SOFTWARE ENGINEERING

PROJECT MANAGEMENT AND PLANNING

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# EXECUTIVE SUMMARY

OctoFlex Technologies is a start-up IT company that specialises in developing cutting-edge solutions for small and medium-sized organisations. We specialise in developing custom software solutions to satisfy each of our clients' unique needs thanks to our team of talented software engineers and designers. OctoFlex Technologies is prepared to maintain its leadership position in the software development sector by placing a strong emphasis on innovation and quality.

### The Company

OctoFlex Technologies has swiftly built a solid reputation for producing high-quality goods with significant economic value. We've established a track record for creating software that is dependable, effective, and economical.

### The Market

OctoFlex Technologies holds a strong position for its dedication to excellence and client satisfaction in the fiercely competitive software development business. Our team members collaborates closely with clients to fully comprehend their unique needs in order to provide a solution that exceeds their expectations.

# INTRODUCTION

OctoFlex Technologies aims to deliver software on time, on budget, and in accordance with the requirements of the organization. The objective of this report is to outline our approach to the project management and planning that OctoFlex Technologies will use to deliver its Blood Support+ Application. The report will address the team organization, people management plan, agile planning, and project plan for our software project on the Blood Support+ Application.

# TEAM ORGANIZATION

A team refers to an organized assembly of people working together with a sense of mutual commitment, synergy, and their respective skills to accomplish a common goal. A team involves at least two or more people.

Organizational teams have no different definition. It is a means utilized by organizations to organize the employees. Teams are an effective alternative to a hierarchical chain of command as it enables a more inclusive approach. Effective teams in an organization facilitate a boost in business productivity and employee motivation and retention.

Our team organization is based on the Agile Software Development Process Model. The team consists of a Scrum Master, Product Owner, and the Development Team. The Scrum Master is the one who is responsible for the expedition of the Scrum Process and is the one who is going to make sure that the team complies with the Agile principles. The Product Owner is the one responsible for defining the application product backlogs and making sure that it is prioritized accordingly. The development team is the one responsible for designing, coding, testing, and delivering the application increments.

Utilizing an agile team structure for project management is malleable and collaborative. To stay current and adjust to varying needs, it uses collaborative, self-governing squads that work in short cycles. Agile ceremonies are utilized to make sure that team members remain consistent and communicate accurately.

# PEOPLE MANAGEMENT PLAN

Our people management plan focuses on the following aspects:

* Recruitment and Selection: We will recruit individuals who have good experience with Agile Software Development and select the ones who will possess all the required technical skills.
* Training and Development: We will give training and development opportunities to all the team members so that they can improve upon their skills and knowledge on Agile Software Development.
* Performance Management: We will do regular check on the performance of all the team members and provide them the assessments on what improvements should be made.
* Rewards and Recognition: We will then reward and recognize all the team members who showcase some exceptional performance and support us in succeeding our project plan.

# AGILE PLANNING

Agile Planning requires breaking down of project into smaller, manageable tasks that can be completed in short iterations called sprints.

Our Agile Planning consists of different phases which are:

Identification of stakeholders and problem definition: Agile planning for Blood support + starts with these two steps. This entails identifying the demographics impacted by the product and determining the problem it seeks to solve.

The next phase is to create a product backlog that lists all the features and specifications for the product. This entails including crucial features like an online gateway for blood donation centres to update their inventory and a message system for hospitals to seek blood supply. Here, the product backlog is a prioritized list of user stories that describes all the features and functionalities of our Blood Support+ Application. The product backlog is continuously updated throughout the ongoing project.

Prioritize features, then organize sprints for development. The agile team does both. The team first prioritizes key features which are the user stories to guarantee that each sprint results in a usable product. Before the start of each sprint, the team selects a subset of the user stories and creates the sprint backlog from the product backlog. The sprint backlog consists of all the tasks

required to be complete the selected user stories. The team then will focus on completing all the tasks in the sprint backlog within the sprint duration.

To discuss accomplishments, obstacles, and plans for the day, daily stand-up meetings are held throughout the course of the project. This ensures that everyone is on the same page and that problems can be solved promptly. Keeping tabs is one approach to make sure a project is successful. This will make sure that the project stays on time as we will be keeping track of the milestones reached. This will also ensure that everyone is concentrated on the intended task and is prepared to make adjustments if necessary.

# PROJECT PLAN

To demonstrate our Agile Planning Approach, we will create a project plan for the Blood Support+ Application. The project plan consists of the following tasks:

* Sprint 1 (Week 1): Project Initialization and Planning.

We will first identify the goals and objectives. Then define the project scope and constraints. Afterwards, we will conduct stakeholder analysis and gather requirements. We will prioritize features with the highest risk and value and plan them early in the release. We will create the project plan that will include the timelines and our budget. Also, we will assign the roles and responsibilities to the team members in the first sprint.

* Sprint 2 (Week 2-4): Designing the User Interface and Database Schema.

We will start with designing the user interface and user experience (UI/UX). Then develop the wireframe and mock-ups. Afterwards, we will define the database schema and create a data model. Then the development environment and tolls will be set up. Then, the implementation of the user authentication and authorization with basic functionality, such as user registration and login will be done.

* Sprint 3 (Week 5-7): Implementing the profile management features and other core functionalities.

Core functionality development will be done such as search, and filtering. Implementation of profile management features such as setting up of profile for both donors and recipients will also be done.

* Sprint 4 (Week 8-9): Implementation of donation management and reporting features will be done within this timeline. Donation management and reporting features includes

bookings, integration of payment gateway for donations and developing notification and messaging features.

* Sprint 5 (Week 10-11): Testing and Deployment of the Blood Support+ Application. Testing the application for functionalities, usability and security will be done. Identification and fixing of bugs and issues will be done. Then, we will conduct the user acceptance testing (UAT). Final testing and debugging will be done after deploying the application to the productive environment. Development of marketing and promotional materials which includes the end-user training videos for the new users of the application. Then at last, the application will be launched to the public.
* Sprint 6 (Week 12): Maintenance and Support. We will majorly focus on providing ongoing maintenance and support for the Blood Support+ Application in this timeline. We will try to monitor as much user feedbacks so that we can make necessary improvements in the newly launched application to improve its business value.

# HOW WE WILL ENSURE THE PROJECT IS DELIVERED ON TIME AND WITHIN BUDGET?

The fundamental but important step that many people overlook is the scope and objective definition. The entire organization must be in agreement with one another. To make sure that the team understands the project aim, the project manager or the scrum master will put out extra effort.

The project's rigorous scope will be decided upon and communicated to the entire team. We will do status meetings and keep everyone (including stakeholders) informed about the status of the project, important milestones achieved, risks to overcome, time remaining and the budget. Everyone will be responsible for listening carefully to the concerns and questions of other team members and will hold them accountable for the task done instead of ignoring them. This will develop a sense of responsibility and encourage everyone to put more efforts.

There is no guarantee that any hazardous circumstance that may arise might be mitigated, even after risk assessment and establishment of an effective risk management strategy. Any unfavourable circumstance could develop and throw the project off course. Hence, we will always be ready for that. Our budget for development of the Blood Support+ Application is $ 35,000 out of which we will have a $5,000 set aside for the unplanned expenses. In order to give ourselves, enough time to fix any mistakes and still deliver on time, the timetable will always be kept ahead of the deadline. Team members might become demoralized under such situations. For that we will have a positive attitude and talk about the problem with others to make a plan of action to resolve it.

We will write the tasks on (physical) sticky cards and hang them up on a large board visible to the entire team. All the user stories in the current sprint will be up on the board.

We will also track the progress of all the tasks on a grid, by recording who is responsible for completing each task, estimated time to complete it, remaining hours, and actual hours used. This time tracking will be updated by all team members and visible to everyone.

We will also do the tracking of velocity using a burndown chart. During the sprint, we will use the team’s time tracking after completion of each task to generate a chart showing the number of tasks or hours remaining, vs. the plan. The slope of the burndown chart will show if we are on schedule, ahead, or behind schedule.

# CONCLUSION

In conclusion, this report describes the project management and planning approach that OctoFlex Technologies will use to deliver its Blood Support+ Application. It covers the aspects of team organization, people management plan, Agile planning, and project planning. The team organization is based on the Agile Software Development Process Model, with a Scrum Master, Product Owner and the development team. The people management plan will focus on the recruitment and selection, training and development, performance management, and rewards and recognition. Agile planning involves breaking down of the project into smaller tasks which are manageable and can be completed in shorter iterations called sprints. The project plan is of 12 week duration consisting of six sprints, each focusing on some specific tasks such as initialization and planning, designing the user interface and the database schema, implementation of the profile and donation management features, reporting features and other core functionalities. The project plan also includes testing and deployment, and maintenance and support.

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