



ROBOTIC PROCESS AUTOMATION

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ABSTRACT

Robotic Process Automation (RPA) is a type of software that allows anyone to automate digital operations. RPA allows software users to develop software robots. "Bots" that can learn, mimic, and then execute business operations based on rules. Users can benefit from RPA automation. To build bots by studying human digital behaviour show Tell your bots what to do, then let them go. Robotic Bots in process automation software can communicate with any system Software or system in the same manner as people do—except that RPA bots can work nonstop around the clock much faster and with complete accuracy and precision.

KEYWORDS

Artificial intelligence, Robots, Automation

1.INTRODUCTION

Robotic Process Automation (RPA) is a type of software that enables anyone to automate digital activities. Users may benefit from RPA automation. to create bots by studying human online behaviour Walk away after telling your bots what to do. Robotic bots in process automation software can communicate with any system. RPA bots work in the same way as humans do, but they can work 24 hours a day, seven days a week. Much faster, and with complete accuracy and precision. Automation is described as "the use or introduction of automatic equipment in a production or other process, facilities," according to Google.com. The process of directing machines to undertake jobs that would otherwise be performed by humans is known as automation. The advantages of implementing this concept of automation in the computer sector outweigh any other method of completing a work. As a result, automated processes are expected to assist businesses in achieving more success in the not-too-distant future. Artificial intelligence (AI), machine learning (ML), robotic process automation (RPA), business process automation (BPA), industrial robots, virtual help, and other technologies are examples of process automation technology. All of these technologies are currently available.

2.LITERATURE SURVEY

This literature survey offers the review of literature over different aspects of robotic process automation.

Leslie P Willcocks, Mary Lacity and Andrew Craig discussed the concept of “the IT function and robotic process automation”. They convey the introduction of new technologies like as Robotic Process Automation (RPA) and Cognitive Intelligence (CI) tools has heightened interest in service automation. Many potential users of new types of service automation technologies are dubious of the claims made about the products' potential commercial benefit. Potential adopters must be exposed to real-life client adoption tales. Academic researchers can assist potential adopters by objectively examining actual RPA and CI implementations in client organisations, appraising what the software can and cannot achieve at this time, and extracting lessons on achieving the product's worth. Organizations hope to improve their operational efficiency by implementing Robotic Process Automation (RPA). Robots, or 'bots,' in RPA, are software agents capable of interacting with software systems by simulating user activities, reducing the workload of the human workforce. RPA has already achieved significant adoption in practice, with numerous vendors offering solution solutions. In contrast to this early practical acceptance, RPA has received very little attention in academic literature.

Kevin C Moffitt, Andrea M Rozario and Miklos A Vasaehelyi discussed about “robotic process automation for auditing”. Robotic Process Automation (RPA) has the ability to upend the traditional auditing methodology. RPA is predicted to repurpose the position of the auditor by removing perfunctory activities and stressing higher order thinking skills, which will eventually lead to improved audit quality, thanks to its capacity to automate rules-based processes that are repetitive and manual. This editorial looks ahead to the future of auditing by presenting the notion of robotic process automation (RPA) and outlining how it can be used in auditing. Furthermore, considerations for RPA-based audits are offered, as well as a number of research questions, with the goal of generating discussion in this evolving field.

Lauren A Cooper, D Kip Holderness Jr, Trevor L Sorensen and David A Wood discuss about “robotic process automation in public accounting”. By interviewing RPA executives at Big 4 firms, they analyse the deployment of Robotic Process Automation (RPA) technologies in public accounting. RPA software streamlines repetitive, mundane processes by automating data entry, processing, and output. Many of our findings are specific to the field of accounting. Participants say tax services are the most advanced in terms of RPA implementation, followed by consulting and assurance services. Furthermore, while RPA has had no effect on rates, there is concern that clients may seek fee reductions as a result of reduced employee hours. Finally, unlike other types of technology, RPA adoption is typically driven by lower-level personnel. Their findings show substantial efficiency and effectiveness advantages from RPA implementation, similar to other fields. Furthermore, interviewers do not anticipate a reduction in headcount as a result of RPA implementation. This is the first study to address the advantages, prospects, and obstacles of applying RPA in accounting, and it will act as a springboard for future research.

OBJECTIVES

- The goal of RPA is to automate repetitive — and presumably dull — corporate operations so that people may focus on more difficult tasks that need advanced problem-solving.
- RPA software works for your company 24 hours a day, 7 days a week
- Cost-cutting: Software robots aid in the cost-cutting of businesses.
- Change management is simple with RPA since it protects application and data integrity.
- Enhanced audit and compliance monitoring: Robots provide detailed audit logs, allowing for advanced corporate analytics and increased compliance.

3.METHADODOLOGY

Robotic Process Automation (RPA) is a virtual robot (or, more accurately, software) that is programmed to mimic the behaviors of humans. It's a step toward corporate and investment banks becoming more digital.

A 6-STEP PROCESS

As RPA use grows, choosing the proper process to automate will become increasingly important in achieving a large Return on Investment. The user must determine the suitable sphere of robot interaction. You may protect your project and determine where RPA is most appropriate by following the 6-step approach below and utilising a scoring matrix to analyse opportunities:

1. **SCOPING:** Determine the target scope based on the environment, needs, and resources available.
2. **EVALUATION OF PROCESSES:** Evaluate the processes using the "score matrix" below.
3. **PROOF OF CONCEPT:** Launch a proof of concept using the "candidates" list of process
4. **TESTING:** Run thorough tests on a large data set and keep an eye on the output quality.
5. **TARGET OPERATING MODEL :** Define appropriate governance, sourcing choices and Benefits measures
6. **DEPLOYMENT:** Create a deployment strategy that include training, communication and Change management

The key to ensuring effective buy-in, dedication, and collaboration throughout the Implementation is to involve both management and operational teams.

TO SELECT ELIGIBLE PROCESSES, A RPA SCORING MATRIX WILL BE USED.

		LOW	MEDIUM	HIGH
DATA	Nature of inputs	Physical	Digital Manual entry	Digital Automatic entry
	Volume of processed data	Low	Medium	High
COMPLEXITY	Number of software used by the process	Low	Medium	High
	Frequency of exceptions	High	Medium	Low
STABILITY	Repetitiveness of the process	Low	Medium	High
	Frequency of changes in the process	High	Medium	Low
HUMAN FACTOR	Frequency of human errors in the process	Low	Medium	High

Although it is vital to appropriately identify the best candidates for RPA, RPA should be viewed as part of a comprehensive process optimization strategy. The introduction of RPA must pave the way for even more automation and efficiency gains.

4.IMPLEMENTATION

When commencing an RPA implementation, there are various aspects to consider. While each RPA process is unique to your organization's goals and maturity, deployment typically includes the following steps:

- Assess for RPA Opportunities in Phase 1
- Choose a vendor in Phase 2
- Capture Process Steps, Pilot, and Implementation (Phase 3)
- Manage the RPA Lifecycle in Phase 4

PHASE 1 KEY TASKS

- Research the capabilities of RPA vendors and services.
- Determine project details, including project team members and roles (e.g., stakeholders, and evaluators) as well as project plan/governance/risks
- Establish project goals
- Provide counsel and strategic direction to stakeholders on a regular basis.
- Agree on the guiding principles for process candidates (e.g., high volume, static, impact, etc.).
- Examine a preliminary list of process candidates for use cases and identify the advantages of possible automation.
- Create a preliminary list of candidates for RPA processes and software vendors.

PHASE 2 KEY TASKS

- Complete the use case(s) for vendors to react to and possibly demonstrate.
- Define process requirements, vendor assessment criteria, and other criteria.access rights, source code, and technological requirements systems, and other resources required to support the effort
- Create and send out a request for proposal to potential vendors.
- Evaluate responses (technical/mandatory criteria)to choose suitable providers who will be invited to the presentation and technical demonstration phase of the project procedure for procurement
- Conduct onsite presentations with selected providers and use their financial proposals to develop the RPA business case.
- Give the pilot to the vendor with the best rating.

PHASE 3 KEY TASKS

- Assist with the project management of the comprehensive implementation plan
- Assist with the project management of the comprehensive implementation plan
- Determine any extra requirements needed to support the pilot • Conduct a readiness assessment
- Execute the pilot with your chosen vendor
- Address any difficulties that arise
- Finish your benefit model (business case)

PHASE 4 KEY TASKS

- Implement the final strategy model (e.g., chargeback mechanisms, the establishment of an RPA centre of expertise, and so on).
- Establish the operating model, governance, and prioritising mechanism for processes.

- Oversee the change management and communication strategy.

5.RESULT ANALYSIS

RPA is a strong transformation tool that can improve your business if you take the right measures to create a smart approach. While the goal of RPA is to automate certain operations previously performed by people, your human capital is critical to a successful transition. Each step of the RPA process should be communicated to your team to ensure a seamless and purposeful implementation. You will be able to limit the margin of error as you progress if your staff understand each step of the implementation, including the regions prone to errors. Human capital is still a significant asset after deployment. In order to manage RPA, teach others, and continue to update the technology as RPA evolves, your IT personnel will need to grasp the new technology.

6.CONCLUSION

Because RPA is a software solution, the complete automation study finds that the term "Robotic Process Automation" conjures up ideas of real robots running around offices carrying out human tasks. In RPA jargon, a "robot" is a software licence. RPA is most commonly used to describe the process of configuring software to perform work that was previously performed by people in business processes. It's critical to keep in mind that RPA does not save any data. RPA can simply integrate with other systems via the presentation layer. RPA systems require minimal to no programming experience because the majority of the interface is built on drag and drop operations. RPA's fundamental benefit is that it lowers expenses while retaining productivity. RPA appears to be the way forward. RPA is a strong automation solution that enables a wide range of automation options while improving quality, increasing control, and adding flexibility. However, success requires a clear RPA vision and strategy that feeds into the implementation approach and operating model. RPA usage will continue to rise in the coming years. Meanwhile, more complex robots solutions will continue to develop and become more widely accepted across industries. Those companies who succeed in scaling RPA are in the best position to progress to and profit from advanced and cognitive automation solutions.

7.REFERENCES

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