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ICT & Software Engineering

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**Projectplan**

#### Version

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# Project Assignment

## Context

Tentive is a consultancy company that focuses on data governance, data management, data quality and data integration. The assignment itself is to research and apply Robotic Process Automation at the company Sligro, which is a customer of Tentive. Sligro Food Group is a Dutch company that includes wholesalers, but also production companies such as Culivers and SmitVis.

Robotic Process Automation, also known as RPA, is a technique with which scripts and/or applications are executed on the computer or server to perform repetitive manual actions that employees no longer have to perform themselves. At the same time, RPA guarantees data governance (agreements in an organization regarding tasks and responsibilities related to data) and increases the data quality of a company at a time when correct data is becoming increasingly important.

Sligro currently has a number of robots in operation, but for the scope of this project we will specifically target the “dagaansluiting” robot. This is a robot that is responsible for checking financial transactions, sending error messages and collecting information such as open purchase orders and rejected purchase invoices for each branch. This information is collected by the robot and put into an excel document. Finally, the robot digitizes a number of lists which are converted from a spool file into .pdf files and can then be found on the disk of the relevant department.

## Goal of the project

The aim of this project is to investigate whether the “dagaansluiting” robot can be optimized, or maybe even replaced for a better option. 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.

By definition, using a (legacy) robot is not always the ideal outcome for Sligro, as more modern techniques are now available. The desired situation for Sligro is a technique that does not require much manual work, and therefore also saves time and maintenance. This may mean that future research will conclude that it is wiser to switch to a different technique. In addition, a number of non-functional aspects with regard to security must be taken into account. Think of setting up a secure connection between the various systems, and dealing with the “Algemene Verordening Gegevensbescherming” (AVG) legislation.

## Scope and preconditions

The table down below shows what will be inside the scope of this project, and what won’t be.

|  |  |
| --- | --- |
| **Inside of the scope:** | **Outside of the scope:** |
| 1. Recurring research | 1. Changing the company’s infrastructure. |
| 1. Documentation | 1. Helping out with client projects |
| 1. Decision/advise document regarding the current bot | 1. Investigating other bots |
| 1. Implementation of an MVP RPA solution |  |
| 1. Data security |  |

## Strategy

The strategy of this project is based on scrum. That is used within the company, and I am already familiar with it. During the semester I will join the daily stand-ups that take place within the company. These stand-ups will take place via Teams since hybrid work is the standard within the company. The daily stand-ups ensure that everyone is up to date on each other's work, and I can also share my progress with the rest of the team. This can also help with the exchange of ideas. At the end of each sprint there will be a meeting where I share my progress of the past sprint, and what will be delivered in the next sprint. This is also known as a sprint review. At the end of the meeting I will give a personal retrospective to identify areas for improvement for the next sprint.

In addition to using this strategy, I will also keep a log of everything that has happened every week in the portfolio, as a kind of accountability at the end of the semester.

## Research questions

Research is key in this graduation internship. In comparison to our first internship, this is a research-driven internship. This means that research will be done in every phase of the project, and not just at the start. I will be using the DOT research framework, as this is used by default every semester. The DOT research framework helps with giving structure to applied research regarding ICT projects.

For more information regarding this framework, please visit <https://ictresearchmethods.nl/The_DOT_Framework>.

This research will consist of 1 main question and several sub-questions. By answering these sub-questions, the main question can eventually be answered, and the research will be complete.

The main question of this internship can be found below:

**“How does the implementation of a new robotic process automation technique ensure that automation is available as efficiently as possible?”**

The sub-questions are as followed:

**“Which techniques are used by the company regarding automation?”**

In order to answer this question, I will be using the main strategies Field and Library. More specifically an interview with the PO to understand which techniques are used, and document analysis provided by the documentation of the company.

**“What are the advantages and disadvantages of these used techniques?”**

This will partly be answered by the interview of the previous sub-question. In addition to this, the main strategies Library and Field will be applied. More specifically I will find out, based on best good and bad practices, what the company is doing well or doing badly with the way of automation now. Next to that I will use the problem analysis to see why the company indicates that the automation right now is not optimal.

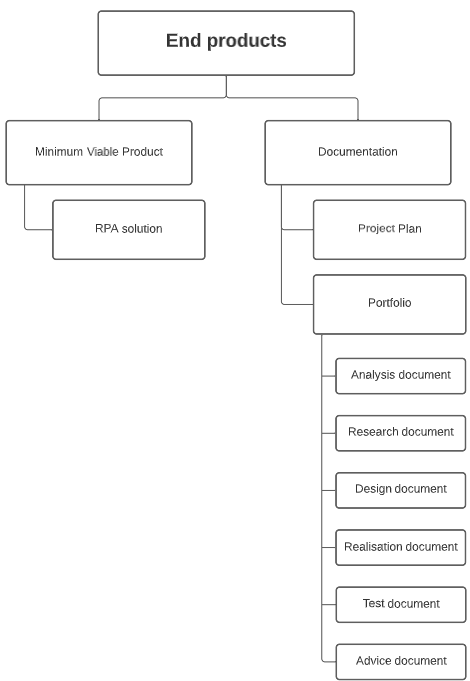
**“To what extent can automation be optimized within the company?”**

This question can be answered by analyzing what the disadvantages are of the current way of automation. In addition, the main strategies Library and Field will be used. More specifically another interview with the PO to find out the company's requirements for improving automation, and document analysis to find out more about optimizing automations.

**“What is the most efficient and sustainable way to use automation within the company?”**

The main strategies will be Library and Workshop for this sub-question. More specifically business case exploration, to analyze the most viable options for this research where all costs and revenues are made clear. Next to that, prototyping in order to create a MVP for the company which will demonstrate the best way of automation applicable. Most likely an expert interview will be hold with the RPA specialist of the company, in order to give support with this sub-question.

## End products



# Project organisation

## Stakeholders and team members

In the table down below all the stakeholders concerning this project are listed.

|  |  |
| --- | --- |
| **Name + tel + e-mail** | **Role/function** |
| Marc den Hollander  +31627538136  [m.denhollander@student.fontys.nl](mailto:m.denhollander@student.fontys.nl)  [marc.den.hollander@tentive.nl](mailto:marc.den.hollander@tentive.nl) | Intern |
| Erkan Kopuz  +31625341124  [erkan.kopuz@tentive.nl](mailto:erkan.kopuz@tentive.nl) | Stakeholder /  RPA specialist at Tentive |
| Johan Stolk  +31622221065  [johan.stolk@tentive.nl](mailto:johan.stolk@tentive.nl) | Company supervisor /  CEO and director at Tentive |
| Dennis van Eijsden  +31621385915  [dvaneijsden@sligro.nl](mailto:dvaneijsden@sligro.nl) | Product Owner /  Application Owner - Back Office Document Management at Sligro |
| Geert Jan van Ouwendorp  +31658718678  [g.vanouwendorp@fontys.nl](mailto:g.vanouwendorp@fontys.nl) | First assessor /  Fontys teacher |
| Currently unknown | Second assessor /  Fontys teacher |

## Communication

****It has been agreed that my company supervisor will be available all week for questions, both at the office and digitally. In addition, every week I can talk to the specialist within our company about RPA when I have questions or need guidance.

We work in a hybrid way, where at least 2 to 3 working days are spent at the office. When working on location, communication is a bit simpler by just walking to the desk of the person in question. When working digitally, communication will take place via Teams, and meetings will be scheduled. I can also consult with the PO when I have questions about the bot and other things concerning Sligro.

All communication will be in Dutch, as long as everyone involved understands this. Otherwise we will switch over to English. All documentation will be delivered in English as well.

As I mentioned before, I will be joining daily stand-ups along with the rest of the IT department via Teams because not everyone is in the office.

I will be holding regular meeting with my school teacher to discuss my progress and feedback for the project. This will either be every week or every 2 weeks depending on the progress.

# Activities and time plan

## Phases of the project

This graduation internship will be split into multiple sprints. Each sprint will consist of 4 weeks, excluding sprint 5 and 6. These sprints will be a little shorter because of deadlines and assessments. Each sprint will contain a sprint review as well as a retrospective to reflect on my work during the sprint.

## Time plan and milestones

In the table down below all of the sprints are listed, with the dates, context and deliverables of each sprint can be found.

|  |  |  |  |
| --- | --- | --- | --- |
| **Sprint & duration** | **Date** | **Context** | **Deliverables** |
| **0** (1 week) | February 6th – February 10th | Start of internship | First version of the project plan |
| **1** (4 weeks) | February 13th – March 10th | Finish the project plan and  the start of researching | Final version of the project plan |
| **2** (4 weeks) | March 13th – April 7th | Start working on portfolio and begin the implementation using the research done | Portfolio (V1) |
| **3** (4 weeks) | April 10th - May 5th | Continue working on portfolio, implementation and research | Portfolio (V2) |
| **4** (4 weeks) | May 8th - June 2nd | Continue working on portfolio, implementation and research | Portfolio (V3) |
| **5** (3 weeks) | June 5th - June 23th | Finishing up the portfolio | Final version of portfolio (deadline June 13th) |
| **6** (2 weeks) | June 26th - July 7th | Assessment period and completion internship |  |

# Testing strategy and Configuration management

## Testing strategy

The company tests in different ways, but what I will be dealing with the most is running test scenarios. These test scenarios are created based on actions that need to be performed by the robot. Consider, for example, actions such as checking financial transactions. There are certain rules that the robot has to check whether certain records are empty before the next steps can be performed. In case of error messages, an email is sent to the people who have to solve this. We can compare these scenarios with the results of the RPA application that will be implemented as an MVP. The code of the RPA application will be checked via code reviews by the company supervisor.

## Test environment and required resources

The robot is being tested in the company's AS400 test environment. In addition, the company uses Kofax RPA, which is a platform to apply RPA. On this platform there is a design studio with which workflows can be created and all applications and data sources can be clicked through and tested. There are not much required resources for this project. Access will be needed to the test and acceptation servers of Sligro, as well as a laptop to run the RPA solution on.

## Configuration management

Sligro manages and configures its projects on various servers. Below are the configuration environments related to this project:

• **SLIGRO20** is Sligro's development environment on which the developers work

• **TSTGRO60** is Sligro's test environment on which System Integration Tests (SITs) are performed.

• **ACCGRO60** is sligro's acceptance environment, in which the User Acceptance Tests (UATs) are performed. This is what the MVP will be dealing with the most to handle the test scenarios.

# Risks

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk** | **Chance** | **Impact** | **Solution** |
| Company supervisor is suddenly unavailable | Low | Low | Another employee takes over supervision |
| Expectations don’t seem to match for each party | Low | Medium | Clear communication with both the school and company supervisor. Adjust expectations based on this. |
| Deviating planning | Medium | High | Adjusting the planning, and communicating with both school and company supervisor |
| Receiving negative  advice (go/no-go) for the continuation of the project | Medium | High | Communicating is crucial in order to fix this with both school and the company supervisor. Adjusting the project’s scope and planning will be needed. |