

RPA (Robotic Process Automation) – Case Study

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Abstract— By now most enterprise leaders are well aware of the benefits of robotic process automation (RPA) – financial savings, improved quality and a better customer experience, just to name a few. RPA is an application of technology, governed by business logic and structured inputs, aimed at automating business processes. Using RPA tools, a company can configure software, or a “robot,” to capture and interpret applications for processing a transaction, manipulating data, triggering responses and communicating with other digital systems. With RPA, businesses can automate mundane rules-based business processes, enabling business users to devote more time to serving customers or other higher-value work. On similar note, a case study was conducted on a Capital Approval tool (tool built for one of the customer) to verify the benefits and results of applying RPA to a business process with different roles activities. The results show that productivity improvement is the main benefit of RPA; also time reduction was achieved on this case

Index Terms— Automation, Bots, Robotics, RPA, RPA Benefits.

1 INTRODUCTION

For any of the business process execution, currently different roles involved in spending substantial time in dealing with downstream application i.e Resource Planning, Customer Relationship Management (CRM), Payroll system etc.

Robotic process automation is designed to help primarily with office type functions, which requires the ability to do several types of tasks in order. This is in contrast to traditional manufacturing automation that focuses on taking one portion of a workflow or even just one task and creating a robot to specialize in it. Office work often requires the same types of repetition of jobs/task, but it is data being manipulated across downstream platforms and applications so a physical robot is not necessary. Instead a software robot is deployed with the ability to launch and operate other software. RPA works like a digital assistant for workers by clearing the onerous, simple tasks that eat up part of every office worker’s day. Simplicity and relative cheapness can make RPA a more attractive solution for many companies, particularly if the company has legacy systems and applications. Robotic process automation is designed to play nice with most legacy systems and applications, making it easier to implement compared to other enterprise automation solutions.

Consider that some of highly structured, routine and manual tasks could be handled by a robot, so that skilled workers have more time for value added tasks. This is the promise or Robotic Process Automation (RPA) that emerges in the last five years as a set of software tools and automation platforms that can automate tasks on rules-based business process. When we talk of Robots in the Robotic Process Automation processes or systems or tools, it doesn’t exactly mean that robots but instead it means that there would software blocks or applications that can take over these responsibilities or tasks from Humans and these can be performed by robots more quickly and efficiently.

While existing capabilities of screen-scraping and macros software technology may come to mind, RPA is an evolution beyond these solutions. RPA is becoming an important automation tool driving digital transformation and the future of work.

2 THE INDUSTRY BENEFITS OF RPA INCLUDES

As a user-friendly and cost-effective tool, robotic process automation provides a number of advantages that are drawing interest from different organizations across many industries.

2.1 Extreme Accuracy

Bots are extremely accurate and consistent – they are much less prone to making mistakes or typos than a human worker. Higher percentages of mistakes and typos have been observed when humans are copying data or feeding other system.

2.2 No programming Skills

To configure a software robot, we don’t need to be expert in programming. As this is code-free technology, any non-technical staff can use a drag and drop process designer to set up a required bot or even record their own steps to automate a process through a process recorder feature and once bot is deployed, bot would execute same steps as it is.

2.3 Regulatory Compliance

Bots only follow the instructions they have been configured to follow and provide an audit trail history for each step. Several aspects of compliance oversight operations can be enhanced through robot implementation. Monitoring and testing is an especially promising automation candidate. Robot’s capability to pull and aggregate data from multiple sources could also enhance the efficiency of regulatory, non-financial, and risk reporting as it can help eliminate or reduce the time-consuming processes of collecting, compiling, and cleansing, and summarizing large amounts of information. The controlled nature of bot work makes them suited to meeting even the strictest compliance standards.

2.4 No impact on existing technology

RPA involves no disruption to underlying systems or technologies. Robots work across the presentation layer of existing applications just as a person does. Robots are useful for legacy systems, where APIs may not be immediately available, or in situations where organizations do not have the skilled resources to develop a deep level of integration with existing legacy applications.

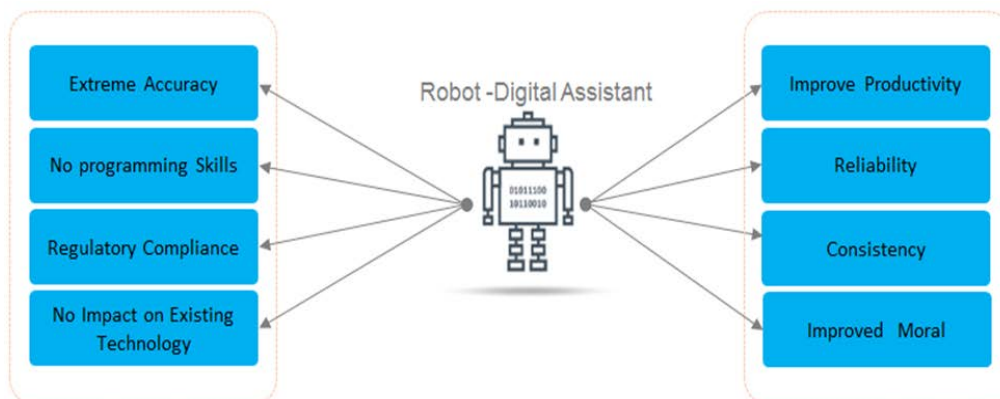


Fig. 1: RPA Benefits

2.5 Improved productivity

Robots process cycle times are fixed and more efficient and can be completed at a faster speed compared with manual process approaches where humans are involved.

2.6 Reliability

Operations can be performed 24/7 as these bots can work tirelessly and autonomously without requiring staff to manually trigger bots to initiate. If a human does need to intervene, it is to make a decision or resolve an error.

2.7 Consistency

RPA also offers the benefit of consistency of process. These bots can perform routine tasks same way each and every time based on defined captured flow.

2.8 Improved Moral: RPA can handle some of the most routine tasks a business completes each day. Bots enable workers to offload manual offload tasks like filling out forms, data entry and looking up information from websites. This will improve morale in the HR and administrative areas of your

business, which are crucial to helping your business grow. Employees will have more time to invest their talents in more engaging and interesting

3 CASE STUDY

Case study was carried out on Healthcare provider firm. As part of organizational strategy, company created Shared platform to manage process automation, innovation and better customer experience. This was all orchestrated using BPM (Business Process Management) and hosted number of processes.

To understand RPA and benefits associated with it, company started by evaluating and prototyping this automation technology on some of its customer business process - Capital Approval process.

Fig. 2 is AS-IS process, once case is approved by all roles then finalizers logged in to the approval digital tool to open case and same time create case in JDE system with relevant detail taking from approval tool and generates JDE IO number. This whole process is manual and most of time leads to error

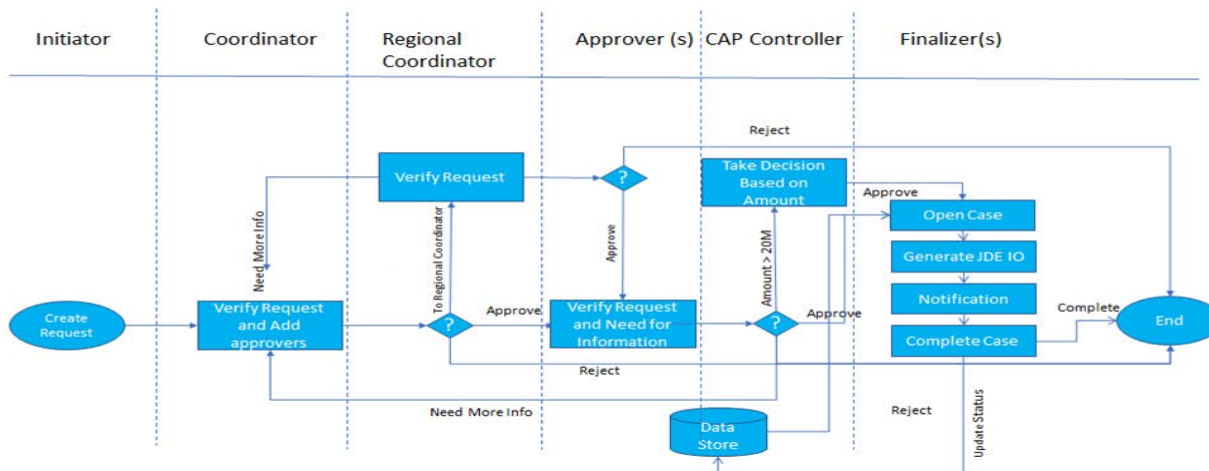


Fig. 2: Capital Approval AS-IS Process

Fig. 3 is the TO-BE automated process, where the finalizer’s role activities were assumed by a software robot (RPA). After the case approval is done by other process roles, the robot access the data store, create case in JDE system and generates JDE IO number, copy the JDE IO and paste it on the approval tool to complete the case and generates notification for case completion

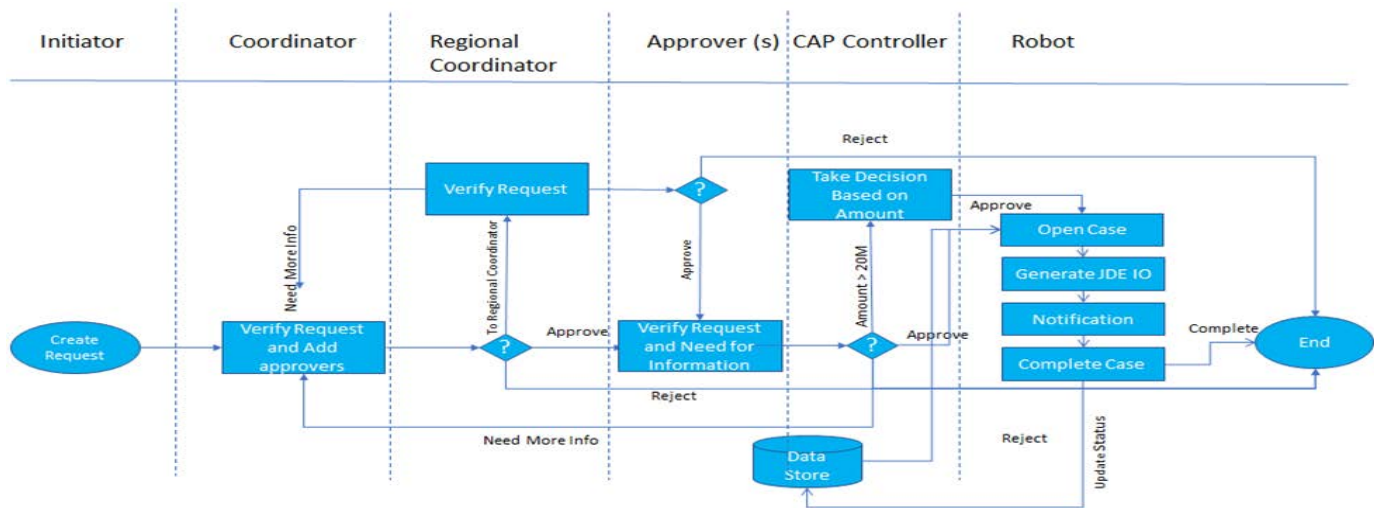


Fig. 3: Capital Approval TO-BE process with RPA

4 RESULTS

To evaluate results of TO-BE process implementation, capital request were monitored in two sets, one set with finalizers and another set without finalizers (Finalizers replaced with Robot) as finalizers activities were performed by robot. The measure used for evaluating the results was case duration for fixed number for requests. With RPA, overall duration reduced by 62% and finalizers duration reduced drastically by 99.99% that may vary based on nature of process.

Capital Request with RPA	Number of Requests	840
	Average Time closure (Days)- Other Roles	4.5
	Time Taken by Robot (Days)	0.001389
	Overall Case Duration (Days)	2.25
Capital Request without RPA	Number of Requests	840
	Average Time closure (Days)- Other Roles	4.9
	Time Taken by Finalizers (Days)	7
	Overall Case Duration(Days)	5.95

Fig. 4: Results of RPA Implementation

5 CONCLUSION

In this case study, we have gone through what Robotic Process Automation means and what benefits that an Organization can enjoy if there is an implementation of Robotic Process Automation in their own business Organization. When it comes to deciding on the use of RPA, companies should consider that RPA is more suitable for high volume standardized tasks that are rules and fixed path driven, where there is no need for subjective judgement, creativity or interpretation skills. In above case study, finalizer role was never involved in subjective judgement hence acknowledged as suitable candidate for RPA implementation.

The main benefits of RPA are cost reduction, increasing process speed, error reduction (as robot follow the instruction which have been provided) and productivity improvement by reducing execution duration as the case study reveals.

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