

Business Case

(TINF21C, SWE)

Project: Modelling Wizard Improvements

Customer: Markus Rentschler

Christian Holder

Team:

| | |
|---------------------|--|
| Project Manager | – Robin Ziegler (inf21100@lehre.dhbw-stuttgart.de) |
| Developer | – Nils Hoffmann (inf21194@lehre.dhbw-stuttgart.de) |
| Test Manager | – Michael Grote (inf21111@lehre.dhbw-stuttgart.de) |
| System Architect | – Fabian Kreuzer (inf21106@lehre.dhbw-stuttgart.de) |
| Tech. Documentation | – Dana Frey (inf21099@lehre.dhbw-stuttgart.de) |
| Product Manager | – Maximilian Trumpp (inf21123@lehre.dhbw-stuttgart.de) |
| Graphical Designer | – Sophie Kirschner (inf21083@lehre.dhbw-stuttgart.de) |

Change History

| Version | Date | Author | Comment |
|---------|------------|---------------|---------------------------------------|
| 0.1 | 26.09.2022 | Robin Ziegler | Initial Setup |
| 0.2 | 27.09.2022 | Robin Ziegler | Ch. 1-3 |
| 0.3 | 28.09.2022 | Robin Ziegler | Ch. 4-6 |
| 0.4 | 05.10.2022 | Robin Ziegler | Revision and Grammar |
| 1.0 | 10.10.2022 | Robin Ziegler | Preliminary Finish |
| 1.1 | 08.11.2022 | Robin Ziegler | Grammar and Articulation |
| 1.2 | 04.05.2023 | Robin Ziegler | Addition of missing (new) team member |

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1. Purpose and Scope

The Modelling Wizard was created in several predecessor projects, it started as a plugin for AutomationML but was transformed into a standalone app. The purpose of the app is to create devices and interfaces or import, from supported file formats to further edit, existing devices. These can then later be exported in numerous file formats for further use. The scope of the project is to improve the existing GUI and refactor the code..

2. Value for the customer

| Value | Comment |
|------------------------|--|
| Efficiency enhancement | With an improved GUI users can more easily accomplish tasks, as well as have a better experience while using the product, increasing workflow and reducing time needed for completing basic and complex tasks. |
| Better quality | Through the enhancements made in the project the product will have an improved quality, fixed bugs will improve workflow, improved GUI enhances user experience. The program will be more accessible to users no matter the experience. |

3. Expected restrictions and risks

It is to be expected that there will be interruptions during the project because the team members have other obligations to fulfill such as other projects from different classes or projects from their employer that can have precedence. Other expected Interruptions may come from sickness or injury, vacation also plays a role but can normally be mitigated ahead of time. It is expected that the project will be finished on time, but possible remaining bugs or other smaller issues cannot be ruled out.

4. Time frame

The project has a time frame of six months from 05th September 2022 – 29th May 2023 but with the restriction that during December, January and February team members are also working for their respective employers, during that time interruptions to the work being done on the project are expected.

The first half of the project, until December 2022, is reserved for getting to know the existing application, creation of the different artifacts for the client and a GitHub for the source code. Other tasks include a usability analysis, testing for potential bugs, and a first prototype. A preliminary presentation will be held at the end of this phase.

In the later half the changes will be implemented. The prototype will be revised, and a final version created, in addition tests will be implemented to rule out further bugs. The remaining documentation needs to be created and existing updated to match current progression. The project ends with a working application and a presentation outlining the work process.

For this project a work pensum of 150h per person is proposed, which will be broken down in the following table.

| Time in hours | Robin Ziegler (PM)* | Nils Hoffmann (Dev) | Fabian Kreuzer (SA) | Dana Frey (TD) | Maximillian Trump (PM)** | Michael Grote (TM) | Sophie Kirschner (GD) |
|----------------------|---------------------|---------------------|---------------------|----------------|--------------------------|--------------------|-----------------------|
| Documentation | 20 | 10 | 10 | 50 | 10 | 10 | 10 |
| Analysis | 10 | 10 | 20 | 10 | 10 | 10 | 10 |
| Design | 10 | 10 | 20 | 10 | 20 | 10 | 50 |
| Code | 20 | 50 | 50 | 20 | 30 | 40 | 20 |
| Test | 0 | 40 | 20 | 10 | 20 | 50 | 0 |
| Meeting | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Customer interaction | 10 | 0 | 0 | 0 | 10 | 0 | 10 |
| Project Managing | 30 | 0 | 0 | 0 | 10 | 0 | 0 |
| GitHub | 10 | 0 | 0 | 20 | 0 | 0 | 10 |
| Presentation | 20 | 10 | 10 | 10 | 20 | 10 | 20 |
| Total | 150 | 150 | 150 | 150 | 150 | 150 | 150 |

Table 1: Work pensum

* Project Manager

** Product Manager

5. Costs

The costs can be structured into the following sections:

Analysis: Get the status of the project and look for improvement ideas.

Design: Conceptualizing of an improved GUI, in form of concept and prototype.

Programming: Implementation of prototype and changes to the project.

Testing: Programming or creation of tests to prove implemented functions work.

Project management: Creation of concept, planning upcoming meetings and making sure communication between members does not break down.

Documentation: Includes documentation of meetings and artifacts.

| Position | Salary €/h | Cost total in € |
|---------------------|------------|-----------------|
| Project manager | 44 | 6600 |
| Product manager | 55 | 8250 |
| System architect | 44 | 6600 |
| Developer | 31 | 4650 |
| Tech. Documentation | 25 | 3750 |
| Test Manager | 31 | 4650 |
| Graphical Designer | 25 | 3750 |

The total cost for the team comes to **38.250€** in salary, to that a buffer of +10% can be recommended. Bringing the total to **42.075€** in salary costs. For a real-world project, you would also have to include things like licenses, overtime pay and other utility bills.

6. Offer

To get an acceptable return on investment for the project a profit margin of ~30% was decided. Bringing the total offer to 55.000€.