Transforming Banking through Intelligent Automation

Abstract

Transformation initiatives in the banking industry are increasingly shifting their focus – from products and processes to customers and their requirements. Rapidly evolving customer demands, tighter regulations, and a hyper-competitive environment mandate the replacement of complex transaction processing processes with more user-friendly, value-adding platforms, aimed at deepening customer-connect.

As banks prepare for the world of opportunities that the digital revolution presents, leveraging artificial intelligence (AI) to simplify customer experience and drive operational efficiencies ranks high on the agenda of C-suite executives.

Robotic process automation (RPA) offers the potential to change the banks' working model by automating many of their back-office processes across geographically dispersed branches. This can help drive better turnaround on delivery, enhance customer experience, and simplify transactions. While RPA has evolved from an emerging trend to a mainstream solution in the finance industry, the challenges around its adoption are keeping banks from realizing its full potential.

This paper highlights the benefits of using RPA in the banking industry, the challenges it poses, both to the banks and their technology partners, and the solutions for effectively addressing them.

Robotics: A Game Changer Driving Financial Process Efficiency

For an industry that has for decades relied on traditional business models, the biggest challenge in adopting RPA stems from bankers' reluctance to circumventing legacy systems and stepping outside their comfort zone. The current workforce at most banks lacks the skills necessary to adapt to newer technology platforms. For instance, banks' legacy systems were largely built on mainframe-based platforms that significantly lack what advanced C++ and .net based programs can deliver today.

While banks have upgraded their systems to newer platforms using transformational methodologies such as Six Sigma and Lean, it has resulted only in short-term improvements at the process level, largely aimed at implementing the Dodd-Frank Act. RPA goes much further. It offers the potential to transform back-office processes by efficiently performing high volume, rules-based tasks. By leveraging techniques such as natural language processing (NLP), machine learning, and computer vision to automate processes, banks stand to gain immensely in terms of efficiency and cost. Besides back-office efficiency, RPA can also enable faster customer onboarding, accurate payments monitoring, and early fraud detection and prevention by recognizing behavior patterns that indicate suspicious activity.

Retail Banking Leads the Way in Robotics Adoption

The immediate shift in embracing RPA is coming from retail banking, given with the direct interaction with customers it entails. Comparatively, corporate and commercial banking have been slow to respond to this change. RPA can be leveraged to help retail customers in auto-filling their account opening applications, setting up standing instructions for payments, and accelerating payments' authorization. The KYC process is a good candidate for RPA as it requires aggregating data from various sources, which if done manually, is significantly effort intensive.

Four Key Aspects for RPA Success

The banking industry is underpinned by four pillars –marketing and sales, transaction processing, customer service, and technology. Robotics plays a key role in driving process efficiencies, improving quality, resiliency, and scalability in each of these four areas. It enables the sales and marketing teams to design customer-centric products by mining big data from multiple sources, and helps IT teams automate transaction processing and leverage technology to empower customers with greater control.

The four key aspects of successfully implementing RPA in banking include:

a) **Integrating robotics and conventional transformation techniques:** Tested transformation techniques such as Lean and DMAIC can help identify transactions that do not require processing. By integrating these proven methodologies with robotics, banks will be able to identify opportunities to eliminate waste and improve operational efficiencies. In effect, RPA will act as an extension of previously used transformation techniques to take the business benefits a step ahead.

Using the traditional DMAIC methodology, banks can eliminate the unnecessary steps in transaction processing, helping robots to automate only the mandatory requirements, thereby accelerating the transaction process and driving significant cost and time savings. For example, RPA can help eliminate the processing of account opening applications by bringing in standardized digital forms across all platforms, with robots working on processing information directly fed either by the customer or by the relationship manager.

b) **Transforming product and process design:** Adopting RPA calls for a paradigm shift in the way products, processes, user interface, and delivery are designed and implemented.

I. **Product design:** RPA adoption will change the way banks design their core products. For instance, an account opening form will have both virtual as well as paper-based formats designed in a way that is easy for robots to read, interpret, and process the data without human intervention.

II. Transaction processing: Robots will be able address customer requirements without human intervention. By identifying customers' transaction processing patterns through advanced analytics, robots will adapt themselves at the customer level, eliminating the need for further levels of transactions at the back end. For example, they can enable instantaneous funds transfer driving the industry to move away from clearing platforms such as SWIFT and BACS, enabling straight through processing. RPA will also facilitate the development of platforms that will eliminate exception processing and accept only clean data for interpretation by robots. For example, robots will have the input filtered for anomalies, eliminate them as exceptions for repairing such inputs, in turn processing only the expected data. Analytics will play a very important role in rejection of such inputs by studying input patterns and methods both by machine reading as well customer behavior.

III. Data extraction and user interface: Simplifying the banking interface for ease of use is a key goal of implementing RPA. Robots can extract data from multiple sources to derive meaningful insights and deliver a superior customer experience.

IV. Delivery design: RPA solutions can integrate delivery design with product design by taking into account the way the product is delivered to the end customer, eliminating exception processing.

c) **Managing the transaction chain:** RPA bring in complete predictability to transactions as robotics solutions work on rules based processing and do not involve exception processing. This renders processes such as reconciliation, book-keeping, and acknowledgement irrelevant, thereby improving the quality and efficiency of banking systems.

d) **Preparing the customer:** The biggest challenge for banks is to keep their customers abreast of the rapid changes that RPA is likely to usher in. Any changes in the user interface (UI) must be subjected to stringent testing and user experience feedback by releasing beta versions to a control group. Eliminating the transaction altogether is a mammoth shift that leaves only the input and the output between the customer and the bank. This makes it critical to integrate customer feedback at every stage of RPA implementation.

Using Robots to Build the Bank of the Future

The banking industry, especially retail banking, is slowly but surely preparing to go through a paradigm shift to eliminate wasteful processing through effective implementation of RPA. Currently, the RPA technology involved in banking is largely based on frameworks developed during the last decade for robot installation in transaction processing. However, the future will see robotic platforms shift dramatically to more UI centric automation, and move away from their dependency on developers to actual users. With the evolving speech and gesture recognition tools, the way transactions are processed will increasingly depend on the input methods at the processor level, which will ultimately be the end customer.

Successful RPA implementation will require banks to work with their existing human and IT capital base, building a technologically driven environment – both in concept as well as in execution. This will mean equipping the workforce with necessary training and implementing effective change management processes. That said, RPA adoption does not spell the end for banking jobs, rather it will free resources to focus on more value-based roles, besides creating new job opportunities for analysts and other skilled workforce.

Robotics' compelling benefits make its adoption in financial services inevitable. Leading banks are likely to view it as not just the next cost-controlling force, but an enabler in improving workforce and business efficiency, positioning their institution for continued success.

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Karthik Venkataraman is a Domain Consultant with the Commercial Banking group of TCS' Banking and Financial Services business unit. He is currently managing the PMO function for multiple clients across geographies in the commercial banking domain. With over 14 years of experience in banking domain, Venkataraman has worked with clients in diverse domains including retail banking, capital markets, wealth management and payments. He has extensive operations experience and has been instrumental in building and managing teams for several relationships, prior to joining the project management function. Venkataraman has a Bachelor's degree in Commerce from the University of Madras, Chennai, India, and a Diploma in Business Administration from IGNOU, Delhi, India.

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