

Project Charter - Internship workflow

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1 Introduction

Our group has identified a workflow within the Fontys organization that presents an opportunity for digital improvement. We aimed to conduct a thorough analysis to identify problems that could be resolved using digital tools while taking into account the needs of stakeholders. It is recognised that the current internship approval process is complex, largely because there isn't a single, centralised platform for managing it. The frequent email exchanges and the sheer volume of internship approval requests often result in lost or hard-to-find feedback, causing frustration for both students and lecturers.

We are committed to addressing this issue by creating a web application that provides a dedicated space for submitting internship approval forms. The application will feature an AI plugin designed to promptly review student inputs and offer immediate feedback. This proactive approach will ease the workload for students, as they will receive early indications if, for instance, the company description is insufficient, allowing them to make necessary improvements even before the lecturer's review. Our goal is to streamline the approval process, making it more efficient and transparent for all parties involved.

2 Business Case

Fontys institution currently faces challenges in managing the internship approval process due to the absence of a centralized platform. The reliance on email exchanges and the lack of visibility into the approval status result in frustration for stakeholders. There is a clear opportunity to simplify this process through web application, providing a user-friendly platform that enhances overall efficiency.

The development of a web application prototype to streamline the internship approval process at Fontys institution is driven by the need to address inefficiencies within the current workflow. Through the integration of an AI plugin, students will receive immediate feedback, enabling early revisions and

improving the quality of submissions. Additionally, lecturers will gain access to a comprehensive history of each application, facilitating informed decision-making.

This project aims to enhance operational efficiency in the process, improve the quality of educational services, and support student success and satisfaction. Centered on providing a user-friendly and transparent approval process, the project addresses challenges within Fontys' workflow to ensure smoother operations.

3 Approach

3.1 Methodology

This project application will adopt an Agile Scrum methodology with an emphasis on short, iterative cycles. Scrum is selected for its flexibility and adaptability which is ideal for projects where end-user requirements are expected to evolve over time.

Sprints are going to be limited to a maximum duration of one week. This will encourage continuous progress and frequent review of the project deliverables. If a sprint extends beyond the one-week timeframe, it will be an indicator that tasks may be too complex or require breaking down into smaller units.

3.2 Roles

The Scrum framework requires applying roles, however due to the size of the team, the roles will be limited to Scrum Master and the development team. The Scrum Master will take charge during the scrum meetings and make sure that the team is following Scrum principles.

3.3 Project Execution

This project will be divided into phases, starting with the analysis phase, where requirements will be gathered for the functional part of the software. As well, the business objectives will be conducted to bring a product that satisfies stakeholder needs. This phase will produce key deliverables such as use case diagrams and user stories.

Following the analysis, the design phase will focus on creating detailed information on how the architecture will look. On the other side, designing wireframes for an intuitive user interface, and planning the business logic (backend)

structure and data management. This phase will result in artifacts like wireframes, class diagrams, and a high-level system components overview.

Process Tracking

To ensure that the end product is delivered on time and with expected functionality, a Scrum board will be employed. The Scrum board will provide a visual representation of the project workflow, tasks in progress, and completed items. This will help to clearly understand if the project is on track and channel transparency among team members and stakeholders about the status of the project.

Stakeholder Engagement

At the end of each sprint, the demo product will be delivered. This way it is possible to showcase the developed features to the stakeholders (Fontys Institution). These demos will serve as a way of communication for feedback. This will allow the team to adapt to changes and requirements proactively.

4 In Scope/Out of Scope

4.1 In Scope

The scope of our project encompasses the design and development of a web application prototype tailored for managing the internship approval process at Fontys. The primary focus will be on creating a user-friendly interface for both students and lecturers to facilitate the submission and approval of internship applications and admissibility documents. Secondary features, such as the AI plugin, version tracking system, and comprehensive dashboard for lecturers will be deprioritized and only implemented if time and resources permit.

4.2 Out of Scope

Aspects that fall outside the scope of our project include the automation of the actual internship placements and direct integration with external job posting platforms. Additionally, while our application will facilitate feedback on internship applications, it will not extend to managing the entire lifecycle of the internship experience post-approval. Our goal is to set clear boundaries to prevent scope creep and ensure our resources are fully dedicated to the critical objectives of streamlining and digitising the approval process.

5 Deliverables

Our goal is to create a Minimum Viable Product (MVP) that improves the internship approval process. The primary deliverables will focus on creating a user-friendly interface for students to submit internship approval forms, submit admissibility documents for eligibility checks, and receive notifications about their internship statuses. Lecturers will be able to approve or deny each application and provide feedback for improvements or advice.

Secondary deliverables, such as the integration of an AI plugin for real-time feedback for students and detailed version tracking showing every change and comment on forms, will only be implemented if additional time and resources become available after completing the core functionalities.

Beyond the immediate functionality, our deliverables extend to comprehensive technical documentation. This includes user stories, diagrams, and wireframes, all of which provide a detailed blueprint of our developmental journey from inception to testing. These tangible outputs ensure a clear understanding among all stakeholders about the project's direction and the foundational elements it will comprise.

However, the importance of our project extends beyond the tangible outcomes. We are equally invested in intangible outcomes, such as expanding our team's expertise in agile processes and programming languages. Furthermore, we hope to increase stakeholder satisfaction by ensuring that our digital solution fits seamlessly with the operational dynamics of the Fontys organisation.

This combination of tangible and intangible outcomes highlights our project's dual focus: providing a functional, effective MVP while also improving our team's and stakeholders' collective knowledge and satisfaction levels. This balanced strategy positions our project to not only meet, but surpass expectations, representing a big step forward in how internship approvals are managed inside the Fontys organisation.

6 Quality Management

The project has specific quality goals aligned with ISO/IEC 25010:2011 standards, focusing on key areas like security, performance efficiency, reliability, and maintainability. Security is another crucial aspect, striving for zero data breaches and full compliance with data protection regulations. Performance efficiency is prioritized to ensure quick response times under typical load conditions. Additionally, reliability goals aim to maintain continuous availability and reliability of the web application to minimize disruptions for users. These

objectives serve as measurable targets to guide the development process and evaluate the final product's quality.

Quality control measures will include practices such as pair programming, code reviews, performance testing, continuous integration testing and unit testing. By implementing these practices, the project team will ensure that code is thoroughly examined for errors, bugs, and inconsistencies, thereby enhancing the overall quality of the software.

A designated quality representative will be responsible for overseeing all aspects of quality management within the project. This individual will ensure that quality objectives are met.

7 Prerequisite

Meeting specific requirements before and during the project's lifecycle is critical to its success. For hardware, the project will require sufficient server capacity to host the web application. This includes CPU power, memory, and storage. On the software front, the project must support several operating systems to satisfy users' diverse tastes as well as the institution's standards. A strong database management system is necessary for effective data storage, management, and retrieval. The project will also require access to proper development tools and environments that correspond to the chosen technology stack and follow coding standards.

Infrastructure requirements include access to cloud services that provide scalable storage, computation, and networking capabilities. A complete security architecture, which includes firewalls, encryption, and intrusion detection systems, is essential for protecting data and user privacy. Furthermore, data backup and recovery solutions must be in place to avoid data loss and maintain operational continuity.

In terms of skills and expertise, the project requires knowledge of project management approaches, namely agile frameworks, in order to effectively direct the development process. Technical proficiency in the project's selected technologies and programming languages is required for both front-end and back-end development. Skills in UI/UX design are also required to ensure that the application is user-friendly and satisfies the needs of the intended audience. Finally, a thorough understanding of data security concepts and regulations is required to ensure that the application meets legal and ethical guidelines.

8 Success criteria

Here are presented our objectives which are success of criteria.

Specific: The goal is to develop a web application prototype by the end of Semester 4 to digitize the internship approval process. This application will enable students to submit their internship applications and admissibility documents online, have their credits checked for internship eligibility, and receive notifications about their form status. Additionally, the application will provide a seamless experience for lecturers, allowing them to easily review and approve or deny internship applications. Initially planned features such as AI-driven feedback, which provides immediate feedback for students and detects issues like insufficient company descriptions or copied content from company webpages indicating a lack of student research, as well as the version control system to track the complete history of each application form including edits and feedback providers, are deferred due to current resource constraints, with potential consideration for future implementation.

Measurable: The success of the project will be assessed by the ability to produce a functional and deployable prototype by the end of Semester 4. This includes demonstrating that the prototype allows students to submit internship forms and admissibility documents, receive notifications about their form status, and enables lecturers to review and approve or deny the forms. Additionally, the prototype must undergo thorough user testing with both students and lecturers to validate its functionality, usability, and effectiveness in streamlining the approval process.

Achievable: Our team is having a realistic picture and there is a clear understanding that the project is complicated, however with the gained skills in the past semester and with good project management this objective seems achievable. As well, there will be a guidance from the lecturer side which will help to move to the right direction of the path. Current technologies and modern frameworks will help to achieve the project goal in this short time.

Relevant: This project is highly relevant to the current needs of both students and lecturers within the Fontys institution. It addresses significant inefficiencies in the existing internship approval workflow, such as delays in the feedback, difficulty in tracking application process, and the lack of a centralised system for managing submission and reviews. By providing a more streamlined, efficient, and transparent system, the project will meet the critical needs of its stakeholders and contribute to an improved educational experience.

Time-bound: The timeline of this project is clearly defined, with the development of the web application prototype scheduled for completion by the end of the Semester 4.

9 Workbreak down structure (WBS)

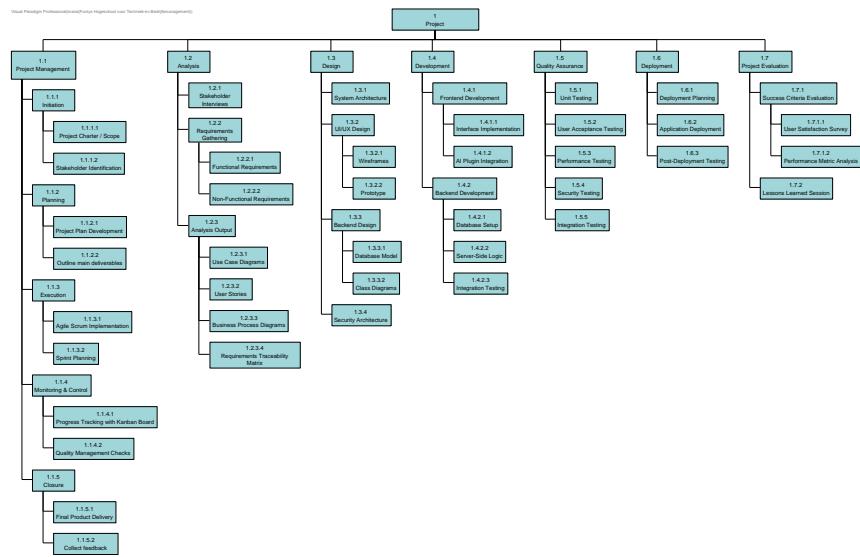


Figure 1: WBS for Internship Project