Analysis document

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Version

Version	Date	Author	Changes	State
1	17-02-2023	M.G. den Hollander	Created the document and added styling.	Concept
1.1	28-03-2023	M.G. den Hollander	Added requirements	Concept
1.2	30-03-2023	M.G. den Hollander	Added non-functional requirements and use cases	Complete

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1 Introduction

For the graduation internship at Sligro, an analysis document was created. The document contains a detailed list of the company's various requirements, which were then organized and ranked according to their importance. Additionally, several use cases were developed.

The primary goal of this project was to investigate whether the current robot could be optimized, or maybe even replaced for a better option/alternative. It is the first robot that Sligro created at the time, it has never received any further attention in terms of opportunities for improvement, and occasionally has to deal with malfunctions. In order to find out whether it is possible to implement an alternative RPA solution, all of the requirements and uses cases were identified and placed in this document.

Overall, this document serves as a global overview of the requirements and use cases that Sligro has for the process that was researched. The findings presented in this document are intended to provide a basis for any improvements on the current way of automation.

2 Requirements

This chapter provides a list of the requirements for the project as outlined by the company. The MoSCoW-method[1] is used to organize the requirements into four categories based on their priority. These categories are Must have, Should have, Could have, and Won't have, which will provide an overview of the importance of each requirement.

The requirements were gathered through interviews, observations and discussions providing a clear understanding of the needs. This helped to clarify the company's objectives and determine the necessary features for the project's success. Based on the obtained information and the research document, a list of requirements was created to meet the company's goals.

By using the MoSCoW-method, the requirements were prioritized based on their importance. The Must have requirements were given the highest priority, followed by the Should have requirements, and then the Could have requirements. The Won't have requirements were excluded from the project as there are none. By prioritizing the Must have requirements, it was ensured that the most critical features were implemented first, and the project met the company's primary needs.

To make the requirements easier to reference throughout the development process, they were numbered (R + number of the requirement), which helps the identification and referencing of the requirements during the project's development.

2.1 Must haves

There are many must haves that the robot already performs, and an alternative must be able to perform these as well.

- R01: Check whether there are any unprocessed financial transactions.
- R02: Printing documents on the AS400 system.
- R03: Data collection and processing in Excel.
- R04: Converting and sending lists from the AS400 system to other systems.

2.2 Should haves

- R05: Notifications when required documents are missing.
- R06: Notifications when there are still unprocessed financial transactions.

2.3 Could haves

- R07: Optimizing the steps in the automated process by skipping missing documents instead of stopping the process.

2.4 Won’t haves

There are currently no won’t haves defined for this project.

[1] Wikipedia contributors. (2022, December 20). MoSCoW method. Wikipedia. Retrieved March 22, 2023, from https://en.wikipedia.org/wiki/MoSCoW_method

3 Non-functional requirements

3.1 Speed

By definition, it is important that the alternative works fast enough. The process needs to be executed on Monday between 7:00 and 8:00 AM and on Tuesday to Sunday between 7:00 and 7:30 AM. This means that it must be able to complete the entire process within a maximum of half an hour. The robot itself takes about 15 minutes to go through all the steps, but the alternative is free to do this in a faster period.

3.2 Security

The security always needs to be in order, even for the robot's alternative. Since the alternative will run within Sligro's own network, this is already somewhat guaranteed. This makes sending lists and collecting data much safer because it will not go outside of the network. In addition, the alternative must handle passwords securely, for example, to log in to the AS400 system. This will be addressed in the implementation document for setting up the connection.

4 Use Cases

This chapter discusses the process of converting various requirements into use cases that will aid in the development of the project. It is important to note that the actor in this project is always a combination of both the administrator at Sligro and the finance department. Therefore to simplify, it will be referred to as "User" in the use cases. These use cases will be worked out in detail in the implementation document.

Name	UC-01 Checking unprocessed financial transactions
Corresponding requirement(s)	R01, R06
Summary	Before creating the “dagaansluiting”, it needs to be clear that there are no unprocessed financial transactions.
Actor	User
Assumption	-
Description	1 The actor indicates that all unprocessed financial transactions must be checked. This must happen between 7:00 and 8:00 AM. 2 A scheduled script is started up that checks if all given ID’s have empty records, or are not stated in the financial mutation list. 3 It has been checked that there are no active financial mutations left. This use case has been completed.
Exception	There are still active financial mutations which are not processed yet. This is where R06 goes into action. An email is sent out to the financial department stating that there are active financial mutations. Every 15 minutes the script checks for changes until 8:00AM. After this period the process needs to be triggered manually.
Result	The financial transactions have been checked, the process can continue.

Name	UC-02 Printing documents
Corresponding requirement(s)	R02, R05, R07
Summary	Documents are printed on the AS400 as spool files. These spool files are important for other steps in the process like R03.
Actor	User
Assumption	UC-01 has been performed successfully.
Description	1 The actor indicates that documents need to be printed on the AS400 for further processing. 2 A script is scheduled to start up, and calls upon the procedure for printing documents. 3 The script checks if all required documents are available. 4 The documents are printed and put in the output queues for further processing. This use case has been completed.
Exception	There are required documents missing from step 3. This is where R05 comes into action. An email is sent out to the financial department stating which documents are missing. After this the system continues to step 4.
Result	The documents are printed and ready for further data collection.

Name	UC-03 Data collection and processing
Corresponding requirement(s)	R03
Summary	Data is collected from the spool files and placed in an Excel document. This document serves as a report for the financial department of Sligro.
Actor	User
Assumption	UC-01 has been performed successfully.
Description	1 The actor indicates that a report must be created that shows data about the “dagaansluiting” of each day. 2 A scheduled task is started that pulls data from the AS400 database and puts this in an Excel document. The data is originally put in different tabs, but for prototyping purposes only the first tab is created. The first tab is named “dagelijkse aansluiting” with the following overviews: “Saldo afgekeurde inkoopfacturen”, “Saldo niet gekoppelde inkoopfacturen”, “Foutverslag”, “Totaal”, “Saldo openstaande inkoopfacturen” and “Verschil” 3 The Excel document is send out via an emailing script and based on the “Verschil” value, the body of the email is adjusted. This use case has been completed.
Exception	There are still documents missing from R02, the data from these files will not be filled into the Excel document.
Result	A report is created and ready for reviewing.

Name	UC-04 Converting and sending documents
Corresponding requirement(s)	R04
Summary	Spool files are converted to .pdf files, an sent to a specific hard drive disk of the financial department of Sligro.
Actor	User

Assumption	UC-01 and UC-02 have been performed successfully.
Description	1 The actor indicates that the spool files have to be converted and put on the designated hard drive disk of the financial department. 2 A scheduled script is started that calls the procedure of sending the files. 3 The script changes the output queue to "ADMIN2PDF" which converts the spool files to .pdf files and puts them on the designated disk. 4 The files are sent, this use case has been completed.
Exception	There are still documents missing from R02, these files will not be sent.
Result	The spool files are converted and sent to the right hard disks.