Robotic Process Automation (RPA) in the Indian Banking Sector: Riding the Raging Tide of Technology and Transforming Customer Experiences

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ABSTRACT

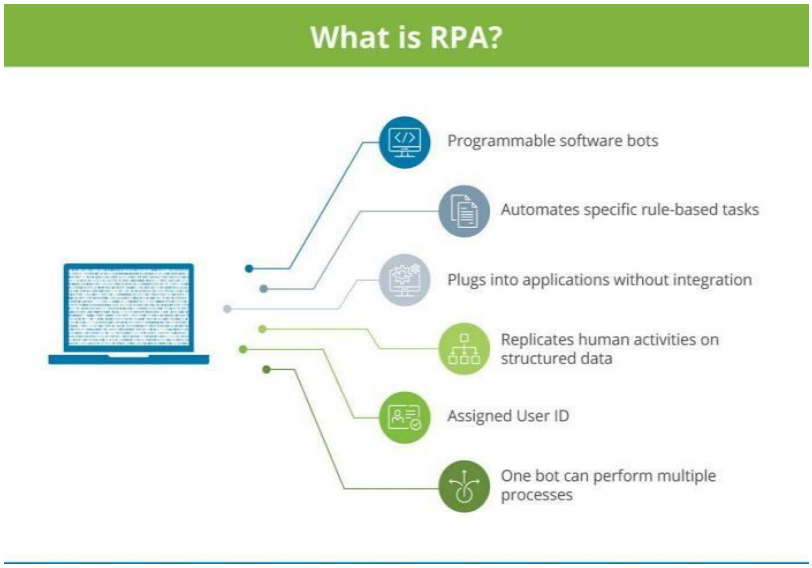
The Indian economy is moving from analog to digital with the advancement of technology coupled with new approaches and methodologies to deal with the voluminous data. The financial service sector which is essentially data-driven should therefore be at the forefront when it comes to digital transformation. Moreover, there is a paradigm shift in the way customers prefer to interact with banks. Customers now expect personalized and quick service around the clock. To meet the increased expectations of the customers of this digital age and to thrive in this everchanging environment, banks have been increasingly adopting digital technology including RPA. Robotic Process Automation (RPA) was essentially developed to automate tasks that were repetitive and rule-based by deploying simple software bots. It resulted in the optimization of costs, reduced turnaround times, and accuracy in operations, and eased the banking employees of routine mundane tasks to enable them to focus on value-added and customer-related functions thereby transforming the customer experience. RPA in banking allows the use of automated workflows to operate with any application or system in the same manner as humans do, except the fact that they can perform 24/7, without any interruption, with precision and reliability. No doubt these are some of the commonly claimed benefits of automation using RPA resulting in improvement of overall performance. However, there also exist a few potential operational risks from its adoption. In this paper, which is a conceptual study we shall be discussing the benefits as well as the challenges of deploying RPA, particularly in the banking sector, and how it has the potential of transforming the customer experience.

Keywords: Automation, Banking, Customer Expectations, Digital Transformation.

1. Introduction

Automation which is derived from the Greek word *autos* meaning self, and *motos,* meaning moving is the deployment of technology to get the work done with little or almost no human intervention. Today almost all aspects of our lives are affected by the process of automation. Some common instances include washing machines, dishwashers, autopilot mode for automobiles, Driverless Metros in Delhi, FASTags, and many more. The rationale behind automation is to reduce human efforts. For instance, when one enters a dark room, turning on the lights is the first thing one would do. Imagine entering the same room and the lights turning on automatically [1] [2]. Most of us would find the second

situation to be more suitable as it saves both our time and effort. Undoubtedly, automation has reached a stage wherein several other technologies are being developed from it. Robotic Process Automation which involves the use of software that mimics human actions is one such burgeoning area. In simple words, RPA is the technology that replaces human action for tasks that are repetitive and redundant by way of extracting data and processing it as well. The programmable software bots can perform with applications at a speed that is much faster than humans with no scope of error [3] [4]. The bots can skim through an email/invoice, dig through data, and file it as well. Process-centric industries can leverage the advantage of RPA .



Source: Report by ACCA Global and CAANZ in collaboration with KPMG, 2018

Unlike traditional automation, the RPA software adapts to dynamic circumstances. The automation of tasks has thus become quite easier with the advent of RPA. RPA bots possess the capability to perform tasks such as translation, initiate predefined responses, and engage with other processes, enabling the automation of diverse repetitive activities (Jovanović et. al, 2018) [5].

Today, RPA is seen as a transformational technology that has matured beyond doing mundane repetitive tasks and can make significant value addition to the organizations adopting it, and Banks is no exception.

2. Robotic process automation in banking

As early as 2016, ICICI Bank set itself apart in the banking industry and became acknowledged as a pioneer in the adoption of Robotic Process Automation.

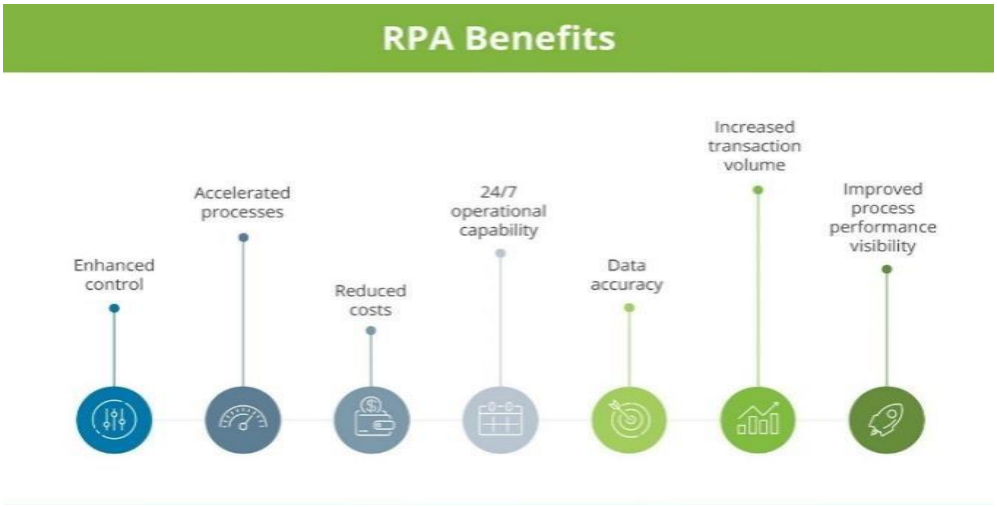
ICICI Bank which happens to be India's largest private sector Bank, was the first bank in the country and among few, globally, to roll out the futuristic technology of Robotic process automation in Banking. Way back in 2016, RPA was initially deployed by the Operations Department at ICICI Bank for 10 processes which scaled up to the re-engineering of 200 processes during the first year itself to support various businesses like retail, trade, treasury, corporate, agri-business, and forex. The software robots were executing over 10 lakh transactions daily thereby showcasing unmatched operational efficiency by significantly reducing the response time by up to 60% and ensuring 100% increased accuracy [6] [7].

Today, ICICI bank has automated 1350 processes to onboard customers, process loans, and perform reconciliation with 750 robots processing more than 20 lakh transactions per day.

By 2017, most of the banks if not all the top banks in India dipped a toe in the rushing wave of Resource Process Automation. As per the reports, RPA in the banking sector is expected to reach $1.12 billion by 2025.

Considering the voluminous data dealt with by the Bank employees every day and on top of that, the manual processing of this huge data, the possibility of errors cannot be ruled out. Besides errors, the processing of such a volume of data is a time-consuming process. The use of RPA will help minimize errors as well as human efforts [8]. With the introduction of RPA, the turnaround time for processing requests has reduced from hours to minutes and even seconds. Manual processes like simple validation of the customer's profile from two systems now take seconds instead of minutes, thereby reducing the processing cost by 30% to 70%.

RPA has transformed the banking business by allowing banks to accomplish back-end operations more correctly and effectively without having to redesign their entire operating systems.



Source: Report by ACCA Global and CAANZ in collaboration with KPMG, 2018

Robotic process automation has thus significantly streamlined a plethora of back-office processes that clogged bank personnel and can now focus on value-added and customer-related functions.

3. Robotic process automation: an efficient tool to enhance and transform customers' experience

The Digitalization of the banking sector has allowed for the emergence of micro and digital banking services. The competition in the banking sector has since then intensified. Consumer expectations are now on the rise owing to the multiple options available to them. Catering to the expectations of the customers is therefore an essential pre-requisite to avoid adverse impacts on revenue generation [9].

To gain a competitive edge in the market by exceeding the expectations of the customers Indian Banks are leveraging the power of Robotic Process Automation. This smart system has enabled banks to automate an assortment of customer service processes and procedures which in turn has allowed them to respond to the queries and requests of the customers on a real-time basis. RPA is an efficient system that can facilitate banks to keep pace with enhanced customer expectations. Robotic Process Automation (RPA) stands at the forefront of technological advancements, revolutionizing the way businesses operate and interact with their clientele. In the banking industry, RPA has emerged as a powerful tool capable of significantly enhancing and transforming customers' experiences [10].

Here are some concrete examples of how RPA can enhance and transform customers' experience in banking:

3.1. Faster Loan Approval Process

RPA can automate the loan application review and approval process. When a customer applies for a loan, RPA can extract relevant information from the application, verify it against predefined criteria, and speed up the approval process. Customers make quicker decisions and are more satisfied with the efficiency of the loan application process.

3.1.1 Automated Account Opening

RPA can streamline the account opening process by automating data entry and verification from application forms into the bank's systems. This ensures accuracy and speeds up the account opening process, providing a smoother experience for customers.

3.1.2 Real-time Customer Support

RPA-powered chatbots can handle customer inquiries and support 24/7, providing instant responses to common queries related to account balances, transaction history, interest rates, and more. This improves customer satisfaction by delivering timely and accurate information.

A few instances of customer query resolution through RPA include:

- **ATM Query Resolution**

Some of the banks are now deploying robotics to handle customer queries relating to the unsuccessful withdrawal of cash from the ATM. The traditional method of resolution took seven days and with robotics, the turnaround time has come down to 4 hours.

- **Queries related to Form 15G/15H**

The resolution of queries related to form 15G/15H is done through software robotics which has been deployed by the banks to perform an end-to-end process. The form relates to a self-declaration form which is submitted for the non-deduction of interest income by an individual. During the first quarter of the financial year, banks receive a plethora of such forms for processing. With software robotics, the activity that would have otherwise taken three days has reduced the same-day closure and that too with 100% accuracy thereby enhancing customer experience.

3.1.3 Fraud Detection and Prevention

RPA can assist in real-time monitoring of transactions and account activities to detect potential fraudulent activities. By automating this process, banks can quickly identify and address fraudulent transactions, enhancing the security of customer accounts and mitigating losses.

3.1.4 Personalized Marketing and Offers

RPA can analyze customer data and behaviors to create personalized marketing campaigns and tailor product offers based on individual preferences and financial habits. This enhances customer engagement and satisfaction by providing relevant and attractive offers.

3.1.5 Streamlined Mortgage Processing

RPA can automate the mortgage approval process by extracting and validating information from various documents, such as income statements and credit reports. This speeds up the approval process, enabling customers to purchase homes faster and with less hassle.

3.1.6 Efficient Account Reconciliation

RPA can automate the reconciliation of accounts, ensuring that customer transaction records match the bank's records accurately. This reduces errors and discrepancies, leading to a more seamless experience for customers.

3.1.7 Automated Payment Processing

RPA can automate payment processing tasks, ensuring timely and accurate payment transfers, bill payments, and fund transfers for customers. This improves efficiency and reliability in financial transactions, enhancing overall customer satisfaction.

3.1.8 Automation of Customer Refunds

Integration of RPA in customer service allows the customers to receive the funds claimed by them at a much faster pace than what it would have been in the case of manual processing of such requests. With the automation in place, the business owners would not be required to assign employees who would be tracking and following up on the refund process.

3.1.9 Account Closure Process

Several requests to close the account are received by the banks regularly. With the integration of RPA automated reminders are sent to the customers for furnishing the required proofs for account closure. RPA is programmed to cover extraordinary cases of account closure due to failure in compliance with KYC. Thus, easing it out both for the banks and the customers.

4. Common challenges on the way to adopting RPA

RPA became an integral part of the Digital Transformation of the Banking sector in India way back in 2016. Although it has only been six to seven years since the adoption of Robotic Process Automation, its scaling has matured enough, but still, there are challenges and obstacles in its adoption. While RPA offers immense benefits, understanding and mitigating these challenges is crucial for successful implementation. The common challenges faced during the adoption of RPA are:

4.1. Process Understanding and Identification of Automation Opportunities

Identifying and understanding processes suitable for automation can be challenging. Some processes may have complex decision-making steps that are difficult to automate effectively.

In banking, the process of assessing loan applications involves nuanced decision-making based on various financial and non-financial factors. Automating this decision-making process while maintaining accuracy and compliance is a significant challenge.

4.1.1 Integration with Legacy Systems

Integrating RPA with existing legacy systems can be complex, especially if these systems lack modern APIs or are not designed for seamless integration.

Banks often have a wide range of legacy systems for managing customer data, transactions, and other operations. Integrating RPA with these systems to automate tasks like data entry and validation can be a daunting task.

4.1.2 Data Security and Compliance

Ensuring data security and compliance with regulations is paramount, especially in the highly regulated banking industry. RPA handling sensitive data adds complexity to compliance requirements.

RPA managing customer account data or processing transactions must comply with data protection laws (e.g., GDPR) and financial regulations (e.g., PCI-DSS). Adhering to these regulations while optimizing processes is a delicate balance.

4.1.3 Change Management and Workforce Reskilling

Employees might resist or fear job displacement due to RPA. Change management strategies and reskilling programs are essential to ensure a smooth transition.

When implementing RPA in customer service, employees may worry about losing their jobs to automated chatbots. Providing training and demonstrating how RPA can complement their work rather than replace it is crucial.

4.1.4 Scalability and Flexibility

Ensuring that the RPA solution can scale as the organization grows and remains flexible to accommodate evolving business needs and technologies.

A bank that introduces RPA for account reconciliation initially might face difficulties when expanding the scope to cover other financial processes due to limitations in the RPA platform's scalability.

4.1.5 Costs and ROI Evaluation

Calculating the return on investment (ROI) for RPA implementation, including licensing costs, development, maintenance, and potential savings, can be complex and time-consuming.

The initial investment for RPA deployment, including software licenses and development costs, may be substantial. Banks need to carefully assess the long-term savings and efficiencies to justify this expenditure.

4.1.6 Process Changes and Standardization

RPA may require existing processes to be modified or standardized for effective automation. Achieving consensus on these changes can be a challenge.

Standardizing diverse loan approval processes across different branches of a bank to enable RPA for automation. This might require a fundamental revaluation and modification of existing procedures. Addressing these challenges systematically and strategically is key to successful RPA implementation in the banking sector, ensuring that the benefits of automation are maximized while mitigating potential risks and disruptions. n an organization in a way that also creates alignment from the initial

stage between the teams involved. Appropriate allocation of roles and resources is thus the key to avoiding mismanagement.

5. Conclusion

In conclusion, Robotic Process Automation (RPA) serves as a transformative force within the banking industry, significantly impacting customers, employees, and the sector as a whole. For customers, RPA enhances their experience by expediting processes, reducing errors, and providing personalized services. From automated loan approvals to real-time customer support through chatbots, the seamless and efficient services offered enhance satisfaction and trust among customers. Moreover, RPA positively influences employees by automating mundane, repetitive tasks, allowing them to focus on higher-value activities that require creativity, critical thinking, and a human touch. By relieving employees of routine tasks, RPA contributes to job satisfaction and fosters a more engaged and skilled workforce. At an industry level, the integration of RPA brings forth heightened operational efficiency, cost-effectiveness, and compliance adherence. Banks experience streamlined processes, quicker decision-making, and enhanced accuracy, ultimately leading to improved productivity and profitability. Furthermore, RPA enables banks to keep pace with evolving customer expectations in a rapidly changing technological landscape. In essence, the adoption of Robotic Process Automation in the banking sector represents a paradigm shift, revolutionizing traditional processes and setting the stage for a more customer-centric, agile, and competitive financial industry.

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Received 28 April 2023
Revised 25 July 2023
Accepted 28 July 2023