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

<<Put Project Team Name Here>>

<<Put Product Name Here>>

Team Members:   
member 1  
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# General Organization

## Project Manager

*Explicitly name the Project Manager and define his/her role and responsibility over the project. Also, list the Project Manager’s skill sets, and justify their selection for this project. Depending on the project complexities, this section may describe how the Project Manager will control matrix organizations and employees.*

## Project Oversight

*Describe team* ***project management/control*** *over the project. Within the project, internal control should be established to control the day-to-day activities of the project. The Project Manager should manage internal control. External oversight should be established to ensure that the organization’s resources are applied to meet the project and organization’s objectives. Describe or reference a process by which internal and external controls interact. Diagrams should be used where appropriate.*

## Roles and Responsibilities

*Discuss the* ***overall structure of the project organization*** *and individual roles and responsibilities throughout the project phases. Include the roles of identified project stakeholders****.***

## Project Constraints

*List and describe any identified project* ***constraints****. Typically, constraints will influence timing, cost, resources, and/or quality.*

## Project Assumptions

*List and describe any identified* ***assumptions****. Assumptions pose a risk to the project and will need further evaluation and validation during subsequent project process phases.*

## Preliminary Schedule and Cost Estimates

*Provide a rough estimate of dates to accomplish* ***key project tasks****. Consider any constraints and assumptions prepared above when considering the preliminary timing. Describe key management* ***checkpoints*** *established by the initiating authority. Similarly, provide a rough order of magnitude estimate of project costs.*

# Scope Statement

*A brief statement of the* ***general scope*** *of the project.*

# Cost Management Plan

*Exactly* ***what do you plan to do to stay within the budget****? How will you control costs in terms of person-hours and dollars? ($800 and roughly 2000 person-hours)*

# Earned Value Management

Earned Value, also referred to as the budgeted cost of work performed (BCWP), is a useful tool that will be utilized throughout this project in order to provide numerical measurements to help track the schedule and budget of the project. To make these measurements useful, the earned value will be compared against separate measurements for actual cost of work performed (ACWP), and budgeted cost of work scheduled (BCWS). The units of measurement used to track the budget of the project are man-hours.

### Measurement:

All data required for Earned Value Management will be tracked in a Microsoft Project file. At the beginning of the project, all tasks required and related to the project will be itemized in the MS Project file and assigned a WBS number for reference. Each item will also have an expected completion date, expected cost (hours), actual completion date, actual cost (hours), assigned resources (team members) and percent complete. Note that all base level items can only be completed entirely, so can only take a value of 0% or 100% completion. From this data, BCWP, ACWP and BCWS can be calculated as follows:

BCWS – The sum of expected costs of all items with an expected completion date before the current date.

ACWP – The current sum of actual costs of all items.

BCWP – The sum of expected costs for all items that have been entirely completed.

The expected values for completion day and cost of items are set at the start of the project, and are part of the planned schedule. Each member of the team will be required to track all work done for any task they are assigned to. This will primarily be done in individuals Engineering Notebooks, and then updated to the MS Project file regularly. All members have access to the MS Project file and WBS numbers for each task in order to report exactly which task any work performed falls under.

### Reporting:

As the task item data is kept up to date, we will be able to compare our original schedule to current project status to give an idea of project performance. For any given date during the project, we can compare BCWS to BCWP to help give an idea of whether the project is on schedule. Likewise, for an idea of where the project stands as far as budget we can compare ACWP and BCWP throughout the project.

This information will be reported as a team during Team Status Reports, and individually during Individual Status Reports during the course of the project.

# Scope Management Plan

*What is the* ***strategy and plan for controlling the scope*** *of the project and eliminating excessive feature creep?*

# Work Breakdown Structure

*What is the WBS (****to the top three levels****)? Show it here in outline form.*

# Quality Management Plan

*How do you intend to measure* ***quality of your documentation and your product*** *to verify that you meet the stated requirements or not?*

# Communications Plan

*How will you* ***ensure good communication*** *with each other – and with everyone else! How will you keep everyone on the same page throughout the life of the project? What about reports, impromptu meetings, scheduled team meetings, email, etc.?*

# Change Management Plan

## Purpose of Integrated Change Management Plan

There is an extremely high (almost inevitable) chance for necessary changes to arise during the course of this project. These may be caused by changes to the set schedule, changes to the available budget, changes in customer requirements as well as other changes. Adapting to these changes is important to ensure project success and completion acceptance by all stakeholders. However, there will also arise some proposed changes that will not be necessary for the completion of the project. Therefore it is important to set out a system that can manage the proposed changes.

The change management plan is also important so that all stakeholders know the status of such changes, and all changes can be tracked and correctly handled. This will include analyzing the change, controlling the impact, and dealing with the effects. Changes can come from many sources, including all stakeholders of the project.

## Roles and Responsibilities

*Project Sponsor:* The project sponsor is acting as the customer for this project, so their role in the change management plan is very important. The sponsor represents the source of any changes to the project by the customer, so will be able to propose changes for consideration. The sponsor will also be requested to approve all changes to the project.

*Project Manager:* The project manager maintains the schedule of the project and so will be responsible for presenting and leading the analysis of any changes related to the project schedule.

*Change Manager:* The change manager is responsible for documenting status, impacts and effects of any change brought to the team.

*Project Team:* All proposed changes to the project shall be presented to the project team for deliberation. The team shall meet as a whole to discuss the impact of the change and any other considerations necessary to address the change.

## Review and Approval Process

Any change presented to the team will be recorded and discussed as an item at the next scheduled team meeting. The change manager will lead the analysis of the change emphasizing the impacts of the change. After discussion, if the team decides to go forward with the change, a plan to do so will be set out. The change will be presented to the sponsor for final approval before enacted upon.

## Change Identification, Documentation, Implementation and Reporting

*Define and describe the* ***change control form*** *and the documentation required to track a change request. Describe any automated tools used to manage and track changes and identify the process for entering and reporting changes. Describe the process for* ***updating any affected documents, the WBS (schedules) and budget/cost documents with approved changes****. If the baseline for these documents changes, describe the means for capturing the baseline change in the OMB Exhibit 300 process.*

# Risk Management Plan

## Purpose of Risk Management Plan

All stakeholders involved in this project recognize that the project itself comes with certain risks. Some of these risks are common ones that can be associated with most projects, and some are more specific to the scope of this particular project. It is important to identify and plan for as many of these risks as possible because they can all affect the schedule or budget of the project as well as the overall success.

The Risk Management Plan is the method used to systematically identify, assess and control risks identified with this project. It will help avoid any risks if possible, and minimize negative effects of unavoidable risks on the success of the project.

## Roles and Responsibilities

*Project Sponsor:* The project sponsor will identify any risks to the project that they may be concerned about, and provide them to the team for analysis. The sponsor may also be involved with the team in controlling the risks if possible.

*Project Manager:* The project manager, as a member of the team, will help identify risks with the team. The manager will have the final decision of prioritization of identified risks after consideration with the rest of the project team.

*Risk Manager:* The risk manager will lead the team during risk assessment. They will keep track of any risks identified by either the team or the sponsor. The risk manager must also plan for any risks identified, with input from the project team. Finally, they will be in charge of monitoring all identified risks throughout the project, which will involve discussing them with the team regularly during meetings.

*Project Team:* The project team will assess all risks together as a group. All members must report any risks that they have identified and provide meaningful analysis during this process. They will also monitor the risks, with the help of the risk manager, to detect any of the identified risks that occur during the project.

## Risk Identification

Risk identification is when any stakeholder contributing to the risk management presents any foreseeable potential problem with the project or development process. Identification includes listing the potential risk in detail so it can be thoroughly analyzed with respect to the project. All risks that have been identified will be recorded by the risk manager. Multiple tools to be utilized during risk analysis include:

- Past project experience,

- Documentation of common project problems which are then related to this project

- Input from project stakeholders, including team sponsor

## Risk Triggers

Some observable risk triggers that can serve as warning of certain risk occurrences include:

* Addition of new requirements
* Changes to existing requirements
* Deliverables or mini milestones not being met on schedule
* Poor morale
* Poor cost performance index

## Risk Analysis

Risk analysis provides a means to examine all risks identified, and helps stakeholders better understand risks. A sample of analyzed risks for this project follows. Note the assigned priority to these risks during this phase represents how important the team feels the risk is on a scale of 1-5.

Product Risks

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Priority(1-5) | Likelihood (%) | Size of loss (weeks) |
| Doesn't float | 1 | 40 | 3 |
| Extreme Temp Failure | 1 | 40 | 3 |
| Frame Resilience | 4 | 30 | 2 |
| Project Failure | 1 | 30 | 4 |

Personnel Risks

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Priority(1-5) | Likelihood (%) | Size of loss (weeks) |
| Personnel Availability | 4 | 80 | 2 |
| Lack of Buy-in | 5 | 20 | 3 |
| Burnout | 1-2 | 95 | 2 |
| Sponsor Availability | 5 | 50 | 2 |

Process Risks

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Priority(1-5) | Likelihood (%) | Size of loss (weeks) |
| GPS Integration | 5 | 30 | 1 |
| Hardware Failure | 3 | 40 | 1 |

## Risk Severity

In order to analyze the severity of risks, they are compared against each other to give a Risk Severity Grid. Risks are ordered by severity, which is calculated as the product of the likelihood and size of loss identified during qualitative and quantitative analysis. The risk severity grid follows:

|  |  |
| --- | --- |
| Name | Severity (likelihood x size of loss) |
| Burnout | 1.9 |
| Personnel Availability | 1.6 |
| Doesn't float | 1.2 |
| Extreme Temp Failure | 1.2 |
| Project Failure | 1.2 |
| Sponsor Availability | 1 |
| Frame Resilience | 0.6 |
| Lack of Buy-in | 0.6 |
| Hardware Failure | 0.4 |
| GPS Integration | 0.3 |

## Risk Response Planning

The team will make every attempt to avoid risks or minimize effects if those risks are encountered. A plan is set out in response to each risk to ensure that they can be controlled effectively. The plan for each identified risk during this project follows:

|  |  |
| --- | --- |
| Name | Response |
| Burnout | All team members will maintain focus and stay involved with project. |
| Personnel Availability | This risk is accepted, and backup roles are assigned for major roles. Also members are committed to provide assistance for transportation problems. |
| Doesn't float | Research will be done before and during design. |
| Extreme Temp Failure | Research to ensure product operating temperature is below required threshhold. |
| Project Failure | Research and attention to details during design will minimize likelihood of this risk. |
| Sponsor Availability | Regular meetings with sponsor are planned to minimize any periods when they may not be available. |
| Frame Resilience | Research will be done to ensure materials used are resillient. Also care will be taken during handling of the product. |
| Lack of Buy-in | All members will have major say in development of project to ensure complete buy-in. |
| Hardware Failure | Research of reliable hardware components will be done. Backups of some items may be purchased if budget allows it. |
| GPS Integration | Accepted, due to low priority. |

## Risk Documentation and Reporting

The risk manager will maintain all risks on the team GitHub repository. All analysis and planning of risks will be kept here. The risk manager will also report his ongoing risk monitoring status at weekly meetings, and keep this information in the repository.

## Risk Control

The risk manager is responsible for monitoring the risks throughout the project. He will confer with team members during weekly meetings to identify any triggers that may have occurred. The risk manager will also check with the team to make sure the actions to control each risk are being completed.

During team meetings, team members will identify any new risks, or changes to already identified risks. The team will then analyze the new information together and the risk manager will add the item to the risk repository. This also applies to any new or changed risks identified by the sponsor.

# Procurement Management Plan

## Purpose of the Procurement Management Plan

*Describe the purpose of the Procurement Management Plan using the following guidelines. Do not merely describe the content of the plan, but explain why Procurement Management is necessary for the*

*The organization is unable to create or supply all the products and services necessary to complete the project and therefore needs to use external sources that have the expertise in certain areas to assist in completing all required project deliverables. Procurement planning gives the project team knowledge and confidence to obtain quality products and services from qualified vendors in a timely manner.*

## Roles and Responsibilities

*Describe how the following project participants, at a minimum, perform in the planning and execution of project procurement*

*Project Sponsor*

*Project Manager*

*Project Team*

*Project Stakeholders*

*Contract Office Technical Representative (COTR)*

## Required Project Procurements and Timing

*Discuss the necessity for planned procurements, including the results of alternative analyses and make or buy analyses. Discuss the best times to initiate the procurement processes to meet the detailed project schedule.*

## Description of Items/ Services to be acquired

*Briefly describe the overall scope of the project. What are the specific items/services/major contract deliverables that will be acquired?*

# Project Closeout Report

## The following are suggested sections for the Project Closeout Report:

## Purpose of Closeout Report

*Describe the purpose of the Closeout Report using the following guidelines:*

*The closeout report insures that personnel, contract, administrative, and financial issues are resolved, that documents are archived, and lessons learned are captured.*

## Administrative Closure

### Were the objectives of the project met?

*Review the project objectives and indicate if the objectives were met. If there were deviations from the baseline objectives and the final product, describe those here.*

### Archiving Project Artifacts

*Describe how project documents will be collected and archived for future reference. Documentation to consider:*

*Financial records*

*Cost and schedule performance reports and records*

*Quality data*

*Correspondence*

*Meeting Notes*

*Status Reports*

*Issue and Action Log*

*Risk Log*

*Contract Files*

*Change Requests*

*Technical documents*

*Acceptance records*

### Lessons Learned

*Conduct a lessons learned session to discuss and capture the performance (e.g., what worked well, what did not work well) from start to finish on the project. Capturing and incorporating lessons learned on future projects are among the most important ways in which an organization gathers information to institutionalize repeatable processes and avoid repeated mistakes.*

### Plans for Post Implementation Review (PIR)

*Describe the plan to conduct the Post Implementation Review (PIR).*

### Final Customer Acceptance

*Describe the achievement of final customer acceptance. Describe the final meeting with customer, who attended and what disciplines were represented (finance, contracts, quality, etc.) Discuss the documents signed. If open issues remain, discuss the plan for their resolution.*

### Financial Records

*Discuss the review of invoices, purchase orders, and final cost reporting. Describe where the final cost records are archived.*

### Final Project Performance Report

*Summarize the project’s scope management, schedule performance, cost performance, quality achievements, and a review of the risk containment performance. Discuss the reasons for cost or schedule variances.*