

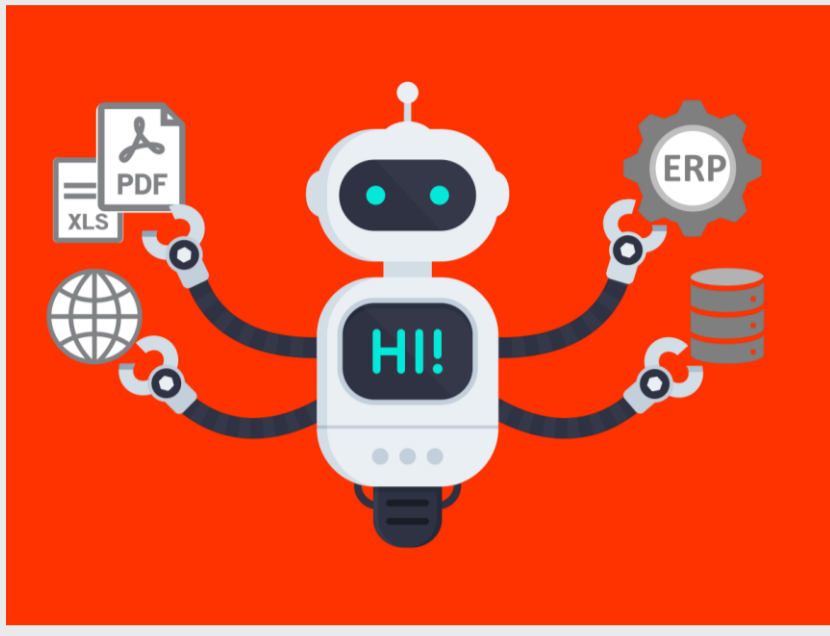
The business value of Robotic Process Automation: a structured literature review

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1 Introduction



Coupled with increasing competition and technological advancement, organizations are exploiting robotic process automation (RPA) to reduce costs and improve performance. RPA is a software that functions by imitating the way humans work.



2 Research questions

- What kind of business value can be created with RPA in an organization?
- What factors ensures that RPA succeed and deliver the promised value?



3 Research Methodology

- Qualitative research design.
- Online search of literature generated 5658 articles.
- Manual screening yielded 210, and review produced a final sample of 85 published literature.
- Data generation and reduction involved an interpretive review analysis of 85 RPA and IT scientific literature.



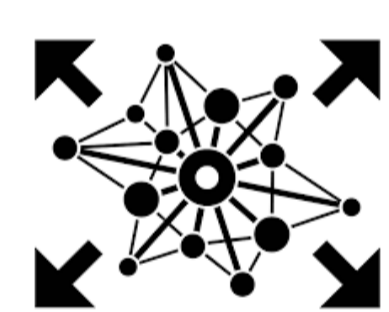
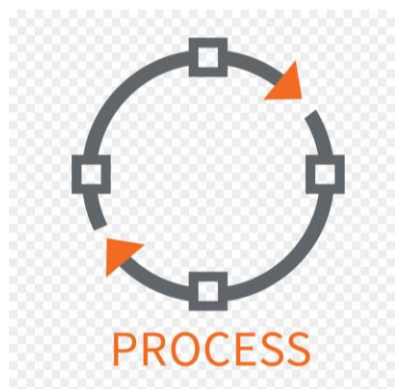
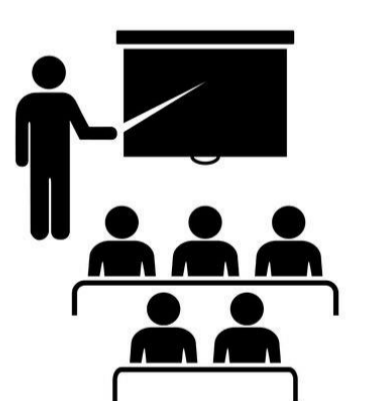
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4 Review results

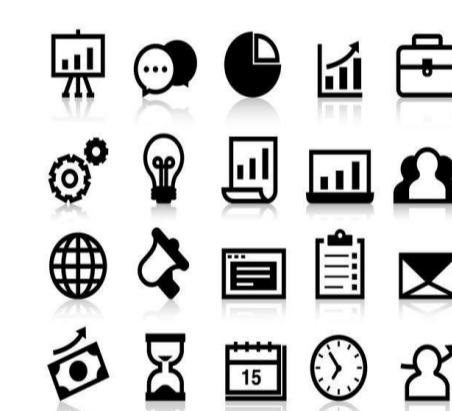
4.1 Four categories of RPA value outcomes



- Improved productivity and efficiency - optimizes resource use e.g. reducing ratio of FTEs to RPA on average by 4:1 (Slaby, 2012)
- Cost reduction and increased profit - increases return on investment (ROI), e.g. by 650% and 800% (Lacity & Willcocks, 2016).
- Improved quality and customer satisfaction - ensures consistence, a 24-hour processing of transactions and response to customers (Slaby, 2012).
- Enhanced performance and scalability - achieved by changing the number of "robots" during peak and low demand periods (Lacity & Willcocks, 2016). Controls cost and production.



4.2 Eight factors for successful RPA delivery process

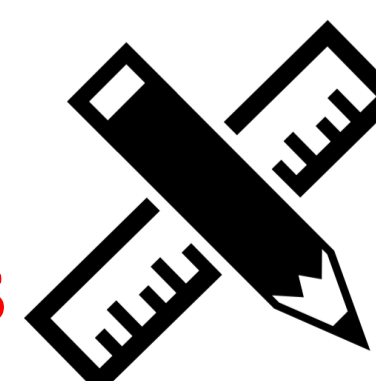


- Strategic alignment - provides a nexus of hardware, software, network, data, and expertise and resources (Wang et al., 2012)
- IT capabilities and resources – structure RPA and enhances processing of huge volumes of data and tasks (Kopeć et al., 2018).
- Suitable business processes - defines sequences and logic of activities from which RPA derive instructions and rules to perform tasks (Betaller, Jacquot, & Torres, 2017).
- IT and employee involvement – in explaining RPA costs and benefits, and to gain support (Hebert, Dhayalan, & Scott, 2016).
- Business cases - enhance RPA understanding and clears people's fears and cautions (Asatiani & Penttinen, 2016; Willcocks et al., 2015).
- Stable environment – creates suitable platforms for monitoring and analyzing RPA performances (Fung, 2014; Slaby, 2012).
- Training, skills and expertise – prevents inexperience, incompetence and cognitive limitations of RPA users (Davern & Kauffman, 2000).
- Testing and maintenance - detects and resolve RPA exceptional events and ensures continuous conformance (Kaushik, 2018; van der Aalst et al., 2018).



5 Conclusion

Practical tips for successful reaping RPA benefits



- (a) Pre-evaluate RPA suitability and compatibility; and (b) attain state of preparedness and readiness.
- (c) Design RPA in line with work flow process patterns; and (d) implement initial RPA on pilot projects.
- (e) Control firm's internal environment; and (f) differentiate RPA deployment from competitors.
- (g) Utilize RPA agility to scale operations; and (g) pre-define KPIs to measure RPA benefits/impacts.

