PROJECT

MANAGEMENT PLAN

D7 Auto Service Center

D7 AUTO SERVICE CENTER

C.M. DE LOS REYES AVENUE, MANGGAHAN,

GENERAL TRIAS, 4107 CAVITE, PHILIPPINES

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1. **Client Profile**

Table 1 Client Profile

Company Name:	D7 Auto Service center
Company Logo:	
Address:	7WR6+HQJ, C.M. De Los Reyes Avenue, General Trias, 4107 Cavite
Contact Number:	+63917 427 7646
Line of Business:	Auto Repair Shop/Servicing
Types of Customers:	Local home and business customers
Stakeholder:	Anne Sydney R. Simpelo
Number of Employees:	Less than 20 (as of March 2023)

D7 Auto Service Center is an Auto Service Center in General Trias, Cavite, that has been in the industry for more than 17 years. Rendering excellent service, while keeping it to an affordable range for customers. D7 started small in the year 2006 but flourished over the years because of their consistency to thrive for excellence in service and creating connections with customers via engagements.

D7 Auto Service Center adds more timely and innovative equipment to provide relevant services catering to their customers' needs.

2. Business Case

2.1. Problem Definition

2.1.1 Problem Statement

The D7 Auto Service Center is facing multiple challenges in their business operations. Firstly, their current advertising and online presence on Facebook, their sole platform for promotions, is struggling due to limitations in customer reach caused by the platform's ever-changing algorithm. This hinders their ability to effectively promote their services and engage with potential customers, especially in a highly competitive online market.

Secondly, D7 Auto Service Center is facing difficulties in managing and keeping track of customer reservations. Customers use various channels such as Gmail, mobile text, Facebook Messenger, and walk-ins to make reservations, resulting in a lack of centralized system for recording and managing bookings. This leads to inconsistencies, errors, and time-consuming manual collation of data from different channels, which affects their customer service and revenue potential.

Lastly, the COVID-19 pandemic has intensified the online competition for D7 Auto Service Center, making it even more challenging to attract and retain customers. They need innovative solutions to improve their online presence, customer engagement, and reservation management to stay competitive in the market and enhance their overall business performance.

These challenges highlight the need for a comprehensive solution that can address D7 Auto Service Center's advertising and online presence issues, streamline their reservation management process, and provide additional features to enhance customer engagement.

2.1.2 Organizational Impact

The proposed project for D7 Auto Service Center will make significant improvements to organizational processes, tools, hardware, and software. A centralized reservation and management system will be implemented to eliminate difficulties and errors in recordkeeping caused by the current system. This will result in improved accuracy and efficiency in managing reservation logs and record keeping, reducing manual collation efforts, and enhancing overall customer service. Additionally, the project will provide an extended communication platform for customers and specialists through the web-app, allowing for seamless and efficient communication for inquiries, clarifications, and updates. This will lead to increased customer engagement and satisfaction and improved

communication within the organization for more effective service delivery. The project may also create new roles or modify existing ones to align with the new system, such as assigning a designated team or individual to manage and oversee reservations. Overall, the proposed project will bring about positive changes in reservation management and customer interactions within the organization.

2.1.3 Technology Migration

D7 Auto Service Center will have an implemented customized software solution designed for their business, involving configuration of the software to meet their unique needs and close collaboration with the project team for smooth deployment and integration. Future data collected upon usage of the web-app including customer profiles, service history, inventory records, and financial transactions, will be uploaded to the new system, validated for accuracy and integrity, and converted into compatible formats. Technical requirements and potential obstacles will be addressed by the project team, ensuring a smooth and seamless data processing, resulting in improved customer service, streamlined business processes, and enhanced decision-making capabilities through effective access and leverage of historical customer data.

2.2. Project Overview

2.2.1 Project Description

The project will focus on developing a web-app platform using modern web development technologies for D7 Auto Service Center. This platform will serve as an additional online presence, alongside their existing Facebook page, and will include features such as a reservation system, customer profiles, service gallery, reviews/feedback section, social media links, 360° virtual tour, and service listing. The project team will follow an Agile development methodology to ensure continuous improvement and adaptability, incorporating feedback from D7's management and customers throughout the development process. Thorough testing will be conducted before deployment, and support will be provided during the initial phase. The purpose of the project is to expand D7's online presence, improve reservation management, and enhance customer engagement, aligning with SDG (Sustainable Development Goals) no. 9 on Innovation. The web-app platform will be a valuable marketing and management tool for D7, providing added convenience and value for their customers.

2.2.2   Goals and Objectives

Below are the specific goals and objectives that the project aims to achieve:

•   To increase customer reach by up to 50% within the first three months of deployment of the web-app by leveraging an additional online platform.
•   To develop a centralized system for D7 to manage the bookings of their customers and allow their customers to request reservations 24/7.
•   To extend the Auto Service Center's support for their customers, as well as potential customers, through an environment where both customers and D7 specialists can converse.

2.2.3   Project Performance

The project's success will be measured using key performance indicators (KPIs) that will gauge its performance and outcomes in relation to key resources, processes, or services. The following KPIs will be used to assess the project's performance:

• **Timeline adherence:** The project team will monitor and track the project's progress in meeting its timeline milestones and deadlines. This will ensure that the project is progressing as planned and will help identify any potential delays or issues that may arise during the project execution.
• **Budget management:** The project team will closely monitor the project's budget to ensure that it remains within the approved budgetary limits. Any variances will be identified and addressed promptly to prevent cost overruns and maintain financial accountability.
• **Quality control:** Quality control measures will be implemented throughout the project to ensure that deliverables meet the predefined quality standards. This may include regular reviews, inspections, and testing of project deliverables to ensure they are of the expected quality.
• **Stakeholder satisfaction:** The project team will assess stakeholder satisfaction through feedback mechanisms, surveys, and regular communication channels. This will provide insights into stakeholders' perceptions of the project's progress and outcomes and allow for any necessary adjustments to meet their expectations.
• **Resource utilization:** The project team will monitor the utilization of key resources, such as personnel, equipment, and materials, to ensure that they are efficiently and effectively utilized. This will help identify any inefficiencies or

resource constraints and take appropriate actions to optimize resource utilization.

- **Process efficiency:** The project team will assess the efficiency of project management processes and methodologies employed throughout the project. This may include measuring the effectiveness of project planning, risk management, communication, and decision-making processes, among others. Any identified gaps or bottlenecks will be addressed to improve overall process efficiency.
- **Project outcomes:** The project team will evaluate the project's outcomes against the predefined project objectives and deliverables. This may include measuring the completion of project deliverables, achievement of project milestones, and realization of expected benefits and outcomes.

Regular monitoring, tracking, and reporting of these KPIs will provide insights into the project's performance and outcomes and enable the project team to take timely corrective actions, if needed, to ensure project success.

2.2.4 Project Assumptions

The following list includes the project's preliminary assumptions:

- The development team has the technical knowledge and proficiency required to successfully complete the project in accordance with the specifications.
- The client has provided clear and concise project requirements, and the development team has a thorough understanding of these requirements.
- The project budget and timeline are reasonable and realistic considering the scope of work involved.
- The hardware and software infrastructure required for the development and deployment of the web-app is available and can meet the project's needs.
- The client is committed to providing timely feedback and approvals during the development process to ensure smooth progress and timely decision-making.
- The web-app will undergo comprehensive testing before deployment to ensure that it meets all functional and non-functional requirements and is of high quality.
- The development team will use an Agile project management approach to ensure effective project execution by providing flexibility and adaptability to changing requirements and conditions.
- Any project-related legal or compliance obligations are acknowledged, and they will be followed throughout the project's duration.
- The project team has access to the necessary resources, tools, and technology

required for the project's successful completion.

Throughout the project, these assumptions will be reviewed and updated often to maintain their accuracy and relevance and to proactively address any changes or inconsistencies that might influence the project's success.

2.2.5   Project Constraints

The project constraints for the project are as follows:

1. **Time Constraint:** The project must be completed within the duration of the PBL course, and any other extension must be approved by the subject adviser.
2. **Budget Constraint:** The project must be completed within the approved budget, which is allocated by the project sponsor. The project's budget will be limited to the workforce (salaries) under entry level position rates, system requirements (both software and hardware) and the miscellaneous costs for the project to be listed in the cost breakdown.
3. **Manpower Constraint:** The project team consists of 6 members, and no additional member can be added to the team without approval from the subject adviser. Furthermore, the project will need an external member coming from the client (Product Owner), who will ensure the project's deliverables and requirements are met and up to standard.
4. **Resource Constraint:** The project team must use resources efficiently and effectively to ensure that the project is completed within the time and budget constraints. Any hardware to be purchased thereby to be used for the project's development (laptops, routers, switches, etc.) are to be handed over to the project sponsor during the turnover phase. No hardware shall be taken off by the project team.
5. **Communication Constraint:** The project team must communicate effectively and with the project sponsor for any changes to the project scope, schedule, budget, etc. The project manager will be primarily communicating with the product owner and the project sponsor, but the product owner will also oversee reaching out to the project sponsor for further elaboration and checking of deliverables.
6. **Quality Constraint:** The project deliverables must meet the agreed-upon quality standards, and any deviations from these standards must be approved by the subject adviser, project panelist(s), and project sponsor.

2.2.6   Major Project Milestones

Below are the major milestones of the project:

- **Project Planning:** In this milestone, the project team meets the client and defines project goals, scope, limitation, requirements, timeline, risks, and assumptions. This includes identifying the client's needs and expectations, determining the project's objectives and deliverables, and identifying potential challenges that may arise.
- **Analysis and Design:** the project team analyzes the project requirements and designs a solution that meets the client's needs, which may involve creating use cases, wireframes, prototypes, UML diagrams, and system design documents.
- **Development:** In this milestone, the project team started developing the web-app with the chosen programming languages and tools identified during the previous Analysis and Design milestone.
- **Testing:** In this milestone, the project team conducts diverse types of testing to ensure the web-app works as expected. This includes system testing to test the system, acceptance testing to ensure the system meets the client's requirements, etc. The team also identifies and fixes any issues discovered during testing.
- **Deployment:** In this milestone, the project team makes the solution accessible to end users by deploying it to the production environment and configuring the necessary infrastructure, including servers, databases, and networking.

2.3. Strategic Alignment

The D7 Auto Service Center project's strategic alignment will adhere to the objectives set for the company. We can ensure that the project contributes to the long-term success of the organization.

D7 Auto Service Center aims to become a trusted and leading provider of automotive repair and maintenance services in the local market.

By leveraging the additional platform through effective procedures that will accelerate the operations of the service center, increase customer service, and raise overall service quality, the project is in line with this objective. The project will assist D7 Auto Service Center build a reputation for reliability, professionalism, and high-quality service by streamlining the service delivery process and assuring prompt and accurate contact with clients, which will help the business achieve long-term success.

Furthermore, D7 Auto Service Center aims to continually innovate and adapt to the evolving needs of customers and the automotive industry.

Advanced diagnostic tools, effective appointment scheduling, and digital record-keeping systems are all implemented as part of the project to boost the capabilities and productivity of the service center. The project will help D7 Auto Service Center remain competitive in the fast-paced automotive service sector and meet changing client expectations by keeping up with the most recent advancements in automotive technology and service trends.

In addition, D7 Auto Service Center is committed to achieving high customer satisfaction and loyalty through exceptional service and support.

By introducing effective workflow procedures, cutting down on service wait times, and enhancing customer communication regarding service status and price estimates, the project is in line with this objective. The project will boost customer satisfaction and loyalty by providing exceptional customer service and fostering long-lasting connections with customers. This will lead to repeat business and helpful recommendations from others.

Overall, the D7 Auto Service Center project's strategic alignment with the organization's objectives of becoming a reputable and innovative provider, ongoing innovation, and customer satisfaction shows how the project supports the company's long-term success and justifies the investment in the project.

2.4. ⌧

The Cost Benefit Analysis of the project was determined through four parts those being:

Costs Determined:

The costs determined for the project is divided into:

Direct Costs:
- Labor Costs
- Transportation Allowances
- Contingency Cost
- Deployment of Web-App

Indirect Costs:

- Software Used
- Internet
- Devices Used
- Peripherals

Estimated Benefits:

Under the researched information for the objectives, it is stated that the increase in sales after deploying the additional platform (web-app) can rise to 50%. Within the first three months of deployment. Due to confidentialities with regards to the current earnings of D7 Auto Service Center, it is hereby backed up instead with the information provided to the Elite Four, in which as per the interview with the client, one service rendered, is enough to pay for the annual hosting of the web-app.

Alternatives:

The alternative idea for the Cost Benefit Analysis (CBA) of this project, is to have it deployed in a web hosting service provider with much wider time of free hosting, and more benefits; but the Elite Four is yet to find a better alternative hosting service provider than that of AWS (Amazon Web Services).

Report and Plan Action:

Once settled and approved of, regarding the costing that will be rendered for the webhosting services, the Elite Four uploads the project to AWS for it to be launched and announced for the business accordingly. Reports and receipts will also be delivered to D7 Auto Service Center so it may be liquidated correspondingly.

Reports are documented by the documentation team and are to be finalized and signed by the project manager, then reported to the project sponsor.

The product owner will also report to the project sponsor about the deliverables provided and submitted for the project's features, implementations, and changes.

2.5. Alternatives Analysis

The alternatives analysis was focused on providing an alternative solution for the webhosting of the project, and it is determined to have AWS as a host alternative in case of the following:

- The web application is not suitable to be implemented on the Microsoft Azure platform.

- The web-application has difficulties, and many concerns when to be or when hosted via Microsoft Azure.

- The client and/or the stakeholders of the project decide to proceed with the alternative as decided.

3. Project Charter

3.1. Project Purpose/Justification

3.1.1 Business Need

The D7 Auto Service Center Web-App was developed to help D7 have an additional platform, which aims to have a more user-friendly interface, allowing clients to access the company's services and offers more easily. To further understand the needs of the business it is categorized into the following:

- The need to leverage an additional platform to increase customer reach.
- Development of a centralized system to efficiently manage bookings.
- Increase customer interactions.

3.1.2 Business Objectives

The business objective for the subject is listed below:

- Achieve a 50% increase in customer reach within the first three months of launching the web-app by utilizing an additional online platform.

- Implement a centralized booking system for D7 to manage customer bookings and enable customers to request reservations 24/7.

- Enhance the Auto Service Center's customer support by creating a platform where both customers and D7 specialists can communicate and interact.

3.2. Project Description

The D7 Auto Service Center Web-App will allow the company to have more control of marketing their business and laying out their new platform. This project will use today's technology as a web application, integrated with features such as a reservation system, statistics, and security. All the company's current system will not be terminated, but will be improved, and merged with the new platform.

3.2.1. Project Objectives

- To increase customer reach by up to 50% within the first three months of deployment of the web-app by leveraging an additional online platform.
- To develop a centralized system for D7 to manage the bookings of their customers and allow their customers to request reservations 24/7.
- To extend the Auto Service Center's support for their customers, as well as potential customers, through an environment where both customers and D7 specialists can converse.

3.2.2. Success Criteria

The success of this project and its criteria will be determined under the completion of features being implemented, to be complete, and fully working throughout the platform's usage.

3.2.3. Requirements

For this project to succeed, it must adhere to the set of conditions below:

- The D7 Auto Service Center Web-App should be tested by the assigned team prior to deployment.
- The project must be implemented without interfering with the usual business operations of the company.
- The project will require an external team member (Product Owner) from the project sponsor's department, to oversee, and report the deliverables being presented thereof by the project team, and these deliverable updates are to be reported by the product owner to the project sponsor.
- The project will also be having a project adviser and project consultant that will be from the project sponsor's choice and decision, to help in the project's

documentation and deliverables.

As the project advances, further specifications may be introduced as needed with the client authorization. Requirements may be altered an indefinite number of times due to the project's nature being that of Agile Scrum.

3.2.4. Constraints

The project constraints for the project are as follows:

1. **Time Constraint:** The project must be completed within the duration of the PBL course, and any other extension must be approved by the subject adviser.
2. **Budget Constraint:** The project must be completed within the approved budget, which is allocated by the project sponsor. The budget of the project will be limited to the manpower (salaries) under entry level position rates, system requirements (both software and hardware) and the miscellaneous costs for the project to be listed in the cost breakdown of the project.
3. **Manpower Constraint:** The project team consists of 6 members, and no additional member can be added to the team without approval from the subject adviser. Furthermore, the project will be required to have external members coming from the client (Product Owner, Project Consultant, and Project Adviser), which will ensure the deliverables and requirements of the project are met and up to standards.
4. **Resource Constraint:** The project team must use resources efficiently and effectively to ensure that the project is completed within the time and budget constraints. Any hardware to be purchased thereby to be used for the project's development (laptops, routers, switches, etc.) are to be handed over to the project sponsor during the turnover phase. No hardware shall be taken off by the project team.
5. **Communication Constraint:** The project team must communicate effectively and with the project sponsor for any changes to the project scope, schedule, budget, etc. The project manager will be primarily communicating with the product owner and the project sponsor, but the product owner will also oversee reaching out to the project sponsor for further elaboration and checking of deliverables.
6. **Quality Constraint:** The project deliverables must meet the agreed-upon quality standards, and any deviations from these standards must be approved by the subject adviser, project panelist(s), and project sponsor.

3.2.5. Assumptions

The following list includes the project's preliminary assumptions:

- The development team has the technical knowledge and proficiency required to successfully complete the project in accordance with the specifications.
- The client has provided clear and concise project requirements, and the development team has a thorough understanding of these requirements.
- The project budget and timeline are reasonable and realistic considering the scope of work involved.
- The hardware and software infrastructure required for the development and deployment of the web-app is available and can meet the project's needs.
- The client is committed to providing timely feedback and approvals during the development process to ensure smooth progress and timely decision-making.
- The web-app will undergo comprehensive testing before deployment to ensure that it meets all functional and non-functional requirements and is of high quality.
- The development team will use an Agile project management approach to ensure effective project execution by providing flexibility and adaptability to changing requirements and conditions.
- Any project-related legal or compliance obligations are acknowledged, and they will be followed throughout the project's duration.
- The project team has access to the necessary resources, tools, and technology required for the project's successful completion.

Throughout the project, these assumptions will be reviewed and updated often to maintain their accuracy and relevance and to proactively address any changes or inconsistencies that might influence the project's success.

3.2.6. Preliminary Scope Statement

The D7 Auto Service Center Web-App will include the design, creation, testing, and delivery of the new platform for the business. The project team will manage all hardware, software, and clients. All the development process will be carried out in a manner that is separate from regular business activities, and all testing will be done in the work area only. The project manager will oversee all project funding up to and including the funds allotted in this agreement. The project sponsor must consent before receiving any further funding.

3.3. Risks

The risks that were identified for the D7 Auto Service Center were identified. Rest assured that the Elite Four team will determine workable solutions for the identified risks that the project poses:

- Data breach through the database of the D7 web-app which concerns its security in the online presence.
- Bugs within the web-app may cause system down-time and delays in the online reservation which pertains to the technical risks that arise concerning the web-apps availability and absence.
- The uncertainty of the web-app creating more sales through the web-app is also an identified business risk for the project since this will cost D7 Auto Service Center to spend money for the web-app's web hosting and maintenance.

3.4. Project Key Deliverables

The following deliverables must be made upon the successful completion of the D7 Auto Service Center Web-app. Any changes to these deliverables must be approved by the project sponsor:

- Fully deployed web-app.
- Technical documentation for the solution.
- Recommendation list for future upgrades/enhancements for the solution.

3.5. Summary Milestone Schedule

The project Summary Milestone Schedule is as follows:

Table 2 Summary Milestone Schedule

Project Milestone	Start Date	End Date
Planning	March 3, 2022	June 27, 2022
System Analysis & Design	August 15, 2022	November 11, 2022
Development	November 23, 2022	March 22, 2023
Deployment	March 23, 2023	June 10, 2023
Close Out	June 11, 2023	June 22, 2023

3.6. Budget Summary

The budget for the D7 Auto Service Center Web-App project is detailed below:

The approved budget: ₱363,600.00

The project's duration is 140 days (about 4 and a half months) from Planning to Turn Over which is from (Mach 2022 - June 2023) since this project is agreed upon to be rendered within a year with no days required to be rendered each month. The amount of work to be paid for by every project team member will be hourly. The budget allotted also excludes costs for food allowances, working space, and any other costs that will be incurred by the project team except whatever is included in the approved budget's breakdown.

Important note:

Salaries for the external team members (Product Owner, Project Adviser, and Project Consultant) will not be covered in this salary breakdown. It is agreed upon by the project sponsor and the project team to exclude this external matter from the documentation. Furthermore, the salary breakdown is in accordance with each member's dates and hours.

Salary Breakdown:

Table 3 Summary Milestone: Salary Breakdown

Position	Salary on an Hourly Rate Basis	No. of work hours	Total
Project Manager	₱250.00	208	₱52,000.00
Web developer	₱200.00	384	₱76,800.00
UI/UX Designer	₱200.00	208	₱41,600.00
Database Administrator	₱200.00	176	₱35,200.00
QA Tester	₱220.00	120	₱26,400
Project Secretary	₱160.00	200	₱32,000

Total Salary: ₱264,000

Table 4 Summary Milestone: Costing

Cost Item	Computation	Cost
Direct Cost		
Cloud Deployment & Domain	₱2,000 (cloud deployment) + ₱1,000 (domain)	₱3,000.00
Transportation Allowance	16 days (6 members) x ₱100 (transportation allowance for deployment and closeout)	₱1,600.00
Contingency		₱35,000.00
Manpower		₱264,000.00
TOTAL:		**₱303,600.00**
Indirect Cost		
Utilities		
Internet	₱6,000.00 x 4 months	₱24,000.00
Equipment		
Software Used		₱0.00
Devices Rental	₱9,000.00 x 4 months at (₱1,500.00 per unit multiplied to number of members of project team)	₱36,000.00
TOTAL:		**₱363,600.00**
GRAND TOTAL: 363,600.00		

3.7. Project Approval Requirements

The success for the D7 Auto Service Center Web-app project will be achieved when a fully tested web-app, and all technical documentation, are approved by the project sponsor, and the project manager, furthermore, it must be is fully deployed throughout the company within the time and cost constraints indicated in this charter. Additionally, this measure of success must include a recommendation list for future recommendations for upgrades/enhancements, as we approach this solution to also be secured to prevent/minimize future threats. Success will be determined by the Project Sponsor, Ms. Anne Sydney Simpelo, who will also authorize project completion.

4. Project Management Approach

With regards to the project management approach, the stakeholder of the project will oversee granting authorization to the developers in implementing features for the project web-app, and to implementing the actual web-app. The development team will be comprised of a project manager, a product owner, developer team, documentation team, and a deployment team.

The project manager shall work with all the members and stay connected with the stakeholder as each of the project deliverables/outcomes are being met. The project manager shall bestow tasks and grant permissions to the team in altering the web-app as approved and discussed by the project manager and the stakeholder.

5. Project Technical Approach

The technical approach for the D7 Auto Service Center will be based on analysis made for the project during System Analysis & Design Phase, while it is also based on the project's requirements, objectives, and constraints. The team will follow a structured agile-scrum methodology which allows changes and alterations to the project to be tailor-fit and beneficial to the stakeholder.

6. Project Management Plans
    6.1. Stakeholders Strategy Management Plan
        6.1.1 Introduction

        The Stakeholder Management Strategy for D7 Auto Service Center Web-App aims to identify, connect, and manage stakeholders successfully throughout the project's lifecycle so that clear and concise communication between the Elite Four and the client is possible. Effective stakeholder management will be essential for the project to be successful. It helps in gaining support and anticipating any conflicts or roadblocks. This strategy describes the primary goals for managing stakeholders throughout the project's lifecycle.

        6.1.2 Identify Stakeholders

        In identifying the stakeholders, the team will conduct a brainstorming session for the team to do this matter. The team's brainstorming session will revolve around the idea of the question "Will the person or their organization be directly or indirectly affected by

this project?" This will help the team identify and determine the stakeholders for the D7 Auto Service Center Web-App Project.

6.1.3 Key Stakeholders

The key stakeholders in this D7 Auto Service Center Web-app project are the D7 Marketing Team, D7 Customers, and the project sponsor, Ms. Anne Sydney Simpelo, as they are required to have constant communication about the project for it to reach the desired state, functionalities, and completion. Consistent communication with the marketing team, customer and the project sponsor will be the key stakeholders so that the desired features of the project that is to be implemented, and so shall it be discussed in detail and to its feasibility, and contingencies to any issues that may arise.

6.1.4 Stakeholder Analysis

The D7 Auto Service Center Web-App Project stakeholders were identified through understanding, analyzing, and categorizing the internal and external users. The main purpose of this analysis is to establish the level of influence and power of each stakeholder has over the project, strategy the management approach for each stakeholder, and determine the appropriate levels of communication and participation for each stakeholder.

The table below summarizes the project's stakeholders, showing those with a high or low level of interest and power in the development process.

Table 5 Stakeholder Register

NAME	POSITION	INTERNAL/ EXTERNAL	PROJECT ROLE	CONTACT INFORMATION
Anne Sydney R. Simpelo	CEO	Internal	Project Sponsor	asimpelo@gmail.com
D7 Marketing Team	Team for Marketing Operations	External	External Users of the system	d7autoservicecenter@gmail.com
D7 Customers	Customers	External	External Users of the system	-

6.2. Scope Management Plan

6.2.1 Introduction

Throughout the D7 Auto Service Center Web-App life cycle, the scope of the work will be defined, validated, regulated, and verified according to the guidelines in the scope management plan. The scope management plan's goal is to guarantee that the project stays on course and fulfills its intended scope within the set timetable and budget.

To create the scope management plan for the D7 Auto Service Center, the team will apply the five-step process of Project Scope Management, which includes collecting requirements, defining scope, creating a WBS (Work Breakdown Structure), verifying scope, and controlling scope.

1) **Collect Requirements** - The team will be defining and documenting the requirements necessary to achieve the project objectives. Both the project charter and stakeholder registration will serve as the foundation for the collection of requirements, which will also enable the team to define requirements, discuss details associated with achieving each requirement, and clarify them through interviews and follow-up discussions. To ensure that the project's execution phase can measure the requirements, they will be meticulously recorded. As part of establishing the project scope, the documentation produced during this step will also be used as input.

2) **Define Scope and User Stories** – Based on the requirements gathered in the collection process, the project scope is defined in detail. This process includes creating the scope statement, developing the project charter, and identifying the deliverables and requirements for each work deliverable.

3) **Create a Work Breakdown Structure (WBS)** - With the help of a WBS, the project scope is segmented into smaller, more manageable work packages. This is utilized to facilitate the project team's ability to effectively manage the project by breaking down the scope into comprehensible components. The resulting WBS visually represents the scope of the project and makes it more accessible to all team members.

4) **Verify Scope** - In this step, the project deliverables are examined and validated to make sure they adhere to the specifications outlined in the project scope statement. This step helps ensure that the project

progresses according to schedule and that the project deliverables satisfy stakeholders' demands.

5) **Control Scope** - Throughout the project's lifecycle, this phase requires monitoring and regulating changes to the project's scope. This includes the team handling scope adjustments and any scope creep that might happen while the project is being carried out.

6.2.2   Scope Management Approach

The Scope Management Approach for the project is the following:

1. Authority and Responsibility for Scope Management:

The Project Manager, Andre O. Viernes, has the primary authority and responsibility for scope management, while the Project Sponsor, Anne Sydney Simpelo, will provide support and guidance as needed to complete the project within its given scope and period.

2. Scope Definition:

To accurately define the project scope of the project, the Elite Four team will use several documents to define this matter, and these are but might not be limited to: the Scope Statement, Statement of Work, Work Breakdown Structure, WBS Dictionary, and other relevant materials that will provide a detailed understanding of the project's scope, its objectives, requirements, and deliverables.

3. Scope Measurement and Verification:

To clearly identify the project's measurement and verification it will be measured through the following:

- Success Criteria – These criteria will be used to determine if the scope of work is within line and to also measure the project's completion within its scope.

- Project Sponsor Approval – The pivotal approval of the project sponsor of the project will be the means of verification whether the project being developed was

not any less nor exceeded its scope as intended within the premises of the project sponsor's recommendations, approval, and restrictions.

4. **Scope Change Process:**

The project manager, Andre O. Viernes, as well as all the other team members, have the authority to change the project's scope as much as necessary, and accordingly. However, before making any modifications by any means, the project manager together with the team will consider the possible impacts on the project's schedule, budget, and other factors and will request permission from the project sponsor, Ms. Anne Sydney Simpelo to push through any changes that will be made to the project.

5. **Acceptance of Final Project Deliverable(s):**

The final project deliverable must be accepted, and the project scope must be approved by the project sponsor, Anne Sydney Simpelo. Andre O. Viernes, the project manager, will ensure that all project deliverables have been completed in line with the scope statement and that the Project Sponsor is fully notified of any changes made throughout the project. To guarantee that all project deliverables fulfill the acceptance criteria and receive final approval, the project manager will also collaborate closely with the project sponsor.

6.2.3   Roles and Responsibilities

The roles and responsibilities of the team are as follows:

Table Scope6 Management: Roles & Responsibilities

Roles	Who	Responsibilities
Project Manager	Andre Viernes	In charge of overseeing the team and ensuring the project is planned, executed, and tasks are completed successfully & on time.
QA Tester	Dan Michael Alfaras	Ensures quality of deliverables, and features being implemented are up to standards.
Web Developer	Alyssa Garcia	Works closely with the Product Owner. In charge of designing, coding, testing, and implementing the project that the team is working on.

Database Administrator	John Zenon Coquia	In charge of managing, monitoring, and maintaining the database.
Project Secretary	Francesca Erin Camino	In charge of coordinating communication and documentation, organizing meetings, managing schedules, and ensuring that participants and roles are defined for the business case and throughout the project.
UI/UX Designer	Darrell Royce Lazala	Works closely with the team's secretary, providing administrative support to the team and assisting in the coordination of team activities.
Project Sponsor/Stakeholder	Anne Sydney Simpelo	In charge of providing the necessary resources for the project, defining the project's objectives, monitoring its advancement, and ensuring its success in achieving its objectives and delivering business value.
Product Owner (Classified as external team member)	Francesca Erin Camino	Reports and communicates with the project sponsor about important updates, changes, and milestones of the project.
Project Consultant (Classified as external team member)	Roselle Wednesday Gardon	Will be in-charge of checking and overseeing documents of the project, and its system, and feature implementation consultations.
Project Adviser (Classified as external team member)	Jo Anne M. de la Cuesta	Will be in-charge of checking and overseeing of documents of the project, and its system, and feature implementation suggestions.

6.2.4   Scope Definition

The project's scope definition will be comprised of where the project is limited to, and what it is intended to do, followed by the approval of the project sponsor, and compliance within the requirements of the Project-Based Learning (PBL) of the Elite Four. These were identified to be:

• Creation of the Web-App as an additional online presence for D7 Auto Service Center

• Creation of a booking system that will allow D7 Auto Service Center to manage bookings online made in the web-app and customers to request bookings 24/7 (except when system downtime occurs.)

• Implementation of helpful features that will allow D7 Auto Service Center to promote rapport with their customers

The scope is subject to change if either the team or the project sponsor made agreements regarding changes, as the project follows an Agile methodology, which may have or pose changes during the project's development phase and/or its entire cycle.

6.2.5   Project Scope Statement

Product Scope Description

The D7 Auto Service Center Web-app project will be limited to creation of an additional platform for D7 that will extend their online presence, as well as creation of a booking system that allows D7 and their customers to manage and make reservations, respectively.

Product Scope Deliverables

The deliverables of the project will be as follows:

1. A fully working web-app for D7 Auto Service Center
2. A fully working online booking system, a feature of the web-app.
3. A manual that will provide instructions on how the web-app will be used.
4. A documentation of the project's product backlog, set of features, and agreed scope, its records, approvals, and other pertinent documents that is within the scope of the Elite Four's documentation.

Product Acceptance Criteria

The Product Acceptance Criteria for the client's receivable project are as follows:

1. All the needed documents are completed and approved by the project sponsor and subject adviser to proceed to the phases of the project.
2. The development team has completed all the features and functionalities as per the product backlog and has ensured there are no bugs or problems (at least before deployment).
3. The Web-App deployment was successfully completed by D7 Auto Service Center, indicating the application is ready to be used by end-users.
4. During the User Acceptance Testing, users have provided positive feedback about the Web-App, indicating that the application meets their requirements and is user-friendly.
5. The personnel of D7 Auto Service Center including that of the owner and the project sponsor is taught of how the web-app is and will be used for the business itself.

Project Exclusions

The project exclusions for the project are as follows:

1. No work will be done for support after the web-app's initial release and launch.
2. The creation of content, including text, images, and videos, is not part of the project scope and is under D7's control.
3. Legal or regulatory compliance work, such as obtaining licenses, permits, or certifications, as well as payments for the deployment is beyond the project's scope.
4. Bug fixes or troubleshooting beyond the web-app's initial release are not included in this project.
5. Optimization of the web-app's performance beyond the initial is not part of the project scope.
6. Any work related to backup and restoration procedures is not part of the project scope.

Project Constraints

The project constraints for the project are as follows:

1. **Time Constraint:** The project must be completed within the duration of the PBL course, and any other extension must be approved by the subject adviser.
2. **Budget Constraint:** The project must be completed within the approved budget, which is allocated by the project sponsor. The budget of the project will be limited

to the manpower (salaries) under entry level position rates, system requirements (both software and hardware) and the miscellaneous costs for the project to be listed in the cost breakdown of the project.

3. **Manpower Constraint:** The project team consists of 6 members, and no additional member can be added to the team without approval from the subject adviser. Furthermore, the project will need external members coming from the client (Product Owner, Project Consultant, and Project Adviser), who will ensure the project's deliverables and requirements are met and up to standard.

4. **Resource Constraint:** The project team must use resources efficiently and effectively to ensure that the project is completed within the time and budget constraints. Any hardware to be purchased thereby to be used for the project's development (laptops, routers, switches, etc.) are to be handed over to the project sponsor during the turnover phase. No hardware shall be taken off by the project team.

5. **Communication Constraint:** The project team must communicate effectively and with the project sponsor for any changes to the project scope, schedule, budget, etc. The project manager will be primarily communicating with the product owner and the project sponsor, but the product owner will also oversee reaching out to the project sponsor for further elaboration and checking of deliverables.

6. **Quality Constraint:** The project deliverables must meet the agreed-upon quality standards, and any deviations from these standards must be approved by the subject adviser, project panelist(s), and project sponsor.

Project Assumptions

The following list includes the project's preliminary assumptions:

- The development team has the technical knowledge and proficiency required to successfully complete the project in accordance with the specifications.
- The client has provided clear and concise project requirements, and the development team has a thorough understanding of these requirements.
- The project budget and timeline are reasonable and realistic considering the scope of work involved.
- The hardware and software infrastructure required for the development and deployment of the web-app is available and can meet the project's needs.
- The client is committed to providing timely feedback and approvals during the development process to ensure smooth progress and timely decision-making.
- The web-app will undergo comprehensive testing before deployment to ensure that

it meets all functional and non-functional requirements and is of high quality.

- The development team will use an Agile project management approach to ensure effective project execution by providing flexibility and adaptability to changing requirements and conditions.
- Any project-related legal or compliance obligations are acknowledged, and they will be followed throughout the project's duration.
- The project team has access to the necessary resources, tools, and technology required for the project's successful completion.

Throughout the project, these assumptions will be reviewed and updated often to maintain their accuracy and relevance and to proactively address any changes or inconsistencies that might influence the project's success.

6.2.6 Work Breakdown Structure

The WBS is used to break down the project scope into smaller, manageable deliverables that are tracked throughout the project's life. While, the WBS Dictionary provides a detailed description of each deliverable, including its scope, timeline, cost, and quality requirements. The WBS created for the project is shown on the figure below:

Figure 1 Work Breakdown Structure

6.2.7   Scope Verification

To adhere to the scope and specifications listed in the scope management plan, the scope verification process will be carried out. The project team will collaborate with the client and other key parties to guarantee that all needs have been met, and a precise checklist will be prepared for the acceptance requirements for each deliverable. Any deviations from the scope management plan will be noted and dealt with in consultation with the appropriate parties. The project team will receive formal sign-off from the client after confirming and accepting all deliverables before proceeding to the next stage.

6.2.8   Scope Control

Within the project's scope control, is the planning of the project itself, the system analysis and design of the project, the preparation and development of the project, and the deployment of the web-app.

This project will be under control during the PBL or Project Based Learning of the Elite Four team. The Elite Four will not be in control of any actions that the project sponsor and D7 personnel will make upon release of the web-app to the webhosting service.

Any changes that will be made after deployment, may it be through the services, and the other features of the web-app, and cancellation of the webhosting, is not under the control of the Elite Four, but under the control of D7 Auto Service Center and their personnel.

6.3. Cost Management Plan

The Cost Management Plan for the D7 Auto Service Center Web-App project is created to properly address any issues or budget constraints to be covered, relevant, and associated with the project are efficiently liquidated, and managed throughout the project's lifecycle. The plans of costing made through the document will be outlining the standards costing of the project as it is measured, recorded, and managed.

Cost Management Responsibilities:

- The Project Manager, Andre O. Viernes, will be responsible for the overall cost management of the project for D7 Auto Service Center and will be the first line of contact for all cost-related issues with the Stakeholder.

- The Documentation Team will be responsible for monitoring and recordkeeping project costs to ensure they are within the approved budget's scope.

Cost Change Approval:

- The cost changes that will be made during the project's lifecycle must be approved by the Project Manager, and discussed with the stakeholder before they are implemented.
- Costs that will be rendered are to be recorded monthly and will be measured and reported monthly.

Cost Measurement & Reporting:

- The reports regarding the costs are to be presented to the Project Sponsor, and he/she must be given a copy of these reports.

Budget Format & Standards:

- The breakdown of the budget, together with the expenses are to be presented using Microsoft Excel to the Project Sponsor.
- The budget will be divided accordingly. It will be divided into individual items as per its cost, together with the computer cost of each item listed.
- Any changes rendered or applied for the project's monthly reports are to be highlighted.

6.3.1. Cost Management Approach

The cost management approach for the D7 Auto Service Center shall be adherent to the principles:

a) Clear and concise cost definitions -The Elite Four team will update and report the pertinent definition of each costing to the project stakeholders. The definition of costs relevant to the project such as, labor, equipment, maintenance, allowances, and contingencies shall be of transparency to the stakeholders.

b) Budget development and tracking - Through utilization of Microsoft Excel, the project budget will be updated, recorded, and tracked throughout the project's entire lifecycle.

c) Cost estimates - The Elite Four team will define the cost estimates, based on actual labor costs, allowances, researched carefully, and in the scope of the provided budget for the said project.

d) Cost variance analysis - A variance analysis will also be done to identify over-expenditure and/or accumulated savings from the reported costs.

Cost management roles and responsibilities - The roles and responsibilities of each team member will be well disseminated, regarding costs, constraints, and the likes.

f) Approval process for changes - A formal process for approving changes from the project manager and the project stakeholders will be made to have transparency with the changes being made.

g) Reporting and Communication - Cost Reports generated through Microsoft Excel will be shared and reported to the project stakeholders.

6.3.2. Measuring Project Costs

The Measuring of the Project Costs Plan for the D7 Auto Service Web-App will include and detailed and calculated approach for the measurement of the projected project costs using EVM (Earned Value Management). This will involve and need various Earned Value metrics like:

1. The BCWS (Budget Cost of Work Schedule) or PV (Planned Value)

   Measures the costs of the work that is budgeted and that is planned to be completed at a specific point in time. This is needed and required for the computation SPI (Schedule Performance Index).

 Example computations:

To calculate the BCWS (Budget Cost of Work Schedule) or PV (Planned Value), we need to multiply the planned percentage of the completed work by the project budget, and you will get the Planned Value.

Planned Value (PV) = (Planned % Completed) X (Project Budget)

Planned Value (PV) = 30% X (PHP 100,000)

= 0.3 X (PHP 100,000)

= PHP 30,000

Therefore, the project's Planned Value (PV) is PHP 30,000.

Reference: [1]

2.   BCWP (Budgeted Cost of Work Performed) or EV (Earned Value)

Measures the budgeted costs of the work that has been completed at a specific point in time. This is needed and required for the computation of SPI (Schedule Performance Index) and the CPI (Costs Performance Index).

Example computations:

To calculate the BCWP (Budgeted Cost of Work Performed) or EV (Earned Value), we need to multiply the Actual percentage of the completed work and multiply it by the project budget.

Earned Value (EV) = % of Completed Work X (Project Budget)

Earned Value (EV) = 40% X (PHP 100,000)

= 0.4 X (PHP 100,000)

 = PHP 40,000

Therefore, the project's Earned Value (EV) is PHP 40,000.

Reference: [1]

3.   ACWP (Actual Cost of Work Performed) or AC (Actual Cost)

Measures the actual costs incurred for the works that have already been completed at a specific point in time and schedule. This is needed for the computation of CV (Cost Variance) and CPI (Cost performance index)

Example computations:

The Actual Cost is the amount of money that has been spent so far.

For example, if PHP 70,000 has been spent so far; Hence, the project's Actual Cost (AC) is PHP 70,000.

Reference: [1]

The metrics above will be used to perform Costs Variance Analysis (CV), Schedule Performance Index (SPI), and lastly the Cost Performance Index (CPI) to measure the project's cost performance throughout the project lifecycle.

To help with capturing and recording these metrics, the team will use various project management software that can track, record, and generate reports on these EVM metrics overtime or in real-time. The software must also be capable of making future forecasts of the project costs as it will be used to review costs performance overtime, across work packages or schedule activities.

1. **Cost Variance (CV)**

   Measures the difference between the actual costs of the project and the planned costs. This is calculated by subtracting the actual costs from the Actual costs (EV – AC).

   Example computations:

   To calculate the Cost Variance (CV), we need to subtract the Actual Cost (AC) from the Earned Value (EV).

   Cost Variance (CV) = Earned Value (EV) - Actual Cost (AC)

   Cost Variance (CV) = PHP 40,000 – PHP 70,000

        = PHP -30,000

   The project's Cost Variance (CV) is PHP –30,000, and since it is negative, we are over budget.

   Reference: [2]

2.   **Schedule Performance Index (SPI)**

Measures the project's schedule performance ratio by calculating the planned schedule and comparing it to the actual schedule. The ratio is calculated by dividing the EV to the PV. The ratio that will be resulted will be compared, if it is a value of 1 this will indicate that the project is on schedule, while the ratio that will be resulted in a value that is less than 1 indicates that the schedule is behind, while a value that is over 1 show that the project is ahead of schedule.

 Example computations:

The formula to calculate the Schedule Performance Index (SPI) is given below:

Schedule Performance Index (SPI) = Earned Value (EV) / Planned Value (PV)

Schedule Performance Index (SPI) = PHP 40,000 / PHP 30,000

   = 1.333

Since the Schedule Performance Index (SPI) is above 1, the project is ahead of schedule.

Reference: [3]

Cost Performance Index (CPI)

Measures the project's cost performance by calculating the actual costs to the planned costs of the project. This Index is calculated using this formula (CPI = EV / AC). Like the SPI the CPI also uses ratio in determining if the project is over budget, under budget, or right in budget.

Example computations:

The formula to calculate the Cost Performance Index (CPI) is given below:

Cost Performance Index (CPI) = Earned Value (EV) / Actual Cost (AC)

Cost Performance Index (CPI) = PHP 40,000 / PHP 70,000

   = 0.571

If the reported or resulting Cost Performance Index (CPI) is less than one, the project is therefore over budget.

Reference: [3]

The Cost Management Plan makes sure the project costs are as effectively managed and controlled as possible throughout its project's lifecycle. By utilizing EVM metrics and calculations. These metrics and calculations help in getting insight and identifying the areas where the project performance health is. And if the project is underperforming it will show it to the project team for them to take appropriate actions on fixing it and bring the project right on schedule and track.

6.3.3. Reporting Format

The reporting format that would be best suited for the cost management plan of the D7 Auto Service Web-App should be a detailed and comprehensive spreadsheet or table, preferably in Microsoft Excel or something similar. Detailing the relevant cost information like project budget, actual cost, projected costs, and any variances or discrepancies and any relevant information should be included in this format.

The format should be easy to understand and be accessible to all stakeholders, the project team, and the project management.

Additionally, the format should include the following in its element for the cost management plan for the D7 Auto Service Web-App.

1. **Cost Management Summary**

This is an overview of the cost management plan, including the approved project budget, cost variance or issues, and actions to take to correct the problem or take corrective actions towards solving cost management related concern.

2. **Budget Breakdown**

This part explains the rational of the budget and explains them in a detailed breakdown which identifies both direct and indirect costing together with the manpower salary.

3. **Cost Variance Analysis**

Analysis of the variances of the project costs between of the budgeted costs. With in-depth explanation and breakdown of the variances between them, the possible impact of them on the project, and actions to take to address these concerns.

4.   Approval

This is where the project stakeholders and project manager review and approve costs management plan in the documentation.

5.   Appendices

This section is for supporting and additional documentation and materials, related to the project, such as costs breakdown, meeting recordings, and forms.

The additional changes will be going through a comprehensive overview of the project's cost management. ⌑

6.3.4. Cost Variance Response Process

The Control Threshold for this project is a CPI or SPI of less than 0.8 or greater than 1.2. If the project is to meet any of the Control Thresholds, a Cost Variance Corrective Action Plan must be made and planned accordingly. The Project Manager will present the Project Sponsor and the Product owner with options for the actions if a cost variance is reported. The Cost Variance Corrective Action Plan will provide a report of the actions and steps necessary to bring the project back within budget constraints. Once the Cost Variance Corrective Action Plan is corrected, it will become part of the project plan in order to correct the variance.

6.3.5. Cost Change Control Process

The cost change control process will follow the project change request process, which will undergo the approval of primarily, the project sponsor and then the approval of the project manager.

1.   **Cost change process**:

The proposed change in the costs and project budget must be communicated and approved by the project stakeholder in order for the proposed change to be effective.

2.   **Cost change approval:**

The cost change will only undergo approval after it has been thoroughly reviewed and

analyzed by the project sponsor and team and has been properly documented.

3. **Cost change Implementation:**

After the budget's cost change is approved, it will be implemented according to the project schedule and cost breakdown.

6.3.6. Project Budget

The budget for the D7 Auto Service Center Web-App project is detailed below:

The approved budget: ₱363,600.00

The project's duration is 140 days (about 4 and a half months) from Planning to Turn Over which is from (Mach 2022 - June 2023) since this project is agreed upon to be rendered within a year with no days required to be rendered each month. The amount of work to be paid for by every project team member will be hourly. The budget allotted also excludes costs for food allowances, working space, and any other costs that will be incurred by the project team except whatever is included in the approved budget's breakdown.

Important note:

Salaries for the external team members (Product Owner, Project Adviser, and Project Consultant) will not be covered in this salary breakdown. It is agreed upon by the project sponsor and the project team to exclude this external matter from the documentation. Furthermore, the salary breakdown is in accordance with each member's dates and hours.

Salary Breakdown:

Table 7 Summary Milestone: Salary Breakdown

Position	Salary on an Hourly Rate Basis	No. of work hours	Total
Project Manager	₱250.00	208	₱52,000.00
Web developer	₱200.00	384	₱76,800.00
UI/UX Designer	₱200.00	208	₱41,600.00

Database Administrator	₱200.00	176	₱35,200.00
QA Tester	₱220.00	120	₱26,400
Project Secretary	₱160.00	200	₱32,000
Total Salary: **₱264,000**			

Table 8 Summary Milestone: Costing

Cost Item	Computation	Cost
Direct Cost		
Cloud Deployment & Domain	₱2,000 (cloud deployment) + ₱1,000 (domain)	₱3,000.00
Transportation Allowance	16 days (6 members) x ₱100 (transportation allowance for deployment and closeout)	₱1,600.00
Contingency		₱35,000.00
Manpower		₱264,000.00
TOTAL:		**₱303,600.00**
Indirect Cost		
Utilities		
Internet	₱6,000.00 x 4 months	₱24,000.00
Equipment		
Software Used		₱0.00
Devices Rental	₱9,000.00 x 4 months at (₱1,500.00 per unit multiplied to number of members of project team)	₱36,000.00
TOTAL:		**₱363,600.00**
GRAND TOTAL: 363,600.00		

6.4. Schedule Management Plan

6.4.1. Introduction

The Elite Four's Schedule Management Plan was created during the project's planning phase and is progressing throughout the last phase. This plan serves as a roadmap for the

project's execution and outlines the approach for managing the project schedule from start to finish throughout the project lifecycle. The plan establishes guidance and expectations for project schedule policies and procedures related to planning, development, management, implementation, and monitoring throughout the project lifecycle.

6.4.2. Schedule Management Approach

The Elite Four's Project Schedule – Gantt Chart was created using Open Project beginning with the deliverables as identified in its Work Breakdown Structure (WBS). The project will use an instructional approach where the team will learn by actively engaging in real-world and personally meaningful projects. The team will collaborate with their peers, apply critical thinking skills, and solve complex problems while developing knowledge and skills. The team will be utilizing Agile Scrum methodology, and any necessary changes will be made as required. The project is composed of five phases, starting from planning until the maintenance phase.

The project schedule milestones are identified as follows:

Planning
- The Planning Phase is the initial phase of the project where the team prepares for identifying the requirements, estimating resources and timeline of the project, and defining the scope, objectives, and deliverables.

  - Planning Phase Preparations
  - Problem Identification
  - Solution Deliberation
  - Business Case & Stakeholder Management Planning
  - Solution Prototype & Refinement
  - Project Management Planning & Documentation

System Analysis & Design
- Analysis & Design phase, where the team creates a detailed plan for the project. The phase focuses on developing the project's technical requirements and detailed specifications.

  - System Analysis & Design Phase Preparations

- System Analysis UML Creation
- System Design UML Creation
- System Analysis & Design Refinements
- System Analysis & Design Documentation

Development
- In this phase where the project's development progressed, the team has gone through these accordingly.

- Development Phase Preparations
- Initial Web-App Development
- Reservation and Review System Implementation
- Web-App Functionality and Features Implementation
- Development Revisions & Quality Testing
- Development Documentation

Deployment
- The deployment phase is the final phase of the project, where the team ensures that the deliverables continuously meet the required quality standard. This also involves monitoring and maintaining the project's deliverables: documentation, web hosting, and cost breakdown. The team has gone through these accordingly.

- Deployment Phase Preparations
- Document Signing for web-app deployment.
- Web-app deployment and compatibility Testing
- Web-app deployment

Close Out
- The closeout phase is the final phase of the project where all project activities are for turn over to its client, and trainings are provided as well as project demonstrations for the client. It involves wrapping up remaining tasks, documenting project outcomes, and transitioning the project to its final state.

- Project Turn Over
- Project Documentations & Receiving copy Turnover
- Project Training & Handling
- Project demonstration & Hands on Practice

The roles and responsibilities of Elite Four's schedule development are as follows:

- The Project manager and Product Owner are responsible for facilitating the definition of work packages, sequencing tasks, and estimating the required duration and resources with project members. They will also create the project schedule using Project Libre and validate it with the Elite Four team, stakeholders, and the project sponsor.

- The Project team will cooperate and collaborate in work package definition, sequencing, and estimating resource requirements and duration. Also, the project members will review and validate the proposed schedule and perform assigned tasks once it is approved.

- The Project sponsor will be informed of the changes made, as will the product owner who will report to the projecy sponsor.

- The project consultant and advisers will be responsible for providing insightful feedback for the project's documentation, development, features implementation, and its milestones through suggestions, and consultations.

6.4.3. Schedule Control

The project schedule will be reviewed and updated accordingly, with actual start and finish dates and completion progress provided by team members and supervised by the project manager.

The project manager – Andre Viernes, oversees holding weekly scheduled updates/reviews. He will also determine the effects of schedule variances, request changes to the schedule and communicate the status of the schedule according to the project's communication plan.

The project team – Elite Four members, are responsible for cooperating in weekly scheduled updates/reviews and will communicate to any changes from actual start/finish dates to the project manager and participating in schedule variance resolution activities as needed.

The project sponsor – Ms. Anne Sydney Simpelo, will remain informed of the project schedule's status and will be reviewing and approving all schedule change requests which are submitted by the project manager.

6.4.4. Schedule Changes and Thresholds

The team can effectively manage and evaluate any proposed schedule changes, ensuring that they do not negatively impact the project's scope, schedule, or resources by following the process below:

1. If any of the Elite Four team members identifies a need for a schedule change, they should notify the project manager.

2. The project manager and the team will hold a meeting to review and evaluate the proposed changes.

3. During the evaluation, the team will determine the affected tasks and any variances that may result from the potential change.

4. The team will consider alternatives or actions that may be taken to address and evaluate how they may impact the scope, schedule, and resources.

5. After the evaluation, if the project manager concludes any proposed changes will exceed the established boundary condition, a schedule change request must be submitted.

6.4.5. Scope Change

If any changes are made to the project's scope, rest assured it is approved by the project sponsor. The project manager must evaluate the scope change's impact on the current schedule. If the project manager determines that the change will significantly affect the current project schedule, they may request a re-baselining of the schedule to reflect any necessary adjustments due to the new project scope. This request must be reviewed and approved by the project sponsor before the schedule can be re-baselined.

6.5. Human Resources Management Plan

6.5.1. Introduction

A human resource management constructed and composed under significant effort, is a key towards success of a project, ensuring that these projects are professionally managed and filled with positions necessary to complete the deliverables from the beginning to its turnover. Roles, and its duties must be clearly defined, as well as the performances being tracked for the management measures, are also essential for the project's strategizing for efficiency and efficacy.

This plan is utilized to effectively manage the project's team; by means of providing an in-depth definition of the roles and responsibilities of each team members, while keeping communication a top priority to ensure productivity runs through at its optimum level for the project. With a clear understanding of the roles, its assigned power for authorization, responsibility, and competency, this plan will be useful in understanding the key responsibilities of each project team member.

6.5.2. Roles and Responsibilities

One of the crucial parts of the Human Resources management plan is outlining the roles and responsibilities of all project team members and stakeholders for the matter. This ensures all team members are well informed of their individual parts to play in the project's succession.

This planning will also define the level of authority and what decisions can be decided upon by members, and what are the extent of their authority. This is to make sure that the resources are maximized to their potential.

The human resource management aims to be a roadmap for the project team members that will serve as guidance in understanding roles and responsibilities for the project's success in execution and delivery of tasks assigned accordingly and effectively.

Table Schedule9 Management: Roles and Responsibility

Role	Authority	Responsibility	Competency
Project Sponsor	Ultimate decision-making	Provides project funding and resources. Defines project scope, goals, and objectives.	Strong leadership, strategic thinking, and communication

	authority for the project	Reviews and approves project deliverables and changes. Acts as a liaison between the project team and the organization's executive management.	
Project Manager	Responsible for project execution and delivery	Develops and manages the project plan. Defines project roles, responsibilities, and timelines. Identifies and manages project risks and issues. Facilitates communication between project stakeholders. Ensures project meets quality, budget, and schedule requirements. Reports project status and progress to project sponsor and executive management.	Strong project management, leadership, and communication
IT (Information Technology) Team (Internal Users)	Provides technical expertise and support for project	Provides technical input into project planning and execution. Develops, tests, and implements technical solutions. Identifies and resolves technical issues. Collaborates with other project teams to ensure technical requirements are met.	Strong technical knowledge, problem-solving, and collaboration
Documentation Team (Internal Users)	Responsible for documentation of project	Develops and maintains project documentation, including requirements, design, testing, and user manuals. Ensures that project documentation is complete, accurate, and up to date. Provides guidance and support to project team members on documentation standards and requirements.	Strong writing, editing, and organizational skills

Customers (External Users)	The users who will use the product or service of the project	Provides feedback on project deliverables. Collaborates with the project team to identify and refine requirements. Tests and evaluates the project deliverables to ensure that they meet their needs. Communicates their needs and expectations to the project team.	Strong domain knowledge and communication skills
Client (External Users)	The entity or organization that has initiated the project and will receive the project deliverables	Provides input and feedback on project deliverables and progress. Reviews and approves project deliverables and changes. Provides project funding and resources. Communicates their needs and expectations to the project team.	Strong leadership, communication, and negotiation skills
External Team (External Users)	The users who will oversee deliverables and provide suggestions and report to project sponsor	Provides feedback on project deliverables. Collaborates with the project team to identify and refine requirements as suggested and consulted upon. Evaluates deliverables and reports to project sponsor.	Analysis, and communication skills

6.5.3. Project Organizational Charts

A project organizational chart visualizes the project's structure, roles, and responsibilities, clarifying reporting lines, decision-making authority, and communication channels within the team and with external stakeholders. The chart aligns each team's critical role with the project goals and objectives, minimizing confusion and ambiguity, facilitating effective communication, decision-making, and collaboration, all essential for project success.
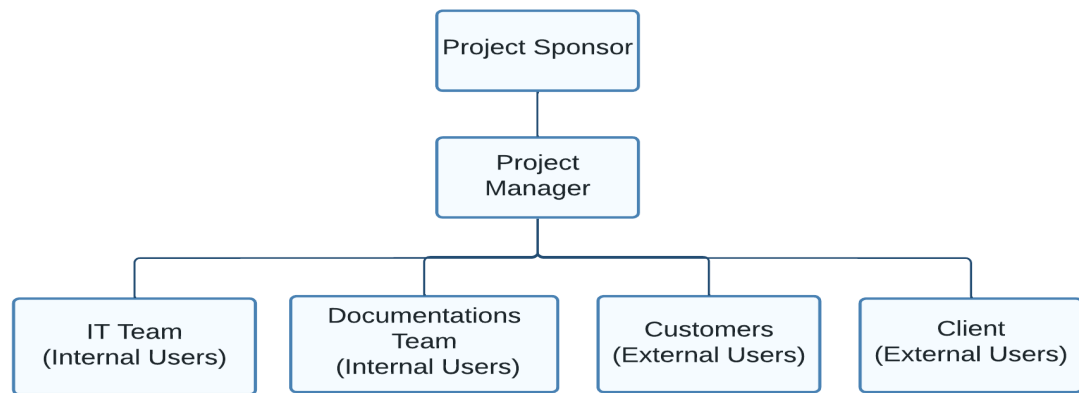
Figure 2 Project Organizational Charts

6.5.4. Staffing Management

Throughout the project's duration, Staffing Management is of utmost importance because it defines the most essentials for the team and their roles to have a successful project execution. Being able to outline the strategies, and the processes of each project phase from planning to closeout, to effectively manage acquiring to turnover, makes human resources clearly informed of their tasks and responsibilities.

• Acquisition is necessary to be done in the timeliest way to acquire the necessary skills and expertise needed in the project.

• Training is a crucial step before starting the project to reduce errors and improve skills for better performance in delivering project outcomes.

• Regular evaluations and assessments will be conducted to identify areas that need improvement and maximize efficiency.

The project's Human Resource and Staffing may be subjected to change as there are going to be contingencies and updates within the project as time moves forward, which is why it is expected to have updates in the staffing management to fulfill the roles and responsibilities needed to complete the project.

Table Staffing10 Management: Roles and Responsibility

Role	Project Responsibility	Skills Required	Number of Staff	Performance Reviews	Recognition and Rewards

Project Sponsor	Provides funding and resources for the project.	Strategic planning and leadership skills	1	Quarterly or as needed.	Bonus or promotion
Project Manager	Oversees the day-to-day operations of the project	Project management, communication, leadership skills	1	Monthly or as needed.	Bonus or promotion
Project Product Owner	Evaluates deliverables and reports to project sponsor	Leadership, communication, delegation	1	Monthly review	-
Project Members	Contributes to the project's execution and completion.	Technical or functional skills as required by the project.	Varies depending on project requirements.	Weekly review or as needed.	Performance-based bonuses or salary increases.
Project Adviser	Contributes to project's checking, suggestions, and improvements.	Technical and analytical skills as required by the project.	Varies depending on project requirements.	Weekly review or as needed.	-
Project Consultant	Contributes to project's checking, suggestions, and improvements through consultations.	Technical and analytical skills as required by the project.	Varies depending on project requirements.	Weekly review or as needed.	-

6.6. Change Management Plan

6.6.1. Introduction

The Change Management Plan was created for the D7 Auto Service Center Web-App project to have a proper plan about how changes will be implemented in the project. Defining the proper steps and the conditions that must be met in order to have the project have changed.

6.6.2. Change Management Approach

The Change Management approach for the D7 Auto Service Center Web-App Project will make sure that the proposed changes will be defined, reviewed, and before it is implemented in order to have the changes run through proper steps before implementation.

The Change Management approach for the D7 Auto Service Center Web-App is observed through the following:

- Ensure are necessary and has benefits for the project.
- Determine how the change will be implemented.
- Manage the change as it is implemented.

The Change Management process was also discussed and agreed upon in order to have formal procedures on how the project parts, and/or features maybe subjected and reviewed for change.

6.6.3. Definition of Change

There are several types of changes which may be requested and considered for the D7 Auto Service Center Web-App Project.

- **Scheduling Changes**: Changes which will impact on the approved project schedule. The changes must be scheduled and must not intervene with the project's scheduled dates for the release plans and other pertinent dates.

The project manager will ensure that all changes made are well communicated with the product owner, the project adviser and consultant, and the project sponsor, in order to have the changes be an informed decision for the project team and the project sponsor.

6.6.4. Change Control Board

The Change Control Board (CCB) is the approval authority for all proposed change requests pertaining to the D7 Auto Service Center Web-App Project. The following chart provides a list of the CCB members for the D7Auto Service Center Web-App Project:

Table 11 Change Control Board

CHANGE CONTROL BOARD ROLE	ROLE	NAME	CONTACT	RESPONSIBILITES
Change Control Board Chair	Project Sponsor	Anne Sydney R. Simpelo	asimpelo@gmail.com	• Approve or deny changes • Review impact of changes and overturn decisions.
Change Control Board Member	Project Manager	Andre O. Viernes	aoviernes@student.apc.edu.ph	• Determine changes made • Appeal to decision turnovers • Formulates action plans for changes
Change Control Board Member	Product Owner	Francesca Erin R. Camino	frcamino@student.apc.edi.ph	• Ensure changes are followed through • Appeal to decision turnovers

6.6.5. Roles and Responsibilities

The following are the roles and responsibilities for all change management efforts related to theD7 Auto Service Center Web-App Project:

Project Sponsor:
- Approve all changes to budget/funding allocations.
- Approve all changes to schedule baseline.
- Approve any changes in project scope.

Project Manager:
- Receive and log all change requests from project stakeholders.
- Lead and manage the analysis of the project's risks, budget, changes, and management planning, and communicate to the project sponsor for any changes.
- Make project and documentation changes as needed, under the approval of the project sponsor.
- Participate on CCB

Product Owner:
- Leading change efforts and ensuring all stakeholders are aware of the changes that will take place.
- Creating and implementing a change management plan that addresses potential resistance to change.
- Identifying and addressing potential risks and issues associated with the change.

6.6.6. Change Control Process

The Change Control Process for the D7 Auto Service Center Web-App Project will follow the organizational standard change process for all projects.

1) Request for change/updates from Project Sponsor - In this case, the changes must be agreed upon by the team and the project sponsor, and any changes that must be implemented should also be within the project team's capabilities.

2) Records of changes made – Changes made are to be recorded by the documentation team to see progress, and updates from the previous feature/part of the project that has been subjected to changes.

3) Change Evaluation – Any changes made will be evaluated before it is implemented for the project.

4) Change Request Decisions – Once the project change has been approved, the decision is set to either be approved, denied, or still pending.

5) Implementation of Change – Once the change request is approved, the project team can start to implement the change.

To effectively monitor the progress of change requests, a specific change request status is assigned to each step, as illustrated in the table below:

Table 12 Change Control Process

Status	Description
Submitted	A change request log submitted by any member of the Elite Four team has not yet undergone impact analysis by the Project Manager.

In Review	Conducting an impact analysis is in progress.
Approved	The change request has been approved and will now proceed to the implementation stage.
Denied	The change request has been rejected.
In Progress	The action plan for implementing the change request is currently in progress.
Verifying	A review is being conducted to ensure proper implementation of the change request.
Closed	The change request has been fully executed, with successful testing and the release of updates.

6.7. Communications Management Plan

6.7.1. Introduction

The D7 Auto Service Center Web-app project considers the Communications Management Plan as a crucial element since it specifies the communication strategy and processes that must be of adherence to enable concise and clear communication within the project team and project sponsor.

- The project information details that will be communicated are outlined in the plan; these may include project updates, progress reports, risks, and challenges.

- To ensure that all stakeholders are informed promptly, the plan delineates the communication methods that will be utilized.

- The plan sets up a schedule for project communications, encompassing both formal and informal means, to ensure that stakeholders are constantly updated.

- The plan describes the distinct communication needs of each stakeholder and the approach to meet those needs, including accessibility and language requirements.

- The plan lays out a process for managing alterations in communication or the communication process, encompassing the proposal, review, and approval of changes. This guarantees that all stakeholders are informed of any changes and that the communication process is consistent throughout the project.

- The plan specifies the process of communication within the project, including how information is disseminated among team members, stakeholders, and other project partners. This ensures that all stakeholders are informed, and that information is exchanged promptly and efficiently.

- The plan incorporates a protocol for escalating and resolving any communication-related conflicts or challenges that may arise during the project. This protocol helps to ensure that any communication-based issues are dealt with and resolved promptly, thus ensuring the smooth flow of the project.

6.7.2. Communications Management Approach

Communication will be very pivotal in the project's phases, which is why the approach that will be utilized for this project is thought of by the team to be a combination of proactive and reactive strategies, while it also takes communication through online and onsite mediums.

Proactive by means of conducting meetings that will be set to have the members and the project stakeholder be informed of the deliverables that are being made, while it also informs the team of what needs to be accomplished. Through this approach, the team communication will flow through the project's phases which will be comprised of the updates with regards to the deliverables, the progress reports, the issues that rose which could cause a bottleneck in the process and may require contingency.

Reactive strategy will also be implemented in the process of the project as it is also required to have feedbacks as a means of understanding and resolving the communication-based conflicts, misunderstandings, and/or conflicts that could hinder the project between the sides of either the client or the development team.

The team will also be conducting meetings with the project manager through onsite and online premises, depending on which medium is best used in situations. This approach will also seek to choose which mode will be most convenient.

The project team will be communicating with the external advisers and consultants for collective feedback and suggestions for the project deliverables and milestones.

The product owner will communicate with the project manager and project sponsor in ensuring proper evaluation and reporting of the deliverables being presented by the

project team for the implementations for the project's system and documentations to either be approved, declined, or be subjected for changes/revisions.

6.7.3. Communications Management Constraints

The constraints that the communications management will have will be dependent on following limitations of, but not, limited to the following:

1. **Limited budget to travel onsite:** The project will have limitations in travelling onsite to the client to report pertinent information for the project.

2. **Limited access stakeholders:** Due to the stakeholder's limitations due to the work schedule, this will also be a constraint if the stakeholder is unable to meet with the development team, is in a remote location, or is unavailable for certain reasons.

3. **Limited availability of development team:** The team members will also have limited schedule availability, due to prior commitments, and/or other responsibilities which makes their availability limited.

6.7.4. Stakeholder Communication Requirements

The D7 Auto Service Center Web-app project relies heavily on Stakeholder Communication Requirements, which outline the communication needs of all stakeholders involved in the project. The effective implementation of these requirements is crucial for the timely completion of the project within budget and to the satisfaction of all stakeholders. The project team can ensure that stakeholders' expectations are met by addressing their specific communication requirements, thereby building trust, and promoting collaboration.

The Communication Management Plan for the D7 Auto Service Center Web-app project contains information regarding the stakeholders' communication needs and how they will be met during the project's lifecycle. This includes the Stakeholder Communication Requirements, which outline the following:

1. **Project updates**: It is essential to keep all stakeholders informed of the project's progress, including any issues or risks that may arise. Both the project manager and product owner will be updating the project sponsor for the project's changes and implementations.

2. **Thorough communication**: To ensure stakeholders understand the message, all project-related information should be communicated in a clear and concise manner.
3. **Accessibility:** Communication should be accessible to all stakeholders, considering any language or accessibility needs.
4. **Confidentiality:** Any sensitive or confidential information should be communicated only to the necessary stakeholders and handled securely**.**
5. **Two-way communication**: Communication should be a two-way process, allowing stakeholders to provide feedback and ask questions.

6.7.5. Roles

Table 13 Communication Management: Roles and Responsibility

Roles	Responsibilities
Project Sponsor	The project sponsor is responsible for approving all changes to the budget/funding allocations, approving all changes to the schedule baseline, and approving any changes in project scope, as well as signing the project charter for the D7 Auto Service Center web-app project.
Project Manager	The project manager is responsible for planning, executing, and closing the D7 Auto service center web-app project. They lead the project team and ensure that the system is completed within the required quality standards, on time, and within budget.
Product Owner	The Product Owner is responsible for giving direction and guidance to team members to complete the D7 Auto Service Center web-app project within the given constraints. This includes delegating tasks, monitoring progress, providing feedback and support, and ensuring that all team members are working collaboratively towards achieving project objectives.
Web Developer	The team developer collaborates closely with the Product Owner to ensure the project is completed quickly and efficiently. They are responsible for the design, coding, testing, and implementation of the project, ensuring that it meets the necessary requirements and is of high quality.
UI/UX Designer	The team developer support works in collaboration with the team's developer and assists them in carrying out various tasks related to designing, coding, testing, and implementing the project. They provide additional support to ensure that the project is completed

	successfully and on time.
QA Tester	The team's QA Tester will evaluate and monitor implementations to ensure the project's features are up to standard and monitored accordingly.
Project secretary	The team's project secretary involves administrative documentation and support in coordinating team activities. This may include scheduling meetings, organizing documentation, and assisting with communication and coordination to ensure the project's smooth operation.
Project Adviser	The team's project adviser will evaluate the project's deliverables and provide suggestions for its improvement regarding its development and documentation.
Project Consultant	The team's project consultant will evaluate the project's deliverables and give suggestions for its improvement regarding its development and documentation through consultations.

6.7.6. Project Team Directory

In the communication management plan, the email addresses and phone numbers in this table are listed as a project team directory and will be used to communicate with these people.

Table 14 Project Team Directory

Name	Role	Email
Anne Sydney R. Simpelo	Project Sponsor	asimpelo@gmail.com
Andre O. Viernes	Project Manager	aoviernes@student.apc.edu.ph
Dan Michael C. Alfaras	QA Tester	dcalfaras@student.apc.edu.ph
Alyssa L. Garcia	Web Developer	algarcia@student.apc.edu.ph
Francesca Erin R. Camino	Project Secretary	frcamino@student.apc.edu.ph
John Zenon P. Coquia	Database Administrator	jpcoquia@student.apc.edu.ph
Darrell Royce A. Lazala	UI/UX Designer	dalazala@student.apc.edu.ph

6.7.7. Communication Methods and Technologies

To successfully communicate with all stakeholders involved in the D7 Auto Service Center Web-app project, it is crucial to have a comprehensive knowledge of the communication methods and technologies to be used. It is necessary to assess the strengths and weaknesses of each communication method and technology to ensure that stakeholders receive the information they require promptly and effectively. This involves identifying the appropriate ways to provide updates, progress reports, risks, issues, and other pertinent details related to the project.

To identify the most suitable communication methods and technologies for the D7 Auto Service Center web-app project, it is important to consider numerous factors, such as:

- The technical proficiency level of stakeholders: Simple communication methods like email and telephone may be preferable for stakeholders not particularly familiar with technology.
- The nature of the information being communicated: When sensitive or confidential information is involved, secure methods such as encryption and password-protected portals may be required.
- The project's budget and available resources: The chosen communication methods and technologies must be financially feasible and sustainable within the project's allocated budget and available resources.

6.7.8. Communications Matrix

The following table will be the communication matrix of the project:

Table 15 Communication Matrix

Channel	From	To	Type	Frequency	Format Used	Delivery media
Project Planning	Project Manager	Project Sponsor	Meeting	Beginning of the project	Formal	Onsite and social media
Release Planning	Project Manager, I.T (Information Technology). Team	Project Sponsor	Meeting	Beginning of the project.	Formal	Onsite and social media
Sprint Planning	Project Manager	I.T. Team	Meeting	Weekly	Informal	Microsoft Teams

						and social media
Management Process	Project Manager, I.T. Team	Project Sponsor	Deliverable	Beginning of the project.	Written Document	Google space (Gmail)
Project Deliverables & Updates	Project Manager	I.T. Team	Deliverable	Twice a week or as needed	Written Document	Microsoft Teams, GitHub
Project Backlogs	Project Manager	I.T. Team	Meeting	Twice a week or as needed	Informal	Microsoft Teams and social media

6.7.9. Communication Flowchart
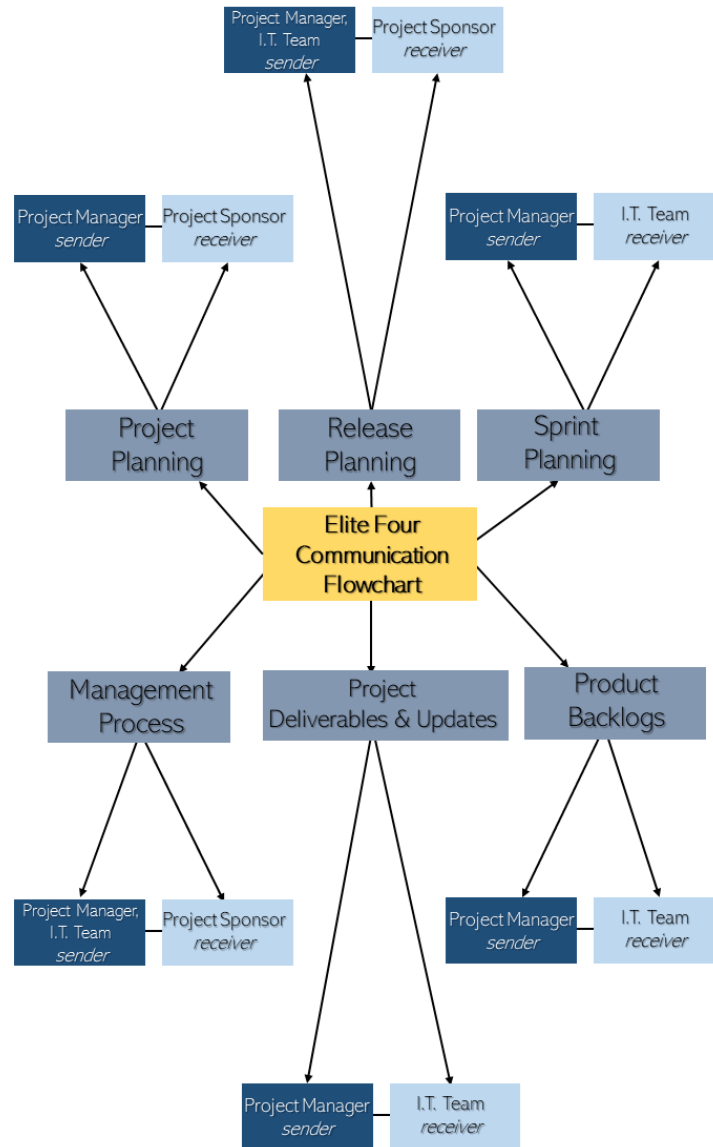
Figure 3 Communication Flowchart

6.7.10. Guidelines for Meetings

Meetings are an essential aspect of efficient communication within any project, and the D7 Auto Service Center web-app project is no different. To ensure the effectiveness, productivity, and efficiency of meetings, it is crucial to establish well-defined guidelines that specify the purpose of the meetings, the roles and responsibilities of attendees, and the procedures that will be followed during the meetings.

Establishing clear guidelines for meetings can improve the effectiveness of

communication among project team members and stakeholders. These guidelines enable participants to better prepare for meetings and engage in discussions more effectively. Furthermore, the project manager can ensure that meetings are conducted in an organized and consistent manner, which can prevent confusion and misunderstandings.

The following are the meeting guidelines that should be observed for the D7 Auto Service Center web-app project to ensure that the meetings are productive, efficient, and effective:

- **Meeting Attendees**: The roles and responsibilities of attendees should be clearly defined and communicated in advance. Only attendees necessary for the meeting should be invited.
- **Meeting Agenda**: A clear, concise agenda should be developed and distributed to all attendees before the meeting.
- **Platform used**: The technology used for meetings should be accessible to all attendees. This may involve the use of video conferencing technology, such as Microsoft Teams.
- **Meeting Evaluation**: Regular evaluation of meetings is necessary to ensure that they are productive and that attendees are satisfied with the outcomes. Any issues that arise during meetings should be addressed promptly, and appropriate measures taken to improve and enhance future meetings' effectiveness.

6.7.11. Communication Standards

The appropriate and best communication standards for the D7 Auto Service Center Web-app project are the following:

- **Naming Protocol**: Establishing a consistent naming convention for documents and files that are shared within a project can make it easier to retrieve and organize files for the project.

- **Collaboration Tool**: The use of a standardized platform such as SharePoint, Open project software, or GitHub for project communication can enhance accessibility to information and promote collaboration among project team members and stakeholders.

- **Video Meetings**: Use of Video conferencing tools like Microsoft teams and Facebook Messenger to contact project development team members and the

stakeholders.

6.7.12. Communication Escalation Process

The appropriate and optimal communication escalation process for the D7 Auto Service Center Web-app project would consist of the following:

1. **Determining the problem:**
   - Any communication or issues related to the project should first be brought to the attention of the Developer.
   - The Developer will assess the situation and try to resolve it themselves or escalate the issue to the next level if necessary.

2. **Address the problem within the team:**
   - If the Developer is unable to resolve the issue, they will escalate it to the Product Owner.
   - The Product Owner will review the issue and try to find a solution. If they are unable to do so, they will escalate the issue to the next level.

4. **Involve the Project Manager:**
   - If the Product Owner is unable to resolve the issue, it will be escalated to the Project Manager.
   - The Project Manager will assess the situation and take appropriate action to resolve the issue. If they are unable to do so, they will escalate the issue to the next level.

4. **Report to Project Sponsor:**
   - If the issue is still not resolved, it will be escalated to the Project Sponsor.
   - The Project Sponsor will review the issue and take appropriate action to resolve it.

This communication escalation process ensures that issues related to the project are addressed in a timely and efficient manner, and that the appropriate level of authority is involved in making decisions related to the project.

6.7.13. Glossary of Communication Terminology

Table 16 Glossary of Communication Terminology

Term	Definition
Communications Management Plan	A plan that outlines the communication strategy and protocols for stakeholders and the project team.
Stakeholder	An individual that has an interest in a project, program, or organization. They can be both internal or external to the organization and can be affected by or affect the project's or organization's actions, decisions, and outcomes.
Communication Flowchart	A visual representation that illustrates how information is communicated and moves throughout a project.
Communication Escalation Process	A process for resolving conflicts or issues related to communication.
Communication Standards	A communication standard is a set of guidelines or rules that define the methods, channels, formats, and protocols for exchanging information and ideas among individuals or groups within a project or organization.
Communication Constraints	A communication constraint refers to any factor that limits or affects the effectiveness of project communications.
Communication Approaches	A communication approach refers to the specific methods and strategies used to convey information and messages to the project stakeholders.

6.8. Quality Management Plan

6.8.1. Introduction

The Quality Management Plan outlines the team's approach to ensuring that the D7 Auto Service Center Web-App project meets the necessary quality requirements and standards. This plan sets up the procedures, techniques, and tools that will be used to manage and control quality throughout the project lifecycle.

6.8.2. Quality Management Approach

The Quality Management Plan for the D7 Auto Service Center Web-App project will utilize an Agile and Scrum methodology, this way, the project during its phases can be subject

to change which will allow both the development team and the client to make changes as needed whenever there are certain adjustments that are needed in order to make the project tailor-fit to the requirements of the business. This method and approach will also allow the development team to carefully run through the deliverables needed and ensure that the deliveries being made are of quality and through the right practices of the chosen methodologies.

To ensure the quality of the project, a QA Tester is a part of the development team to ensure that all implementations are up to standard and of quality.

The project sponsor also acquired a project adviser and consultant to evaluate the project deliverables and provide feedback and suggestions through consultations.

Table 17 Quality Management Plan: Roles and Responsibilities

Role	Description
Project Manager	Establishes and supports the standards needed for the project deliverables so that it may supply satisfaction to stakeholders' needs.
QA Tester	Ensures that the project's features, and other necessary components pass the success criteria of the project, while supporting communication to both the project teams and the project manager.
Development Team	Responsible for ensuring that deliverables are created and delivered on time, while these deliverables being made are of utmost quality and adhere to the success criteria and standards.
Documentation Team	In charge of keeping all paperwork and pertinent meetings well documented and recorded. This team will also handle weekly reports, status reports, and organize the minutes of the meetings.
Project Sponsor	The project sponsor will be part of the project's decision making whether a feature implemented and to be deployed is thereby approved, declined, or needs changes. The project sponsor will also receive regular updates from the project manager as new features are being implemented to the project.

Product Owner	Responsible for evaluating the deliverables being provided by the team and reports it to the project sponsor as updates throughout the project's lifecycle.
Project Adviser	The project adviser will be overseeing the deliverables being provided and will be supplying suggestions through the documentation and implementation of the project.
Project Consultant	The project adviser will review the deliverables and documentation of the project and supply suggestions through consultations.

6.8.3. Quality Requirements / Standards

The D7 Auto Service Center Web-App project must adhere to the following quality requirements and standards:

- The web application should be designed to provide a user-friendly and intuitive experience, with consistent design and layout across all pages, to ensure ease of use and efficient navigation.
- The web application must adhere to industry standards and best practices for security, performance, and scalability to ensure a secure and reliable system.
- Thorough testing and validation should be conducted throughout the development lifecycle to ensure that the web application meets all client requirements and specifications and to find and address any defects or issues.
- The web application should be compatible with all major web browsers for desktop to ensure a consistent and seamless user experience.
- The design of the web application should incorporate a modular and flexible architecture that allows future updates, enhancements, and maintenance without disrupting the existing system functionality.
- The web application should follow relevant laws and regulations, such as data privacy laws, to ensure legal compliance and protect user data.

By adhering to these quality requirements and standards, the team can ensure that the D7 Auto Service Center Web-App project delivers a high-quality product that meets all customer expectations and requirements.

6.8.4. Quality Assurance

The Quality Assurance process of the D7 Auto Service Center Web-App is also needed for the utmost quality of the deliverables, with the assurance that the standards from the selected methodologies are being met. This will be achieved by following through the success criteria, the satisfaction of the project's clients, and through the team's collaborative effort which will make the overall project complete and of quality.

Defining the Quality Standards: The project team will collaborate with the client to ensure that both the project and the documents, about quality, are well defined and of utmost adherence to the client's satisfaction.

QA Testing: After the project quality standards are defined through, the next phase is the QA Tester's responsibility to ensure that all implementations for the project's quality are up to standards and is of quality.

Reports: Using the success criteria, the project team will be providing reports with regards to progress, and use of Open Project which will help display the project work packages' statuses.

Compliance to Industry Standards: As part of the PBL or Project Based Learning, this project will undergo the process of industry standards wherein, it will go through the planning, system analysis and design, then development phase which ensures that all deliverables and documentations are well polished and organized.

Client Feedback: The client's satisfaction with the project will be considered as this is pivotal to the project's completion.

Quality Assurance of the project will be closely watched as it is a crucial part in making sure that the project was delivered in compliance to the standards and customer satisfaction while following through the methodologies used in completion of the project.

6.8.5. Quality Control

To make sure that the project meets the required quality standards, the following quality control measures will be taken:

- Regular inspections and reviews of project deliverables will be conducted to show

and address any quality issues that arise.

- Project changes will be closely checked to ensure that they are properly documented, tracked, and approved. Unauthorized changes will be found and promptly addressed to support the quality and integrity of the project.

- Client feedback will be collected and analyzed to find any areas where client expectations are not being met. Necessary changes and improvements will be made to the project to address these issues.

6.8.6. Quality Control Measurements

To check and control project performance, a set of quality control measurements will be implemented throughout the project lifecycle. The following measurements will be used:

- Regularly, the team will review test results and validation reports to ensure that the D7 Auto Service Center Web-App meets all necessary requirements and specifications set by the client.
- The QA Tester will review and oversee the project implementations to ensure the quality of the deliverables and adherence to the project's defined quality standards.
- Quality metrics will be proven to evaluate project performance, including measuring the number of bugs and the number of client issues reported. This data will be used to name areas for improvement and take necessary actions to ensure that project goals are met.
- Inspection and review results will be closely checked to find and address any quality issues that arise. The team will document any corrective actions taken to prevent the recurrence of the same issues in the future.
- The team will regularly review the changes to ensure that all project changes are appropriately documented, tracked, and approved. Unauthorized changes will be found and addressed promptly to support project quality and integrity.
- Client feedback will be regularly collected and analyzed to find any areas where client expectations are not being met. With the help of this feedback, the project will be changed and improved as needed to keep up with the needs and satisfaction of the client.

By following this Quality Management Plan, we can ensure that the D7 Auto Service Center Web-App project meets the necessary quality requirements and standards, and

that quality is managed and controlled throughout the project lifecycle.

6.9. Risk Management Plan

6.9.1. Introduction

Risk management is an essential procedure that helps the team in recognizing and reducing the risks that might appear when developing a project. The team will outline its approach to risk management for the D7 Auto Service Center Web-App project in this plan, along with the measures it will take to identify, evaluate, and mitigate risks. The team will also discuss the project's top three risks and how they intend to handle them. The team can reduce the possible impact of these risks and guarantee the successful delivery of the D7 Auto Service Center Web-App project by adopting a proactive approach to risk management.

6.9.2. Top Three Risks

The top three risks that were identified for the D7 Auto Service Center are:

Security risks - A major risk for web applications is the potential occurrence of a security breach, which may involve unauthorized access by attackers to the application's data, either through the exploitation of vulnerabilities in the application or using social engineering tactics to deceive users into disclosing sensitive information.

Technical risks - Technical issues such as bugs, compatibility problems, and performance bottlenecks can cause downtime or other issues that affect the web application.

Business risks - The possibility always exists that the web application may not succeed in terms of drawing in users or generating revenue, resulting in a significant setback for the business.

6.9.3. Risk Management Approach

The D7 Auto Service Center Web-App risk management strategy:

Risk Identification - To identify potential risks that may arise during the development of the web-app, the team will analyze the project requirements, objectives, and scope. This process will help the team identify risks associated with the development process.

Risk Evaluation - After identifying potential risks, the next step is to evaluate the probability and impact of each risk. This process assists in prioritizing the risks and allocating resources suitably.

Risk Management – After the risk has been identified and assessed, the team will create a risk mitigation plan that involves devising strategies to reduce or eliminate risks. Strategies may involve backup systems, contingency plans, security measures, etc.

Risk Tracking- To complete the risk management process, the team will monitor and manage the risks throughout the development process. This involves regularly reviewing the risk management plan, updating it when necessary, and making changes to mitigate new risks that emerge.

6.9.4. Risk Identification

Risk identification is a very pivotal step in the risk management process of the project. To effectively identify potential risks associated with the development of the D7 Auto Service Center web-app, the team will follow these steps:

- Analyze project requirements, objectives, and scope to identify risks that could arise during the development process.
- Consider potential external factors that could impact the development process, such as changes in regulations, emerging technologies, etc.
- Categorize identified risks into diverse types, such as security risks, technical risks, and business risks.
- Prioritize the identified risks by evaluating their probability and potential impact on the project.
- Develop a proactive approach to risk management by creating a risk mitigation plan that involves devising strategies to reduce or eliminate the identified risks.

Consistently keep an eye on and handle the identified risks throughout the development process by regularly examining the risk management plan, making updates as needed, and implementing modifications to minimize any new risks that arise.

6.9.5. Risk Qualification and Prioritization

Once risks have been identified, it is essential to qualify and prioritize them based on their likelihood and impact. The following criteria will be used to qualify and prioritize risks for

the D7 Auto Service Center Web-App project:

a. **Likelihood** - The probability of the risk occurring, categorized as high, medium, or low.
b. **Impact** - The severity of the risk's consequences, categorized as high, medium, or low.
c. **Urgency** - The time within which the risk needs to be addressed, categorized as immediate, near-term, or long-term.

Risk assessment matrix for the identified risks of the D7 Auto Service Center Web-App based on their likelihood and impact:

Table 18 Risk Assessment Matrix

Risk	Likelihood	Impact	Urgency	Priority
Security	High	High	Immediate	High
Technical	Medium	High	Near-term	High
Business	High	Medium	Long-term	Medium

In this matrix, risks are categorized based on their likelihood, impact, urgency, and priority. The likelihood and impact categories are rated as high, medium, or low. Urgency is categorized as immediate, near-term, or long-term. Finally, risks are prioritized as high, medium, or low based on their scores in each of these categories.

The risk assessment matrix provides a visual representation of the likelihood and impact of each identified risk in the D7 Auto Service Center Web-App project. The matrix indicates that the top three risks identified in the risk management plan - Security risks, technical risks, and Business risks - all have a high probability of occurring and could result in a significant impact on the project if they are not adequately addressed.

The matrix shows that Security risks have the highest impact on the project, followed by technical risks and Business risks. As a result, Security risks are classified as high priority and require immediate attention, while Technical and Business risks are categorized as medium priority and need to be addressed in the near term.

The risk assessment matrix helps the project team to prioritize the identified risks and allocate resources effectively to mitigate them. It also enables the team to monitor and manage risks throughout the project development process, reducing the possibility of negative outcomes and ensuring the successful delivery of the D7 Auto Service Center Web-App project.

6.9.6.   Risk Monitoring

Risk monitoring is a continuous process that involves tracking and reviewing identified risks and implementing appropriate measures to mitigate them. The following steps will be taken to effectively monitor risks for the D7 Auto Service Center Web-App project:

a. **Regular Reviews** - The risk management plan will be reviewed regularly to ensure its effectiveness and relevance. The team will conduct periodic reviews to assess the project's progress and the impact of identified risks on the project.
b. **Status Reporting** - The project team will develop a risk status report that will be updated regularly to track the progress of risk mitigation efforts. The report will include details on the risk status, mitigation measures, and any new risks that have emerged.
c. **Change Management** - The team will monitor any changes in the project scope, timeline, or resources that may impact on the identified risks. Changes will be managed using a formal change management process to ensure that the potential impact of any changes is assessed before they are implemented.
d. **Communication** - The team will establish effective communication channels to facilitate communication among stakeholders. This will help ensure that any emerging risks are identified and addressed in a timely and appropriate manner.

Effective risk management is critical in ensuring that the project team minimizes the risks of the project. By adopting a proactive approach to risk management, the team can reduce the potential impact of risks and ensure the successful delivery of the D7 Auto Service Center Web-App project. The risk management plan outlines the team's approach to identifying, assessing, and mitigating risks, and the risk assessment matrix helps prioritize risks based on their potential consequences and likelihood of occurrence. By monitoring identified risks regularly, the team can track the progress of risk mitigation efforts and adjust the risk management plan as necessary to ensure that the project stays on track.

6.9.7.   Risk Mitigation and Avoidance

To mitigate the identified risks, the team will:

- Develop a risk mitigation and avoidance plan that outlines specific strategies to reduce or eliminate each risk.

- Use strategies such as developing backup systems, implementing contingency plans, enhancing security measures, improving testing and quality assurance processes, and conducting risk assessments throughout the development process.

- Create an action plan to avoid risks that cannot be mitigated, such as risks associated with market trends or external factors beyond their control.

Key considerations and options for risk mitigation and avoidance include:

- **Resource allocation** - Allocate sufficient resources to the risk mitigation and avoidance plan, including personnel, time, and funding.

- **Risk assessment** - Conduct ongoing risk assessments throughout the development process to identify and address new risks as they arise.

- **Contingency planning** - Develop contingency plans for high-priority risks that could interrupt the project flow.

- **Communication** - Ensure open and effective communication channels between team members to identify and address risks promptly.

- **Agile approach** - Use an agile approach to development, with regular testing and feedback cycles to identify and address risks early in the development process.

- **Change management** - Implement change management processes to ensure that changes to the project do not introduce new risks.

6.9.8. Risk Register

The team will maintain a risk register for those documents all identified risks, their classification, probability, impact, and mitigation strategies. The risk register will be regularly updated throughout the development process to reflect any changes in the risk landscape or the risk management plan. The risk register will serve as a key reference for the project team to monitor and manage the risks effectively. The following criteria will be used to maintain the risk register of the project:

- **Risk ID** - A unique identifier assigned to each risk.

- **Risk Rank -** A ranking or scoring system used to prioritize the risks based on their likelihood and impact.
- **Description** - A brief description of the risk and its potential consequences.
- **Category** - The area or aspect of the project that the risk relates to, such as schedule, resources, technical, market, or human resources.
- **Destination/Owner** - The person or team responsible for managing and mitigating risk.
- **Probability** -The likelihood of the risk occurring, typically rated on a scale from low to high.
- **Impact - The risk's potential impact on the project, typically rated from low to high.**
- **Status** - The current state of the risk, whether it is open, in progress, or closed.

Table 19 Risk Register

Risk ID	Risk Rank	Description	Category	Destination / Owner	Probability	Impact	Status
R001	High	Team unable to meet project deadlines	Technical	Project Manager	High	High	In progress
R002	High	Key team member is unavailable during a critical phase	Business	Project Manager	Medium	High	In progress
R003	High	Inadequate user testing leads to buggy application	Technical	QA Team / Development Team	High	Medium	In progress
R004	High	Unauthorized access to sensitive data	Security	Development Team	Medium	High	In progress
R005	Medium	Third-party software used becomes unavailable	Technical	Development Team	Medium	Medium	In progress
R006	Low	Changes in the market that affects	Business	Product Manager	Low	Low	In progress

		relevance of the product						
R007	Low	Budget constraints	Business	Product Sponsor	Low	High	In progress
R008	Low	Miscommunication between team members	Technical	Project Manager	Low	Medium	In progress

The risk register helps the project team prioritize risks based on their probability, impact, and other factors, ensuring adequate risk management throughout the project's lifecycle. Regular monitoring and updates to the risk register allow the team to proactively address potential risks and mitigate them before they become critical issues that could jeopardize the project's success.

6.10. Procurement Plan
6.10.1. Introduction

The purpose of the procurement management plan is to have access to the required tools, skills, and services while within the budgetary constraints for the D7 Auto Service Center Web-App. By outlining the project's objectives, requirements, stakeholders, and scope, this plan establishes the project's overall context.

To ensure the successful implementation of the D7 Auto Service Center Web-App, the system must meet the following requirements:

- Account Management
- Reservation System
- Rating and Review System
- Community Forum
- User-Friendly Interface
- Service Details, Contact Information, and About the Company
- Gallery & 360 Virtual Tour
- Promos Tab, & Supports Tab
- Social Media Links
- Admin Panel

These requirements encompass all the essential features and functionalities that should be part of the D7 Auto Service Center Web-App to ensure a comprehensive and satisfactory user experience. By following this plan, it can effectively manage the procurement process, ensuring access to the required tools, skills, and experience, as well as services within the allocated budget. It emphasizes the importance of maintaining high quality standards throughout the implementation process.

6.10.2. Procurement Risks

Assessing the risk is an important task in all projects, as it involves the whole project and whether the acquiring of goods, services, and the business model would work in the real-life scenario. These procurement risks are potential issues that can arise during the project's procurement process. Which can negatively impact the said project and potentially the clients and their customer. Hence, it is important to know and plan for the risks as early as possible to minimize if not eliminate the possible impact of them on the project.

1. **Security Risk**: This refers to the potential for unauthorized access to sensitive data, which can compromise the confidentiality and integrity of the information. It is important to implement strict security measures, such as encryption and access controls, to prevent unauthorized access and protect sensitive data.

2. **Technical Risk:** This risk involves challenges related to the technical aspects of the project. It could include issues such as the team's inability to meet project deadlines or inadequate user testing, leading to a buggy application. Mitigation strategies should focus on monitoring project progress, conducting thorough testing, and providing additional resources if needed.

3. **Business Risk: Business risks are associated with factors that can impact the project's success from a business perspective.** This can include changes in the market that affect the relevance of the product or budget constraints that limit financial resources. It is crucial to conduct market research, adapt the product strategy as needed, and develop a well-defined budget to address these risks effectively.

These are the identified procurement risks that can happen during the implementation of the D7 Auto Service Center Web-App. It is important to conduct a comprehensive risk assessment and develop a plan to address any potential risks before implementation

begins.

6.10.3. Procurement Risk Management

1. Identification of Procurement Risks

The identified procurement risks for the D7 Auto Service Center Web-App are the following:

Technical
Team unable to meet project deadlines.
Inadequate user testing leads to buggy application.
Third-party software used becomes unavailable.
Miscommunication between team members

Business
Key team members are unavailable during a critical phase.
Changes in the market that affect the relevance of the product.
Budget constraints

Security
Unauthorized access to sensitive data

2. Risk Mitigation Strategy

After that, the risks for the project have been identified during the project. The appropriate risk mitigation and management strategy should follow to minimize the negative impact to the project.

- Regular project progress meetings and resource adjustments
- Cross-training team members and developing contingency plans.
- Implementing comprehensive user testing with QA and development teams
- Implementing strict security measures and regular monitoring
- Identifying alternative options for critical third-party software and maintaining communication with vendors
- Conducting market research and adapting to the new market trends.
- Developing a realistic budget and monitoring expenses
- Promoting effective communication and addressing misunderstandings promptly

3. **Assignment of Responsibilities**

The implementation of the D7 Auto Service Center Web-App requires a clear assignment of responsibilities to ensure the project is delivered on time, within budget, and to the desired quality standards.

The project manager will be responsible for the project, including establishing a management plan, setting project timelines, and ensuring all stakeholders are informed and engaged throughout the project. While the rest of the project team will be responsible for ensuring the system meets the needs of the business and its customers, providing user training and support, and monitoring the system's performance to ensure it is functioning properly.

4. **Communication**

For the successful completion of the project and the risk management of it, proper communication and reporting is needed. As the status updates of the project's states will provide insight to the whole project team and makes them able to produce risk mitigation and risk management strategies

A communication plan must be developed to ensure that that the parties involved in the project are informed about the project of any development that is happening in the procurement risk management or risk mitigation section of the project.

5. **Continuous Improvement**

The procurement risk management plan emphasizes continuous improvement through regular review and assessment of risk mitigation strategies, learning from past experiences, monitoring the external environment for new risks, and adjusting the procurement management plan accordingly. A proactive risk management culture is cultivated to minimize potential risks and drive ongoing improvement.

The adoption of an Agile Scrum methodology further enhances the procurement risk management process by enabling iterative and flexible development. Through collaborative Scrum meetings, the project team identifies and addresses risks, adjusts priorities, and implements timely mitigation strategies. This iterative approach ensures continuous evaluation and management of risks, enabling effective response to changing circumstances and successful procurement outcomes.

6.10.4. Cost Determination

Determining the cost of the D7 Auto Service Center Web-App necessitates considering several elements that influence the project's scope, complexity, and timing. Project management, development, integration, procurement, training, maintenance and support, contingency, and operating expenditures are some of the cost aspects that must be considered when estimating the entire cost of the project.

Personnel costs, equipment expenditures, and software costs associated with project management are all included. Development expenses include software development, hardware, testing, and quality assurance, whereas integration costs include the cost of integrating the system with existing software or third-party applications. The cost of procuring hardware, software, and services required to design and implement the system is included in the procurement expenses. The cost of teaching personnel to operate the system efficiently is included in the training costs.

The cost of maintaining the system, including software updates, hardware maintenance, and user support, is included in maintenance and support costs. Contingency costs are funds set aside to cover unexpected events such as delays, scope changes, or new requirements. Finally, operating costs include the costs of running the system after it is operational, such as labor costs, licensing fees, and maintenance expenses.

The total cost for the D7 Auto Service Center Web-App can be established by estimating the cost of each of these cost elements. The total cost establishes a baseline for budgeting, forecasting, and monitoring project spending throughout the project's lifecycle.

6.10.5. Procurement Constraints

The D7 Auto Service Center Web-App is no exception and demands careful consideration of multiple such constraints. The following are the constraints that must be considered as part of the D7 Auto Service Center Web-App:

- **Security –** The web-app must adhere to strict security measures to safeguard sensitive customer data, prevent unauthorized access, and protect against cyber threats/attacks.

- **Business –** The business objectives of the project must be considered when

developing the system. This includes financial restraints, schedule restrictions, and market trends.

- **Technical** - The D7 Auto Service Center Web-App must have the necessary features to allow the customers to book appointments, view available services, and receive confirmation of bookings. It also must have a user-friendly interface that can easily be navigated and must be accessible to customers that have various levels of technical proficiency.

6.10.6. Contract Approval Process

To ensure that all contracts are approved within their urgency, the contract approval process for the D7 Auto Service Center project will be formal and informed immediately to the project sponsor. The procedure will follow the organization's policies and regulations as follows:

Contract Planning: The project team will develop and construct the document necessary for the said project.

Contract Development: Once approved by the team, the contract thereby proceeds to be delivered to the project sponsor for approval/revisions.

Contract Approval: The contract would then be presented for approval to the project sponsor and project manager.

Contract Management: Once the contract is signed, the project manager will align the project to the contract's constraints and agreements.

6.10.7. Decision Criteria

For the D7 Auto Service Center Web-App, the following decision criteria will be used by the contract review board:

- **Business Needs** - The system should be aligned with the organization's business needs, such as improving the customer experience, increasing operational efficiency, or increasing revenue.
- **Pricing** - The cost of the project's implementation will be considered during the

deployment process.

- **Schedule** - The team will be adhering to the scheduled delivery of end results of the project timeline and deliverables, which include the deliverables and documentation.
- **Compliance** - All legal, regulatory, and intellectual property rights, data privacy, and security, must be clearly stated, reviewed, and approved and undergo proper legal processes before implementation in the project.
- **Technical Requirements** - The system must meet the organization's technical requirements, such as compatibility with existing systems, security protocols, and compliance with relevant industry standards.
- **Resource Availability** - The project should have the necessary resources, such as staff, budget, or technology, to ensure its success.

6.10.8. Performance Metrics for Procurement Activities

For the D7 Auto Service Center Web-App, the following performance metrics will be used for procurement activities:

1. **Procurement Life Cycle Period:**

   The time it takes to complete the procurement process, beginning with identifying the need and ending with the issuance of a purchase order or contract.

2. **Cost Liquidation:**

   This metric will enable the breakdown of costs to see whether the project exceeded its approved budget. The liquidation will help in informing the actual costs over the planned costs.

3. **Customer Satisfaction:**

   Customer satisfaction will also be a metric that will be of great reliability to see the project's efficacy to its intended purpose.

6.11.   Implementation Plan
6.11.1. Executive Summary

The Elite Four team collaborated with the client to develop the D7 Auto Service Center

Web-App, aiming to enhance their auto services by improving organization, providing a convenient booking, and scheduling system. This includes highlighting the key features and functionalities of the system, such as online booking, appointment scheduling, and customer communication.

The first step in developing an implementation plan for D7 Auto Service Center Web-App is defining the project's scope and goals. This includes showing the system's key features and functionalities, such as online booking, appointment scheduling, and customer communication. It is also critical to define the project goals and success criteria to ensure that the system meets the needs and expectations of the stakeholders.

The second step is to name and assign roles and responsibilities to the project team. The project manager, product owner, developers, designers, project coordinator, and other relevant personnel should make up the team. The project manager should develop a project plan outlining the timeline, milestones, deliverables, and resource requirements. The project's critical path and risks should also be named in the plan.

The third step is to design, create, and test the D7 Auto Service Center Web-App. This entails creating the system architecture and deciding the technologies and tools needed for development. To ensure scalability and maintainability, it is important to build the system using the best coding practices in the industries. To ensure that the system meets the functional and non-functional requirements, extensive testing and quality assurance should be performed. After the system has been tested and confirmed, it should be deployed to the production environment, and end-users should be trained. Ongoing maintenance and support should also be supplied to ensure the system's dependability and accuracy.

The current state of the system is stable and is ready to be deployed and hosted on a cloud platform. All the required functionalities have been tested. As the system gets ready for deployment, we are aiming to ensure that the client will receive and be equipped with all the essential documentation and to help to manage and support the system efficiently.

To ensure a thorough understanding of the system, the new owners will receive all project deliverables, including technical documentation, user manuals, and source code. We will also provide new owners with knowledge transfer sessions covering system operations, maintenance, and troubleshooting.

To summarize, putting in place the D7 Auto Service Center Web-App causes careful

planning, a skilled project team, and a rigorous development and testing process. D7 Auto Service Center can ensure that the system meets the needs of their customers, improves service efficiency and delivery, and supplies a positive return on investment by following a well-defined implementation plan.

6.11.2. Transition Approach

The transition approach for the D7 Auto Service Center Web-App project will include the following steps:

Assessment and Communication: The assessment will ensure that all gaps and inefficiencies in the system have been found. This also means that all stakeholders are informed of the transition plan that will occur, as well as the schedules for the transition.

Planning: The planning stage is to develop a detailed transition plan. This includes deciding the implementation's overall progress, milestones, and timelines. It is also critical to find potential risks and mitigation strategies to avoid problems in the future.

Knowledge Transfer: Knowledge transfer will take place through various channels, including documentation and the planned demonstration of the project use, to ensure that the client will acquire the proper skills and knowledge needed to operate the project.

Staffing: The project team's staff will be identified to determine the need regarding the staff for the project.

Training: The project team will be providing training for the staff of the d7 that will help in management and operations of the system during its closeout phase.

System Demonstration and Handling: The project team will also be providing system demonstrations on how to manage the records of data being collected in the project, to properly handle and manage the system being used in the administrator side of the project.

Evaluation: The evaluation part of the transition will be deemed necessary to evaluate the project's transition success and the insights upon transition.

Assumptions:

The following assumptions are assumed for the transition:

a. The client will provide availability online or onsite for meetings, consultations, and signing documents, and the project's transition.

b. Documentation, demonstration, and proper turnover will be supplied by the development team to its client and sponsor accordingly.

c. The project team will be provided with a budget from the project's creation until its turnover as needed, and within the approved budget constraints.

d. The client will be knowledgeable of operating and managing the project as demonstration and manual instructions will be provided during the project turnover.

6.11.3. Transition Team Organization

Roles and Responsibilities:

Project Manager: Overall accountable for the transition's success. The project manager will oversee the transition, ensure that transition activities are completed on time, and stay connected with the project sponsor for updates.

Product Owner: Ensures that the project's features and other necessary components pass the success criteria of the project while supporting communication to both the project teams and the project manager.

Development Team: In charge of supplying technical ability for the project. The Developers will collaborate closely with the project team to understand the system and develop a transition plan. The developers will also oversee coordination with the client to ensure that technical knowledge and ability are transferred smoothly.

Documentation Team: In charge of keeping all paperwork and pertinent meetings well documented and recorded. This team will also handle weekly reports, and status reports and organize the minutes of the meetings.

Project Sponsor: The project sponsor handles approving all changes to the budget/funding allocations, approving all changes to the schedule baseline, and

approving any changes in project scope, as well as signing the project charter for the D7 Auto Service Center web-app project.

D7 Marketing Team: The marketing team of D7 will be trained to effectively manage the system being implemented unto D7 Auto Service Center.

Project Adviser: The project adviser be overseeing the transition to provide suggestions and/or improvements.

Project Consultant: The project consultant will be reviewing the project during the transition phase for any changes/updates for improvement through consultations.

6.11.4. Workforce Transition

The workforce transition plan for the D7 Auto Service Center Web-App consists of three steps. The first step is to inform employees and stakeholders about the need for the new system so that they are informed and prepared for the change. The second step is to provide employees with customized training on how to use the new system, which includes instruction on new processes, procedures, and technologies. Finally, the third step is to manage employee performance during and after the new system's implementation to ensure that employees are effectively using the new system and meeting business goals.

Organizations can ensure that their employees are prepared and equipped to use the new system effectively by following these steps, which leads to improved business processes, increased efficiency, and increased customer satisfaction. A well-defined workforce transition plan can reduce potential resistance to change, increase adoption and usage of the new system, and help the project achieve its goals.

6.11.5. Workforce Execution During Transition

During the transition period of the D7 Auto Service Center Web-App the following are to be observed and performed:

- **Documents & Records Update:** This is crucial for the project's recordkeeping, as documents are changed, and/or altered to match what is agreed upon by the

project manager and the project sponsor.

- **Formal Acceptance:** The formal acceptance through proper signing and agreeing to the documents is still to be observed during the project's transition period.

- **Project Closeout Onsite Meetings: T**he transition will also cover the closeout phase of the project which is why it will be of necessity to meet with the team's sponsor to formally turn over and close the project.

6.11.6. Subcontracts

This project D7 Auto Service Center Web-App is not tied or bound to any contracts or subcontracts. Transition of contracts or other related matters to subcontracts are not required.

6.11.7. Property Transition

6.11.7.1.   Intellectual Property

The intellectual property of the D7 Auto Service Center Web-App's intellectual properties will fall under its:

- Project Source Code
- Project Database
- Project Open Administrator Tool
- Project Documentations
- Project Signed Documents

The following steps will be taken to ensure proper handling of intellectual property during the transition:

Identification of all the project's intellectual property

All intellectual property associated with the project will be transferred to the project sponsor accordingly throughout the project's turnover phase.

Protection of all the project's intellectual property

During the transition period, all intellectual property will be safeguarded by non-disclosure agreements (NDAs) and other legal processes to ensure that the project team kept the intellectual properties of the project safe to the best of their abilities.

Transfer of project's intellectual property

The project's intellectual properties are to be transferred to the project sponsor during the turnover period of the project.

6.11.7.2. User Accounts and Passwords

As pivotal part of the D7 Auto Service Center Web-App's security the user account and password of both the admins and the customers will be marked as the key credentials that will be used to access the account that they have used to access the system, in line with their respective accesses.

User Account Recordkeeping and Data Collection

The accounts made will be recorded in the database to keep a record of the login credentials and pertinent information of the user that will be used to access their respective accounts and to improve the services being used in the web-app.

Passwords

Passwords will also have the requirements of a strong password, to meet with the standards of security that prevents easy hacking of the accounts of both the admins and the customers. Through the accounts made, passwords per accounts may also be updated if the password is forgotten, through project measures utilizing the forgotten password.

Account Disablement

Any violations within the premises of the web-app that was made by the customer accounts is subject to account disablement or in the case that an admin has also violated any rights or has acted unlawfully, the account of the violator shall be disabled to prevent any further harm in the system and its internal and external party involvements.

6.11.8. Knowledge Transfer

Documentation & Instruction Manuals:

- Documentation and manuals will be provided to the client by the project manager and the development team.
- The manuals will supply the proper instruction on how to complete specific system tasks.

Training:

The project team and development team will provide the client with proper orientation and training to ensure they fully understand the system and its processes.

Meetings between the project team and the client will be scheduled as part of the Knowledge transfer process to ensure that users of the system to manage it will be knowledgeable enough in operating and handling it accordingly.

6.11.9. Schedule

Figure 4 Schedule: Gantt Chart

Figure 4 Schedule: Gantt Chart
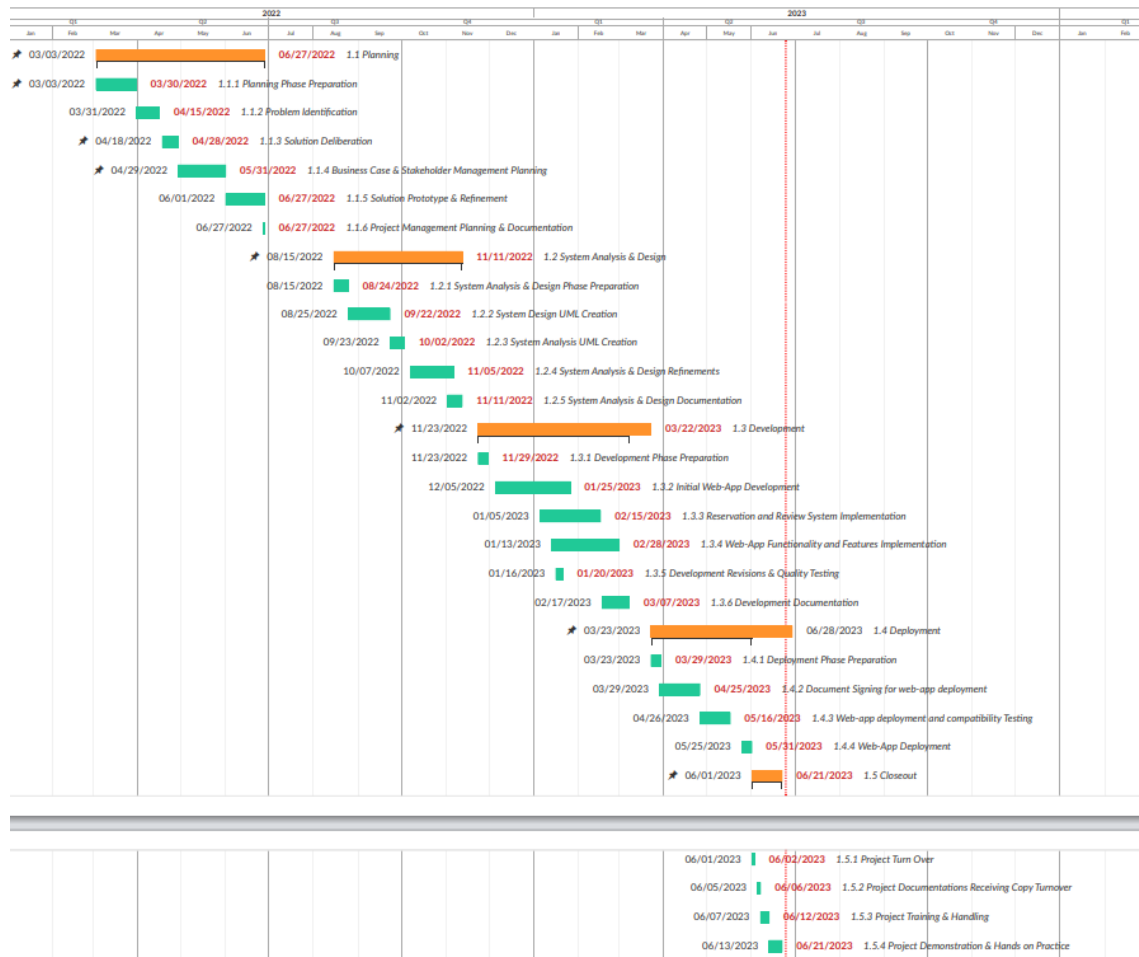
6.11.10.   Handover and Acceptance

The completion of the transition plan, which will include all necessary documents and deliverables, marks the beginning of the project turnover and acceptance procedure. To review the transition plan and ensure that all requirements have been met, the project team will then schedule a formal turnover and demonstration meeting with the project sponsor.
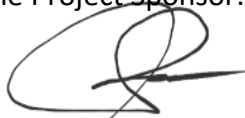
At the handover meeting, the project team will present the documents and deliverables that were made, developed, agreed upon, and signed, together with the system's instruction manuals.

The project sponsor will sign a formal acceptance document which pertains to the agreement to turn over the project for use and for operating for the D7 Auto Service Center.

In summary, the project turnover and acceptance section of the contract transition out plan will serve as a comprehensive guide, ensuring a smooth completion of the transition process and the satisfaction of the project sponsor with the outcomes.

7. Sponsor Acceptance

Approved by the Project Sponsor:

Date:_____

Ms. Anne Sydney Reyes-Simpelo
D7 Auto Service Center Owner

8. List of Tables

9. List of figures

10. Appendices

10.1.   WBS Dictionary

Level	WBS Code	Element Name	Definition	Estimated Duration
1	1	D7 Auto Service Center Web-App	A web-application as an additional platform for D7	**140 Days**
2	**1.1**	**Planning**	**Comprised of planning essentials for the project**	**25 Days**
3	1.1.1	Planning Phase Preparations	Project Adviser and Client search	3 Days
3	1.1.2	Problem Identification	Brainstorming and signing	3 Days
3	1.1.3	Solution Deliberation	Presentation of ideas	8 Days
3	1.1.4	Business Case & Stakeholder Management Planning	Continuation of planning for chosen project	3 Days
3	1.1.5	Solution Prototype & Refinement	Finalization of plans and heads up for system analysis and design	5 Days
3	1.1.6	Project Management Planning & Documentation	Finalization & Documentation of Planning	3 days
2	**1.2**	**System Analysis & Design**	**Comprised of System Analysis and Designing of chosen project**	**30 Days**
3	1.2.1	System Analysis & Design Phase Preparations	Project Adviser and Consultant search	3 Days
3	1.2.2	System Analysis UML Creation	Analysis of context and data flow of system	10 Days
3	1.2.3	System Design UML Creation	Presentation of Works from Sprints	10 Days
3	1.2.4	System Analysis & Design Refinements	Documentation proper of project and more analysis of system	4 Days
3	1.2.5	System Analysis & Design Documentation	System structure, deployment, activities and deployment diagrams & Finalization of System Analysis and Design	3 Days
2	**1.3**	**Development**	**Comprised of Development of system features and web-app**	**60 Days**
3	1.3.1	Development Phase Preparations	Project Adviser and Consultant search	3 Days
3	1.3.2	Initial Web-App Development	Initial creation of features for the web-app	15 Days
3	1.3.3	Reservation and Review	Continuation of creation of	15 Days

		System Implementation	project features	
3	1.3.4	Web-App Functionality and Features Implementation	Presentation of development progress	15 Days
	1.3.5	Development Revisions & Quality Testing	Finalization of documentation for development and features of web-app	10 Days
3	1.3.6	Development Documentation	Finalization of documentation for development and features of web-app	2 Days
2	**1.4**	**Deployment**	**Comprised of proper documentation, and project managing of web-app**	**10 Days**
3	1.4.1	Deployment Phase Preparations	Project Adviser and Consultant search	3 Days
3	1.4.2	Document Signing for web-app deployment	Documentation of work division and work management	1 Day
3	1.4.3	Web-app deployment and compatibility Testing	Deployment testing	5 Days
3	1.4.4	Web-App Deployment	Continuation of documentation and deployment preparation	1 Day
2	**1.5**	**Close Out**	**Comprised of project turnover and closeout to client**	**15 Days**
3	1.5.1	Project Turn Over	Formal event of turnover of project to D7 Auto Service Center	2 Day
3	1.5.2	Project Documentations Receiving Copy Turnover	Release of copies of technical documentation to D7 Auto Service Center	2 Day
3	1.5.3	Project Training & Handling	Demonstration of project tutorial to project sponsor and D7 Auto Service Center Management	4 Days
3	1.5.4	Project Demonstration & Hands-on Practice	Demonstration of project tutorial to project sponsor and D7 Auto Service Center Management	7 Days