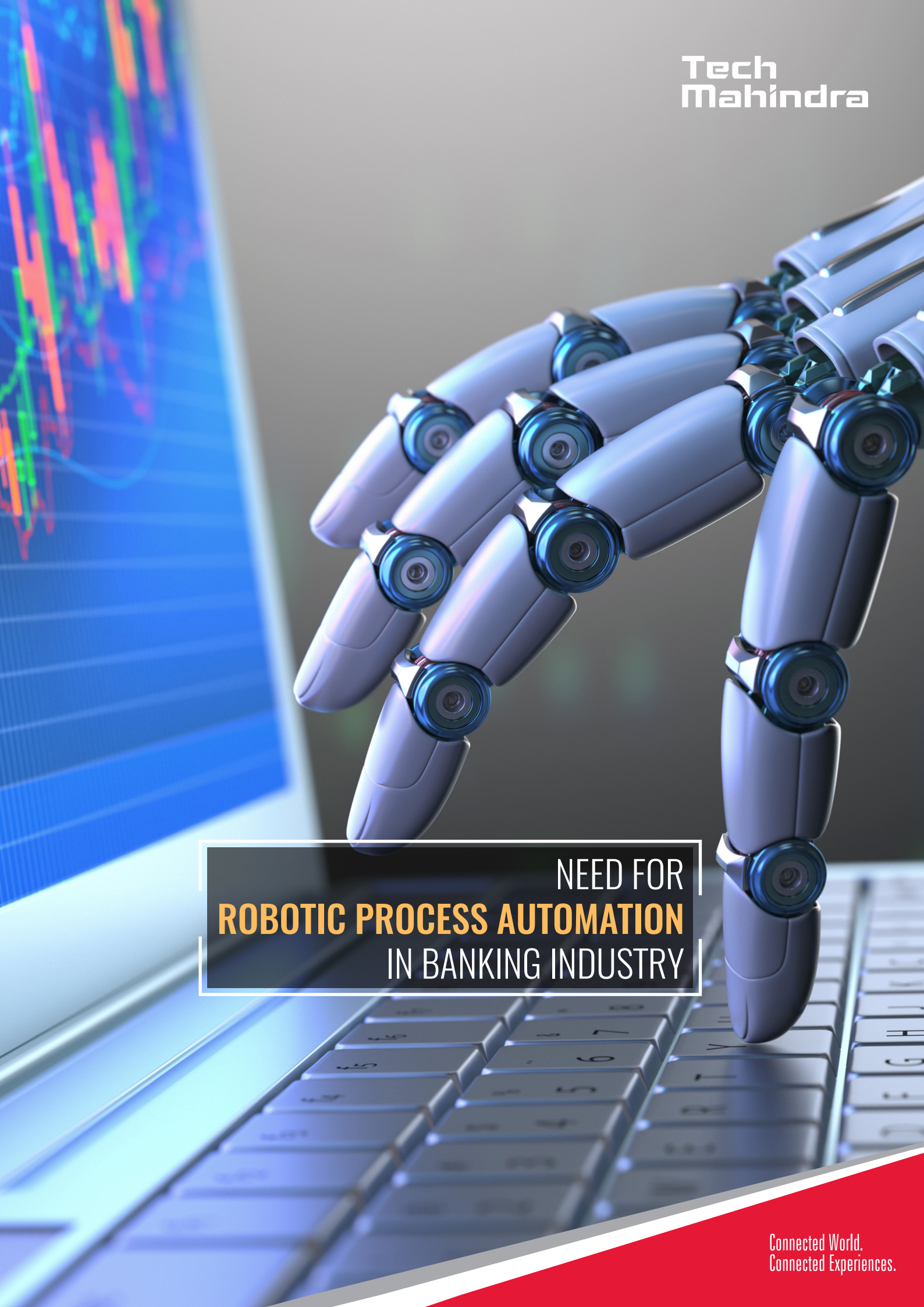
Tech Mahindra



NEED FOR ROBOTIC PROCESS AUTOMATION IN BANKING INDUSTRY

Connected World.
Connected Experiences.

EXECUTIVE SUMMARY

Most banks have a growth plan for every 3-5 years. While it looks easy to achieve the set objectives in those 3-5 years, it's easier said than done. The primary reason being, the banking industry has unique business objectives when compared to other industries. Challenges faced by banks are quite colossal when compared to other corporates. Looking backwards, when internet was born, every industry was ready to adapt and change, but it took quite some time for banking and financial institutions to move on and adapt with the internet buzz. We still have many banks that run on paper based transactions and their primary reason for not adapting to change is that they deal with finances of Consumers, Corporates, and Government. This makes them susceptible to irreversible reputation damage.

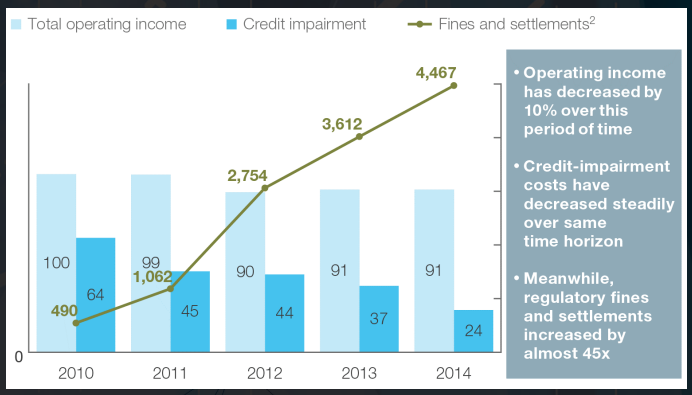
However, in the current hyper ledger era, banks have become more aggressive. They have started competing with other industries on technological advancement. It is an major change that is often driven by comparison with peer banks. While an aggressive stance means growth, it also brings along more challenges that need to be overcome in order to meet strategic objectives.

Replace or Upgrade Legacy Applications

Globally, many banks are still running on legacy systems, be it mainframe engines or a linux based custom built products. While the digital world calls for decommissioning these applications and move in to state-of-art applications, banking operations still don't find tangible need for replacement. These systems are in existence for more than a decade now and banking operations have gotten used to the functions and shortcuts they support. This scenario hinders options for replacement given the supposed comfort zone the previous system creates. Further, until it gets replaced, brown field deployments and resultant changes tend to become an overhead for the bank. Interestingly, in case of upgrades, brown field architectures must be altered based on the new version which in-turn adds a component to IT Capex.

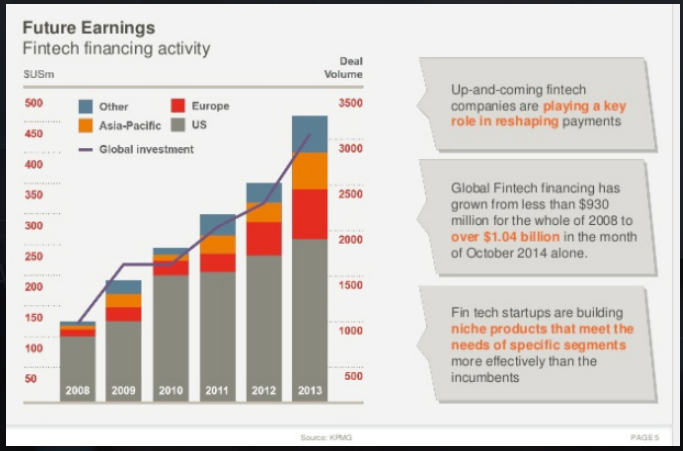
Increase in Operational and Capital Expenditure (Opex and Capex)

After the 2008 financial crisis, banks have been put to 'Stress Test' to control their liquidity and lending structure. There has been significant increase in writing off loans that result in banks making more provisions to existing loan books. Further, risk and compliance has taken utmost precedence making banks heavily invest on more human resources, Software applications, analytics, and reporting engines. While this brings in more control on one hand, as required by the governing agencies, but on the flip side, it increases the Opex and Capex for the bank.



Customer Experience Enhancement

'Customer First' is the intonation for every industry and banking is no exception to it. According to Gartner, 27% of the expense budget gets allocated to bank's marketing division and CMO's focus is to enhance 'Customer Experience'. There has been a paradigm shift from Internet banking to multi-channel banking and now going over to Omni-channel banking. While it gives lot of pride to provide 'Digital Experience' to Customers, it does not ensure near-term return on the investment (ROI).



Increased competition from Fintech and Disruptive Technology

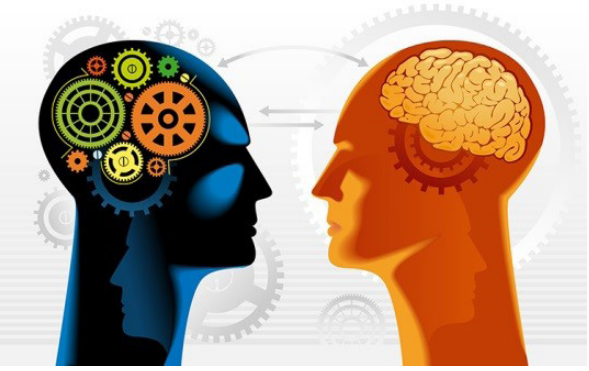
Use of Near Field Communication (NFC) in payment arena is one classic example that shows how a FinTech enterprise can overtake the market share of banks with superior technology. The Retail Payment segment which was once owned by banks and large intermediaries, has been disrupted through digital banking innovations. The World Banking Report 2015 states that 30.6% of Customers get their first view of the product from non-banking agents like FinTech players. Third party providers offering distributed ledger for payments and structured finance is another major threat to small and medium sized banks, as it would reduce their margins.

WILL RPA REALLY HELP BANKS TO MOVE HEADFIRST

Improve Resource Utilisation

RPA technology allows operations teams in banks to customize a software component (Robot), and lodge and interpret an existing business process. This can be in the form of a transaction, managing a communication channel, or cleansing and interpreting data with integrated digital systems. The interesting part of this software component is that the operator can assign a specific task to it or allocate even a medium size process. The Robot can further clone multiple sub robots through which underlying sub processes or activities can be executed, thereby building a virtual workforce underneath.

Precisely, the operations team can create functional decomposition and then assign a robot to each of the steps without needing any support from the technical team. The business unit gets greater visibility of the operations and it helps bring down operation costs significantly. Some banks have reported 80% reduction in pperational costs of the business unit.

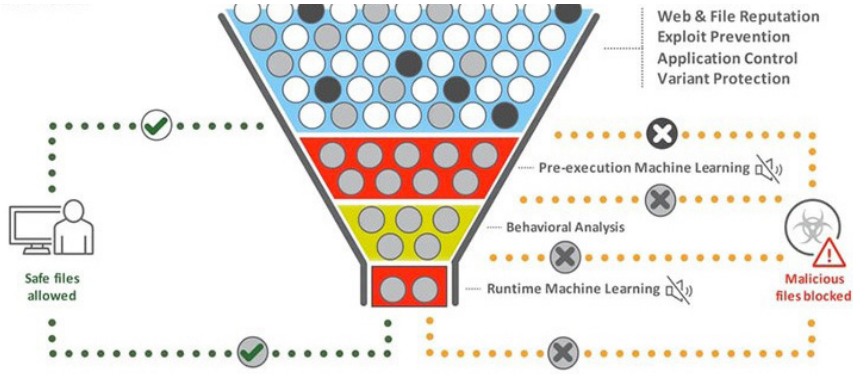


Accessing the Production Environment

Role based access can be created to ensure that robotics assigned to business processes can only access the production environment and execute assignments. In fact, most of the RPA COTS' products have 'Centralised User Management' feature which can be used to distinguish access that is enabled to bots and officers. Remarkably, the RPA Process can store information required to process and purge instantly once the assignment gets completed. For example, late payment fee charges on Credit Card can be executed by the bot. Post execution, the data file gets purged and sent to the directory from where file cannot be retrieved by the bot. This will ensure that there is no breach in customer data. In fact, every key stroke change executed by the bot gets recorded at transaction level.

Integrated AI and Machine Learning (ML)

Gartner states that Intelligent, Digital, and Mesh form the basis of the top 10 strategic technology trends for 2017. While RPA might help banks to automate a process, its limitation is that it cannot execute a new process or a sudden deviation. Machine learning comes to rescue RPA bot by applying artificial intelligence to the assigned process and ensure that the desired end state is met. For Instance, in a Credit Card charge back enquiry, the RPA process can initiate and check if the business rules are met - validate the date and the % of interest that is applied, but it cannot validate if the intermediary or Customer is authorised to claim the charge back. Machine learning can pick secured keys or identification of the customer and validate if the information can be transmitted. It builds in synergy between assignment and execution - be it structured or unstructured data.



Single view – Right shoring

Multinational Banks that operate Centralised Processing Centres (CPC) can gain quantifiable advantage with the RPA Model. RPA Process can be defined for a specific location, region or for a country. For instance, when creating an account for a North American Corporate Customer, the NAICS code must be entered, else the bank will not be able to classify the industry level. But, for a Middle East Customer, ICC Code mandatorily requires industry identification. Region level sub process conditions can be defined at the RPA Master rule where the bot can identify customer country, locate industry code and get the details. Exceptions can be configured and assigned to AI (Artificial Intelligence) and ML (Machine Learning) components.

Retaining the Legacy and still gaining competitive advantage

Banks that still own legacy applications can reduce their Capex for upgrades and make significant Opex savings through RPA. Many banks in North America still rely on mainframe engines. Primary reason is that mainframe processes large transactions in faster time while maintaining Data Security. But on the flip side, the Turnaround Time (TAT) to process a loan application or a trade finance transaction is significantly low when compared to a robust transaction system. RPA can do the magic by orchestrating the process through sub bots and execute it in faster mode without any human involvement. For instance, to process a Direct Debit authorisation file in a mainframe system, the Operations executive will need to enter the details of mandate through multiple functions, then assign target date, amount and register the agreement for the Customer. But in a RPA process, a mandate bot can be created to register, manage the static data, and assign the date based on agreement content. All these can be done within a minute and with greater quality.

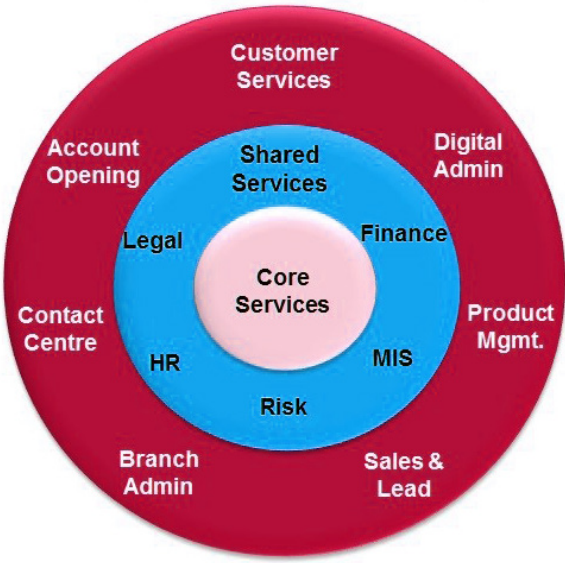
From banking context, the entire functional value chain can be categorized into Customer facing processes (Front Office) and Operational processes (Middle Office and Back Office). On customer facing processes, Customer essentially gets serviced directly whether it is through a digital channel or any other alternate channel.

On the other hand, Middle Office largely deals with risk, but it also lot to do with settlements, which means once the customer initiates a transaction or a trade or request for a policy, Middle Office essentially does Risk Management. It basically assesses/ underwrites and looks into the type of background check that's required and closes the transaction.

Back Office is where the transaction gets consummated – e.g. Reconciliation, Statement generation, Dispatch, etc.

On the basis of the category, process automation and and its benefits are likely to be visualized through the RPA deployment. RPA can be applied across Front, Middle, and Back Offices where the rate of hand-off between processes is particularly high. These areas stand to benefit the most from automation and attain superior efficiency.

SUPERIOR OPERATIONAL EFFICIENCY



POTENTIAL RPA CANDIDATES

Front Office

Wealth Management

RPA can be used to check daily fund administration and load the reports based on the latest NAV from market. Also, it can be used for reporting to clients.

Cash Management

The OCR software can be integrated and RPA can retrieve the data and provide input to the cash collection module. The lodgement can be automated and cheques or drafts can be pushed for payments or collections based on the transaction.

Treasury Deals

RPA can locate the mark to market and determine the price between investment managers and trade brokers to intimate clients through the online communication channel.

Mid Office

Risk Management

RPA can potentially check the daily NPA of the bank and intimate the sales team to connect with their relevant clients and ensure speedier collections.

Loan Provisioning

Excess utilisation of fund based limits can be identified and facilities can be automatically controlled by the RPA process without any human intervention to verify and inform the client.

AML & KYC

Transaction Monitoring and KYCs can be automatically configured in RPA by the Compliance Officer, thereby effectively utilising the compliance team.

Back Office

Accounts Management

Salary processing, Direct debit setup, Account creation, Product setup, etc. can be transformed to RPA through Machine Learning Program. Multiple large processes, including corporate onboarding can be setup through RPA.

Trade Finance Processing

Direct Collections, Import LC Doc Validation, Pre-Shipment and Post-Shipment stages, Invoice Discounting can be seamlessly handled in RPA.

Global Netting & Reconciliation

Central netting, Nostro Recon, General Ledger Transaction and Balance Recon can be built in RPA, to give regular reports with diagnosis at account and transaction levels for correction to any business unit.

SOME STEPS TO IMPLEMENT RPA PROGRAM

Implementation of RPA requires standard procedures like identifying the product, defining the architecture, hardware components etc., but apart from these, the most important pre-requisites are

- To Identify the business unit that would be considered for pilot study
- Building a Functional Decomposition of the processes in the business unit
- Finalize standard and non-standard processes
- Plan access control set-up to execute standard processes using bots
- Create checklist of procedures and scenarios where Artificial Intelligence can be used
- Identify Machine Learning steps to be used for non-standard processes
- Determine Impact Assessment on non-standard processes for using RPA
- Identify technical architecture that would be used to handle application interfaces for RPA

While RPA empowers Operations teams to customize and handle robots by themselves, there are other stakeholders who have a crucial role to play until the platform is handed over to the Operations floor. These stakeholders include IT Security team, Risk Management team, IT Change and Service Management, Business/Product Management team, and Operations Business Unit.

LESSONS LEARNT FROM SIMILAR RPA PROGRAMS

Though RPA can be immensely beneficial to the banking industry, there are limitations that must be considered before stepping on implementation:

- RPA requires an initial Capex post which has a bearing on the year-on-year Opex on new processes. This ideally means that RPA must be included in the bank's yearly IT Budget
- Building a robot for a process is easier, but industrializing it is a tough task unless the bank creates a vision and roadmap for RPA
- Rather than starting big-bang, it is better to start with simple processes that do not have high impact and then start replicating to multiple larger processes
- Agile methodology would help, but a disciplined agile would speed up implementation
- Process Transformation or automation projects are sometimes mistaken for RPA. Practically, RPA brings in an efficient way to deliver standard processes
- Subjective execution instructions will need to be analysed and handled through AI or ML (For instance, receiving Correspondent Bank transfer instruction through email)
- Accessing the business applications through Citirx can bring down your automation's potential and speed. Choosing other secure option enhances its performance.

RPA might improvise and transform the way your bank operates. This could include, change in culture, change in operational procedures, interaction with customers, handling Information Security, Risk Management Practices, Digital Contact Centre contro,l etc.

RPA is a technology change, but it requires buy-ins from various stakeholders in the bank. Interestingly and importantly, Human Resources plays a critical role. There must be a plan to re-skill existing resources in order to effectively leverage their expertise and utilise them effectively. RPA will set the stage to put transformation efforts across the bank, but, it must know how to accomplish strategic objectives before effectively managing critical assets.

ABOUT THE AUTHOR

Suresh Balachandran works for **Tech Mahindra BFSI Competency**, primarily on Retail Banking and Digital channels. He has been a banking technology expert providing consulting and business analysis services to banks across North America, Europe and Asia. Suresh holds Master degree in banking technology and has worked on multiple initiatives of national banks across continents.

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