the best places to work.

To learn more about us, visit www.mindtree.com or follow us @Mindtree_Ltd