Software Project Management Plan

FOR FLEET MANAGEMENT SYSTEM

DATE: MAY 13, 2024
BY: M MUHAMMED AQEEL &
YASHWANTH KARUPARTHI

SPMP Outline

1. **Introduction**
2. **Project Organization**
3. **Managerial Process**
4. **Technical Process**
5. **Work Packages, Schedule, and Budget**
6. **Additional Sections**

SPMP - Section 1

1. Introduction
    - 1.1 Project Overview
    - 1.2 Project Deliverables
    - 1.3 Evolution of SPMP
    - 1.4 References
    - 1.5 Definitions & Acronyms

SPMP - Section 1

1.1 Project Overview (Page 1 of 2)

Objective:
Develop a web app for planning and managing fleet for Timottee ice-cream company.

The product will enable the company to monitor the deliveries performed by the driver through trucks to track performance.

SPMP - Section 1

1.1 Project Overview (page 2 of 2)

Time, budget & personnel requirements:

Phase	No. of People	Budget	No. of Hours/Days
Requirements Gathering	Manager	NA	NA
System Design and Architecture	Lead & Developers	Aed 80/hour	2 weeks
Implementation	Lead & Developers	Aed 80/hour	4 weeks
Testing	Testers	Aed 60/hour	2-3 weeks
Deployment	Deployment Team	Aed 60/hour	3 weeks
Total	11	Aed 33,600	3 months (estimated)

SPMP - Section 1

1.2 Project Deliverables

Entire source code & user and operations manual will be delivered 13 weeks after the project journey begins.

Client is responsible for acquiring the recommended hardware and software by the time the product is delivered.

SPMP - Section 1

1.3 Evolution of SPMP

SPMP for this project will evolve throughout the developement lifecycle to adapt changing requirements.

The updated SPMP would include detailed schedules, resource allocation, risk management strategies and quality assurance measures.

SPMP - Section 1

1.4 References

- Steve McConnell, Software Project Survival Guide, Microsoft Press, 1998
- Hunt, A., & Thomas, D. (1999). The Pragmatic Programmer: Your Journey to Mastery. Addison-Wesley
- Pressman, R. S. (2014). Software Engineering: A Practitioner's Approach. McGraw-Hill Education.
- Bass, L., Clements, P., & Kazman, R. (2012). Software Architecture in Practice. Addison-Wesley

SPMP - Section 1

1.5 Definitions & Acronyms

- SPMP - Software Project Management Plan
- GPS - Global Positioning System
- Fleet Management System (FMS) - software solution designed to manage and optimize the operations of a fleet of vehicles

SPMP - Section 2

2 Project Organization

2.1 Process Model

2.2 Organizational Structure

2.3 Organizational Boundaries

2.4 Project Responsibilities

SPMP - Section 2

2.1 Process Model

- The projects adopts Scrum framework considering the dynamic nature of the project and need for iterative development and continuous feedback.
- Specification were written by Aqeel and verified at meetings with Aaryan.
- Design task will be done by Aqeel while Yashwanth will check overall design
- Coding will be performed by both Aqeel and Yashwanth. Aqeel & Yashwanth will test each other’s code and perform integration testing simulataneously.

SPMP - Section 2

2.2 Organizational Structure

Development team consists of Aaryan (owner), Aqeel and Yashwanth (software engineers).

SPMP - Section 2

2.3 Organizational Boundaries & Interfaces

- All work for this project will be performed by Aaryan, Aqeel & Yashwanth.
- Aaryan will meet weekly with the client to report progress and discuss possible changes and modifications.
- Major changes that will affect milestones or budget will have to be approved by Aaryan and documented.

SPMP - Section 2

2.4 Project Responsibilities

Each member is responsible for quality of the module he/she codes

- Aqeel: code modules to handle Logistic Manager & Driver tasks
- Yashwanth: code modules to handle Retailer & company staff tasks
- Aaryan: handle class definitions and report modules, oversee module integration and overall quality of the product and will discuss with the client

SPMP - Section 3

3 Project Organization

3.1 Management Objectives & Priorities

3.2 Assumptions, Dependencies & Constraints

3.3 Risk management

3.4 Monitoring & Controlling Mechanisms

3.5 Staffing Plan

SPMP - Section 3

3.1 Managerial Objectives & Priorities

- Overall Objective: to deliver efficient and fault-free product on time and within budget
- If this cannot be achieved, priority is given to completing the basic routines needed to update delivery information; reports have the lowest priority.
- Team members will meet at the end of each day to discuss problems and progress.
- Formal meetings with client will be held at end of each week to report progress and determine if any changes need to be made.

SPMP - Section 3

3.2 Assumptions, Dependencies & Constraints

- Deadline & budget constraint must be met
- Necessary hardware and software components for development purpose need to be provided
- Adequate training and support for users during implementation phase to be arranged
- Product must be user-friendly
- Integration with GPS for real-time vehicle tracking to be made
- Regular constraings regarding data privacy and security must be adhered to

SPMP - Section 3

3.3 Risk Management

- Client is assumed to be inexperienced with mobile app navigation, so special attention to be paid for specification phase and communication with client and product has to be user-friendly.
- Possible chances of software failure for GPS integration, hence required strong integration testing to be done

SPMP - Section 3

3.4 Monitoring & Controlling Mechanisms

- Aaryan will be responsible for all review and auditing
- At daily meeting, Aqeel & Yashwanth will present progress and problems
- Aaryan will determine whether they are progressing as expected and confirm they are following the specifications and SPMP
- Any major problems faced by the team will immediately be reported to Aaryan
- Change in management processes to handle any deviations from original plan effectively

SPMP - Section 3

3.5 Staffing Plan

- Aaryan is needed for the entire 13 week, for the first 4 weeks only in a managerial capacity and during next 9 weeks as both manager and programmer.
- Aqeel & Yashwanth are needed for the entire 13 weeks in specifications, development and testing.

SPMP - Section 4

4 Technical Process

4.1 Methods, Tools and Techniques

4.2 Software Documentation

4.3 Project Support Functions

SPMP - Section 4

4.1 Methods, Tools & Techniques

- Scrum framework for delivering high quality product.
- Object-oriented design will be used
- Java, Javascript & Django and Flask are used for develping the web-app, along with Ruby on Rails for backend and React.js for frontend
- PostgreSQL used for storing and managing data
- GPS tech is integrated with telematics devices
- Documentation and coding will be performed in accordance with company standards

SPMP - Section 4

4.2 Software Documentation

- Software Documentation will follow company standards and be done by individuals working on the developments and testing of the software
- Reviews of documentation will be conducted by Aaryan at the completion of each phase of the process
- This will ensure that all the documentation for a particular phase has been completed by the time the next phase is started

SPMP - Section 4

4.3 Project Support Function

- Quality assurance will be performed as documented in 2.1

SPMP - Section 5

5 Work Packages, Schedule, and Budget

5.1 Work Packages

5.2 Dependencies

5.3 Resource Requirements

5.4 Budget & Resource Allocation

5.5 Schedule

SPMP - Section 5

5.1 Work Packages

- Routines are required to store the delivery, driver and truck information updated by logistic manager so as to be accessed by the Driver, retailer and company staff.
- Routines for editing the information also to be provided for driver to update route information
- Reporting frameworks are required for providing information to company staff through dashboard
- Methods fo reach of these classes will be created independently

SPMP - Section 5

5.2 Dependencies

- As specified in process model
- No phase will be started until the tasks from the previous phase have been approved by Aaryan

5.3 Resource Requirements

- 3 personal computers with Windows OS installed equipped with 8GB minimum RAM with essential Web development tools required.
- High performance servers and networking equipment will also be required to host the web application, database and associated services

SPMP - Section 5

5.4 Budget

Phase	Budget
Requirements	NA
Design	aed 4,600
Implementation	aed 10,000
Testing	aed 10,500
Deployment	aed 8,500
Total	aed 33,600

SPMP - Section 5

5.5 Schedule

Weeks	Task Description
Week 1, 2	Client meeting, requirements specification, rapid prototype finished, Client & users approved rapid prototype.
Week 3, 4	Documented specification document, designed system architecture and UI mockup and got approved by client
Week 5, 6	Implemented all backend technology necessary for application and approved the progress
Week 7, 8	Implemented all frontend technology necessary for application and approved the progress
Week 9, 10	Integration of each module tested, inspection of individual modules done, product tested, document checked
Week 11, 12, 13	Deployed and showcased the demo application to the client, received feedback from client, updated the software with patch works as specified by client and release the final product

SPMP - Section 6

6 Additional Components

6.1 Index

6.2 Appendices

SPMP - Section 6

6 Additional Components

- **Security:** User must authenticate himself/herself to use the product according to the user’s role
- **Training:** Training will be provided by Aaryan during delivery of the final product. Aaryan will provide 1 year of support through calls.
- **Product Maintenance:** Corrective maintenance will be performed by the team at no cost for period of 12 months. A separate contract will be drawn up regarding enhancements