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**Design document**

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Version: 1.1

#### Version

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| **Version** | **Date** | **Author** | **Changes** | **State** |
| 1 | 17-02-2023 | M.G. den Hollander | Created the document and added styling. | Concept |
| 1.1 | 12-04-2023 | M.G. den Hollander | Started working on documenting the designs. | Concept |
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# Introduction

During the graduation internship at Sligro, an important step in the development process was the creation of a design document. This document serves as a blueprint for the alternative to the robot and contains information about the designs and diagrams of all components of the project.

The ultimate goal of this document is to provide a detailed guide that will help in the implementation phase of the project. It is hoped that this document will help the reader to better understand the structure of the alternative to the robot, which will help in a later phase of implementation.

By providing a clear and structured overview of the design, the document aims to ensure that everyone involved in the project has a shared understanding of its objectives and requirements.

# System Context Diagram

This chapter explains the system context of this project. The diagram below (figure 1) shows the entities and their interactions.

A diagram of a process

Description automatically generated with low confidence

Figure 1 System Context Diagram

The global system used is the AS400. For more information about this system, please refer to the first research question in the [research document](https://sligro-my.sharepoint.com/personal/mdenhollander_sligro_nl/Documents/Desktop/Portfolio%20Marc%20den%20Hollander/2.%20Research/Research%20document.docx) to find out exactly what this system is. This AS400 system is used for the entire Sligro business operations, and for this project specifically, a process is being automated for the finance department of Sligro. In addition, it is managed by the IT department administrator. This means that both an "Admin" and "Finance" actor are present in this overview. This process is automated by an RPA tool used by the company, which involves a "robot" that goes through a certain process for the finance department called the “Dagaansluiting”. This means that the RPA solution sends various information to the financial department like reports, files and emails. The alternative will have to do exactly the same thing using multiple scripts in the background. The chapter on the architecture of the RPA solution goes into more depth on this topic.

# Container diagram

This chapter outlines the various containers of the project. The diagram below (Figure 2) explains how everything is divided into different containers. Furthermore, the technology being used will also be described.

A picture containing text, diagram, line, plan

Description automatically generated

Figure 2 Container Diagram

If we dive deeper into the different containers, it can be seen that the RPA solution uses multiple scripts. It has been chosen to build the RPA solution as a .NET 6 console application in C#, which can then call multiple scripts. These scripts are written in multiple languages, mainly Visual Basic (VB) and Visual Basic for Applications (VBA). The scripts then call the AS400 using SQL statements to retrieve data, but procedures are also called on the AS400 itself in order to perform tasks like printing files.

# Architecture RPA solution

In this chapter, the architecture of the alternative to the current RPA will be shown. Figure 3 provides an overview of the different components along with further explanation down below.