INDUSTRY REPORT

HOW TECHNOLOGY IS REVOLUTIONIZING THE INDIAN BANKING INDUSTRY.

BANKING ON THE FUTURE

MAY 2023

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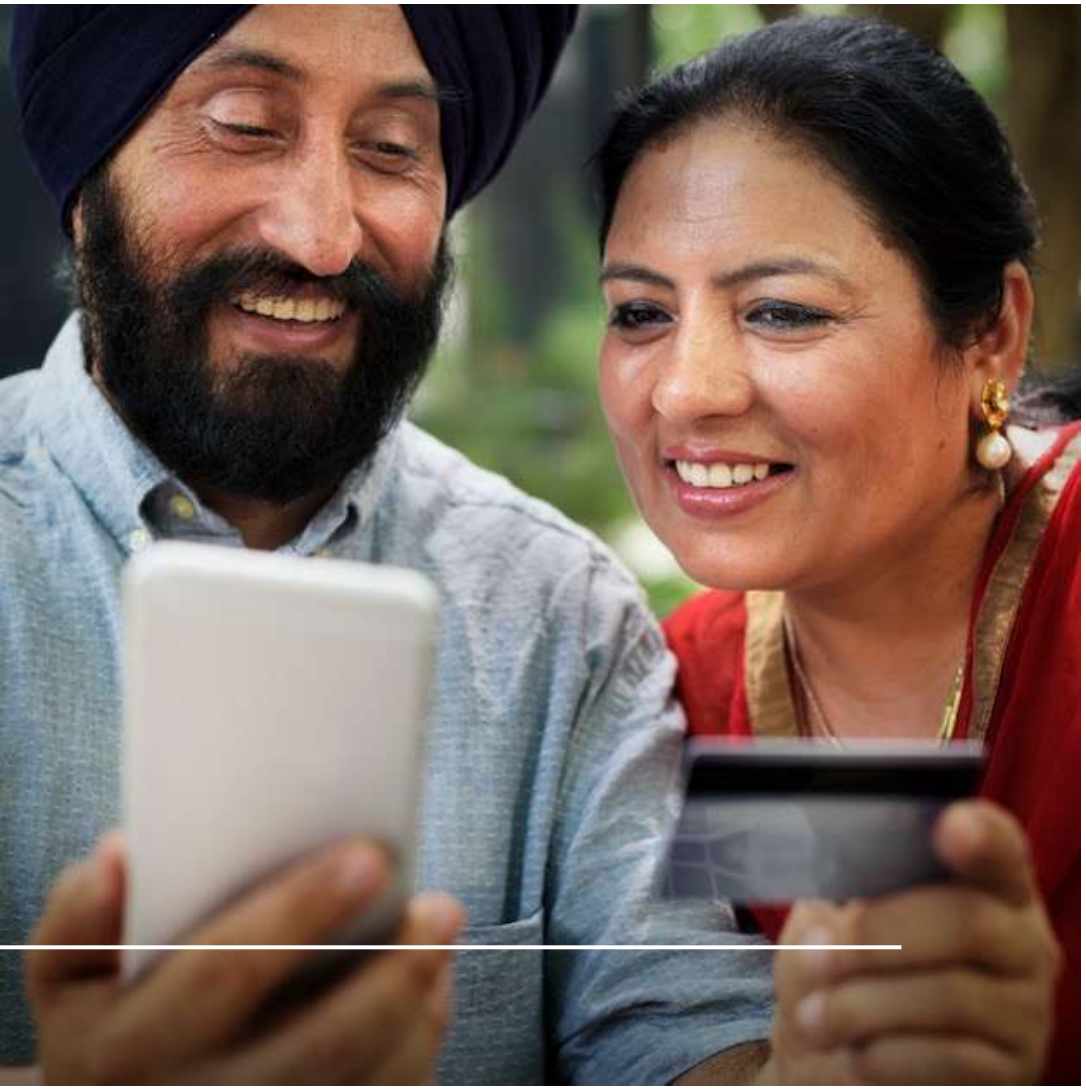
Globally, the finance industry has experienced unheard-of disruption due to digitization and cutting-edge technologies.

The Indian banking industry has rapidly embraced technology, recognizing its potential to transform the way banking services are delivered. In recent years, Indian banks have invested heavily in digitizing their operations, improving their efficiency, and enhancing the customer experience. From online and mobile banking to biometric authentication and AI-powered chatbots, Indian banks have adopted a wide range of technologies to provide better and more secure services to their customers. Additionally, the Indian government's push for digitization and financial inclusion has further propelled the adoption of technology in the banking industry, with initiatives such as the Unified Payments Interface (UPI) and the Jan Dhan Yojana program helping to bring banking services to previously underserved populations. As such, technology is poised to continue playing a key role in the growth and evolution of the Indian banking industry.

What does it mean to the Indian Banking Industry



Heightened Customer Experience

According to a survey of C-suite executives in the financial services sector, 80% indicate that embracing any sort of digital transformation must place a strong focus on improving customer experience. Customers' experiences with traditional financial services were ridden with long wait times and ineffective resolutions. Modern consumers are digitally savvy. They depend heavily on technology in their daily lives, and they want financial services to be just as convenient. As a result, adopting digital capabilities can assist financial institutions in tracking, attracting, and retaining consumers through positive engagement and constant provision and delivery of personalized products and services.

Boost operational efficiency and revenue generation

The appropriate set of digital technologies, when applied strategically, can aid transformation, significantly improving operational processes and, as a result, increasing revenue generation by folds. By automating manual procedures and integrating data, technology can assist streamline operations, lowering costs, and saving time. By carefully gathering, managing, and storing raw consumer data that can be analyzed to increase business intelligence and optimize growth, digital transformation activities help to simplify data collection and management, ultimately enhancing revenue generation.

Expand to the unbanked population

With technology solutions, the Indian banking sector's transformation from physical to digital banking has effectively overcome the hurdles posed by the diverse Indian population. Banks are now producing long-lasting products and have transformed themselves from mere traditional money-dealing enterprises. The previously under-represented groups in rural areas now have convenient access to financial services. Banks are now increasing their reach into the country's rural core.

Process agility and insight-driven operations

Given that most processes can be automated by adopting technological tools, it invariably increases process agility by eliminating human-induced errors. Aiding in the improvement of precision in repetitive tasks can improve operational efficiency by folds. When it comes to making critical decisions, technology, like AI, enables faster trade decisions in capital markets. Business decisions and strategies can now be based on calculative insights with a more customer-centric product or service.

In line with multiple global banks that are already making AI-enabled capabilities intrinsic to their operations and strategies, financial institutions in India also embraced transformation to meet the changing needs of their customers and maintain that competitive edge. Indian banks have been proactively implementing new technologies and providing cutting-edge goods to promote inclusion and improve customer services. The central bank of India, The Reserve Bank of India (RBI) itself is often attributed a quintessential role in the introduction of electronic payment systems like RTGS, NEFT, and mobile banking systems. The banking and financial services industry has undergone a technological transition that has resulted in a surge of redefined goods and services as well as improved overall experience across the board.

Decision-making

The nation's largest bank, State Bank of India (SBI) employs analytics tools to obtain a unified picture of customer data, allowing it to better manage accounts and operations and make more informed and timelier product-launch decisions. Analytics solutions also provide SBI with real-time visibility and early alerts for non-performing assets, which aids in credit default risk management.

Operations

ICICI, one of India's largest private-sector banks, uses robotics to automate several banking activities. It has used AI-enabled technologies such as facial and voice recognition, natural language processing, and machine learning to automate more than 200 business activities in retail banking, agri-business, commerce, foreign exchange, treasury, and human resource management.

Customer Service

Kotak Mahindra Bank has introduced Keya, an AI-powered voice bot that can interpret and reply to customer inquiries in both English and Hindi. Keya can handle over 10,000 banking transactions, account details, and credit card service inquiries and requests.

Security

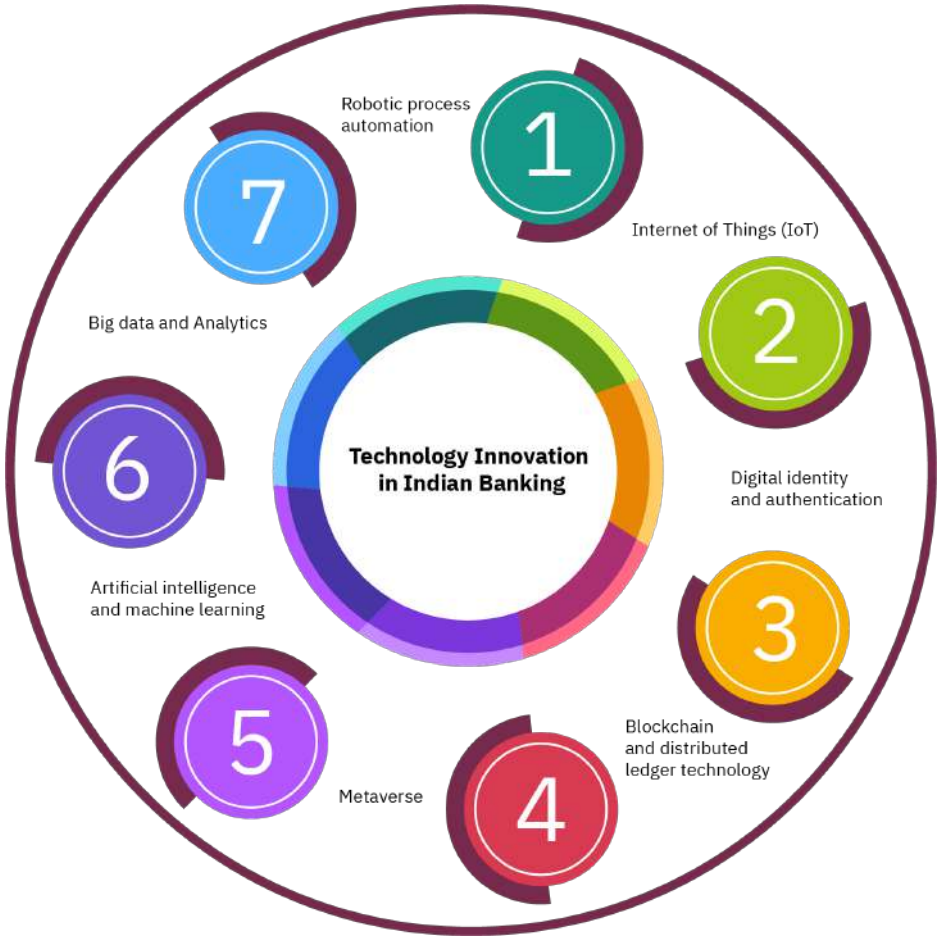
To detect and prevent fraudulent transactions, SBI Card has built an AI-powered fraud detection system that uses machine learning techniques. The technology has decreased false positives by 30%, resulting in a considerable decrease in fraud losses.

Refined Products

Kotak Mahindra Bank launched KayPay, an AI-powered investment platform that leverages machine learning algorithms to give personalized investment recommendations based on customer preferences and risk tolerance. In addition, the platform provides real-time market information and analysis to assist customers in making informed investment decisions.

These are just a few examples of how the Indian banking industry is being shaped by innovation. Adopting these disruptive technologies can assist banks in increasing revenues through increased personalization of services to customers; lowering costs through efficiencies generated by increased automation, lower error rates, and better resource utilization; and uncovering new and previously unrealized opportunities based on an improved ability to process and generate insights from vast troves of data.

Major technology trends driving change in Banking



Artificial intelligence and machine learning

In today's age of hyper-personalization, chatbots have become ubiquitous, evolving from simple digital tools to virtual private assistants. Apart from offering consumers the flexibility of a self-service option, AI-powered chatbots provide contextual insights to consumers through their preferred channels (including the comfort of their homes), thus boosting the sales conversion of FS products. Applications of AI have been developed to better manage risks and time-sensitive choices. Today, most organizations are switching from antiquated rule-based risk management systems to AI-driven engines.

IndusInd Bank has launched an AI-powered chatbot named IndusAssist, which can assist customers with their banking needs, including account balance inquiries, fund transfers, and bill payments. IndusAssist has a 24/7 availability and can handle up to 75% of customer inquiries.

The AI-powered chatbot EVA (Electronic Virtual Assistant) from **HDFC Bank** is another example of how AI is used in more extensive applications. EVA can parse natural language, analyse sentiment, and have contextual dialogues to deliver individualized and effective customer support.

In a related vein, **Axis Bank** has unveiled a machine learning-powered loan underwriting system that employs AI to analyse customer data and deliver real-time credit determinations. The solution has significantly increased client satisfaction and improved risk management by cutting the loan processing time from 20 days to just a few hours.

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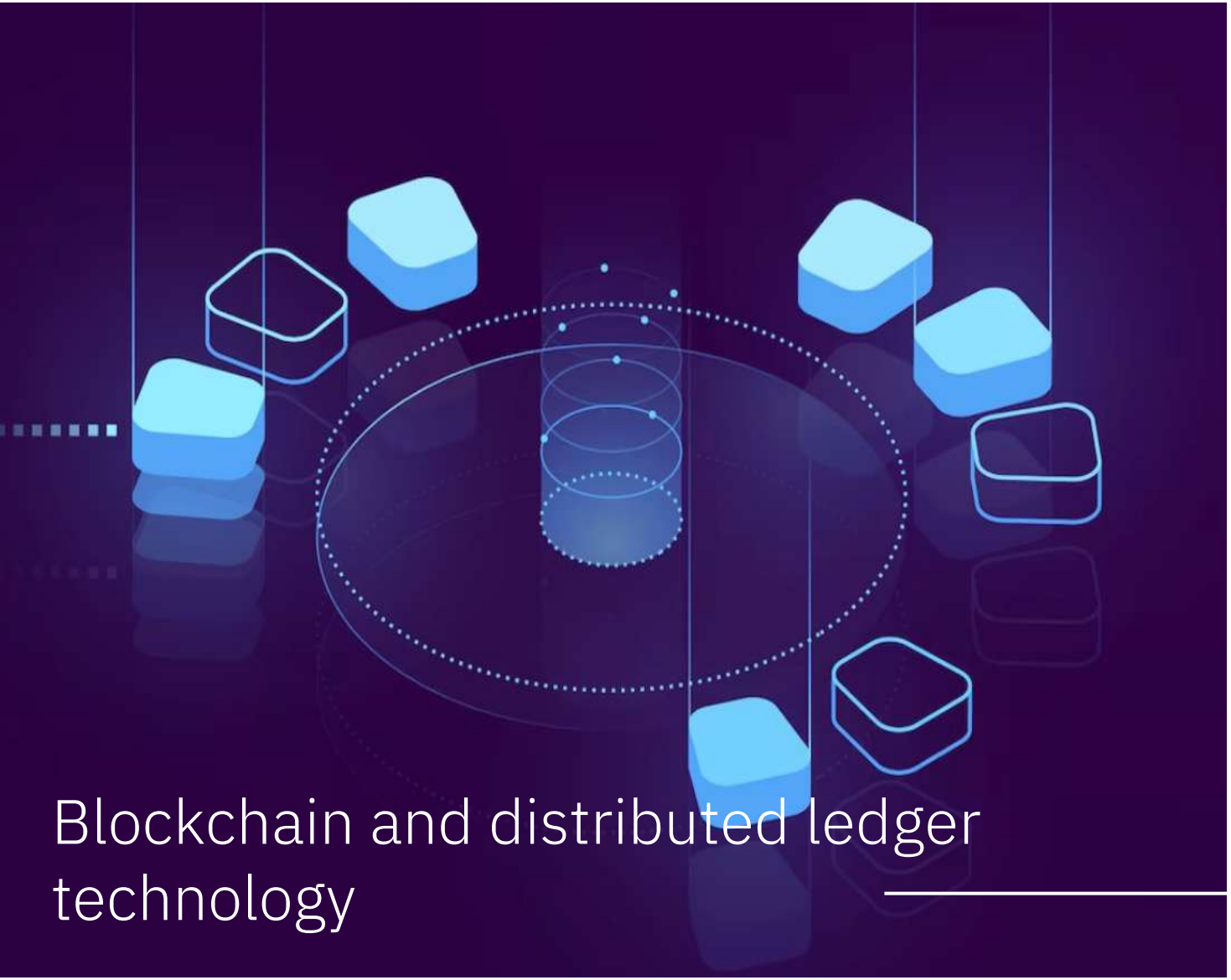
Application of metaverse technology in India's financial services industry embodies the next evolutionary stage of the country's banking and financial services ecosystem. Representing the fifth stage of evolution in the banking and financial services industry, metaverse offers customers exceptional banking experience in a virtual environment. Complemented with virtual or augmented reality technologies, metaverse technically allows an immersive, personalized banking experience for customers. The impact is so significant that it is estimated that by the end of this decade, about 50% of banks globally will be deploying these technologies as an alternative to traditional customer transactions and even employee engagement.

Even though in India, the banking sectors are still in a nascent stage in the metaverse adoption, but it's the need of the hour to gauge their technology readiness and embrace the technology. For instance, metaverse opens up new segments of customers for the bank. The current youth demographic, the Gen Zs, are highly reluctant to do routine banking transactions. Their need for convenience and seamless experience makes it taxing for them to make way with the traditional banking systems.

Union Bank of India, the first Indian Bank to launch the "Uni-Verse" virtual lounge for customers who can access product/service/banking experience through the UBI website. UBI's Metaverse Virtual Lounge Uni-verse provides information on deposits, loans, government welfare schemes, and digital initiatives.



Blockchain and distributed ledger technology

In addition to providing a huge variety of potential use cases, blockchain is particularly appealing to the financial services sector since it can significantly lower infrastructure costs. Blockchain distributed ledger technology (DLT) drastically cuts costs by eliminating an entire layer of intermediaries that take fees from each transaction they perform by enabling immediate confirmation of all participants on the network. This is significant for an industry that is oversaturated with middlemen involved in moving money and adjudicating contracts, among other things.

YES Bank has incorporated blockchain technology to strengthen its supply chain financing processes, allowing buyers and suppliers to conduct faster and more secure transactions. The use of technology has decreased the processing time for supply chain finance transactions from weeks to just a few days.

Digital identity and authentication

Account opening is becoming more electronic, and service providers want a secure and safe means to verify identification and conduct e-KYC. Therefore, digital identification and authentication has seen rapid adoption across the sector. Furthermore, in some circumstances, prefilling of client fields by linking them to external data sources is readily available in numerous organisations.

Customers' convenience has been improved by including new features such as facial recognition, digital identity, and authentication. This technology, which represents a significant transition from traditional banking services, provides efficient customer service and ease.

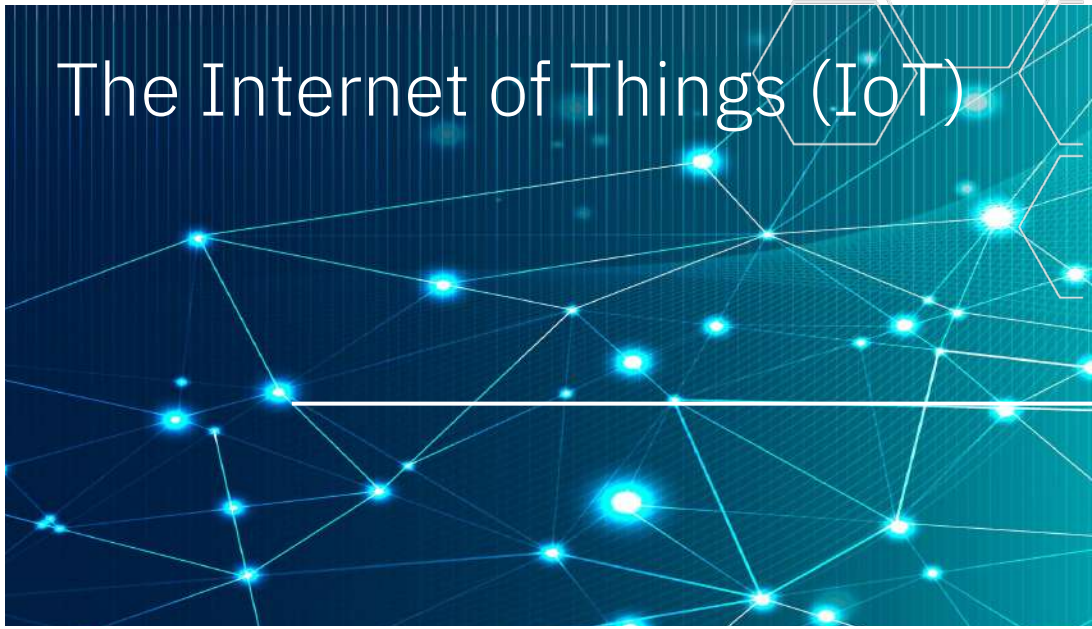
HDFC Bank has implemented Aadhaar-based e-KYC (know your customer) verification, which allows customers to open bank accounts online without the need for physical documents.

IDFC First Bank has deployed facial recognition technology for customer authentication, allowing users to use their mobile phones to access banking services.

The Internet of Things (IoT) is a cutting-edge technology that allows networks of connected devices (such as sensors, cameras, and smart gadgets) to collect real-time data, send it to the cloud for processing and analysis, and respond to events in real time. This element makes it crucial for the financial services business. As a result, firms are mining their core transaction and IoT data to study customer expenditure and payment trends for recommending 'next best offers'. This has not only aided in cutting high client acquisition costs, but also led to expanded income prospects through cross-selling and upselling.

IoT has being employed to counter security risks as well. To provide 24-hour security of property and equipment (offices, ATMs, CIT cars, etc.), IoT connects and remotely controls CCTV cameras, smart alarm systems, vehicle telematics, and other monitoring technologies. It also sends notifications in the event of any malicious activity. Coupled with AI-powered analytic, it helps spot fraud and hacker threats by collecting and analysing user account data.

Users can now make payments without using their credit or debit cards directly thanks to the integration of banking IoT solutions and wearables. The availability of NFC-enabled gadgets, such as smartphones and smart watches, that enable contactless payments for smooth financial transactions has significantly increased customer convenience.



IDFC First Bank has partnered with a start-up to develop an IoT-based solution for real-time monitoring of its branch operations. The solution uses IoT sensors to track footfall, waiting times, and other key metrics, helping the bank to improve customer experience and reduce costs.

The 'IndusMobile' IoT-based mobile banking app from **IndusInd Bank** enables users to carry out a variety of operations using their cell phones, including bill payments, fund transfers, and balance checks.

Cloud computing and storage

Previously, cloud applications were synonymous to financial services players as cloud-based software-as-a-service (SaaS) primarily for non-core applications such as CRM and HR. But now the trend is changing. There is a high rise in using cloud infrastructure model for variety of applications. It is now used for delivering core applications too. Cloud infrastructure has substantially lowered data storage costs, enhanced application scalability, and enabled industry participants to leverage big data by using advanced analytics to get customer insights. It has been utilised as an analytics platform to generate customer insights by accessing data from different partners via APIs and microservices, allowing businesses to respond to customer requests quickly.

Cloud infrastructure is highly interoperable. This is of great significance as it helps in moving different systems to the cloud platforms while ensuring efficient integration with other systems. This ensure a seamless experience for end customers.

ICICI Bank, one of the country's early adopters, adopted a hybrid cloud approach and migrated its key banking system to the cloud. This decision has assisted the bank in lowering IT infrastructure expenses and increasing scalability. Having a hybrid cloud model, further allows it to use both public and private cloud infrastructure for its operations.

Axis Bank has adopted cloud computing for its data analytics and customer insights initiatives. It has partnered with cloud service providers to access data from multiple sources and gain insights into customer behavior and preferences.

By implementing cloud-based solutions for a range of aspects starting from its CRM, HR, and treasury operations, **HDFC bank** has readily utilized this technology. It It has also embraced cloud technology for its mobile banking app, allowing customers to access their accounts and perform transactions on-the-go.

THE FUTURE

Digital Currency

With the advent of cryptocurrencies and digital tokens, Indian financial institutions may adopt these new forms of digital currency, leading to better efficiency, transparency, and security in financial transactions.

Increased Use of AI/ML

As AI/Ml algorithms advance, they may be used to improve customer service, detect potential fraud, and make more accurate investment decisions.

Blockchain

Greater adoption of blockchain technology might be witnessed among Indian financial institutions to boost transaction speed and security while also lowering expenses.

Biometrics

With the advent of cryptocurrencies and digital tokens, Indian financial institutions may adopt these new forms of digital currency, leading to better efficiency, transparency, and security in financial transactions.

Expansion of Open Banking

Open banking is the practice of exchanging financial data across various entities in order to improve financial services and create a more competitive market. As open banking becomes more common, it has the potential to spur greater innovation and collaboration in the Indian Banking Industry.

Metaverse

As more tech-savvy Gen Z customers begin to use financial services, metaverse technology may see widespread acceptance among financial institutions. While not yet commonly used in the finance industry, metaverse technology may find applications in financial transactions and investment management, etc.

There are undoubtedly many advantages to the introduction of technology in the financial services industry. Without the usage of software, the global finance sector would not have reached its current size. Adopting technology can significantly improve India's financial services sector's ability to serve the world's second-largest unbanked population. This could easily translate into millions of people in both the formal sector and the sizable informal economy receiving payments, settling debts, and transferring money anywhere in the nation, with only a few screen taps. However, it is also crucial to note that the digital transformation journey can be challenging. It necessitates a shift away from traditional norms and processes for new interventions to have an impact, as well as assuring employer upskilling and a shift in corporate practices. Organizations frequently lack the requisite skill sets for implementing digital initiatives. As a result, understanding how to draw the dots between digital efforts, strategy, and business enablement remains critical.

If you want to implement advanced technology into your business, talk with our experts for actionable insights and trends that can help you carve the best implementation strategy. Our experienced industry experts, here at Knometrix, are proficient in analysing and identifying the best-suited strategy for your business.

Knometrix provides businesses with global market intelligence & market insights to facilitate intelligent decision making. Our in-depth analysis and unique data-driven insights helps leading organizations in strategic decision-making.

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