Robotic Process Automation Application in Bank and Insurance

Ms.V.Revathi[1], Akshaya. M[2]
[1]*Assistant professor, M.Sc.,(M.Phil), department of software systems, sri Krishna arts and science college, Coimbatore*
[2] *Student -V M.Sc SS, Department of Software systems, Sri Krishna College of arts and science, Coimbatore*

***Abstract*- The digital workforce – software bots working alongside humans is growing rapidly in almost each and every sector. As automation adoption will increase, most high dealings and labor-intensive jobs can upgrade as we have a tendency to move to a digital hand. Money establishments like Banks, financial institutions, and insurance companies process large numbers of operations daily. In sectors that need intensive and ponderous operations, RPA can be used as a virtual employee, as a substitution replacing humans in mundane and repetitive tasks. Robotic process automation permits modern banks to meet their high demands for audibleness, security, and data quality, while also improving operational efficiency. human activities such as working in IT systems, and copying and pasting data across systems are mimicked by Software bots, and in contrast to other automation solutions, RPA commonly requires minimum integration with existing IT setup. RPA improves the speed and accuracy of tasks that reciprocally will increase productivity**

Index Terms- banking industry, digital workforce, insurance, robotic process automation.

I. INTRODUCTION

RPA is an application of technology, ruled by business logic and structured inputs, geared towards automating business processes. Using RPA tools, a corporation will set up software package, or a "robot," to capture and interpret applications for process a group action, manipulating information, triggering responses and act with different digital systems. RPA eventualities vary from something as simple as generating an automatic response to an email to deploying thousands of bots, everything programmed to automatize jobs. improved outcomes involve bringing together the work of human with technology rather than relegating them to their separate structural corners. Robotic process automation is involved in reducing effort and bringing outcomes that improve customer-centric enterprise, where improving responsiveness and collaboration is essential element, we will continue to see rapid increases in digital workforce implementations in all sectors but particularly in banking and financial services, insurance, technology, pharmaceuticals, logistics, telco and manufacturing.

Digital technologies will take up repetitive tasks that humans shouldn't be doing, leaving more time for employees to focus on the tasks that only humans are amazing at performing. Enterprises supercharge their automation by injecting RPA with cognitive technologies such as Machine Learning, speech recognition, and natural language processing, automating higher-order tasks that in the past needed. the perceptual and judgment capabilities of humans.

II. ROBOTIC PROCESS AUTOMATION IN BANKING

A business drive to become digital enterprises, it must automate things that can be automated to drive greater business efficiency and reliability in meeting customer demand at practical cost. Banks and other monetary services organizations currently automate mundane back office business processes which have never been automated before. As it has within the past, automation will continue to accelerate human innovation, changing the business operations paradigm across all industries globally. RPA in banking use cases apply to a wide range of processes, including retail branch processes, commercial

lending, consumer lending, loan processing, underwriting, and anti-money-laundering the banking industry in which large amounts of manual work still should be performed daily inside, outside of, and in between multiple core banking systems, all in an effort to reconcile and transcribe data to process transactions.

Robotics in banking is outlined as the use of robotic process automation software like UiPath, Automation Anywhere, or Blue Prism, to install desktop and end user device level software robots, or artificial intelligence workforce, or assistants, to help banking work that is repetitive in nature. banking robots when enforced they take in charge of mouse and keyboard actions like opening applications, clicking, copying and pasting information from one banking system to another, sending emails and other labor-intensive "low-value add" tasks. The bots work in individual data field level similar to an Excel macro across banking software systems. For banking industry, robotics represents a new and underutilized way to increase productivity, while minimizing traditional repetitive, manual-labor-intensive processes. RPA in banking threatens to disrupt business-process-outsourcing models, as it provides a lower-cost, higher-productivity model. Still, RPA for banking operations is not a "silver bullet." It cannot fix processes that are broken in the first place, despite the claims of some consulting firms. Indeed, it's important to realize that many firms have a tendency to over-promise on RPA's abilities, while failing to mention that merely layering RPA will neither address nor fix the root cause of organizational process problems. The key to successful RPA in banking is scaled process standardization

III. BENEFITS OF ROBOTICS IN BANKING

Banks like Retail and commercials are facing increased pressure from management, shareholders, and external competition to reduce costs, increase product quality, and accelerate the processing of back-office work. When paired with the correct type of process analysis, robotics can help banking operations management tackle most large-scale and routine data-movement tasks. They can also implement it with unprecedented speed—on the order of weeks, not months or years.

The financial benefits of robotics in banking are matched by the development it yields in both back-office processes and the client experience. In short, banks can save cash on labor while doing more with less with RPA.

- Banking RPA does not require new IT infrastructure change or upgrade. RPA is a low-priced layer that sits on top and across all currently-installed banking applications.
- no coding requirement. Robotics in banking does not require coding experience.
- Implementation is faster. RPA for the industry is nimble; robots can be tested in short cycle iteration.
- easy to change. A banking robot can be installed or updated within a week when banking processes change.
- Minimum IT intervention is needed. Front-line staffs can be trained to maintain and "manage" their own banking robots.
- RPA boosts morale. Contrary to people opinion, banking robotics can actually increase (and not decrease) the morale of human workers by reducing the burden of boring data-entry work.
- Robots does not take breaks. Banking robots can work for 24/7—365 days per year tirelessly. Banks does not pay robots for their overtime or health insurance, or they even dose not worry about them quitting

Use Case Step 1: Identify the sub-processes on process maps where banking robots can be implemented.

Use Case Step 2: Prioritize and evaluate all of the banking sub-processes and targeting candidates which yield highest benefits.

Use Case Step 3: Develop and document use-case requirements, rules, and keystrokes that the banking robot must perform.

RPA in banking yields the most benefits when led with deep front-line process analysis and a desk-level work standardization plan across the organization. RPA in banking yields the best value when preceded by deep front-line process analysis and a desk-level work-standardization plan across the organization;

FIG:1 banking process mapping-RPA example

consider these three high-level examples of RPA in banking:

Three high level examples of RPA in banking are below:

- Use Case 1: Consumer loan-processing time can be reduced from 30 minutes to just ten minutes by eliminating the copying-and-pasting of customer information from one banking system to the next.
- Use Case 2: It is possible to boost accuracy of new-bank-account-opening requests, replete with reduced downstream errors, and improve system data quality. These all are achieved by eliminating data-transcription errors from inward new bank account opening request emails into the core banking
- Use Case 3: Banks can radically boost the speed of customer verification by automatically validating customer data on government websites like tax payment, or property-appraisal sites. during the processing of auto loans

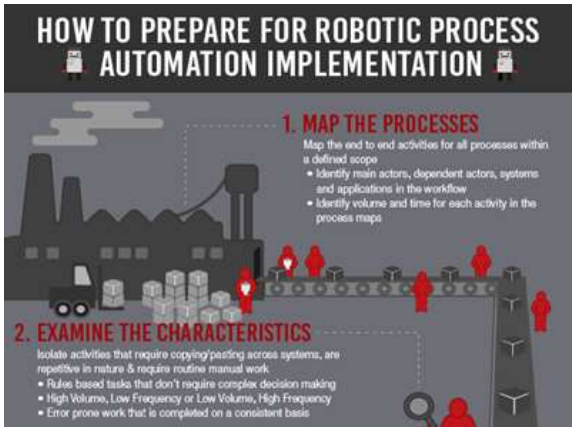

FIG:2 first two steps of RPA implementation

FIG:3 third and fourth step of RPA implementation

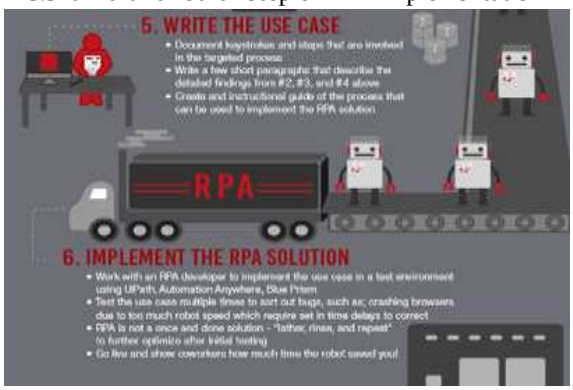

FIG:4 end stage of RPA implementation

limit your pilot scope. This will reduce both the educational curve and risk of project failure. In practical terms, this implies identifying use cases for RPA in the banking sector for just a few tasks to start rather than for each and every process that a bank executes all at once.

IV.DISADVANTAGE OF RPA IN BANKING INDUSTRY

Any method amendment or technology update comes with risk. Yet compared to long-term core technology implementations, the operational risk of RPA is far lower. This is the result of a robot can be turned off

instantly if you choose to and thus won't shut down your core banking processes. there's the risk of robot downtime and operations disruption, if the project goals aren't clearly communicated directly. A robot might stop working due to operating-system updates, hence the need for operational readiness to update and repair robots as needed.

IV.I. COMPLIANCE RISK

The ungoverned proliferation of banking bots across the organization especially those whose processes particularly include regulatory checkpoints can become problematic, should process managers lack an inventory of installed banking robots and the processes they perform. RPA bots that aren't designed to stick to strict compliance processes can lead to major compliance problems, if they grow to populate the majority of a bank's process workforce. That's why it's essential that banking bots act simply as extensions of humans, and not attempt to undertake any decision-making on their own.

IV.II. DATA-QUALITY RISK

Big data standardization processes are over rated in RPA scoping and implementation at banks. with every terabyte that has been loaded into a banking system, the odds of poor-data proliferation increase. a robot can cut-off a back-office employee's errors when transcribing data from a spreadsheet to a system. But if the data received from the front office is already in bad order That adds up to a lot of poor-quality data that will eventually need to be cleaned, downstream.

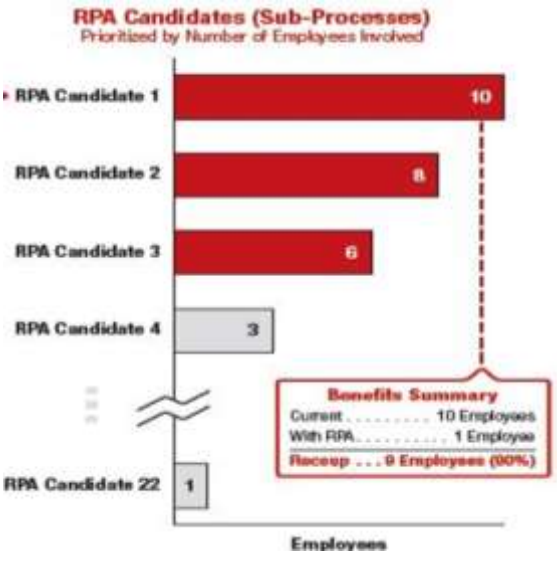

FIG:5 work completion resource with RPA

V. ROBOTIC PROCESS AUTOMATION IN INSURANCE

FIG : 6 ROBOTIC PROCESS AUTOMATION IN BANKING INDUSTRY

Robotics process automation, or RPA—that is, the utilization of front-end, desktop-level, no-codig needed software bots to handle routine keystroke-level processed is revolutionizing insurance. From personal and industrial insurance line underwriting and onboarding, to policy holder services and claims processing, RPA is already creating drastic changes within the way that insurers operate, improving customer service and reducing cycle times reducing overhead Insurance robots operate similarly to Excel macros. But not like Excel macros (which only work, obviously, in Excel), RPA bots can work across multiple systems, instead of being confined to just one. With robotic process automation, all sort of insurance sub-processes will be sped up. Common work tasks which can be automated via robotic process automation include:

- Open, log in, toggle between different application and system.
- Copy paste data from spreadsheets to core systems.
- Move data from core systems to spreadsheets.
- Move information from Core System A to Core System B.
- Pull data from invoices to core system.
- Open email and move data into core system.
- Move files and folders from desktops to servers.
- Scrape information from the internet and websites.
- Calculate data automatically to create reports.

VI.BENEFITS OF RPA IN THE INSURANCE INDUSTRY

Robots will assist you link disparate heritage systems, on the front-end, with no cryptography, to conduct insurance operations quicker, scale back labor price, expedite new business onboarding, underwriting, client service, and claims processes all at the same time. With the shifting demographics of consumers, consumer interaction preferences are moving towards the digital and fast of transaction. the same ease of service and cycle time that they experience on shopping online or while using online banking is expected while Customers utilize consistent service levels and convenience while operating with insurance company

The only way your insurance company can tap the maximum benefits of RPA in an insurance use-case is by first standardizing as much of the manual work as possible. standardization across the entire organization like. Deep, front-line process analysis and desk-level work are simply, essential for RPA. They're what makes RPA in insurance worth the investment and the only way to build a business case with real return-on-investment. the benefits from RPA in insurance can be both financial and operational in nature, improving back-office processes and the customer experience while saving money on labor. Basically, robotic process automation enables you do a lot more with what you have, or less. When compared to ancient automation, robotic process automation in insurance has specific benefits, including:

- Faster claims processing. Claims processing needs employees to gather information from various documents and copy/move that information into various systems. It's a time-consuming long process, which delays the timely response that customers desire when they file a claim. RPA will move large amounts on claims data with one click.
- Easier policy cancellation. The process of cancelling policies is long time-consuming due to having to interact with email, a policy administration system, a CRM, Excel, and PDFs.
- Simplified new business on-boarding. Sometimes companies grow faster than they can manage. Robots will assist growth with minimal growing pains: manual inter-departmental data movement from new clients being on-boarded can be reduced by at least 50% – within weeks.
- Increased data accuracy. Using RPA increases the reliability of data. That's because, unlike humans, robots are unable to key in data incorrectly; nor will their "minds" wander while performing repetitive tasks, you must resolve bad data being received on the front end for it to work right.
- Standardized processes. An impact of using robots is the necessary standardization of processes. a company's process all need to be standardized, which in turn increases worker efficiency, and then greatly increases the speed at which the robots can do their work as well.
- Legacy-systems compatibility and new system implementation friendly. Robots can be configured to use old systems that might be replaced in the next few years, and updated to work with the new ones. Robots are simply reconfigured within days to point to new systems as they get enforced.
- Easy transition. Working at the acquainted desktop level, robots are easy for employees to understand and to use. They can be installed quickly, and work with existing technology.

Step 1: determine sub-processes on process maps where insurance robots can be implemented.

Step 2: Prioritize and evaluate all of the insurance sub-processes and use cases to see which yield the most benefits.

Step 3: the use-case requirements, rules, and keystrokes must be developed and document which the insurance robot must take over.

VII. PITFALL OF RPA IN INSURANCE INDUSTRY

Installing thousands of bots has taken heaps longer and is lot more complex and expensive than most organizations have hoped it would be.

The platforms on that bots interact often change, and the necessary flexibility isn't always configured into the bot.

A new regulation requiring minor changes to an application form might throw off months of work in the back office on a bot that's nearing completion.

VIII. ADVANTAGES

RPA dramatically will increase productivity, results in near-zero errors, reduces costs, has faster cycle times as well as incredible scalability. the power of having the ability to expand the work capacity of a business immediately on demand and the ability to scale down this kind of work capacity just as quickly as possible by RPA.

The combination of RPA solutions with intelligent technologies may have great potential for widespread adoption across all industries.

RPA describes a toolkit that allows non-engineers to create software bots replacing human effort to complete task to automate rule driven business processes

XI. CONCLUSION

These new digital robots are capable of handling simple, everyday tasks related to customer service, cybersecurity, handling complaints and service requests and performing maintenance. The coming years will see the rise of robots that can work in both semi-structured and unstructured environments. This will enable companies to utilize robotics to execute a multitude of tasks across the enterprise. In addition, these robots will now work seamlessly and in tandem with human employees, which would augment each other's strengths to increase overall productivity. the future where human will be liberated from repetitive tasks, allowing bots to do them and are empowered to transition to more creative and fulfilling roles while contributing higher order value to the business leading organizations in logistics, health, utilities and resources will explore the use of robots to automate operations and it's virtually impossible to build a digital enterprise without RPA. Bots may complete a task in faster and cheaper task completion than human, but until further notice, the human and technology equation is still essential to support the modern customer-centric enterprise

REFERENCE

[1] https://solutionsreview.com/business-process-management/difference-between-rpa-and-bpm
[2] https://thelabconsulting.com/robotics-in-banking-with-4-rpa-use-case-examples
[3] https://thelabconsulting.com/robotics-in-banking-with-4-rpa-use-case-examples/