

A ROLE OF INFORMATION TECHNOLOGY IN PUBLIC AND PRIVATE SECTOR BANKING IN INDIA

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ABSTRACT

Information technology refers to the acquisition, processing, storage and dissemination of all types of information using computer technology and telecommunication systems. Technology includes all matters concerned with the furtherance of computer science and technology and with the design, development, installation and implementation of information system and applications. Information technology architecture is an integrated framework for acquiring and evolving Information technology to achieve strategic goals. It has both logical and technical components. Computer hardware and software, voice, data, network, satellite, other telecommunications technologies, multimedia are application development tools. These technologies are used for the input, storage, processing and communication of information. Information technology includes ancillary equipment, software, firmware and similar procedures, services etc. Modern high throughput technologies are providing vast amounts of the sequences, expressions and functional data for genes and protein. One of the most difficult challenges is turning this enormous pool of information into useful scientific insight and novel therapeutic products.

Keywords: *Information, Technology, Information System, Expressions, Useful.*

Introduction

With the globalization patterns world over it is hard for any country large or little, created or creating, to stay disconnected based on what's going on around. For a nation like India, which is one of the most encouraging developing business sectors, such disengagement is almost unimaginable. All the more especially in the region of Information innovation, where India has certainly an edge over its rivals, staying ceaselessly or consistency of the world patterns is indefensible. Financial I area as a rule and banking industry specifically is the biggest high-roller and recipient from data innovation. Its undertaken to relate the global patterns in it with the Indian financial industry. The last parcel incorporates potentially all unfamiliar banks and recently settled Private sector banks, which have completely mechanized all the activities. With these varieties in the degree of data innovation openly and private area banks, it is helpful to assess the patterns in Information innovation globally as additionally to see the near situation with Indian banks. The current article begins with the banks insight when they get into Information technology up degree. All the patterns in Information technology area are then talked about to see their importance to the status of public and private sector banks.

Information Technology Considerations

Since the early nineties, each public and private sector bank has done some Information technology improvement effort. The first and foremost compulsion is the fierce competition. While deciding on the required architecture for the Information technology consideration is given to following realities.

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- **Meeting Internal Requirement**

The requirements of the banks are different individually depending upon their nature and volume of business; focus on a particular segment, spread of branches and a like. Many a time's banks do have the required information but it is scattered. The operating units seldom know the purpose of gathering the information by their higher authorities.

- **Effective in Data Handling**

As stated earlier the public and private banks have most of the needed data but are distributed. Further the cost of collection of data and putting the same to use is prohibitively high. The accuracy and timeliness of data generation becomes the causalities in the process. Best of the intentions on computerization are wished away because there is non- visible reduction in cost /efforts/time required for the required data gathering.

- **Extending Customer Services**

Addressing to rising customers' expectations is significant particularly in the background of increased competition. In case bank A is unable to provide the required service at a competitive price and in an accurate manner with speed. There is always a public and private bank Information technology at its next-door waiting to hire the customer. Awareness of customers about the availability of services and their pricing as also available options have brought into sharp focus the issue of customer satisfaction.

- **Creative Support for New Product Development**

It has become necessary for the banks to vitalize the process of product development. Marketing functionaries needs a lot of information not only from the outside sources but also from within the banks. Public and private Banks are looking to retail segment as the future market places for sales efforts. Having full-fledged information of existing customer is the key for this purpose. The emergences of data requirement and an appropriate architecture to support the same are significant issues to be handled in this regard.

- **End-user Development of the Non-technical Staff**

Banking being a service industry, it is the staffs at counters that deliver the products. In Indian scenario, virtual banking is likely to have a few more years to establish. The dependence on counter staff is unavoidable. The staffs are large in number and the majority is non-technical. The customer satisfaction levels at the counter determine the ultimate benefit of IT offensive. Giving due consideration to this aspect in choosing architecture is necessary.

Emerging Trends for Banking in 2020

- **Conversational User Interface**

Customers nowadays don't have the patience to attend for long hours and obtain their queries resolved. Instead, they demand fast response and effective resolution of their issues. Information technology has created this potential in banking organizations. Supported by AI technology, Information technology is employed by several finance firms to cut back prices and meet dynamic expectations. Now, users not rely upon ancient ways of two-way communication like email, phone, and so forth Report by Gartner states that over 85% of client service interactions are handled by Information technology in 2020. Information technology helps in encouraging colloquial banking by providing an exceptional expertise that can be customized to fulfill surpassing clients' expectations. Brands like Bank of America, Capital One, and so forth are exploitation bots for several years to resolve easy queries. However, today's advanced bots may supply monetary tips, find dishonest activities, and even assist customers throughout registration. they'll facilitate in creating good conversations with scores of customers, simply at a fraction of the value that may have taken by using human customer agents. This technology not solely helps the banking world to supply centralized financial management however additionally improve the method customers connect with their banks. the proper Information technology Development company is all you wish to induce your own banking larva and replace human agents for higher savings.

- **Big Data Analytics**

With the increasing quantity data generated daily by the banking sector, it's turning into tough to extract unjust insights which will facilitate in growing additional opportunities. Massive information is that the answer! This technology has beyond question place all the banking data i.e. debit/credit card transactions, ATM withdrawals, cash transfer, and so forth to form knowledgeable choices and method it effectively to achieve valuable information that's required to remain competitive within the future. Big

information helps in creating banks find out about their customers in a higher method sanctioning them to form period business choices through analysis of client's purchase habits, sales management, and so forth alternative additional advantages of massive information are better marketing, product cross-selling, fraud detection, customer feedback analysis and lots of more. Additionally, it aids in distinctive the most recent market trends and streamlining internal processes to cut back risks.

- **Block Chain Integration**

Block chain is thought for crypto currency like Bitcoin that helps keep track of transactions in a very secure and verifiable way. Talking concerning security in banking institutions, block chain can sure as shooting disrupt banks by rising security, saving cash and improving customer experience. As block chains are extremely secure and easy to operate, it are often used for promoting transparency throughout payments & currency exchange in banking. Block chain acts as a localized info and helps in protective customers' personal and monetary information by storing all the knowledge concerning period payments & profile details on multiple block chain servers. This resolves problems like fraud detection and cyber-attack prevention. the necessity for third parties will be removed within the loans and system exploitation block chain creating it safer to borrow cash and scale back interest rates. Artificial Intelligence Banks have benefitted tremendously by adopting newer technologies like AI leading to lower prices and more revenue through multiple channels. A report from Business executive Intelligence says the common calculable value savings for banks exploitation AI is 5 lakh Crore by 2023. Let's ascertain banks are using AI! it's principally wont to contour client experiences with robots and Information technology. One common example is using AI to facilitate mobile banking sanctioning customers to induce 24/7 access for any banking operations. AI additionally helps monetary establishments to form simpler disposal choices and higher risk management. This technology work at the side of alternative trends like massive information analytics, voice interfaces, RPA, etc.

- **Cyber Security**

Banking is one such business that deals with sensitive & personal information that has created it a pretty target for cybercriminals. Although it's not possible to forestall all the cyber-attacks because of the varied interactions with customers' money, security is crucial and bank establishments should be prepared with the plans to reduce the harm if any mishap occurs. Banks must share best practices and data to assist customers avoid the probabilities of cyber-attacks. Additionally, they ought to invest in technical measures like operating with the govt. to order cyber security, educating customers concerning their cyber security responsibilities, roles keep their information safe.

- **Robotic Process Automation**

Using Robotic Process Automation the financial institution can use customer support bots to cope with low-precedence questions from clients like account stability check, fee queries, etc. and store the time of human dealers to cope with high-precedence concerns. This will now no longer most effective enhance productiveness however lessen labor/operational expenses and the mistake rate. With immediate decision via Robotic Process Automation customers could make a short choice for his or her credit score card software without getting any human dealers worried with inside the system. Though robot improvements are nevertheless with inside the adolescent phase, banking agencies ought to be aware about all of the blessings it gives to hold long-time period AI results. Leverage Robotic Process Automation era to supply the satisfactory viable client revel in with inside the banking international via robots and digital assistants. Automate your repetitive duties without human intervention and store expenses efficiently.

- **Cloud Computing**

Another contemporary fashion of the banking enterprise is cloud computing so as to make 24/7 customer support viable offering any time provider to clients. This complements the overall performance of economic establishments and scale-up offerings extra quickly. Customers will most effective pay for the offerings they want allowing banks to govern expenses. One can effortlessly avail pay-as-you-cross pricing via way of means of paying the cloud issuer as in line with the usage, making it clean for man or woman clients or agencies to apply the cloud. In the banking enterprise, cloud computing can sell secure on line payments, virtual cash transfers, wallets, etc.

- **Closing Statement**

With the creation of recent technology, the face of the banking enterprise has modified especially over the years. Now, the banking system is tons quicker than earlier than an extra reliable. The client dating with banks has now no longer most effective stepped forward however the quantity of the

client base has additionally accelerated due to the blessings like everywhere banking. While banks cope with growing demands, growing flexibility needs new demographics, etc., technology come into movement to supply green client experiences. Information technology is one of the maximum rising developments so as to affect the banking enterprise via way of means of saving expenses and enhancing productiveness. Get in contact with professionals of AI Information technology answer companies to power a thorough shift with inside the banking international with those pinnacle developments in 2020 and beyond.

Recent Technological and Other Developments in Banking Sector

- **Internet**

Internet is a networking of computers. In this advertising message may be transferred and acquired worldwide. The facts may be dispatched and acquired in any a part of the world. In no time, net facility can do many a process for us. It consists of the following:

- This internet cans paintings as digital mailing gadget.
- It will have get admission to the remote database, which can be a newspaper of overseas country.
- We can change our thoughts via Internet.
- We could make touch with all of us who's a related with net.
- On net, we are able to change letters, figures/diagrams and song recording.

Internet is a quick growing internet and is of maximum essential for public region undertaking, Education Institutions, Research Organization etc.

- **Society for Worldwide Inter-financial institution Financial Telecommunications**

Society for Worldwide Inter-financial institution Financial Telecommunications as a co-operative society become fashioned in May 1973 with 239 collaborating banks from 15 international locations with its headquarters at Brussels. It began out functioning in May 1977. RBI and 27 different public region banks in addition to eight overseas banks in India have acquired the club of the Society for Worldwide Inter-financial institution Financial Telecommunications. Society for Worldwide Inter-financial institution Financial Telecommunications affords have rapid, secure, dependable and price powerful mode of transmitting the monetary messages worldwide. At gift extra than 3000 banks are the participants of the community. To cater to the boom in messages, Society for Worldwide Inter-financial institution Financial Telecommunications become improve with inside the 80s and this model is referred to as Society for Worldwide Inter-financial institution Financial Telecommunications. Banks in India are hooked to Society for Worldwide Inter-financial institution Financial Telecommunications gadget. Society for Worldwide Inter-financial institution Financial Telecommunications is a way of the state-of-the-art message transmission of global repute. This is fantastically price powerful, dependable and secure method of fund switch. This community additionally enables the switch of messages regarding constant deposit, hobby fee, debit-credit score statements, forex etc. This carrier is to be had in the course of the year, 24 hours a day. This gadget make certain towards any lack of mutilation towards transmission. It serves nearly all monetary groups and decided on variety of different customers. It is apparent from the above gain of Society for Worldwide Inter-financial institution Financial Telecommunications that it's miles very useful in powerful client carrier. SWIFT has prolonged its variety to customers like brokers; accept as true with and different agents.

- **Automated Teller Machine (ATM)**

Automated Teller Machine is a digital device that is operated via way of means of the client himself to make deposits, withdrawals and different monetary transactions. Automated Teller Machine is a step in development in client carrier. Automated Teller Machine facility is to be had to the client 24 hours a day. The client is issued an Automated Teller Machine card. This is a plastic card, which bears the client's name. This card is magnetically coded and may be study via way of means of this device. Each cardholder is supplied with a mystery non-public identity number (PIN). When the client desires to use the cardboard, he has to insert his plastic card with inside the slot of the device. After the cardboard is a diagnosed via way of means of the device, the client enters his non-public identity number. After setting up the authentication of the customers, the Automated Teller Machine follows the client to go into the quantity to be withdrawn via way of means of him. After processing that transaction and locating enough balances in his account, the output slot of Automated Teller Machine deliver the desired coins to him. When the transaction is completed, the Automated Teller Machine ejects the client's card.

- **Cash Dispensers**

Cash withdrawal is the fundamental carrier rendered via way of means of the financial institution branches. The coins fee is made via way of means of the cashier or teller of the coins dispenses is an change to time saving. The operations via way of means of this device are less expensive than guide operations and this device is less expensive and rapid than that of Automated Teller Machine (ATM). The client is supplied with a plastic card that is magnetically coated. After finishing the formalities, the device permits the device the transactions for required amount.

- **Electronic Clearing Service**

In 1994, RBI appointed a committee to study the mechanization with inside the banks and additionally to study the digital clearing carrier. The committee encouraged in its file that digital clearing carrier-credit score clearing facility need to be made to be had to all company bodies/Government establishments for making repetitive low fee like dividend, hobby, refund, salary, pension or commission, it become additionally encouraged via way of means of the committee Electronic Clearing Service-Debit clearing can be brought for pre-legal debits for bills of software bills, coverage top rate and installments to leasing and financing companies. Public and private banks have been essential step to introduce those schemes, to start with in Chennai, Mumbai, Calcutta and New Delhi.

- **Telephone Banking, Mobile Banking and SMS Banking**

Mobile telephones as a medium for extending banking offerings have off-overdue been accomplishing more significance. The speedy boom in customers and wider insurance of cell telephone cell smartphone networks have made this medium an critical platform for extending banking offerings to clients. With the speedy boom with inside the range of cell telephone cell smartphone subscribers in India (approximately 352 million as on the quilt of March 2018 and developing at approximately eight million a month), banks were exploring the feasibility of the use of cell telephones as an opportunity channel of shipping of banking offerings. Some banks have commenced providing data primarily based totally offerings like stability enquiry, forestall fee education of cheque, transactions enquiry, and region of the closest ATM/department etc. Acceptance of switch of budget education for credit score to beneficiaries of same/or any other financial institution in choose of pre-registered beneficiaries have additionally started in some banks. In order to make certain a stage gambling subject and thinking about that the era is fairly new, Reserve Bank has introduced out a fixed of working pointers for adoption through banks. Telephone banking is precise provision of banking offerings over the telephone cell and smartphone. It is a time period used for appearing stability checks, account transactions, payments, credit score packages and different banking transactions via a cell tool consisting of a cell smartphone or Personal Digital Assistant (PDA). The earliest cell banking offerings had been presented via SMS. It lets in clients to carry out transactions over the smartphone. Most smartphone banking uses an interactive voice response (IVR). Mobile banking is the most up to date vicinity of improvement with inside the banking quarter and is anticipated to update the credit score/debit card device in future. Most of banks are offering SMS alert facility to their clients.

Financial Inclusion

Traditionally, we've found that the terrible aren't welcomed to the banking fold with a false impression that they're now no longer bankable and that there may be no enterprise possibility in providing offerings to the under-privileged and terrible humans with inside the semi-city rural regions and to slum-dwellers with inside the metropolitan cities. Banks and monetary establishments had been, until current times, financially with the exception of those humans. Today's initiative with the aid of using the financial institution in launching this bold application of monetary inclusion may be very commendable. Huge participation with the aid of using girl's marketers in today's application bodes nicely for the monetary inclusion projects being undertaken with the aid of using the financial institution. Like charity, virtues like thrift and field start at domestic and what can be a higher manner than regarding girls on this bold application geared toward inculcating thrift and including, into the monetary fold, the hitherto excluded. It is crucial to notice that that the financial institution isn't handiest supporting the girls with the aid of using beginning money owed and granting loans however has additionally undertaken the undertaking of supplying training, instructing them in getting ready their personal money owed, supporting them promote their produce, etc. Financial Inclusion is the technique of making sure get entry to suitable monetary services and products wished with the aid of using all sections of the society in general, and susceptible organizations along with weaker sections and occasional earnings organizations in particular, at an cheap value and in a truthful and obvious way with the aid of using regulated mainstream institutional players.

Measures undertaken to sell Financial Inclusion

It has been RBI's endeavor to put off all hurdles with inside the manner of its regulated entities in accomplishing economic inclusion objectives. Some of the salient measures undertaken on this regard are:

Introduction of New Products

- **Opening of 'No-Frill' Debts**

A 'No Frills' account is one for which no minimal stability is insisted upon and for which there aren't any any provider fees for now no longer retaining the minimal stability, added as in line with RBI directive in 2005. Public and private sector Banks were suggested to offer small overdrafts in these 'no frill' debts. As of March 2011, 143.4 million 'No Frill debts' were opened through home industrial banks with super stability of '10,231cores. With a view to inspire transactions in No Frill debts banks were suggested to offer small overdrafts (ODs) in such debts. Up to quit March 2019, banks have supplied four.2 million ODs amounting to '433cores something.

- **Relaxed Regulatory Requirements**

- **Relaxed Regulatory Dispensation on Know Your Customer (KYC) Norms**

KYC necessities for small money owed have been comfortable in August 2009, via way of means of stipulating that creation via way of means of an account holder, who has been subjected to complete KYC drill, might suffice for establishing such money owed, or, that the financial institution can take any proof to its delight as to the identification and deal with of the customer. During the 2018-19 year, it's been similarly comfortable to consist of activity card issued via way of means of NREGA duly signed via way of means of an officer of the State Government or the letters issued via way of means of the Unique Identification Authority of India containing information of name; deal with and AADHAAR quantity as a legitimate identification proof.

- **Simplified department authorization**

To growth the attain of banking community, home scheduled industrial banks have in advance been approved to freely open branches in Tier 2 to Tier 6 centers (with populace of much less than 1,00,000) beneath Neathwell-known permission, difficulty to reporting. Recently, incentives had been supplied for establishing branches in Tier 2 centers additionally. Further, home scheduled industrial banks had been approved to open branches in rural, semi city and concrete centers with inside the North-Eastern States and Sikkim, without the want of taking permission from Reserve Bank in every case, difficulty to reporting. In 2018-19, the quantity of branches of SCBs multiplied via way of means of 14,843 over the preceding yr. Importantly, of the brand new branches opened via way of means of SCBs, 22 consistent with cent have been in rural regions and forty two consistent with cent have been in semi-city regions. The Southern region, that's already nicely banked, had the very best percentage of latest financial institution branches in 2018-19.

- **Business Correspondent / Business Facilitator**

In January 2009, the Reserve Bank approved banks to have interaction Business Facilitator and Business Correspondent (BC) as intermediaries for supplying economic and banking offerings. The Business Correspondent version permits banks to offer door step shipping of offerings especially 'coins in - coins out' transactions at a place a lot towards the agricultural populace, accordingly addressing the ultimate mile problem. The listing of eligible individuals/entities who may be engaged as Business Correspondent is being enlarged from time to time. For-income businesses have additionally been allowed to be engaged as Business Correspondents. As on Sept 2019, banks have stated deploying 4.35 Lakhs Business Correspondent which protected 5Lakhs villages. During 2009-19, with a view to harness the big and considerable retail community of company for supplying economic and banking offerings, 'for income' businesses have been additionally allowed to be engaged as intermediaries to paintings as Business Correspondent s for banks further to entities approved in advance.

- **Opening of branches in unbanked rural centers**

A want became felt for establishing of greater brick and mortar branches, except using Business Correspondent, to similarly enhance banking penetration and, greater importantly, economic inclusion. Accordingly, banks had been mandated with inside the Monetary Policy Statement – April 2019, to allocate at the least 250 something consistent with cent of the overall quantity of branches to be opened throughout year in unbanked rural centers. Special Dispensation scheme for establishing of branches in India- To enhance banking penetration in hitherto unbanked India, the Reserve Bank requested the State

Governments and banks to pick out centers wherein there's a want for putting in both complete-fledged branches and the ones presenting foreign exchange facilities, coping with authorities' enterprise or for assembly forex necessities. It has additionally supplied to fund the capital and walking charges for 5 years supplied the State Government worried is inclined to make to be had the premises and installed location suitable safety arrangements.

- **Financial Inclusion Plan for Banks**

In our attempt to reap a sustained, deliberate and dependent economic inclusion, all public and personal area banks have been counseled to install location a Board authorized 3 year Financial Inclusion Plan. These plans widely consist of self-decided goals in appreciate of rural brick and mortar branches to be opened; enterprise correspondents to be employed; insurance of unbanked villages with populace above 2000 as additionally different unbanked villages with populace beneath Neath 2000 via branches/BCs/different modes; no-frill money owed opened inclusive of via BC-ICT; Kisan Credit Cards (KCC) and General Credit Cards (GCC); and different particular merchandise designed via way of means of them to cater to the financially excluded segments. Banks have been counseled to combine Board authorized FIPs with their enterprise plans and to consist of the standards on economic inclusion as a parameter with inside the overall performance assessment in their staff. The implementation of those plans is being carefully monitored via way of means of the Reserve Bank.

Challenges Ahead

- **Important Business Challenges**

- Meet consumer expectancies on provider and facility provided via way of means of the bank.
- Customer retention.
- Managing the unfold and preserve the working profit.
- Retaining the cutting-edge marketplace percentage with inside the enterprise and the enhancing the same.
- Completion from different gamers with inside the banking enterprise.

How to Satisfy the Challenges?

At company degree to satisfy the challenges, diverse initiated were taken and implementation is in manner beside up gradation of records center facilities:

- **Centralization of Functions**

- Inward clearing records importing and processing
- Check e-book issues
- MIS-On-Line Monitoring/Generation of assertion via way of means of controlling offices
- Audit from the far flung location Sending mails and assertion of bills to customers & entirety of non- obligatory area in newly opened bills.

- **Single Window System**

- **Revised Account beginning from for shooting entire customer/Account records as per CBS requirement.**

- **Call center for customers.**

Conclusion

All those traits in Indian banking display that the Public and private sector banks are transferring closer to cutting-edge banking converting a face of conventional banking of Indian financial system .It is outstanding extrade of banking enterprise. They are a putting in a data era for banking commercial enterprise and are seeking to offer era primarily based totally banking services and products to their customers. Indian banks also are seeking to of banking services and products to 1 forestall banking keep for client delight, however relatively non-public and overseas banks current in Indian financial system are having a better degree of modernization and imparting numbers of cutting-edge offerings to their customers. Indian public quarter banks that maintain round 80% of marketplace percentage do have taken initiative with inside the discipline of Information technology. They are transferring closer to the centralized database and decentralize choices making process. They possess enviable nice manpower. Awareness and appreciation of Information technology are very an awful lot there. What is wanted is a

'large push' the manner it turned into given with inside the put up nationalization length for expansionary activities. Information technology and India have emerged as synonymous. Whether India turns into a vacation spot for outsourcing or it turns into an improvement center is count number of debate. As a ways as banking enterprise in India is involved it is able to be stated that even though the Indian banks might not be as technologically superior as their opposite numbers with inside the evolved world, they may be following the bulk of worldwide traits at the IT front. The energy of Public and private banks lies in withering storms and growing as much as the expectancies from the entire quarters-catching up with all of the worldwide traits is an issue of time.

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