Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Information Technologies

Bachelor Thesis

Introduction of Robotic Process Automation in shared business services centers

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Introduction of Robotic Process Automation in shared business services centers

Abstract

The bachelor's thesis aims to introduce Robotic process Automation in shared business services centers. The work is divided into three chapters – theoretical review, comparison of RPA tools and multiple criteria decision analyzing selected RPA from the user's perspective.
The first chapter explains that basic terms and concepts relevant to Artificial Intelligence and RPA tools gives the theoretical framework to multiple criteria decision-making analysis.
The second chapter compares the RPA tools based on criteria such a price, service and support, reliability, study the program and Evaluation and Contracting, etc.
The third chapter uses the multiple criteria decision-making analysis to compare selected RPA from the RPA global market.
The decision parameters are established, aspiration levels are formed, and possible options are listed.

Keywords: Artificial Intelligence, RPA, Automation, RPA benefits

1 Introduction

The emergence of the ‘Robotic Process Automation’ term began around early 2000. The term Robotic Process Automation (RPA) though sounds like a physical robot that runs human operations, in fact, it is a computer software configuration that replaces humans in doing a task (Willcocks, Lacity & Craig 2015). Bataller, Jacquot, Torres (2017) defines RPA as a method, system, and tool, including computer programs coded into computer storage, to automate manual processes. Method, system, and tool include measures to identify processes manually executed by users who interact with computers and automate the process by a robot that is configured to interact with other computers.

This thesis reveals RPA implementation and the important keys to how to choose the right RPA tool. The first part introduces what is Artificial intelligence, how nowadays business process move to automation by bots and explain what RPA is.

The second part analyze the most popular RPA tools in market and explain their differences.

The third part regarding MCDA analysis will provide specific information, based on criteria, which are took from several source, to help make a decision.

2 Objectives and Methodology

2.1 Objectives

The main objective of the thesis is to evaluate options for RPA implementation in a company using SAP ERP.

The partial goals of the thesis are:

a) The comparative analysis of RPA approaches
b) Using and applying the multiple criteria decision analysis among RPA candidates
c) Make observation of case study for a company using SAP ERP

2.2 Methodology

Literature review is conducted using methods of synthesis, induction, deduction and extraction. Analytical section is done with the use of multiple criteria decision analysis (MCDA) methods by interpretation of gained results. Based on the theoretical part and practical estimations, discussion and conclusion are provided.

3 Conclusion

The main objective of the thesis is to evaluate options for RPA implementation in a company using SAP ERP, which was based on choosing the most popular and the fittest RPA. First, the author made observation of RPA market, then took the top several RPA and compared them by MCDA analysis. After analysis, found out the most relevant RPA such a Blue prism.

The first partial objective was to make a comprehensive overview of approaches to products and barriers of implementing RPA in ERP. After observation of RPA, the author wrote down the best ones such a Blue prism, UiPath, Anywhere and SAP IRPA(Contextor). Then made a short comprehensive overview in table, where you can find the most frequency question about RPA tools. Barriers of implementing RPA in ERP for those RPA, which the author mention, are common. For example:

1. the process must be well-defined optimized and repeatable without the need human interaction.
2. need to standardize processes across an organization
3. updated software environment

The results of the study show the following conclusions:
Several sources have been analysed relating to the use of robotization of business processes. From tools (software products) to create RPA solutions the most popular are Blue prism and UiPath. As the most convenient method, I can prefer UiPath, as it is a simple and free environment for developing RPA solutions that has intuitive interface. Nowadays, the topic of this work is relevant, as such automation requires less resources than software refinement, which saves time and companies' economic resources.

Then, for the case study, author chose one of the branches of SAP company, which is located in Czech Republic, Prague to show how RPA can improve the business process and make it work faster. In 2018 SAP company bought Contextor SAS and made collaboration with SAP Leonardo Machine Learning portfolio. From Order to invoice team view, the process take several times to automate any process. For example, automation of invoicing. First, need to prepare the environment for it, fix often appears bags, optimize, send request to IT team, and test the updates. If everything works, confirm, and enjoy work process.

If we summaries the study to SAP company and their relation to RPA, the author based on comparation and survey, would like to say, that SAP company is satisfy and keep work environment favourable. They are on stage of improving the business process and foot with a digital time. For sure, the main factor is that they have own RPA and they are ambassador of their product. As a owner, they always want to be better and make for that a lot of work.

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