

# Is Intelligent Automation a Business Enabler? – A Conceptual Study

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## ABSTRACT

*Being competitive and seamless service delivery is the new norm of business, Business organizations are effectively using the technology disruptions and advancements for achieving competitiveness. Through the adoption of Intelligent Automation with integrated Artificial Intelligence, strategic decision makers are winning new deals. The Indian BPO sector is heading from mere lift and shift of back end services to business transformation and digital value creation to their clients. The disruption in the technology advancements is benefiting businesses not only in increasing productivity but also is opening up, new business avenues as RPA & AI service providers. This paper attempts to give an insight on AI and RPA as a business enabler, highlighting various benefits of its implementation and also the recent developments in RPA Markets. An attempt is also made to identify the impact of RPA & AI on Finance and Accounting Services.*

**Key Words:** *Artificial Intelligence, Robotic Process Automation, Competitiveness, Intelligent Automation.*

## Introduction:

Have we ever thought of giving voice commands and controlling home appliances? A driverless car? Tap and pay your bills? all these are the technological disruptions and which have created a new market segmentation. Thanks to Intelligent Automation, an automation feature with integrated Artificial Intelligence system with it. With the dynamic global economy, the Robotic Process Automation and Artificial Intelligence is rapidly acquiring the mundane high volume repetitive tasks that are rule based. Organizations are striving to deliver quality services with zero errors and digital value creation for their clients. The BPO/KPO staff across the world who are supporting back office operations are in fear of losing their jobs.

Digital Customer value creation is one of the complex and multi-diverse target for the service providers. Digitization has brought Customers to lime light and digital service delivery offers various factors supporting value creation (Saar-ijarvi, Kannan and Kuusela 2013; Vargo & Lusch 2014)

Most of the organizations are implementing the robotic process automation at their operations. In fact, they seek network service providers for Automation- as-a- Service (AaaS). Not only in manufacturing, but also in service

sector, automation is gaining importance these days. Automation is an important component in business process management, as the major focus of this aims at productivity, efficiency and quality enhancement. (Laylock and Hartmann, 2005).

RPA is a software robot, which captures data and repeat the same steps from transaction processing system, manipulate data, trigger a response, communicate with other digital systems like human worker. (Boulton 2017). The structured tasks are being efficiently imitated by the software robots with least possible error rate (Fung 2014). The exception handling, including the suspected accounts, data validation and connection across multiple platforms will be the future for leveraging the RPA and AI to arrive at a fully automated process from the current semi-automated process. (Castelluccio 2017).

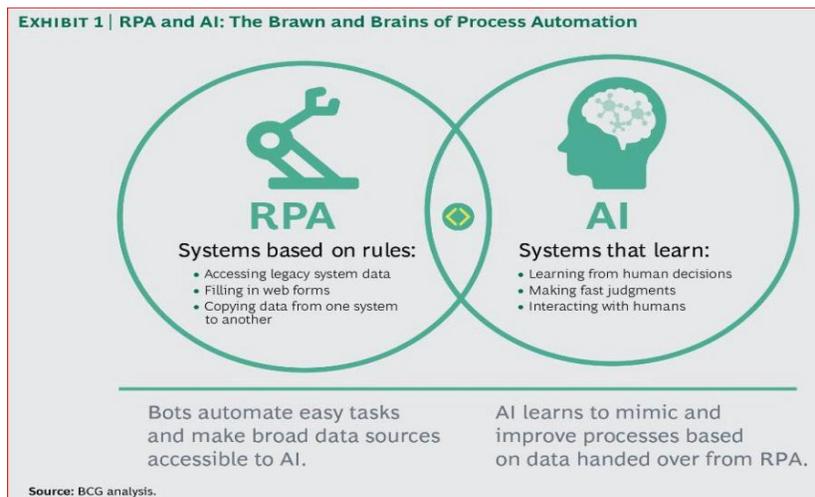
RPA is considered as one of the key concerns for the new generation workers (Ford 2015). RPA and AI pose a threat to manual work as automating will change the ways of working, and work category that impact operations. (Nicholson, Sahay and Heeks 2018). Some authors have also pointed out that RPA will lead to higher degree of workforce reduction leading to negative impact such as unemployment and threat of greater inequality (Spencer 2018).

With all these discussions, this paper aims to present is RPA a boon or bane. Will it act as a business enabler?

### **What does RPA & AI Mean?**

Robotic process automation (RPA) is the application of technology that allows employees in a company to configure computer software or a “robot” to capture and interpret existing applications for processing a transaction, manipulating data, triggering responses and communicating with other digital systems. Simply, *robotic automation is software automating software.*

The term “artificial intelligence” dates back to 1956 and belongs to a Stanford researcher John McCarthy, who coined the term and defined the key mission of AI as a sub-field of computer science. Basically, *artificial intelligence (AI) is the ability of a machine or a computer program to think and learn.*



Source: <https://digitalmarketing.temple.edu/mis5102sum2018/2018/07/03/ai-rpa-changing-customer-service/>

Various research articles from secondary sources and based upon the researchers work experience were used to analyze the current scenario and to draw the conclusions.

According to Hindle, Lacity, Willcocks, & Khan, 2018, Patric Geary, the Marketing Director of Blue Prism (RPA developing Company), first used the term “Robotic Process Automation” in 2012. Between 2014 and 2015, it gained popularity when most of the companies started announcing considerable savings by its usage. Sources for Sources Research (2017) and Everest Group research (2017), opined that the global RPA market grew significantly to 64% between 2016 to 2017 with a revenue growth of \$271 million to \$443 million (Fersht & Snowdan, 2017). HfS Research (2017) reported a 42% increase in the market from 2017 to 2018 and an expected increase around 94% from 2018 to 2021 (Fersht & Snowdan, 2017).

According to NASSCOMs report titled “Technological disruptions and their transformational impact” published in Nov 2017 opines, Investments in Artificial Intelligence will achieve a Compound Annual Growth Rate (CAGR) of 54.4% by 2020 with revenues are projected to reach USD 46 billion. Key Cognitive technologies like Machine Learning, Natural Language Processing (NLP), computer vision and Robotics will draw significant investments for diverse business functions.

According to McKinsey Report, due to Robotic Process Automation, 75 million out of 375 million people around the world may need to change occupational categories and acquire new skills by the year 2030. Andrew Ng, who’s a famous machine-learning expert, has said that almost anything that a person can do with his or her brain within one second is something that machine learning is able to do. But still human interference is required for the skills that machines aren’t good at doing: that’s social and emotional skills, creativity, and applying high levels of cognitive function and expertise.

According to PWC report titled “Will Robots Really steals our jobs? - An international analysis of the potential long-term impact of automation” opines that Artificial Intelligence, Robotics and other forms of automation have a potential of contributing up to \$15 trillion to Global GDP by 2030.

In a study by PwC, titled “Workforce of future – The competing forces shaping 2030”, 37% of the people are worried about automation in 2018 as against 33% in 2014; 74% people showed interest in up skilling to remain employable; and 73% thinks that technology can never replace human mind.

The leaders opined that, RPA, AI and other automation isn't about some 'far future' of work – change is already happening, and accelerating, so the organizations have to act now, Automation and Artificial Intelligence (AI) will affect every level of the business and its people. A depth of understanding and keen insight into the changing technology landscape is a must. Organizations can't protect jobs which are made redundant by technology – but they do have a responsibility to their people. Protect people and not jobs through Nurturing agility, adaptability and re-skilling.

Willcocks, Lacity & Craig (2015), in their study “RPA: Mature Capabilities in the Energy Sector” presented the benefits as under:

<b>Utility's RPA Capabilities – 2015</b>					
<b>% Automated Processes</b>	<b>No. of Automated Processes</b>	<b>RPA transactions/Month</b>	<b>Robotic Scale</b>	<b>Payback period</b>	<b>1-year ROI from RPA</b>
25%	About 25	1 million	2 human and 300 robots performing the work of 600	12 months	200%

Willcocks, Lacity & Craig (2015), in their study titled “RPA at Xchanging” presented the benefits of RPA implementation for back office services:

<b>Xchanging's June 2015 RPA Benefits</b>					
<b>No. of Automated Processes</b>	<b>RPA transactions/Month</b>	<b>Robotic Scale</b>	<b>Savings / Process</b>	<b>Benefits</b>	
14 Crore	120,000 cases	27	30%	1. Service quality improvement 2. Low error 3. Faster Turnaround time 4. Multi-tasking 5. Increased Compliance 6. Scalability	

Thornton et al. 2012 opines that Individuals will reflect and act according to the methods and behaviors that are believed to be most effective and efficient for the organization

Chen, Yan Huang, Chiu and Pai (2012) says the accountants' supervisors agreed that the automation technology implementation will change the role of accountants. According to the professional logic lens, the change in the role of the accountant may occur as accountants will begin to form a new role when attempting to adapt themselves to new usage and workflows resulting from the use of automation technology being implemented. Additionally, the findings showed that the major impact on accountants after they implemented the automation technology is the improvement of work efficiency, reducing work routines, improving the quality of statements and management analysis, improving motivation in learning and innovation, improving IT and professional skills, and also improving competition pressure. The results of this study are supported by Kanellou and Spathis (2013), where they have found that automation technology system makes data collection and processing easier and faster. In addition, automation technology provides more flexibility to accounting department.

According to Lacity & Willcocks (2015), the major benefits of automation technology are the increased work accuracy, better utilization of time, and increase productivity in transaction processing.

Schatsky, Muraskin & Iyengar 2016, Automation technology promises a very simple and fast concept to execute in comparison with technologies that require human involvement. Automation technology is also widely applied in accounting and finance assignments because according to professional logical lenses, it is seen to improve work accuracy, reduce working cycles and more flexible.

Dobson 2017, Employees are frightened and hard to learn about the use of new technologies. There are employees who are already comfortable with their job position and are reluctant to change their work processes. Additionally, it also creates fear among employees because of the worries of their jobs being taken over by robots. This results in the introduction of new technology acceptance problems and should be addressed well by firms. Based on the professional logic lens, this is an issue that needs to be stressed as it can jeopardize their job opportunity.

Study conducted by Kanellou and Spathis (2013) showed that automated technology and the ERP did not succeed in reducing the number of employees that resulted in no cost advantage to the organization.

Lacity & Willcocks 2015 - Organizations ways of working will definitely see a drastic change with the implementation of RPA and AI. All Jobs needs to be redesigned matching to the new requirements. Organization should provide continuous support to its employees by up skilling their skill sets. The major advantage of RPA over human beings is it can work at any time, when organization demands for. The features of the RPA are very good as it can improve the organization's performance. Automation technology that uses robots and replaces humans is better because it can solve issues involving humans such as disciplinary problems, employee productivity, and human resource shortages. The previous studies stated that when automation technology is introduced into the organization, it will result in the change of work and also the reduction of labor (de Castro & de Olieveira 2015; Gable, Palmer & Sedera, 2002; Gorla, Somers & Wong 2010).

According to Lamberton (2016), 30-50% of the first RPA projects within an organization fail. The term RPA is relatively new, however, the market is growing fast. To be able to avoid the common mistakes in RPA project failure, it is crucial to define a roadmap for the implementation.

<b>Impact of Robots on Productivity, Employment &amp; Jobs</b>	
Robots increase productivity and competitiveness	<p>Robots make companies remain and become competitive</p> <ol style="list-style-type: none"> <li>1. Investment in Robots led to 10% growth in GDP per capita of OECD countries from 1993 to 2016</li> <li>2. Deployment of 1% robotics density (no. of robots / million hours worked) showed 0.04% increase in Productivity</li> <li>3. McKinsey Predicts that 2.8% growth in GDP over the next 50 years is driven by automation</li> </ol> <p>Companies to Reshore because of automation</p> <ol style="list-style-type: none"> <li>1. Whirlpool, Ford Motors and Caterpillar in US and Adidas in Germany are showing this trend</li> <li>2. 250,000 Jobs are taken back to US by reshoring since 2010</li> </ol>
Robotics Created new jobs and higher wages	<ol style="list-style-type: none"> <li>1. Between 1999 and 2010, there were increase of 10 Million Jobs in EU</li> <li>2. UK's economy reflected an increase in wage by £10,000 more per annum</li> </ol>
Robots and Humans complement each other	<ol style="list-style-type: none"> <li>1. Robots substitutes jobs and not the labor - less than 10% jobs are fully automable</li> <li>2. A task at BMW which caused wrist-pain to users have been reduced by use of Robots</li> <li>3. 50% productivity increase with no job losses was witnessed by Paradigm Electronics in Canada</li> </ol>

### Conclusion:

AI & RPA implementation has led to various benefits to the organizations not only in terms of efficient business process management but also in terms of Cost benefit analysis. According to Information Services Group, automation's returns have garnered double-digit productivity improvements over outsourcing, and cost reductions between 14% and 28% have been realized.. Automation has also streamlined regulatory compliance that imposes fines by virtually eliminating human error. This clearly depicts that RPA is a game changer and business enabler.

If experts with a vast understanding of automation implementation and rethinking processes are put to use, automation can open the door to a new world in business development.

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