

DIGITAL METAMORPHOSIS IN BANKING AND FINANCIAL SERVICES

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ABSTRACT:

The banking sector plays an imperative role in the country's development. The development of the banking sector depends upon the services provided by them to the customers in various aspects. New competitors to the market, new business models, and changing customer expectations and disintegration of traditional services are all backing to put traditional banks under tremendous pressure to unveiling new technology for their operations. Most of the banks start pioneering banking with object to create more value-based customers. ATM, NEFT, Internet banking, SMS banking, RTGS, Mobile banking, and cheque truncation system are some of the existing innovations. But there are some new innovations used by non-banking institutions and a few other foreign banks. These new innovations may be seized by the Indian banks. So, this paper enlightens the knowledge light on new innovations in the banking and financial sector. The article targets defining digital transformations in banking, outlining how banks are developing and pointing out who the technology itself will be disruptive for the banking sector, but rather how they can deploy the technologies that cause disruptions.

1. Introduction:

Banks are embracing digital transformation by using new technology and navigating new partnerships which will challenge the growing competition. Digitalization and innovative technologies are creating unprecedented disruption within the banking sector, and therefore the rate of change is increasing. Banks face crucial decisions as technology shifts customer expectations and changes the regulatory landscape. But digital initiatives isolated here and there across an organization will not be enough to succeed. Your digital strategy and your business strategy must be one and therefore the same. Furthermore, we may successfully collaborate with an ecosystem of industry partners and FinTech providers.

2. Objective of the study:

The purpose of the study is to mainly focus on digital innovation in banking and financial services at a global level.

3. Research Methodology: The research is done upon the secondary data that is collected from various sources like newsletters, articles, and other websites.

4. REVIEW OF LITERATURE

Depending on quantitative or qualitative research done in 2017 on impact of demonetization on Indian Economy. General public and various sectors of economy. Dr. Arunn Mittal 2017 in his research article found that the people are facing liquidity problems in early days later cash less transactions helped everyone, besides changing their behavior pattern in curtailing the expenses and saving for urgent needs.

A survey done in Ghaziabad city on retail sector by Dimpal Viji and Arora 2017 found the demonization impacted retail sector very badly especially the small vendors. It impacted e-business a lot and it will prove huge boom for digital payment market. Post demonetization people started believing in plastic money which is easy to adapt.

Kamesam 2001 from his studies that changes that took place in Indian banking industry emphasized on technological advancements and profitability in banks. Emergency services like Electronic Data Interface usage of smart cards. All resulted in increasing the level of profitability and productivity of banks. He recommended that to reduce crimes security digitalization will improve customer service and systematic efficiency and increased profitability and productivity..

Ramani 2007 reveals from his study the impact of e-payment system on Indian banking sector, how E-payment was helps in handling large volume of payment transactions and remittances for fast and quick payments at low cost. He highlighted various reforms taken by RBI on various e-payment systems, he also highlighted methods used in core banking solutions, data mining,. E-payments reduced fraud and delay in payment obligations.

5. EMERGENCE OF WORLDWIDE LEVEL TRANSACTIONS

All over the planet people are increasingly transacting across national borders far more than the previous times, they're more frequently traveling, living, and buying internationally. The emergence of digital innovations within the banking and financial services in the economy is

another example of how people can sleep in any part of the planet and deliver projects without geographical prejudice. How has this happened over a period of time?

- **Seamless Integration** - Internet-facilitated technologies allow better oversight and efficiency of demand and provide fulfillment operations.
- **Mobile Connectivity** - Mobile networks are more cost-efficient than their fixed-line equivalents and have allowed rapid infrastructure build-up, bringing large parts of unreachable audiences within the “consumption” economy.
- **Increase in Data Availability** - Shifts to digital methods have brought large increases in data availability; both from conventional data (e.g., financial) to non-financial (social media, geotagging, AI-based models, etc.)
- **Reduced Cost of Acquiring and Servicing Clients** - generally, digital technologies are allowing banks to scale back their costs to acquire/service customers, by automating tasks that might have otherwise been performed by human labor.
- **Trust-based Transactions** - Digital social identities are allowing completely new ways to spot, monitor, assess, score, engage, and track customers. The targeted nature of a digital footprint offers large incentives to play it fair and straight and align transactional parties.
- **Cloud and Physical Infrastructure** - Physical location of most businesses, especially in services, has ceased to be a bottleneck for geographical growth. Companies in one corner of the earth can now onboard and repair customers on the other.
- **Scaling-up Businesses** - is becoming easier with cloud-based distributed and “pay-as-you-go” scalable infrastructure allows the rapid building of companies at low fixed CAPEX costs

6. VARIOUS OTHERSECTORS WHERE THE DIGITALISATION IS USED

6.1 RETAIL BANKS: WELL-PREPARED FOR DIGITAL INNOVATION

Retail banks consider digital capabilities foundational to their competitiveness. As fintech firms, online-only banks, and non-financial platform companies enter this segment of the financial services industry, retail banks are making technology a significant strategic focus from the survey, 87% have a correct long-term plan for digital innovation.

6.2 CAPITAL MARKETS: THE DIGITAL OPPORTUNITY FOR IMPROVED COMPETITIVENESS

For investment banks, asset managers, wealth managers, and technology play a variety one role in driving business strategy. Anticipating widespread disruption in financial services, many capital markets firms are already investing in new tools and platforms. Infact, 93% of technology executives at capital markets firms say their company features a long-term plan for technology innovation throughout the business.

6.3.INSURANCE BANKING:

Perhaps quite the other financial service sector, insurance emphasizes personal relationships. Human emotions like trust and compassion often play a central role, both in winning new customers and keeping existing ones. Oneof the most important challenges for insurers today is leveraging technology to create and improve their business while maintaining that essential personal touch.

7. Recent Trends in Banking: All Roads Lead to Digital

Several trends are making a robust impact on the digital banking space. Some of these trends are relatively mature, whereas several recent developments still have fairly low penetration or usage among banks.

Mobile Banking

In emerging markets like China and India, the penetration of mobile banking is stronger as compared to developed markets. Most banks today offer mobile banking, ranging from basic mobile applications to more sophisticated apps comprised of unique value-added services and features - like social media integration and augmented reality. Many new mobile-only banks have cropped up across the world.

Social Media

New disruptive technologies are now getting employed by banks to integrate social media into banking services, ranging from payments, transfers to even utilizing it for calculating credit scores, and lending decisions.

Biometrics

Banks are now increasingly using voice biometrics, fingerprint scanning and iris scans as authentication tools to strengthen security platforms and address identity theft-related challenges. Biometrics is considered a serious contender to replace passwords in the future.

Contactless card: This talks about the credit and debit card usage that has evidently increased after the government requested the citizens to go digital and less cashless. This also has made the working of the financial services more flexible and efficient towards better India.

Personal Finance Management

Personal financial management applications have evolved from basic tools to more advanced and automatic platforms that leverage big data, analytics, behavioral research, and other technologies to automate and digitize personal financial management. Banks are offering these value-added services to reinforce engagement levels with customers.

- ✓ **Contextual Banking:** In today's dynamic and hyper-connected business environment, it has become imperative for banks to supply the proper service to the proper customer at the proper time. Omni-channel banking that gives a uniform banking experience to customers across multiple channels is becoming key to success.

Digital Wallet

Digital wallet may be a mature digital banking technology, with strong usage and penetration among customers. Wallets are frequently wanted to conduct small transactions by customers across the world. The market is expected to grow 30% on a CAGR basis in the next 5 years.

P2P Lending & Payments

P2P and other alternative digital lending platforms have gained attention in the last several years, due to an increased volume of funding and owing to shorter turnaround times in loan disbursement, innovative credit appraisal methods and improved lending rates.

Blockchain

Blockchain, or distributed ledger technology, is predicted to rework the whole financial services space - be it back-end banking operations, trade finance, and lending, payments, or insurance. Banks around the world are either exploring the usage of blockchain or testing it in their operations.

Wearables: Wearables are being evaluated by banks as a replacement interaction and authentication medium. With increasing penetration among consumers, wearables are poised to become a mainstream digital banking application.

GAINING REWARD POINTS: This is another newly added innovation in the banking sector, once when we start using the credit or debit card in various malls, shops, etc. the amount that is drawn by the shopkeeper from the card later turns to be the reward points for the cardholder. Using these reward points the cardholder can redeem it next time on the total bill made by him. It's kind of discount that is allowed by the bank to its customers.

ARTIFICIAL INTELLIGENCE:

The explosive growth that the last decade has seen within the amount of structured and unstructured data available with the banks, combined with the expansion of cloud computing and machine learning technologies has created an ideal storm for AI to be used across the spectrum of banking and financial services landscape. Business needs and capabilities of AI implementations have grown hand-in-hand and banks are watching AI as a differentiator to beat down the emerging competition. Artificial Intelligence allows banks to use the massive histories of knowledge that they capture to form far better decisions across various functions including back-office operations, customer experience, marketing, product delivery risk management, and compliance.

CLOUD COMPUTING:

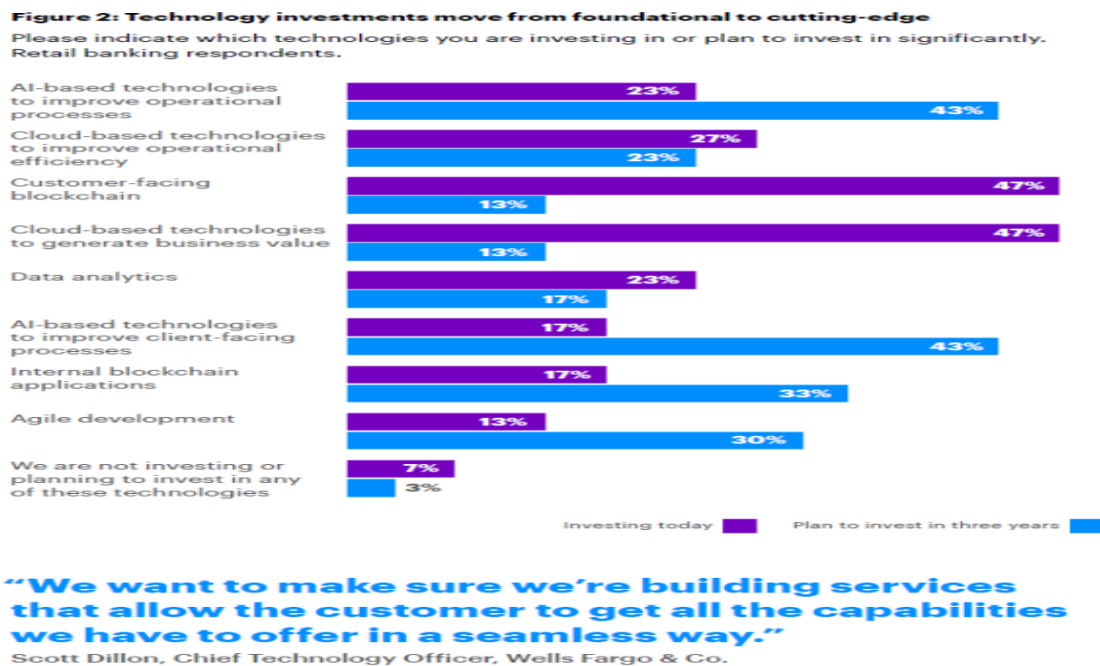
Cloud computing uses the data stored on an external server and accessed through the internet. It is an evident result of the improvements in digital networks and computing speed over the last decades. Banks are widely using cloud computing for human resources, email, customer analytics, customer relationship management, and development and testing. Many financial services rely on cloud computing to get more accurate results for their information. This also makes the work of the employee easier and more effective. As banks adapt to market changes and new technology landscapes, cloud computing is playing a major role. It gives alternative access to core banking technology. The costs of deploying and maintaining complex in-house systems, and keeping up with consumer expectations, are making banks to increasingly depend on innovative, flexible and cost-effective models for their banking solutions.

8. RETAIL BANKS STEPPING AHEAD WITH DIGITAL INNOVATION

The top three goals for digital innovation according to retail bank executives 43% of retail bank executives feel and expect their investments to improve customer loyalty, 33% feel technology will increase market share, and 30% say it will improve employee retention. Deeper customer loyalty, growing market share has become the key competitive factors that maintain the growth and employee's commitment towards the banks and financial services. Banks have seen their technology needs growing and have understood that cloud and data analytics are the key factors for the next generation artificial intelligence (AI) and machine learning. 53% say that AI based operations will have greater impact on the functioning of the banks, whereas 47% of them are of the opinion that client-facing AI has made bigger impact. And the remaining 77% say that in five years the virtual assistants will substantially take over the banking sector.

According to the survey retail banks are increasingly using the sophisticated tools to reach their goals. Their current and future planned investments will reflect the technology. In today's banking sector we can say around 47% of them are investing heavily in customer facing-

blockchain, this might fall to 13% by next three years because the respondents by then will have fully integrated these capabilities into their business. Technology investments move from foundational to cutting-edge Please indicate which technologies you are investing in or plan to invest in significantly.



The biggest barrier to ‘digital transformation is legacy technology and system integration challenges. The report on innovation to retail banking indicates that majority of the banks in the banking industry are not sure about how successfully it might impact the organization objectives.

Approximately only 37% of the banks say that they have seen the evident changes in the operations after digital transformations being impacted on product and service delivery. Whereas another 33% say it has enhanced their innovation process. Industrial experts feel that words digital transformation and digital optimization might be used interchangeably and sometimes even in wrong context.

Banking industry displays a lag in the future business models, 50% of the banks say that they will operate in full stack banks across retail banking and corporate banking segments, but only 26% of banks say they are evolving towards open banking models. 75% of the banks in the industry feel that open banking model attracts more of investment and shares to the bank. Along with open banking API’s and advanced analytics are seen as the big tickets by the banks in the aspect of investment as it will create higher impact in the minds of the customers as well.

Investing in new technologies means greater initial investment on new building, new products and new services which will cost the banking industry on quiet higher end than others. Hence many banks are not ready to apply on any of the technology to create expected business out comes. Only 36% of the banks have showed the readiness to adapt to the open API frame work and advanced analytics.

There is big threat looming over banks in next 5 years as large technologies companies like fin techs and challenger banks will take over the banking sector to greater heights and lead the digital innovation more effectively and eminently.

9. EVIDENT CHANGES DUE TO DIGITAL INNOVATION IN BANKING AND FINANCIAL SERVICES

EVOLVING WORKFORCE

New technologies mean new specialties. As such, the workforce for financial institutions is evolving. According to a LinkedIn Study the highest financial jobs being hired within the UK are:

- Investment Banking Analyst
- Software Engineer
- Paraplanner

At the same time, more traditional jobs require different skills to provide for customers such as salespeople, customer service representatives, HR, and project managers. Advances in technology, including AI systems, are creating an environment where these positions are in danger of becoming outdated unless new skills are developed. As technology continues to evolve the industry, there will be an increased need for a viable workforce to satisfy the rising demands and challenges which develop. At the same time, transitioning towards digital services and technologies will require the right individuals to be in place to ensure these developments are successful.

SPECIALISED SKILLS

As the new technologies come into picture, the recruitment of specialized skills also started. Traditional customer-facing roles require different skills – the validity and usefulness of those roles are now being threatened by innovative technologies. As a result, the industry is looking towards the acquisition of the latest skills so as to exchange those becoming irrelevant through this transformation. It cannot deny that technology has made such an enormous impact on our lives and financial services are not any exception. Digital transformation has created innovative technologies at a rapid pace, and it continues to grow.

In order to remain ahead, traditional financial services organizations will need to adopt new business models so as to take care of customer loyalty and remain competitive. Success will depend on the power of companies to facilitate business automation and integrate technologies with existing ones.

REDUCTION IN CORRUPTION

Since the country is going towards becoming more cashless and digitalized, the rate of corruption also has come down drastically. When we take a look into the facilities provided by the government to the BPL cardholders, then job opportunities created by the government to the unemployed through their Pradhan Mantri Udyog yojana, etc before digitalization the funds issued to these facilities never reached the needy sector of the country, it was getting miss used by the middle agents or sometimes would have used funds for some other illegal purpose. But with digital innovation of scanned unique Aadhaar card, pan card is linked to their personal bank account has made the funds reach the needy sector of the country.

LESS PAPERWORK FOR LOAN APPROVALS

Yes, in the traditional method of banking if any individual wanted to take a loan from the bank they had applied for it in the nearest banks and then had to wait for the application to get approved, later submitting the required documents to make it safer and secure way of getting a loan. This way of getting loans was longer, time-consuming, and sometimes if even one document was not right they had to go through the process all over again which was very difficult for the people from rural sections as they had less knowledge about it. With digitalization, all this paperwork has been cut down and everything is done through the online filling of application.

This is more reliable, accurate, and safe as all the required bank and personal details of the person who is taking a loan are already fed to the system at the time of opening the account.

10. ADVANTAGES OF DIGITAL INNOVATION IN BANKING SECTORS

The digital transformation may be a process of constant technological evolution, where companies must be up so far within the tools available for the development and efficiency of processes to realize greater profitability, such as Big Data or Machine Learning. That is why it is essential to determine the benefits of digitalization for banking institutions. In this sense, Vector ITC points out the subsequent advantages:

User experience: The advance of digital innovation has enabled institutions to improve the user experience comprehensively and to improve omnichannel banking in its evolution towards a customer-centric model. This implies having analytical technology solutions to offer products and services tailored to users. To do this, it is necessary to take into account the knowledge of their preferences, purchasing behavior, and attitudes to risk and financial health.

Increase in the number of clients: Faced with the loss of confidence by traditional banking and the growth in the use of banking apps and online banking by consumers, financial institutions have recently increased the number of customers. With the emergence of Fintech in the sector, it is clear that banks will have to change the way they conduct their business to avoid losing customers.

Greater efficiency in processes: With the implementation of different cutting-edge technologies such as the electronic signature or the creation of banking applications for the smartphone, banks aim to improve the efficiency of their manual processes. In this way, they seek to reduce human errors in dealings with customers. According to the company, it is estimated that correcting this type of error is usually between three and four times more expensive than creating a digital process. Digitalization in the processes grants very important improvements since all the data and signatures are captured correctly the first time.

Cost reduction: Another advantage of digitization in banks is cost savings, both for institutions and customers, through the use of new means of payment and cashless transactions. An example could be Challenger Banks, which are those Nedbank's that have a banking license to offer savings products, financing, and cards in the same way as a traditional bank, but with a 100% digital operation.

Better decisions based on data: With the increasing digitalization of banks, data becomes one of the most important assets when making dynamic decisions, based on large volumes of information available to institutions. Technologies such as Big Data allow banks to base their decisions or improve processes on the data available to their customers. In recent times, the arrival of large technology companies has been a great challenge for banks, as they have a greater amount of data and have a deep knowledge of the technological solutions they offer.

Challenges Involved in Digitalizing Banking Activities in India

Here are the Challenges to digital banking and recommended ways for how to overcome them are discussed.

Attaining App Perfection

There is an immense feeling of intensity and consolation while accessing a Smartphone application. Cell phones are progressively close to home in nature, progressing to biometric check, in any event, for activities, for example, opening the screen. Bringing this into account, developing applications identified with business becomes significant to hold customers. With banking and financial applications progressively offering the comfort and extravagance of observing costs whenever from wherever associations that don't take advantage of this area will surely miss out on many people that will consider the enterprise obsolete. Nonetheless, most applications are frequently ridden with bugs and face serious performance issues. They stay hard to explore, on occasion and frequently crash. This can be detrimental to the company's progress as it would represent low quality.

Technology Upgrades

Hardly any years back, Smartphone small just barely becoming mainstream. Today, the usefulness to a great extent defines the device that is claimed. The individuals who travel frequently on business rely upon Apple and Android tablets, the individuals who function as consultants rely upon excellent cameras and digital note pads, while the individuals who work the 9-to-5 routine favor robust workstations and high-performance work areas. What's more, we have products like Amazon Echo tossed in the blend, for every-day cautions, and to liven up the

general way of life. Knowing which crowd to target is just its half; understanding who might utilize what device under which conditions are similarly significant. This implies a serious measure of investment for banking and financial entities in digital abilities and defining powerful digital strategies.

Cyber Crime

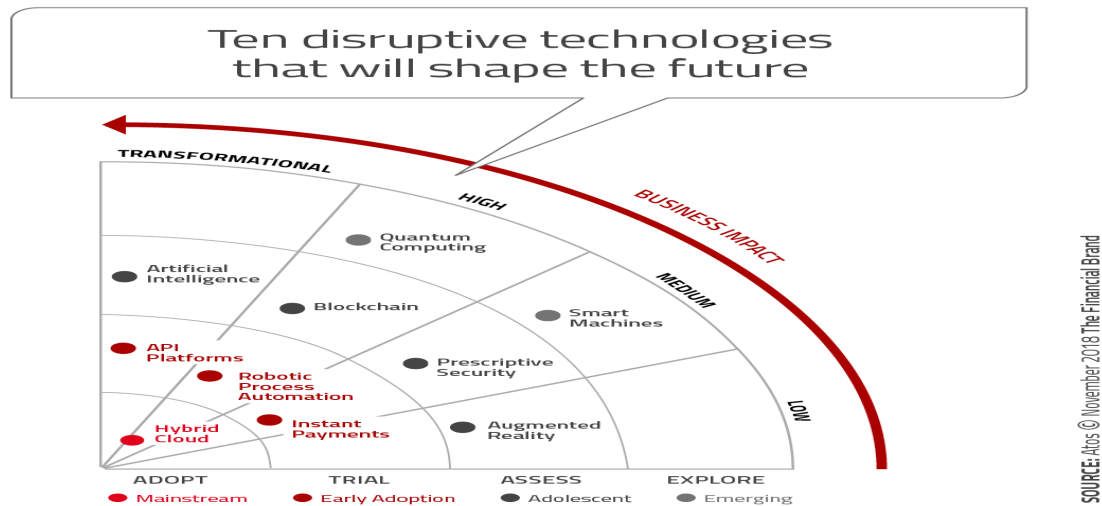
Most banking and financial applications are liable to digital assaults the most. The explanation is self-evident what with money being the undeniable goal. Fraudsters have been known to be imaginative in their endeavors to siphon reserves, either as enormous sums in a discharge, or tiny sums from a great many accounts, over a significant period. If not money straightforwardly, there is consistently the risk of information being compromised.

Spearheading with Innovation Superheating the marketplace by offering imaginative services isn't simply wanted, yet also required remaining on top of things and attracting a wide customer base. Particularly with an enormous base of youthful users, it becomes imperative to recognize your company in the consistently becoming and competitive marketplace. In any case, companies are frequently reluctant to take the jump, as they know that things can terribly reverse discharge and cause moment reaction from perturbed customers.

Sustainability: Post fruitful development and implementation, the following squeezing challenge to handle successfully is sustenance. An association's supportability as a pioneer is conceivable just through collaboration. Just when the users recognize the estimation of the product or service will the hierarchical worth skyrocket to progress and stay there. In this specific circumstance, the intensity of internet-based life is frequently ignored. While consistently great reviews elevate the association to superior status, consistently awful reviews can decimate even an entire realm.

Delivering Quality at Speed: In the surge of needing to convey products and services at an accelerated speed, companies regularly tend to compromise on the quality. The issue with quality is that there is nothing of the sort as a little bug; a bug is a bug. There have been a few cases of associations purposely choosing to disregard deserts in products and programming even before the thing hit the market.

The banking sector is going through technological blend out with different changes, the reason is customer expectations and advanced technologies. The rising competition for unique customer experiences around banking and financial service has forced the banks to be innovative for themselves. The biggest threat is cybersecurity breaches made banks to be more agile. These are the ten disruptive technologies that will shape the future of banking and financial services in the digital era.



11. Suggestions to Overcome the Problems and Challenges of Digitalization of Indian Banking Sector

- Quality Assurance professionals are trained to investigate, survey, and guarantee the nature of the product. They become engaged with the process at an opportune time in the product lifecycle and guarantee that applications are conveyed with premium quality. On account of a performance issue despite the thorough testing, they will have the option to tend quickly to the problem and fix the bugs in a split second.
- Software testing assumes a key job in guaranteeing device compatibility with the product and makes the entity more user accommodating. This constantly prompts additionally breathing space for investigating the devices that will have the option to convey the company's customized programming better. This commonly spares the company a large number of dollars and associations can, subsequently, spend their endeavors on making sense of an able digital strategy.

- Security testing will track down the potential purposes of vulnerabilities that programmers may exploit and offer the appropriate arrangement. Security testing demands an intensive comprehension of the banking system and offers a top to bottom information on the inner design. Quality Assurance professionals that have the ability over the banking area are the ones that would best handle digital wrongdoing.
- Software testing can guarantee that all the significant bugs are handled as they rise, and the intensive investigation is led so as to have preventive measures. This will give creative companies in their particular ventures a lift, with the goal that they can keep on investigating how to amuse their customer-base more readily.
- Understanding and utilizing the intensity of web-based life, while vital, can be ridden with issues. Trolls, malware, and tweets about performance issues would all be able to unleash devastation if not adequately and quickly managed. Programming testing workforce can spot genuine problems and promptly fix the issues, in this way containing the issue. This enormously supports brand picture over the long haul.
- Robust programming testing guarantees that the product or programming hits the market well in time. By intently dissecting conceivable programming issues directly from the requirements gathering stage, quality affirmation specialists guarantee the time to market.

All the banks recognize the gap that stops them from transforming to meet the potential, they started investing significant amounts into banking technologies, foresee a great customer advantage.

CONCLUSION

The footsteps of the public towards banks might have reduced however still 70% of people in India transact only through banking channels because people feel safe only when they interact with humans face to face no matter how many more digital innovations might happen. But still, people coming to banks for checking their account balances, their EMI payments, etc has reduced as they can access all those details using internet banking, mobile banking. Without the banking industry economy cannot boom, the future of banking is towards reducing the interest rates on deposits and focusing more on lending. The banking industry is going towards this channel and

hence digital innovations help the industry to be more effective and efficient in the progress of the country towards achieving the goal set by our leaders.

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