A Review on Robotic Process Automation

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Abstract: **Today's market climate is evolving at an unprecedented pace- but it's full of opportunities as well. Technology continues to push the agenda for organizational change, but now it is about making operations smarter and more autonomous, described mainly by moving from data-consuming humans to data-consuming machines and executing on a plan.**

The ability to apply Robotic Process Automation to business processes has captured many organizations' attention as they operate in a digital-first environment that demands streamlined operations and higher resource value. When implementing Robotic Process Automation (RPA), companies automate rule-based processes with software programs that don't need human intervention.

This paper helps in understanding the automation of the repetitive and complex processes through Robotic Process Automation while reducing the time taken to complete the process and thus increasing the performance. RPA bots allow efficient automation by learning directly from humans and interacting with user interfaces just like humans would.

Keywords: **RPA, Automation, Robotic Process Automation, Automation Anywhere, UiPath.**

1. Introduction

For the execution of business processes, workers currently spend substantial time dealing with Enterprise Resourcing Planning (ERP), Customer Relationship Management (CRM), spreadsheets and legacy systems in manual repetitive tasks like tipping, coping, pasting, extracting, merging and moving massive amounts of knowledge from one system to a different. Consider that a number of these highly structured, routine and manual tasks might be handled by a robot, in order that knowledge workers have longer for value added tasks.

The robotic process automation (RPA) does not represent neither physical nor mechanical robot, even if it brings to our mind a vision of some electromechanical machine. In the term of robotic process automation, robot refers to a software-based solution, programmed to hold out procedures, processes or tasks on the repetitive way that are usually done by humans. This is the promise of Robotic Process Automation (RPA) that emerges in the last five years as a set of software tools and platforms that can automate tasks on rules-based business process.

Technology and competition is moving at an unprecedented pace and is expecting business houses to be in-line with change to avoid being peril and absolute. Executives are using increasingly broad range of technology to increase competitive advantage (Bourne, 2017). Robotic Process Automation is one such area which is promising greater operational benefits and costs, which is why business process or workflow automation has been growing for the last decade (Bourne, 2017). RPA is replacement of man with bots for repetitive, rule-based business process actions, these bots mimic action of worker would perform on computer. With RPA business can create digital workforce that execute tasks faster, more accurate and cost effective. It also helps the organization to achieve leaner and more efficient work force (NIIT, 2016). For accelerating productivity gain, RPA must be implemented on key corporate functions which are repetitive, standardized, transactional process and activities like finance, compliances, treasury and marketing (Zamkow, 2017). It is the time for organizations to ensure smooth transition of RPA adoption. Benefits offered by RPA has created a big buzz in business environment, early adopters have also acknowledged its importance and cost-effective results.

2. Literature Review

The Robotic Process Automation (RPA) is a new phase of the technology to come. Robotic process automation technologies are becoming necessary as a part of conducting business operations around the globe within organizations. Robotic process automation can give the core business processes immediate value. [1]

Robotic Process Automation (RPA) emerges as a software-driven solution for automating business processes based on rules that include repetitive tasks, structured data and deterministic performance. Recent studies report the benefits of using the RPA in terms of efficiency, expense, speed and reduction of errors. The study shows that the key advantage of RPA is increase in productivity. [2]

Today and over the years, companies have been actively searching for IT solutions that could holistically increase the efficiency of their users to enhance customer satisfaction, increase profitability and quality, reduce costs etc. Robotic Process Automation (RPA) has recently emerged as a game-changing technology that outperforms numerous technologies emerging over the decades from the business process

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238

management (BPM) industry. Since its emergence, Robotic Process Automation has made its way through several market realms thanks to its ability to automate basic rule-based processes that are repetitive and manual, expanding the use cases and continuing to grow with business requirements. [3] helps to research the implementation of RPA across various markets, RPA advantages and RPA futures.

[4] discusses the meaning of RPA means and it brings cost effective benefits with greater efficiency and accuracy. Further this study enlists the challenges of RPA implementation.

RPA is a groundbreaking new technology, capable of producing substantial investment returns for businesses. RPA also provides the BPO (Business Process Outsourcing) companies with new market opportunities. [5] explains OpusCapita's RPA journey, a BPO company that initially developed a strong internal RPA capability and then expanded its operations to provide clients with RPA services.

There's a trend nowadays to automate routine activities to reduce human errors or costs. Digitization calls for new business-process approaches. RPA comprises a range of evolving technologies that pledge business process automation through the use of human-based qualified software robots. Companies need to track their own business processes constantly to define and automate processes that are appropriate for automation purposes. [6]

Earlier innovations focused on increasing the productivity of labor, but now the emphasis has moved to reducing labor. To cope with the rapid speed of the automation industry, we need a deeper understanding of RPA and know how it helps to improve productivity and rising costs. [7] aims to provide an illustration of RPA usage for a systematic study of RPA is e-commerce industry.

Despite the utility of RPA tools and their growing prevalence and usage in various business contexts, certain cybersecurity issues emerge with this technology. [8] discusses the cyber security implications of RPA technology, including a risk analysis and an overview of best practices in defense.

[9] We understand the criteria for processes to be suitable for RPA implementation.

3. RPA Operations

1. Credible Transformation of Companies: The company processes will be significantly changed with the latest RPA technology. The businesses will now significantly increase the productivity with which they are using their labor, the a more productive workforce using Robotic Process Automation with effective, efficient and low-cost digital labor. This helps companies to cut costs, reduce losses and avoid risks.
2. Software Migrations: In all the organizations a huge amount of software is produced. Routine operations can require manpower to gather, evaluate, and produce a report as insights become complex. Robotic Process Automation can only help companies and businesses speed up application

transformation and incorporation of existing software by migrating content more efficiently, with less effort, or connecting to legacy systems.
3. Web Crawling: Robotic Process Automation, through different tools, automates content collection from any source in any format. The formats can be in video, text, image, audio. The data can be the format that is structured, semi-structured and unstructured. This Robotic Process Automation technology is capable of using deep learning techniques to extract deep Web data. Additionally, the mining process will be performed with the aid of Artificial Intelligence, Big Data Analytics, and other web analytics.
4. IT Department Enabler: Robots in Robotic Process Automation are software programs that mimic human-computer interactions and execute routine procedures, rule-based tasks such as gathering and analyzing multi-system data, reading and writing to databases, or extracting and reformatting data into reports and dashboards. Through hardware and software and networking management they keep an eye on addressing anomalies and smooth operations.

4. RPA Tools

RPA is part of the collection of evolving Artificial Intelligence methods, including virtual agents, machine learning, computer vision, and classification of natural languages. The below mentioned platforms are among the most used RPA Platforms.

A. Blue Prism

On the Microsoft. NET Framework, Blue Prism is developed. It programs any application and supports any platform such as Mainframe, Windows, WPF, Java, Web, etc. that is presented in a variety of ways such as terminal emulator, thick client, thin client, Web browser, Citrix and Web services.

It was deliberated for the development, testing, staging, and production of a multi-environment placement model with both physical and logical access controls.

Blue Prism RPA software consists of a central release management system and dispersal model for process transition, offering high visibility and control levels. The organization is provided with additional control through a centralized process expansion and re-use model. The program supports guiding contexts such as PCI-DSS, HIPAA, and SOX, with plenty of controls in place to provide the necessary security and governance.

B. Automation Anywhere

Industry experts, built Automation Anywhere to mimic not only IT processes but also human cognitive behavior. Unlike other RPA platforms, the data it collects often contains patterns in human behavior. It automates and streamlines many business processes and activities using these details, providing us with a simple solution for a digital workforce.

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239

Table 1
Comparison of UiPath, Blue Prism and Automation Anywhere

Features	UiPath	Blue Prism	Automation Anywhere
Is trial version available?	Community Edition is available	No trial version is available	The trial version is available for 30 days
Is it user-friendly?	Has a user-friendly visual designer	Has a user-friendly visual designer, easier than Automation Anywhere	Developer friendly but requires high programming skills
Google Trends Popularity	Most popular tool	More popular than Automation Anywhere	The least popular tool in the trio

C. UiPath

UiPath is world-renowned for its product leadership and technological excellence. Below is a portion of UiPath's highlights that make it appealing to RPA:
- Open Platform
- Rapid Results
- Path to AI
- Scalability
- Security

5. RPA Bot Development Methodology

The various stages involved production and design of the bot is explained below along with the key tasks for each stage of the lifecycle.

A. Opportunity, Identification and strategy

This stage involves various sub tasks from developing a detailed business case to the proof of the concept. The detailed business case evaluates the scope of the project along with the desired outcomes to justify the positive points of the establishing an automation solution.
- Business Case
- Proof of Concept
- Identifying opportunity
- Establish governance structure policy
Document: Business Requirement Document (BRD)

B. Solution Design

This stage involves the categories from vendor selection to the development of the BOT logic and review of the BOT logic and various procedures involved in this process.
- Vendor selection
- Bot Logic
- Procedures
Documents: Process Flow Diagram and Process Flow Information
- Process Flow Diagram: Designing of the process steps and scenarios in the form of a flowchart.
- Process Flow Information: Description of each step mentioned in the Process Flow Diagram

C. Configure and test

This stage involves various testing like the user acceptance test and configuration of the bot for the dedicated task.
- User acceptance test and resilience test
- Source code library

Document: Test Case Document
- Unit Testing and Integration Testing
- Issues identified and handled
- Increases accuracy of the BOT
- Handling of new scenarios
- Different parameters are observed:
  - Time taken by the BOT to complete the process
  - Quality Check (Actual output vs Expected output)

D. Deploy
- Production readiness review
- Migration to production
- GO Live
- Inventory management

Document: Solution Design Document
- Publishing of the bot to the respective online platform:
Example: UiPath Orchestrator
- Scheduling of BOTS
- Load sharing to increase efficiency of the entire process

E. Operate and maintain
- Change management
- Version control
- Bot performance review

F. Retirement
- Bot health check
- Retirement and migration strategy

6. Applications of RPA

There are a lot of Industry based applications of RPA which can automate simple tasks and saves a lot of costs. Few such applications include:
1. Healthcare: Hospital administrative works such as tracking patient details, medical history, claims system such as complaints, appeals process and other data gathering works can be automated using RPA.
2. Insurance: To process the influx applications in insurance industry, data handling, documentation, collection and processing of documents and streamlining of workflows.
3. Banking/Finance: Copy pasting data to central systems from remote system, automation of billing system to reduce errors, customer service, credit card, mortgage processing, fraud detection, KYC process, report automation and account closure process.

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240

4. Tax: Data sorting, automation of data retrieval process, file tax appeal based on collected information and reducing manual data entry processes.
5. Human Resource: Candidate sourcing, employee history verification, on boarding process, payroll automation, employee data management, expense management and absence management.
6. Operations – Updating inventory records, issuing refunds, procurement process such as updating vendor records and logistics function such as trade finance, order update, shipping notifications.
7. Retail – Product categorization, Update orders, manage fake accounts and process shipping notifications
8. Telecommunication – Monitor subscriber feeds, fraud management and customer data updates.
9. IT & customer services – Automation of repetitive tasks like data entry, system checks, daily backup process, system administration tasks, running diagnostics, sending scheduled bulk emails and so on.
10. Miscellaneous – Quote-to-cash, procure-to-pay, data cleansing, data extraction from various apps such as PDF, Excel, Word and so on.

7. Processes that can be Automated Using RPA

1. Highly manual and repetitive processes: The processes which are manual and tedious and involves repetition like copying of data from one application to other which is done very frequently should be automated through RPA.
2. Processes with standard readable electronic Input Type: The inputs which are standard and consistent and are in a readable input type like Excel, Word, etc. can be manipulated through RPA and desired outputs can be achieved efficiently. However, if the input is of type scanned images are not prone to automation.
3. Consistent Processing Methods: The processing methods which remains constant over a period of time can be easily automated through RPA but the processes which changes in a short time are not recommended for automation.
4. Rule-Based Processes: Activities which have clear processing instructions and decision making based on standardized and predictive rules.
5. High Volumes: Certain Processes involves manipulation of high volumes of data to get a desired output which can be tedious when done manually but through RPA high volumes of data can be processed efficiently and in less amount of time.
6. Automation Savings: Some of the processes are analyzed and can be done more efficiently, therefore it is recommended to automate only the processes that can provide a saving in terms of human work-effort of minimum 2 FTEs.

8. Advantages of RPA

1. Reduced Operational Costs: Offshore outsourcing has been a preferred business practice for rising operating costs in recent decades. This is because, in Western countries, labor is very costly relative to developing countries like India and the Philippines. RPA technology has shown itself to slash the cost of a full-time offshore equivalent (FTE) by half.
2. Workforce Virtualization: Next generation of back-office productivity.
3. Data processing Capability: The robot program produces process logs while it performs function, providing a lot of management knowledge that can be further analyzed for better decision-making. This is true for business processes at both the micro and macro levels. When processes are micro-managed, this will allow companies to track deficiencies and introduce steps to facilitate further optimization.
4. Improved Regulatory Enforcement: For businesses expanding their activities internationally, enforcement with regulations is very relevant. A fully automated RPA process will allow them to monitor each step and to record it systematically. This allows businesses to be more market- and audit regulations compliant.
5. Increased Efficiency: A robot device is capable of operating all day, every day of the year and needs no time off. A single software robot may usually replace between two and five FTEs. Computer robots can do more work in less time, thereby gaining control over the requirements of resources during peak processing times.
6. Increased Employee Efficiency (Flexibility and Multitasking): Workers can spend their time on complicated tasks, adding value to the current processes, while automated robots perform routine, boring work. They may engage in activities which call for greater human intervention. This involves the aspects of personal engagement, problem solving and decision-making. This all contributes to the efficiency of the workforce and helps the company more generally.
7. Reduced Error Rate and Chance of Delivery: Virtual robots effectively eradicate processing errors while properly designing a process and mapping its sub-processes. Nonetheless, to achieve desired outcomes they require research, preparation, and governance.
8. Improved Customer Satisfaction: Automation results in more effective and error-free processes, allowing staff more flexibility for direct customer engagement, improving their efficiency, increasing customer loyalty and developing a relationship with the client.
9. Logistic Advantages: RPA removes the need for overseas jobs, and problems with hiring and handling workers in various time zones, along with any cultural

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Volume-3, Issue-5, May-2020
www.ijresm.com | ISSN (Online): 2581-5792

241

and language differences between workers. Organizations will greatly reduce the cost of preparation, too.

9. Challenges

A. Market Assessment

Industries such as banking, finance and insurance have already implemented the RPA with high cost savings and higher productivity to support the industries. CIO (Chief Investment Officer) studies however challenge the legal ramifications of applying Robotic Process Automation in the financial and legal sectors (Zamkow, 2017).

B. Operational Challenges

In a virtualized desktop environment, RPA tools work best with correct scaling and business continuity configuration. Business system and procedure is not always easy to understand. Many times, the failure to understand the day-to-day functioning of a business is responsible for RPA failure. Another common mistake is to aim RPA at a highly complex operation, resulting in significant cost of automation.

Simple business processes are easy to automate, but complex business processes require a greater understanding of process complexity followed by testing and rework period. Lack of real-time awareness can lead to failure of the phase in which the robot is operating. Most of the RPA adoption failures are due to the difference between planned outcomes and software robots actually working.

Processes that are susceptible to regular change may not qualify for automation due to the expense of change management, and time for managing the change. That makes it worse if the method is automated based on the use of application or device internal sources.

C. Change Management

Developing a "people plan" strategy to implement RPA technology has to be a key priority. HR team within the company needs to find versatile ways to handle complex staff transitions. Resistance to automation stems from a combination of uncertainty and misinformation. Additionally, those operating with teams and departments, organizational change management strategy, where teams can effectively inform and assist each other through the process of transition, where individuals and organizational management techniques are implemented, the business will step into the third stage of organizational change, by recognizing the effect of the transition on the overall strategic planning, communication and company leadership.

D. As a Stand-Alone Technology, No Strategic Value

RPA cannot be applied in isolation. For better performance and productive operation, it must be clubbed with cognitive solutions and digital powered STP (Albert, Banerjee, 2016). The business process can break down, in the absence of machine learning.

10. RPA Versus Traditional Automation

The automation of robotic processes varies from the conventional automation techniques. Let's see a contrast between them based on different parameters:

1. Operating Layer: The Robotic Process Automation i.e. RPA imitates the actions of the various applications. If the robots are finished with their learning stages, the decision to carry out activities can be taken at that level, while conventional automation techniques do not mimic the operation of a user, executing the programming instructions given to it is only conceivable.

2. Programming Skills: No further programming expertise is needed to automate any application using RPA. Automation is as simple as making a flowchart, or diagram, allowing the users to understand the features of automation. But in order to use traditional automation techniques, users should be able to program to automate the features, the programming skills that differ depending on the distinctive tools they choose to use.

3. Complex system: RPA imitates human activities, it is independent of the system layout to be implemented, and it can also automate the complicated system, but in other automation strategies complex systems cannot be implemented because of some programming language constraints.

4. Design Time for Scenario: To automate any program, it is important to design a scenario, RPA is a technique guided by the software method, that is, the users may describe the processes in the form of a flow chart using the drag and drop functionality. This method therefore required less time to plan the scenario, but in traditional automation strategies the feasibility analysis and design of test cases for a specific application therefore takes additional time, it requires more time to design the scenario.

5. Domain Knowledge: For robotic process automation users should have good process and domain awareness similar to other traditional automation techniques, there is no distinct method available for defining the process and creating content for them. The business analyst is responsible for executing the various functionalities of RPA sector. The tester or the users should have the domain awareness of functionality that is to be evaluated in traditional automation methods. Typically, the manual testers are responsible for specifying the scenarios in these approaches, and the automation testers will build the content based on the specified scenarios.

6. Primary Use: The various business processes or functionalities can be automated by using RPA

International Journal of Research in Engineering, Science and Management
Volume-3, Issue-5, May-2020
www.ijresm.com | ISSN (Online): 2581-5792

242

software. For RPA, site, laptop, mobile app and Mainframe-based application can be automated. RPA is not a research tool but, in the future, it may be used as a testing tool. Whereas it is conceivable to automate a specific Web-based or desktop-based program with traditional automation testing. The various automation devices such as Selenium, QTP, Jmeter serve the same function for conducting the particular type of testing.

7. Execution Time and Scalability: Through RPA, the function can be allocated to the number of virtual machines, and each of the machines can perform the specific task assigned to it. Specific programming approaches are used in conventional automation methodology to perform the parallel execution or scalability. One should have a physical computer with sufficient computing capabilities to complete the parallel execution.

8. Maintenance of Test Scenario: The RPA is very basic and easy to use, with the result that users can upgrade

any business function and procedure. But it will be more costly to maintain the testing scenarios because when a change is made in a particular module it can impact the other modules in the scripts and lead to the updating of the particular script.

The RPA will be less costly than the other technique of automation, since it can reduce reliance on human resources. Through RPA, a specific product and a service may be automated, but the system can only be automated with traditional automation technique. RPA's main aim is to minimize headcount while the other automation strategy is based on reducing execution time. Non-technical users often use the RPA technique to improve efficiency, allowing them to concentrate on more important tasks that cannot be automated, but traditional automation is restricted only to technical users.

11. Case Studies

Table 2
Case Studies on RPA Implementation (Source: https://blog.aimultiple.com/rpa-case-studies/)

Company	RPA	Industry	Business Function	Case Study	Results
Line mobile communication app	Argos Labs	Tech	Technology	Mobile app testing and monitoring	Reduced quality assurance effort
An automobile manufacturer	Argos Labs	Manufacturing	Technology	Online app testing and monitoring	Reduced quality assurance effort
ANZ bank	Automation Anywhere	Financial Services	Various	Various processes	85% reduction in effort (equivalent to 400 FTEs)
Dell EMC	Automation Anywhere	Tech	HR and Finance	Various processes including invoicing process, renewal quote generation	$2M savings per year
TreasuryOne	Automation Anywhere	Financial Services	Operations	Back-office operations, including performing settlements and sending out deal confirmations	Error reduction
Juniper Networks	Automation Anywhere	Tech	Operations	Invoice generation	Error reduction
A global bank	Automation Anywhere	Financial Services	HR	HR form tracking and management process	$1m savings p.a.
Bancolombia	Automation Anywhere	Financial Services	Operations	Back office processes	Reduction of labor and errors
Logistics	Automation Anywhere	Logistics	Operations	Document management automation	$0.4m savings p.a.
Fortune 100 bank	Automation Anywhere	Financial Services	Operations	ACH payment processing	50 FTEs reassigned to higher value tasks error reduction
Quad/Graphics	Automation Anywhere	Printing	Finance	Payments processing other processes	Faster turn-around-time
San Diego County - Health and Human Services Agency	Automation Anywhere	Non-profit/ government	Operations	Processing customer applications	Reduced effort Reduced errors
An imaging tools manufacturer	Automation Anywhere	Manufacturing	Finance	Order fulfilment process	Reduced effort Reduced errors
Synergy	Automation Anywhere	Energy	Finance	Transactional billing process	$2.3m annual value savings Error reduction 280+ bots deployed
Cerner	Automation Anywhere	Healthcare	IT	Migrating data from excel to Electronic Medical Records (EMR)	$130k benefits p.a. 628% ROI
Fortune 500 storage provider for hybrid cloud data centers	Automation Anywhere	Manufacturing	Finance	Order-to-cash	8 FTEs moved to higher value tasks $350k savings in 3 months

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243

Company	Tool	Industry	Function	Processes	Results
A food and beverage company	Automation Anywhere	Food and beverage	Finance	invoice processing help desk internal financial reporting	25 FTEs focused on high value tasks
A manufacturer of construction and mining equipment	Automation Anywhere	Manufacturing	Operations	Supply chain management	29% productivity increase Error reduction
A health insurance company	Automation Anywhere	Insurance	Operations	Member enrollment process Commercial claims testing audit	Reduced effort Reduced errors
Commercial bank	Automation Anywhere	Financial services	Operations	GAAR worksheet updates Appraisal orders Email notifications Other processes	Reduced effort
A logistics company	Automation Anywhere	Logistics	Operations	Billing and other processes	25% reduction in turn-around-time 25% reduction in effort Error reduction
A top 30 bank	Automation Anywhere	Financial services	Operations	Document ordering Data entry Data verification and other processes	Reduced errors $1m annual cost savings
Core Digital Media	Automation Anywhere	Tech	Operations	Extracting lead gen data from 50 different online publishers in various formats	$150k savings p.a.
Medical technology company	Automation Anywhere	Tech	IT	Procure to pay IT system updates Data queries & analysis Other processes	50 FTEs reassigned to higher value tasks
Stant	Automation Anywhere	Manufacturing	Finance	Invoice matching Manual invoice creation Approval workflow Data validation Exception & metrics reporting General ledger coding	80% invoice straight through processing achieved
One of Big 4	Automation Anywhere	Professional services	Operations	Tax returns Business intelligence Reporting	$18m savings p.a.
A life and financial services company	Automation Anywhere	Insurance	HR Operations	HR record processing Physician statement orders	$200k savings p.a.
A telco	Blue Prism	Telecom	Operations	Maintenance processes automated	78% reduction in effort IT audit quality improved thanks to detailed log files
Walgreens	Blue Prism		HR	Various processes including worker's compensation claims	73% reduction in effort
Coca Cola	Blue Prism	FMCG	HR and Finance		
npower	Blue Prism	Utility	Operations		$10M savings per year 2 million hours of work automated per year
The Co-operative Banking Group	Blue Prism	Financial Services	Operations	The excess queue procedure which determines how to treat insufficient funds is 80% automated	80% reduction in effort
Shop Direct	Blue Prism	e-Commerce	Operations	Customer-registration process for the new theft ID insurance program	Recruitment and training cost of 22 staff eliminated
The Co-operative Banking Group	Blue Prism	Financial Services	Operations	10 processes including Direct Debit cancellation, account closures, CHAPS payments, foreign payments, audit reports, Internet applications and Card and Pin Pulls	Audit conducted in one minute with automation versus 6-7 hours manually CHAPS process reduced to 20 seconds automatically versus 10 minutes manually
Xchanging	Blue Prism	Professional Services	Operations	Various processes	30% average reduction in effort per process
Telefonica O2	Blue Prism	Telecom	Operations	15 processes representing 35% of back-office transactions	Reduced need for FTE growth, reduced turn-around time
University Hospitals Birmingham NHS Trust	Blue Prism	Healthcare	Customer Service	Patient self check-in	50% reduction in effort 2x improvement in turn around time Improved data quality

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Volume-3, Issue-5, May-2020
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244

Mid Essex Hospital Services NHS Trust	Blue Prism	Healthcare	IT	Integration for an enhanced patient flow and self-service kiosk solution	
An automobile manufacturer	Option3 JiffyRPA	Manufacturing	Finance	Invoice processing automation	85% reduction in effort 10x improvement in turnaround time Reduction in errors
HP	UiPath	Tech	Finance	Invoice tax accounting and reporting sub-processes automated	85% reduction in effort leading to $100k cost savings
EY		Professional Services	Administrative	Crawling through meeting registrations and finding individuals that have not booked their air tickets	50% reduction in effort 20% reduction in air travel ticket prices
EY		Professional Services	Various	Various processes	500 processes automated with 600 bots
Fortune 500 tech company		Tech	Finance	Quarterly financial report generation	70% reduction in effort and turnaround time Improved auditing capabilities thanks to detailed logs Reduced errors

12. Conclusion and Future Scope

RPA implementation helps in achieving better privacy and compliance. Further, RPA can improve the quality, speed, accuracy by a great extent hence leading to process improvement with better efficiency. RPA can replace the data entry and the data rekeying jobs with its automated tools and techniques. Also, repetitive jobs of data assembling, formatting tasks that use a set of rules to follow the process can be easily performed.

The growth in the field of RPA is sure shot and thus can provide higher technological potentials towards significantly reducing the risk of inaccurate regulatory reporting's along with improvised analytics and higher data accuracy.

RPA can be collaborated with Artificial Intelligence to solve complex decision-making problems.

RPA can be expected to contribute to the market growth of Big Data and Internet of Things.

RPA is al so believed to collaborate with other technologies like Cyber Security to enhance customer experience.

RPA-bot can also read the e-mail body, sends it to NLP (Natural Language Processing) and then executes the specific process extracted by NLP.

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