Department of Computer Science and Engineering  
The University of Texas at Arlington

Aegle

Outreach Storage System

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# General Organization

## Project Manager

Karla Hernandez is the project manager for Team Aegle. Karla was selected as a project manager by the project director Cdr. Mike O'Dell and approved by every team member. Karla is a software engineering student at the University of Texas at Arlington. The project manager is in charge of guiding the team, making sure that everyone successfully accomplishes all the tasks in a timely manner. Also, the project manager is the main point of contact with the project sponsor as well as scheduling team meetings and setting the agendas to make sure the purpose of the meeting has been accomplished. The project manager has more than one year of industry experience working in teams, which provided her with experience on managing and leading a group as well as organizing a team and conflict resolution. The team agreed on selecting the Outreach Storage System as the project to develop.

## Project Oversight

The team has agreed on keeping an internal calendar, having all tasks due one week before the official syllabus dictates, so that the team has more time available to have the documents reviewed by several people before officially submitting them. The tasks are broken down into the smallest possible working units, providing the team the ability to easily understand each one of them. Tasks will be delegated according to the individual's strengths. For documentation, the team is using Google Drive, but in the process of migrating to GitHub, to enable version control of each document. The team has a group chat, which enables real time communication among all the team members, where every concern or topic is discussed or the time for a meeting is established.

## Roles and Responsibilities

The following table describes the roles and responsibilities of each stakeholder involved in the development of the Outreach Storage System.

|  |  |  |
| --- | --- | --- |
| **Team Member** | **Roles** | **Responsibilities** |
| Karla Hernandez | Team Lead | Ensure that tasks are completed on time.  Ensure that team stays on focus.  Ensure that risks are successfully handled.  Main contact with sponsor and change control management.  Conflict solver. |
| Architecture Lead | Software System Architecture design  Software Sub System Architecture design. |
| Joseph Finnegan | Software Manager | Manage development lifecycle of the web application. |
| Test Lead | Design a test plan for the project.  Keep track of any bug resolution. |
| Server Lead | Choose the best server based on the project needs.  Set up the server.  Maintain the server as required. |
| Risk Manager | Manage risk associated issues and documentation. |
| Joe Martinez | Document Master | Integrate the documents.  Review the documents to ensure consistence.  Make final modifications. |
| Database Lead | Plan the database design.  Create the database structure. |
| Carlos Torres | Project Planner | Create project plan.  Task breakdown into smallest working units.  Assign tasks to team members. |
| Hardware Lead | Create hardware design of the project.  Integration of hardware components. |
| Dr. Tiernan Carter | Project Sponsor | Set requirements.  Provide feedback. |
| Cdr. Mike O’Dell | Project Director | Supervises the project.  Verifies status of the team. |

## Project Constraints

The team has defined some assumptions that are required in order for the Outreach Storage System to be successful. The assumptions are listed below:

* **Limited Time:** The project has to be delivered in approximately 6 months from now, leaving approximately 3 more months for extra planning and the rest for implementation
* **Limited Budget:** The project has a limited budget of $800, which could potentially affect the design of the system due to RFID readers being high in cost, so the team has to be very careful to choose the correct type of reader.
* **Lack of Knowledge:** The team does not have experience with RFID technology, so this constraint could potentially affect the project by preventing the team of taking the best decisions possible regarding this technology.

## Project Assumptions

The team has defined some assumptions that are required in order for the Outreach Storage System to be successful. The assumptions are listed below:

### Team meetings.

The team is required to gather at least twice a week to provide updates on the tasks or about any concern that might arise related to the project. Each team member will be responsible for completing the assigned tasks according to the project plan. Team members have to attend all possible meetings, or ask for updates if they were unable to attend.

### Communication.

The main mean of communication between team members is through “What’s App”, a real time group chat application. Regarding the communication with the project sponsor, email is the preferred channel; but also the team has established weekly meetings to update the sponsor and ask any questions related to the project. The team will use email or office hours to contact the project director regarding any activities during the project.

### Technology.

The team assumes that the system will have a working internet connection that will be used for sending the storage data to the server. It is also assumed that the interface model between the hardware and the server application will include minimal coding skills in case a predefined API does not exist. Other assumptions are that the server will have the necessary hardware and software requirements needed to host the Outreach Storage System.

### Individual Effort.

Individual effort is a key driver for the project’s successful completion. Each team member is required to provide quality work to the project and completing the tasks assigned to them in a timely manner as the project plan dictates.

## Preliminary Schedule and Cost Estimates

The following table shows the major project deliverables, along with the due dates and the cost represented in hours.

|  |  |  |
| --- | --- | --- |
| **Preliminary Project Schedule** | | |
| **Project Milestone** | **Due Date** | **Cost (Hours)** |
| SRS Initial Draft | 10/08/2014 | 47 |
| Project Charter Initial Draft | 10/15/2014 | 36 |
| Project Plan Initial Draft | 10/15/2014 | 8 |
| SRS Baseline | 11/07/2014 | 49 |
| Architecture Design Specification Initial Draft | 12/01/2014 | 58 |
| Baseline Project Charter | 12/03/2014 | 27 |
| Baseline Project Plan | 12/03/2014 | 10 |
| Architecture Design Baseline | 12/08/2014 | 73 |

**Table 1-1: Preliminary Schedule**

# Scope Statement

## Introduction

The purpose of this project is to provide an inventory management system to organize and manage a storeroom of items, saving both time and resources. Not only will the system track inventory but will allow the user to specify various categories through which they can organize inventory in a logical way.

## Product Definition

The Outreach Storage System has several features and functionalities that it will be expected to fulfill for the user. It will first and foremost maintain a database of all items that are currently being stored in the Outreach Storeroom along with the attendant features that make this possible such as adding and removing items.

Since more than one person may be given access to the storeroom and remove or add items to the inventory, OSS will have a user management feature to set appropriate access levels to different individuals since some users may only be allowed to check out items but not to add new items to the inventory. The system will also include features for record keeping and auditing purposes such as keeping track of which items are checked out and when they are checked in and by whom.

In addition to this, OSS will give the user options for organizing and categorizing inventory items in a way that is useful to the user. Both physically, by crate and by location, and logically, by item characteristics or user defined project categories.

## Intended Audience

The intended audience for this system is Dr. Tiernan, the Outreach Coordinator at UTA, and her assistants, as well as outside requesters that will not directly have control over the management system but will be able to request items.

# Cost Management Plan

## Purpose

The cost management plan will be used to help ensure that the team will stay within the allocated budget of $800 for the project. This plan will also help the team manage their time to ensure the project is completed on schedule.

## Project Budget

The team has been given approximately 6-7 months to complete the project. If each person allocates 15 hours per week, then this is about 360 to 420 man hours over the project’s lifespan. As a 4 man team this is approximately 1440 to 1680 man hours over a 6 to 7 month time period. The team has also been allocated an $800 budget to spend on project materials and associated costs.

## Project Budget

Based on the team’s initial research on the hardware and server service required for this project, the team has come to a preliminary estimate of $720 for total costs. The largest cost by far being the RFID reader and will necessitate increased scrutiny when it comes to deciding on a specific model during the implementation phase. While this is an approximate figure there is still room for deviation as the project progresses. The initial breakdown of costs is as follows.

|  |  |
| --- | --- |
| Parts | Cost |
| Handheld RFID Reader | $600.00 |
| RFID Tags | $20.00 |
| Miscellaneous Items | $30.00 |
| Plastic Crates | $40.00 |
| Server (6 months) | $30.00 |
| **Total Cost** | $720.00 |

**Table 3-1: Preliminary Cost Analysis**

The costs shown are preliminary and will likely change as the project progresses into the implementation phase.

## Labor Management

The team will measure the labor that goes into the project by using earned value management. The measurements will be calculated by finding the budgeted cost of work scheduled (BCWS), actual cost of work performed (ACWP), and the budgeted cost of work performed (BCWP). These values will then be calculated and put into the Microsoft Project plan for the project. The estimated man hours for this project will total between 1440 and 1680 for the 6 to 7 month life of the project. These numbers are an estimate and are subject to refinement as the project progresses.

# Earned Value Management

## Purpose and Overview

The purpose of Earned Value Management will be to keep track of the project progress. Earned Value Management will allow us to check if the project is on schedule, behind schedule or ahead of schedule. Earned Value Management will also allow us to keep track of every team member’s progress on their assigned individual tasks, recording the amount of hours put into the tasks, and comparing these hours to the amount of time that was planned for each task. Earned Value Management will be used along with the MS Project Plan file in order to monitor the individual progress of each team member as the team progress.

## Earned Value Components

The components of Earned Value are the following: Budgeted Cost of Work Scheduled (BCWS), Actual Cost of Work Performed (ACWP), Budgeted Cost of Work Performed (BCWP), and % Complete. BCWS, ACWP, and BCWP will be measure in man-hours.

* **Budgeted Cost of Work Scheduled (BCWS):** BCWS is the amount of time planned given to work on an assigned task. Ex: Formatting Document – BCWS = 3 Hours, in theory this task should be completed in 3 hours, BCWS is an estimate.
* **Actual Cost of Work Performed (ACWP):** ACWP is the amount of time spent working on a given assigned task. Ex: Formatting Document – ACWP = 2 Hours, in reality the task took 2 hours to be completed it. ACWP is the actual amount of time spent on a given task.
* **Budgeted Cost of Work Performed (BCWP):** BCWP is the value that was earned for completing a task. Ex: Formatting Document – BCWP = 3 Hours, the earned value is 3 hours instead of 2 hours because the BCWS assigned to the task was 3 hours. Only the person assigned to this task is given credit for completing the task even if he\she got help from another team member.
* **% Complete:** This component keeps track of whether a task is complete or not, 0% means not completed, and 100% means completed.

## Cost Performance Index

The Cost Performance Index (CPI) is a value that allows the team to measure the work performance of the team, basically how efficient the team is. The CPI is a ratio between the BCWP and the ACWP. Through CPI the team will be able to keep track of the work performance and address any work performance issues with the project.

If CPI > 1.0, then the team is performing well

If CPI < 1.0, then the team is performing poorly.

## Schedule Performance Index

The Schedule Performance Index (SPI) is a value that allows the team to measure if the deadlines are been met or not, basically it indicates if we are behind of schedule, ahead on schedule or right on schedule. The SPI is a ratio between BCWP and BCWS.

If SPI > 1.0, then the team is ahead of schedule

If SPI < 1.0, then the team is behind of schedule

## Status Reports

The team will meet twice a week, once during the weekdays and once during the weekend in order to check progress on every member’s performance. The performance of each member will be measured using the earned value components, CPI, and SPI. During these meetings, every member will let the project planner know how much time the person has put into their tasks, when did they start the tasks, and when did they finish the task so that the project planner can record all the information on the MS Project Plan file. During these meetings, the members will also address any issues that they have with their respective tasks and the team will work on finding a solution to any issue.

# Scope Management Plan

## Introduction

The scope management plan helps ensure the success of the project by focusing the sponsor and team on what matters. It helps both parties understand what can and will be implemented in the product as well as how the path towards completion is travelled. Ultimately, it keeps the project on track, and minimizes risks and misunderstandings between the sponsor and development team.

## Methodology

In order to keep the project on track, Team Aegle will meet with our sponsor, Dr. Tiernan, on a regular basis. This will minimize the impact of any surprises that our research and development yield, as well as help keep the team on track with what matters most if features need to be cut, trimmed, or potentially added. We will also maintain and adhere to a complete project plan to keep things flowing throughout the process of developing the RFID system.

### Scope Management

The scope of the project is inherently tied to the domain of the storage room, which the RFID system is expected to operate in. However, the requirements of the project are susceptible to change, especially in the early stages of the project that we are currently in. Requirements refinement is expected and is actively sought so as to develop a stronger project plan to keep the team on track.

## Change Control

Changes to the project requirements after their finalization will not be implemented unless deemed absolutely necessary to the project’s functionality and success. If the sponsor does wish to make a change once detailed design of the project has begun, she will have to justify the proposed change in one of the regular meetings held between the sponsor and team and submit a proposal form to the team. The team will have to come to a unanimous decision that the proposed change has high value and should be implemented in order for the team to follow through. If the team does come to this conclusion, members must revise all design, specification, and planning documents so as to include the change.

# Work Breakdown Structure

The work breakdown structure for the project shows the team project schedule, which is divided into two sections, Senior Design I and Senior Design II. The first section of the project deals with creating a plan to properly design and develop the wanted product, while the second section of the project consists of the actual design and implementation of the wanted product. The major tasks are divided into individual sub-tasks or small team sub-tasks that are more simple and easy to work with. The work breakdown structure also includes the team meetings, sponsor meetings, research, and the team status report. The second section (Senior Design II) has not been planned yet, but it will be planned before the end of the first section of the project.

|  |  |  |  |
| --- | --- | --- | --- |
| WBS | Task Name | Baseline Start | Baseline Finish |
| **1** | **Phase I (Senior Design 1)** | **Fri 8/22/14** | **Wed 12/10/14** |
| **1.1** | **Getting Started** | **Fri 8/22/14** | **Fri 9/12/14** |
| **1.2** | **MS Project Plan** | **Mon 9/8/14** | **Wed 12/3/14** |
| **1.3** | **System Requirement Specification (SRS)** | **Mon 9/8/14** | **Fri 11/14/14** |
| **1.4** | **Project Charter** | **Mon 9/8/14** | **Wed 12/3/14** |
| **1.5** | **Architectural Design Specification (ADS)** | **Fri 11/14/14** | **Wed 12/10/14** |
| **1.6** | **Group Meetings** | **Fri 9/12/14** | **Wed 12/10/14** |
| **1.7** | **Sponsor Meetings** | **Fri 9/12/14** | **Wed 12/10/14** |
| **1.8** | **Team Status Report** | **Fri 9/12/14** | **Wed 12/10/14** |
| **2** | **Phase II (Senior Design 2)** | **Beginning of Spring 2015** | **End of Spring 2015** |
| **3** | **Project Research** | **Fri 9/12/14** | **Wed 12/10/14** |

**Table 6-1 General Overview of Project Schedule**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| WBS | Task Name | Resource Names | Baseline Start | Baseline Finish | % Complete |
| **1** | **Phase I (Senior Design 1)** |  | **Fri 8/22/14** | **Wed 12/10/14** | **43%** |
| **1.1** | **Getting Started** |  | **Fri 8/22/14** | **Fri 9/12/14** | **76%** |
| 1.1.1 | Building Team |  | Mon 8/25/14 | Thu 9/4/14 | 100% |
| 1.1.2 | Project Assignment Discussion | Team | Fri 9/5/14 | Fri 9/5/14 | 100% |
| 1.1.3 | Team Name | Team | Fri 9/5/14 | Thu 9/11/14 | 100% |
| **1.1.4** | **Project Setup** |  | **Thu 9/4/14** | **Fri 9/12/14** | **0%** |
| 1.1.4.1 | Communication Setup | Karla | Thu 9/4/14 | Fri 9/12/14 | 0% |
| 1.1.4.2 | Code Repository Setup | Joe | Thu 9/4/14 | Fri 9/12/14 | 0% |
| 1.1.4.3 | MS Project Setup | Karla | Thu 9/4/14 | Fri 9/12/14 | 0% |
| 1.1.4.4 | Server Setup | Joe | Thu 9/4/14 | Fri 9/12/14 | 0% |
| **1.2** | **MS Project Plan** |  | **Mon 9/8/14** | **Wed 12/3/14** | **0%** |
| **1.2.1** | **Project Plan First Draft** |  | **Mon 9/8/14** | **Wed 10/15/14** | **0%** |
| 1.2.1.1 | Create Project Plan | Carlos | Mon 9/8/14 | Wed 10/8/14 | 0% |
| 1.2.1.2 | Project Plan Internal Due Date | Carlos | Wed 10/8/14 | Wed 10/8/14 | 0% |
| 1.2.1.3 | Project Plan Team Review | Team | Wed 10/8/14 | Wed 10/15/14 | 0% |
| 1.2.1.4 | Project Plan First Draft Submission | Team | Wed 10/15/14 | Wed 10/15/14 | 0% |
| **1.2.2** | **Project Plan Final Version** |  | **Wed 10/15/14** | **Wed 12/3/14** | **0%** |
| 1.2.2.1 | Project Plan In-Class Review |  | Mon 10/20/14 | Fri 10/24/14 | 0% |
| 1.2.2.2 | Project Plan Revision | Carlos | Fri 10/24/14 | Wed 11/26/14 | 0% |
| 1.2.2.3 | Project Plan Internal Due Date | Carlos | Wed 11/26/14 | Wed 11/26/14 | 0% |
| 1.2.2.4 | Project Plan Team Review | Team | Wed 11/26/14 | Wed 12/3/14 | 0% |
| 1.2.2.5 | Project Plan Final Version Submission | Team | Wed 12/3/14 | Wed 12/3/14 | 0% |
| **1.3** | **System Requirement Specification (SRS)** |  | **Mon 9/8/14** | **Fri 11/14/14** | **60%** |
| **1.3.1** | **Gathering Customer Requirements** |  | **Mon 9/8/14** | **Fri 9/26/14** | **100%** |
| 1.3.1.1 | Initial Meeting with Sponsor | Team | Fri 9/12/14 | Fri 9/12/14 | 100% |
| 1.3.1.2 | Customer Requirements Brainstorm | Team | Fri 9/12/14 | Wed 9/17/14 | 100% |
| 1.3.1.3 | Defining Customer Requirements | Team | Fri 9/12/14 | Wed 9/17/14 | 100% |
| 1.3.1.4 | Customer Requirements Deliver to Sponsor for Feedback | Karla | Wed 9/17/14 | Wed 9/17/14 | 100% |
| 1.3.1.5 | Feedback Analysis | Team | Fri 9/19/14 | Wed 9/24/14 | 100% |
| 1.3.1.6 | Customer Requirements Refining | Team | Fri 9/19/14 | Wed 9/24/14 | 100% |
| 1.3.1.7 | Sponsor Meeting to Approve Requirements | Team | Wed 9/24/14 | Wed 9/24/14 | 100% |
| **1.3.2** | **SRS First Draft** |  | **Mon 9/8/14** | **Wed 10/8/14** | **39%** |
| 1.3.2.1 | Product Concept | Joe | Mon 9/8/14 | Mon 9/29/14 | 0% |
| 1.3.2.2 | Product Description and Functional Overview | Joe | Mon 9/8/14 | Mon 9/29/14 | 0% |
| 1.3.2.3 | Customer Requirements | Carlos | Mon 9/8/14 | Mon 9/29/14 | 100% |
| 1.3.2.4 | Packaging Requirements | Carlos | Mon 9/8/14 | Mon 9/29/14 | 100% |
| 1.3.2.5 | Performance Requirements | Joseph | Mon 9/8/14 | Mon 9/29/14 | 0% |
| 1.3.2.6 | Safety Requirements | Joseph | Mon 9/8/14 | Mon 9/29/14 | 0% |
| 1.3.2.7 | Maintenance and Support Requirements | Joseph | Mon 9/8/14 | Mon 9/29/14 | 0% |
| 1.3.2.8 | Other Requirements | Joseph | Mon 9/8/14 | Mon 9/29/14 | 0% |
| 1.3.2.9 | Acceptance Criteria | Karla | Mon 9/8/14 | Mon 9/29/14 | 0% |
| 1.3.2.10 | Use Cases | Carlos | Mon 9/8/14 | Mon 9/29/14 | 100% |
| 1.3.2.11 | Feasibility Assessment | Karla | Mon 9/8/14 | Mon 9/29/14 | 0% |
| 1.3.2.12 | Future Items | Joseph | Mon 9/8/14 | Mon 9/29/14 | 0% |
| 1.3.2.13 | Document Merging | Joe | Mon 9/29/14 | Wed 10/1/14 | 0% |
| 1.3.2.14 | SRS Internal Due Date | Team | Wed 10/1/14 | Wed 10/1/14 | 0% |
| 1.3.2.15 | SRS Team Review | Team | Wed 10/1/14 | Wed 10/8/14 | 0% |
| 1.3.2.16 | SRS Peer Review |  | Wed 10/1/14 | Wed 10/8/14 | 0% |
| 1.3.2.17 | SRS Submission | Team | Wed 10/8/14 | Wed 10/8/14 | 0% |
| **1.3.3** | **SRS Final Version** |  | **Wed 10/8/14** | **Fri 11/14/14** | **0%** |
| 1.3.3.1 | Product Concept Revision | Joe | Wed 10/8/14 | Wed 10/29/14 | 0% |
| 1.3.3.2 | Product Description and Functional Overview Revision | Joe | Wed 10/8/14 | Wed 10/29/14 | 0% |
| 1.3.3.3 | Customer Requirements Revision | Carlos | Wed 10/8/14 | Wed 10/29/14 | 0% |
| 1.3.3.4 | Packaging Requirements Revision | Carlos | Wed 10/8/14 | Wed 10/29/14 | 0% |
| 1.3.3.5 | Performance Requirements Revision | Joseph | Wed 10/8/14 | Wed 10/29/14 | 0% |
| 1.3.3.6 | Safety Requirements Revision | Joseph | Wed 10/8/14 | Wed 10/29/14 | 0% |
| 1.3.3.7 | Maintenance and Support Requirements Revision | Joseph | Wed 10/8/14 | Wed 10/29/14 | 0% |
| 1.3.3.8 | Other Requirements Revision | Joseph | Wed 10/8/14 | Wed 10/29/14 | 0% |
| 1.3.3.9 | Acceptance Criteria Revision | Karla | Wed 10/8/14 | Wed 10/29/14 | 0% |
| 1.3.3.10 | Use Cases Revision | Carlos | Wed 10/8/14 | Wed 10/29/14 | 0% |
| 1.3.3.11 | Feasibility Assessment Revision | Karla | Wed 10/8/14 | Wed 10/29/14 | 0% |
| 1.3.3.12 | Future Items Revision | Joseph | Wed 10/8/14 | Wed 10/29/14 | 0% |
| 1.3.3.13 | Document Merging | Joe | Wed 10/29/14 | Fri 10/31/14 | 0% |
| 1.3.3.14 | SRS Internal Due Date | Team | Fri 10/31/14 | Fri 10/31/14 | 0% |
| 1.3.3.15 | SRS Team Review | Team | Fri 10/31/14 | Fri 11/7/14 | 0% |
| 1.3.3.16 | SRS Gate Peer Review | Team | Mon 11/3/14 | Mon 11/3/14 | 0% |
| 1.3.3.17 | SRS Gate Review |  | Fri 11/7/14 | Fri 11/7/14 | 0% |
| 1.3.3.18 | SRS Team Revision | Team | Fri 11/7/14 | Fri 11/14/14 | 0% |
| 1.3.3.19 | SRS Submission | Team | Fri 11/14/14 | Fri 11/14/14 | 0% |
| **1.4** | **Project Charter** |  | **Mon 9/8/14** | **Wed 12/3/14** | **27%** |
| **1.4.1** | **Project Charter Draft** |  | **Mon 9/8/14** | **Wed 10/15/14** | **53%** |
| 1.4.1.1 | General Organization | Karla | Mon 9/8/14 | Mon 10/6/14 | 100% |
| 1.4.1.2 | Scope of Statement | Joe | Mon 9/8/14 | Mon 10/6/14 | 0% |
| 1.4.1.3 | Cost Management Plan | Joe | Mon 9/8/14 | Mon 10/6/14 | 0% |
| 1.4.1.4 | Earned Value Management | Carlos | Mon 9/8/14 | Mon 10/6/14 | 100% |
| 1.4.1.5 | Scope Management Plan | Joseph | Mon 9/8/14 | Mon 10/6/14 | 100% |
| 1.4.1.6 | Work Breakdown Structure | Carlos | Mon 9/8/14 | Mon 10/6/14 | 0% |
| 1.4.1.7 | Quality Management Plan | Joseph | Mon 9/8/14 | Mon 10/6/14 | 100% |
| 1.4.1.8 | Communications Plan | Joe | Mon 9/8/14 | Mon 10/6/14 | 0% |
| 1.4.1.9 | Change Management Plan | Joseph | Mon 9/8/14 | Mon 10/6/14 | 100% |
| 1.4.1.10 | Risk Management Plan | Karla | Mon 9/8/14 | Mon 10/6/14 | 100% |
| 1.4.1.11 | Procurement Management Plan | Carlos | Mon 9/8/14 | Mon 10/6/14 | 100% |
| 1.4.1.12 | Project Closeout Report | Carlos | Mon 9/8/14 | Mon 10/6/14 | 100% |
| 1.4.1.13 | Document Merging | Karla | Mon 10/6/14 | Wed 10/8/14 | 0% |
| 1.4.1.14 | Project Charter Internal Due Date | Team | Wed 10/8/14 | Wed 10/8/14 | 0% |
| 1.4.1.15 | Project Charter Team Review | Team | Wed 10/8/14 | Wed 10/15/14 | 0% |
| 1.4.1.16 | Project Charter Peer Review |  | Wed 10/8/14 | Wed 10/15/14 | 0% |
| 1.4.1.17 | Project Charter Submission | Team | Wed 10/15/14 | Wed 10/15/14 | 0% |
| **1.4.2** | **Project Charter Final Version** |  | **Wed 10/15/14** | **Wed 12/3/14** | **0%** |
| 1.4.2.1 | Project Charter In-Class Review |  | Mon 10/20/14 | Fri 10/24/14 | 0% |
| 1.4.2.2 | General Organization Revision | Karla | Fri 10/24/14 | Fri 11/21/14 | 0% |
| 1.4.2.3 | Scope of Statement Revision | Joe | Fri 10/24/14 | Fri 11/21/14 | 0% |
| 1.4.2.4 | Cost Management Plan Revision | Joe | Fri 10/24/14 | Fri 11/21/14 | 0% |
| 1.4.2.5 | Earned Value Management Revision | Carlos | Fri 10/24/14 | Fri 11/21/14 | 0% |
| 1.4.2.6 | Scope Management Plan Revision | Joseph | Fri 10/24/14 | Fri 11/21/14 | 0% |
| 1.4.2.7 | Work Breakdown Structure Revision | Carlos | Fri 10/24/14 | Fri 11/21/14 | 0% |
| 1.4.2.8 | Quality Management Plan Revision | Joseph | Fri 10/24/14 | Fri 11/21/14 | 0% |
| 1.4.2.9 | Communications Plan Revision | Joe | Fri 10/24/14 | Fri 11/21/14 | 0% |
| 1.4.2.10 | Change Management Plan Revision | Joseph | Fri 10/24/14 | Fri 11/21/14 | 0% |
| 1.4.2.11 | Risk Management Plan Revision | Karla | Fri 10/24/14 | Fri 11/21/14 | 0% |
| 1.4.2.12 | Procurement Management Plan Revision | Carlos | Fri 10/24/14 | Fri 11/21/14 | 0% |
| 1.4.2.13 | Project Closeout Report Revision | Carlos | Fri 10/24/14 | Fri 11/21/14 | 0% |
| 1.4.2.14 | Document Merging | Karla | Fri 11/21/14 | Wed 11/26/14 | 0% |
| 1.4.2.15 | Project Charter Internal Due Date | Team | Wed 11/26/14 | Wed 11/26/14 | 0% |
| 1.4.2.16 | Project Charter Team Review | Team | Wed 11/26/14 | Wed 12/3/14 | 0% |
| 1.4.2.17 | Project Charter Peer Review |  | Wed 11/26/14 | Wed 12/3/14 | 0% |
| 1.4.2.18 | Project Charter Submission | Team | Wed 12/3/14 | Wed 12/3/14 | 0% |
| **1.5** | **Architectural Design Specification (ADS)** |  | **Fri 11/14/14** | **Wed 12/10/14** | **0%** |
| **1.5.1** | **ADS First Draft** |  | **Fri 11/14/14** | **Mon 12/1/14** | **0%** |
| 1.5.1.1 | Introduction | Joe | Fri 11/14/14 | Fri 11/21/14 | 0% |
| 1.5.1.2 | Meta Architecture | Karla | Fri 11/14/14 | Fri 11/21/14 | 0% |
| 1.5.1.3 | Layer Definitions | Joe | Fri 11/14/14 | Fri 11/21/14 | 0% |
| 1.5.1.4 | Inter-Subsystems Data Flow | Joseph | Fri 11/14/14 | Fri 11/21/14 | 0% |
| 1.5.1.5 | Presentation Layer | Carlos | Fri 11/14/14 | Fri 11/21/14 | 0% |
| 1.5.1.6 | Data Processing Layer | Karla | Fri 11/14/14 | Fri 11/21/14 | 0% |
| 1.5.1.7 | Data Storage Layer | Carlos | Fri 11/14/14 | Fri 11/21/14 | 0% |
| 1.5.1.8 | Requirement Traceability | Joseph | Fri 11/14/14 | Fri 11/21/14 | 0% |
| 1.5.1.9 | Operating System Dependencies | Joe | Fri 11/14/14 | Fri 11/21/14 | 0% |
| 1.5.1.10 | Testing Considerations | Joseph | Fri 11/14/14 | Fri 11/21/14 | 0% |
| 1.5.1.11 | Document Merging | Karla | Fri 11/21/14 | Mon 11/24/14 | 0% |
| 1.5.1.12 | ADS Draft Internal Due Date | Team | Mon 11/24/14 | Mon 11/24/14 | 0% |
| 1.5.1.13 | ADS Draft Team Review | Team | Mon 11/24/14 | Mon 12/1/14 | 0% |
| 1.5.1.14 | ADS Draft Peer Review |  | Mon 11/24/14 | Mon 12/1/14 | 0% |
| 1.5.1.15 | ADS Draft Submission | Team | Mon 12/1/14 | Mon 12/1/14 | 0% |
| **1.5.2** | **ADS Gate Review Version** |  | **Mon 12/1/14** | **Wed 12/10/14** | **0%** |
| 1.5.2.1 | Introduction Revision | Joe | Mon 12/1/14 | Wed 12/3/14 | 0% |
| 1.5.2.2 | Meta Architecture Revision | Karla | Mon 12/1/14 | Wed 12/3/14 | 0% |
| 1.5.2.3 | Layer Definitions Revision | Joe | Mon 12/1/14 | Wed 12/3/14 | 0% |
| 1.5.2.4 | Inter-Subsystems Data Flow Revision | Joseph | Mon 12/1/14 | Wed 12/3/14 | 0% |
| 1.5.2.5 | Presentation Layer Revision | Carlos | Mon 12/1/14 | Wed 12/3/14 | 0% |
| 1.5.2.6 | Data Processing Layer Revision | Karla | Mon 12/1/14 | Wed 12/3/14 | 0% |
| 1.5.2.7 | Data Storage Layer Revision | Carlos | Mon 12/1/14 | Wed 12/3/14 | 0% |
| 1.5.2.8 | Requirement Traceability Revision | Joseph | Mon 12/1/14 | Wed 12/3/14 | 0% |
| 1.5.2.9 | Operating System Dependencies Revision | Joe | Mon 12/1/14 | Wed 12/3/14 | 0% |
| 1.5.2.10 | Testing Considerations Revision | Joseph | Mon 12/1/14 | Wed 12/3/14 | 0% |
| 1.5.2.11 | Document Merging | Joe | Wed 12/3/14 | Fri 12/5/14 | 0% |
| 1.5.2.12 | ADS Gate Review Version Internal Due Date | Team | Fri 12/5/14 | Fri 12/5/14 | 0% |
| 1.5.2.13 | ADS Gate Review Version Team Review | Team | Fri 12/5/14 | Sun 12/7/14 | 0% |
| 1.5.2.14 | ADS Gate Review Version Peer Review |  | Fri 12/5/14 | Sun 12/7/14 | 0% |
| 1.5.2.15 | ADS Presentation Slides | Team | Fri 12/5/14 | Wed 12/10/14 | 0% |
| 1.5.2.16 | ADS Presentation Rehearsal | Team | Fri 12/5/14 | Wed 12/10/14 | 0% |
| 1.5.2.17 | ADS Gate Review Version Submission | Team | Mon 12/8/14 | Mon 12/8/14 | 0% |
| 1.5.2.18 | ADS Gate Review Presentation | Team | Wed 12/10/14 | Wed 12/10/14 | 0% |
| **1.6** | **Group Meetings** |  | **Fri 9/12/14** | **Wed 12/10/14** | **100%** |
| 1.6.1 | Team Meeting 1 | Team | Tue 9/9/14 | Tue 9/9/14 | 100% |
| 1.6.2 | Team Meeting 2 | Team | Thu 9/11/14 | Thu 9/11/14 | 100% |
| 1.6.3 | Team Meeting 3 | Tem | Tue 9/16/14 | Tue 9/16/14 | 100% |
| 1.6.4 | Team Meeting 4 | Carlos,Joe,Karla | Wed 9/24/14 | Wed 9/24/14 | 100% |
| 1.6.5 | Team Meeting 5 | Carlos,Joseph,Karla | Thu 9/25/14 | Thu 9/25/14 | 100% |
| 1.6.6 | Team Meeting 6 | Carlos,Joe,Karla | Fri 9/26/14 | Fri 9/26/14 | 100% |
| 1.6.7 | Team Meeting 7 | Joseph,Karla | Thu 10/2/14 | Thu 10/2/14 | 100% |
| **1.7** | **Sponsor Meetings** |  | **Fri 9/12/14** | **Wed 12/10/14** | **0%** |
| **1.8** | **Team Status Report** |  | **Fri 9/12/14** | **Wed 12/10/14** | **100%** |
| 1.8.1 | Status Report 1 |  | Fri 9/12/14 | Fri 9/12/14 | 100% |
| 1.8.2 | Status Report 2 |  | Fri 9/26/14 | Fri 9/26/14 | 100% |
| **2** | **Phase II (Senior Design 2)** |  | **Beginning of Spring 2015** | **End of Spring 2015** | **0%** |
| **3** | **Project Research** |  | **Fri 9/12/14** | **Wed 12/10/14** | **0%** |
| 3.1 | Carlos Research |  | Fri 9/12/14 | Wed 12/10/14 | 0% |
| 3.2 | Karla Research |  | Fri 9/12/14 | Wed 12/10/14 | 0% |
| 3.3 | Joe Research |  | Fri 9/12/14 | Wed 12/10/14 | 0% |
| 3.4 | Joseph Research |  | Fri 9/12/14 | Wed 12/10/14 | 0% |

**Table 6-2 Detailed Project Schedule**

# Quality Management Plan

## Introduction

The quality management plan’s purpose is to establish an acceptable level of quality for the project. The baseline standard for quality is the system requirements specification document, which compiles customer and developer requirements into a streamlined presentation to be referred to for guidance by the development team. Features necessary to attain a proper level of quality are the primary focus of this plan.

## Documentation

Documentation of the project is organized and kept together through the use of a subversion repository on Github.com, and final versions of the documentation will be stored on a publicly visible Google drive account. Rough drafts will be read and finalized by the team’s document reviewer so as to keep a level of coherence within the documentation. Revisions will go through the same process, and the thoughts and perspectives of each individual team member will be available upon request from their engineering notebook.

## Software

The software for this project will be designed and developed following a number of principles well established within the application development community. Specifically, the team will follow the principles of test driven development, consumer inclusion, and rapid development cycles among others. Also, the end product is expected to be of high quality according to all parties concerned.

## Hardware

Hardware for the RFID inventory system will be evaluated by the team according to its quality, ease of use, price, and functionality. Each of these will be assigned an abstract weighted value by the team and used to weigh the available RFID products against each other for purchase and use by the team and consumer. The hardware that is purchased for use within the project will be extensively tested and have its relevant behavior and functionality documented for the utility of the end user.

## Testing

Testing of the end product will be performed to ensure its quality. The web application will be unit tested and subject to integration testing as it is being developed. The hardware will be tested for proper functionality as well before being fully integrated with the software. After testing of the individual components (the hardware and software), the two will be tested as a complete package for proper operation within conditions similar to the product’s final use.

# Communications Plan

## Introduction

Communication is a prerequisite for ensuring that a team operates effectively and efficiently on every task required of it. This communications plan will set the standards for all official forms of contact internally among its members and externally to its sponsor and project supervisor.

## Internal Communication

### Team Meetings

The team often meets informally after lab sessions to keep each other up to date on project progress with longer meeting later the same afternoon in necessary. These longer meetings are when we discuss concerns about the project or share information as well as assign tasks for the next week.

### What’s App

The What’s App mobile application is the main channel of communication between all members of the team. This application allows for group messages to be sent and received quickly over the Internet and is used for day to day communication.

### Email

Email will be used as a backup form of communication between team members should WhatsApp fail or in case of emergency as the channel of last resort.

### GitHub

GitHub is being used to keep track of different versions of all the documents developed during the project with the purpose of rolling back a version if we need to.

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## External Communication

### Sponsor Meetings (Dr. Tiernan)

Regular sponsor meetings are scheduled for every Friday at 4pm where the team will keep the sponsor up to date with the project and receive feedback about any concerns the team has encountered.

### Email

Copies of official documentation that are to be submitted to project supervisor will also be sent to the sponsor to keep them up to date with project progress and to solicit sponsor feedback if necessary. Email will be used to communicate with the sponsor if an issue comes up that cannot wait until the official weekly meeting.

### Project Supervisor

The team will be in constant communication with the project supervisor. Updates will be provided in multiple forms such as team status reports, individual status reports, and gate reviews.

# Change Management Plan

## Purpose of Integrated Change Management Plan

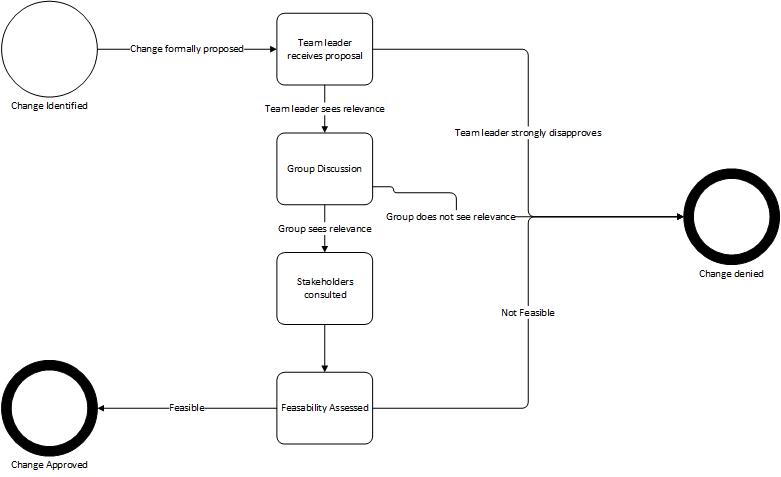
The functional purpose of the change management plan is to serve as a way for the project to stay on schedule and within budget constraints. It will help the team anticipate, analyze, and prepare for changes that tend to be proposed throughout the development process. Stakeholders tend to realize that they want something in the final product during design and implementation, which can adversely affect the project’s schedule if the change is allowed into the requirements. Due to time and budget constraints, change management policies must be implemented to keep the project from falling off schedule and cutting corners. A change management plan also helps the team lobby with the project sponsor with established expectations. Stakeholders have certain expectations of the project that they are sometimes unable to convey initially, and a way is needed for both parties to come to an agreement and amend the initial project requirements that have already been established. The following sections will define all of the guidelines and roles of parties involved in the process of changing the project requirements and expectations.

## Roles and Responsibilities

* **Project Sponsor:** The project sponsor, Dr. Tiernan, will be responsible for approving and proposing any significant changes that may occur within the duration of the project. The project sponsor will be contacted within 48 hours of a major change proposal and will be expected to attend a meeting with the development team to discuss the impacts of the proposed change and its validity. Any proposal that the sponsor wishes to submit must be submitted in the form of the document that describes the proposed change and justifies why it is paramount to the functionality of the final product.
* **Project Manager:** The project manager, Karla Hernandez, will be the primary point of contact for any people wishing to contact the team. She serves as a thin barrier between the development team and the project sponsor and stakeholders. She has the right to opt not to tell the team about a proposed change, or to delay the proposal so as to keep the project on schedule and ensure its security. This ensures that the developers are able to stay on track without the distraction or responsibility of dealing with interested parties
* **Project Team:** The project team’s purpose in the change control process is to discuss and analyze proposed changes and their feasibility. They will consider the effort needed, required technology, and monetary cost of a change before coming to a decision as to whether a change will be implemented. Members of this team must unanimously vote on whether a change will be included within the project.
* **Other Stakeholders:** The team’s stakeholder and project supervisor, Mr. O’Dell is to be immediately notified of approved changes to the final product. His thoughts and opinions on the change will be taken into consideration, and heavily weigh on whether or not the change reaches final approval

## Review and Approval Process

The diagram below illustrates a high level view of the process that will be used to consider and approve a change proposal.



**Figure 9-1:** **Change Proposal Process**

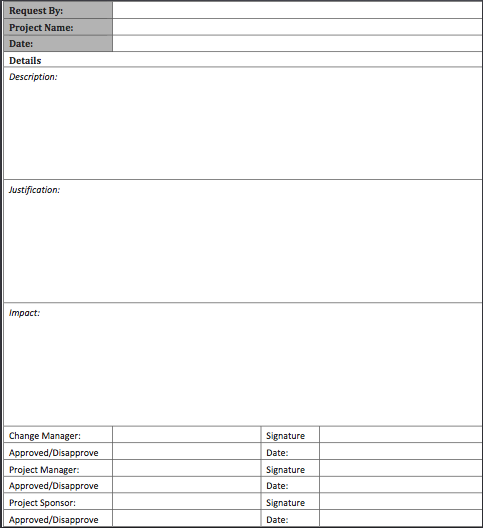
All change requests will undergo the procedure above unless the sponsor proposes the change during a meeting, at which time there would be immediate discussion with the proper procedure being followed afterwards.

## Change Identification, Documentation, Implementation and Reporting

For the process of making a major change to the project, use of a form is required. Use of the form will allow the team to keep a record of each change throughout the course of the project. The form used to record these changes will consist of the following pieces of information.

* **Source of the Change** - The form should contain the name of the individual or group that proposed the change.
* **Date of Change Request Submission** – The form should contain the date that the form was submitted
* **Description of the Change** – The form should contain a detailed description of the change proposed. This field should contain enough information for the team to understand specifically how this change would be implemented
* **Justification for the Change** – The form should contain a detailed justification for why the change is important enough to implement.

The form will also have areas for the signatures of each team member and the team sponsor to sign upon approval of the change. If a change is agreed upon, then all documentation, design, and the project plan should be revised to reflect the new change



**Form 9-1: Change Request Form**

# Risk Management Plan

## Purpose of Risk Management Plan

The purpose of the risk management plan is to be prepared in case of an emergency, by planning ahead the required steps needed to mitigate any risk that might affect the development of the project. In most of these cases Team Aegle will try to prevent risks from emerging. However, risks are an inevitable part of project development therefore the risk management plan will include the steps required to reduce the impact as much as possible.

## Roles and Responsibilities

The project stakeholders play a vital role in the identification of risks that might emerge during the project development lifecycle. The following section describes the roles and responsibilities of each stakeholder.

### Project Sponsor

The project sponsor will provide risk identification from the client’s point of view. This insight is very valuable because the team is not as familiar as the client is, regarding the storage policies and such. Since the project sponsor possesses a technical background, she will be able to also provide the team with some technical risks and resolutions for the project.

### Project Manager

The project manager is responsible for guiding the team along the correct path, mainly focusing on avoiding the most critical risks by having constant communication with the risk manager.

### Project Team

The entire team is responsible for identifying risks as well as following the steps stated in the risk management plan. The risk manager will drive the team discussions.

### Risk Manager

Joseph Finnegan is the designated risk manager. He will be responsible for recording, documenting and keeping track of any risk related issues or concerns that emerge during the entire development of the project. He will also communicate or address any concerns identified by any of the stakeholders to the whole team. If the team is facing a risk, he will ensure to communicate the team the steps to follow as well as monitoring the risk mitigation process.

## Risk Identification

Every team member is responsible of reporting any identified or emerged risks to the risk manager. Ideally, risks will be identified early in the development of the project with the purpose to avoid the higher risks and be prepared in case of an incident. The risk manager will invoke a team meeting to discuss and inform the team about the steps to take. The project sponsor and director will only be contacted when the severity of the impact is very high.

## Risk Triggers

A risk trigger refers to an identified measure that indicates that a risk might occur. The following list describes some triggers that have been identified by the team.

* Lack of knowledge, mostly related to hardware and RFID technology.
* Missing deadlines by team members.
* Change control not handled properly.
* Not having continuous communication with the project sponsor.
* Team member low involvement can impact the development of deliverables on time.
* Lack of communication among team members will prevent everyone from having a common understanding of the application.

## Risk Analysis

The table below lists the risks that have been identified by the team to this date that could potentially affect the success of the project.

|  |  |  |  |
| --- | --- | --- | --- |
| **Category** | **Risk** | **Probability** | **Cost** |
| Technology | Choose correct RFID reader | 20% | 14 |
| Sponsor | Tracking items in the storage room is an unrealistic requirement. | 100% | 15 |
| Team | Lack of RFID Technology knowledge | 100% | 23 |
| Team | Underestimation of tasks | 35% | 2 |
| Team | Other work | 75% | 2 |
| Team | Incorrect Project Design | 15% | 18 |
| **Total** | 74 | | |

**Table 10-1: Risk Analysis**

## Risk Severity

The following table lists the severity of every risk that was listed in the previous section along with its corresponding resolution. They are prioritized according to the likelihood of occurrence.

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk** | **Priority** | **Resolution** | **Trigger** |
| Choose Correct RFID reader | High | Learn about RFID technology and possibly borrow a testing reader from Dr. Jones | Lack of knowledge related to RFID technology. |
| Tracking items in the storage room is an unrealistic requirement. | High | Find a technology work around so that we don’t exceed the budget. | Sponsor defines unrealistic requirements. |
| Lack of RFID technology | High | Dr. Jones Students will train us on RFID technology topics. | Identifying the use of the unknown technology in the requirements phase. |
| Underestimation of tasks | Medium | Have an internal calendar with early due dates so that we have time in case of a contingency. | Tendency of the team to underestimate hours for the tasks. |
| Other Work | Low | Distribute the work among the remaining team members. | Team members require to miss a meeting or get assigned extra course work. |
| Incorrect Project Design | High | Consult with several individuals the correctness of our ADS before turning in the baseline document. | Confusion on how to design the Architecture of the system. |

## Table 10-2: Risk Severity

## Risk Response Planning

The risk plan is one of the most critical elements to ensure that risks are correctly mitigated if not entirely prevented, which will ensure that the project is successfully delivered on a timely manner.

The key driver in this plan is the risk manager, who will stay on top of any risks, executing the corresponding risk mitigation steps. The risk mitigation process is described below:

* Risk Identification: The whole team will be responsible for identifying new risks in the different parts of the project that each team member is working. The risks can be either identified before occurrence (preferably) or on time of the occurrence.
* Risk Analysis: Once a risk has been identified, the risk manager will schedule a meeting so that all the team members can discuss the priority of each risks and the impact it will create to the project development.
* Risk Management Plan: After coming up with a list of possible risks, the team will define the steps that are needed to mitigate the risk to the lowest impact possible.

## Risk Documentation and Reporting

Risks will be properly documented by the risk manager, in a special MS Word document which will have as solely purpose to provide detailed information on the risks, as well as the mitigation plan and steps followed by the team. Also, after the risk is mitigated the risk manager should document all the monitoring in case the risk has more impacts than the team had anticipated.

## Risk Control

The team has to have a set mind oriented towards risk control. To ensure this, the team will put up a sign in their respective cubicle so that in each meeting they are reminded that risks have to be part of each single detail. The risks will be properly documented along with its resolution and monitoring.

# Procurement Management Plan

## Purpose of the Procurement Management Plan

The purpose of the procurement management plan is to provide the team and any project stakeholder with a set of guidelines that will be followed during the purchase of the components. Information for staying within budget and ensuring that components and services are received in time to avoid any delays during the project will be included. Also the procurement management plan will make sure that only components and services necessary for the project are purchased and it also states the roles and responsibilities of the people involved in the project.

## Roles and Responsibilities

* **Project Sponsor:** Dr. Tiernan can provide the team with suggestions and advice related to the components and services needed for the project, aside from this she would not have any other roles or responsibilities regarding the procurement plan.
* **Project Manager:** Karla Hernandez will be the link between the team, and the project supervisor. She will also have the final decision as to which components and services are purchased for the project, and will also have the final decision concerning any other issues related to the procurement plan.
* **Project Team:** Every team member will provide the project manager with their opinion and advice regarding which components and services are necessary for the project. The team will also be responsible for researching the components needed for the project, and to let the project manager if any other components or services are needed to complete the project.
* **Project Supervisor:** The project supervisor has the final decision as to which components and services will be purchased.

## Required Project Procurements and Timing

The components and services needed for the project will be procured at least 2 weeks before the implementation part of the project. Services will also be scheduled at least 2 weeks before the implementation phase and set to be activated on the date that the services will be needed. The objective is to have all the components and services ready before the implementation phase begins. The team will constantly monitor and make sure that the components list is up to date in order to avoid unnecessary purchases. Acquiring the components in time and avoiding the purchase of unneeded components are critical to avoid schedule delays and budget issues.

## Description of Items/ Services to be acquired

The following list shows all the necessary components to complete the project.

* RFID Reader
* RFID Tags
* Antennas (4 Antennas, one per corner of the storage room)
* WMS Software (Warehouse Management System)
* Cables to Connect Antennas to RFID Reader
* Ethernet Cable to Connect RFID Reader to Host Computer
* Host Computer

# Project Closeout Report

## Purpose of Closeout Report

The purpose of the closeout report is to address any personnel issues, administrative issues, and financial issues at the end of the project and resolve the issues in a orderly and timely manner. Also, during the closeout report the team should make sure that all the documents from the project are archived together, and that all the lessons learned are documented.

## Administrative Closure

### Were the objectives of the project met?

At the end of the project, the team will meet with the sponsor and determine if the project was successful or not. The overall satisfaction of the sponsor with the final product is important, but at the end the success or failure of the project will be measured and determined by comparing the features of the final product to the System Requirement Specification of the project. The team and sponsor should take into consideration how many requirements were accomplished, and the priority of the requirements, with the high priority requirements weighing more than the low priority requirements in the final decision to determine if the project was successful or not.

### Archiving Project Artifacts

The following list contains all the documents of the project that will be archived in both physical and electronic copies for future references.

* System Requirement Specification
* Project Charter
* MS Project Plan
* Architectural Design Specification
* Detailed Design Document
* System Test Plan
* Financial Records
* User Manual
* Lessons Learned
* Source Code Documentation

### Lessons Learned

At the end of the project, the team will meet to discuss the overall performance of the project. During this meeting, the team will make an assessment of the project from start to finish and determine what the team could have done better to increase the overall performance of the project and efficiency of the team, and what the team did well during the project. This assessment will be the team’s lessons learned and will be documented, and included in the project documents to be archived.

### Plans for Post Implementation Review (PIR)

After the project is over, the team will meet with the sponsor, and determine if the project was a success or not. The success of the project will be determined by comparing the final product with the System Requirement Specification. The team and the sponsor will determine how many requirements were completed, and the priority of the requirements will also dictate if the project was successful as requirements with higher priority are more important. The System Requirement Specification also contains the acceptance requirements section that will be used to validate the correct functionality of the Outreach Storage System.

### Final Customer Acceptance

At the end of the project, the team will meet with the sponsor to discuss the end product. The team and the sponsor should go over the end product and check which customer requirements were completed and which ones were not. The team should explain the reason why the incomplete requirements were not accomplished and discuss how to implement the incomplete requirements in the future if the costumer desires to implement the missing requirements.

### Financial Records

The team will keep a record of all purchases made throughout the project with all the vendor’s receipts from any purchases made. All of these purchases will be documented and will be included in the project documents to be archived. The project closeout report will also have a record of all the purchases made.

### Final Project Performance Report

At the end of the project, the team will meet and produce a report containing information regarding the project’s scope management, schedule performance, cost performance, quality of achievements, and a review of the risk containment performance. If there were any changes in the project’s budget cost or any schedule variances, it will be explained and documented in this report.