

Software Project Management Plan (SPMP)

The basic template to be used is derived from IEEE Std 1058-1998, IEEE Standard for Software Project Management Plans. The following is a template for the SPMP. It begins with a cover page that contains the version control and release information. Each section has a description of the information contained within.

Software Project Management Plan

for

<Name of Project>

<author>

<date>

Version Release	Responsible Party	Major Changes	Date
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0.1 Initial Document Release for Comment

Table of Contents

Build the table of contents here. Insert it when you finish your document.

1. Introduction

This section of the SPMP provides an overview of the project.

1.1 Project Overview

Include a concise summary of the project objectives, major work activities, major milestones, required resources, and budget. Describe the relationship of this project to other projects, if appropriate. Provide a reference to the official statement of product requirements.

1.2 Project Deliverables

List the primary deliverables for the customer, the delivery dates, delivery locations, and quantities required satisfying the terms of the project agreement.

1.3 Evolution of the SPMP

Describe how this plan will be completed, disseminated, and put under change control. Describe how both scheduled and unscheduled updates will be handled.

1.4 Reference Materials

Provide a complete list of all documents and other sources of information referenced in the plan. Include for each the title, report number, date, author, and publishing organization.

1.5 Definitions and Acronyms

Define or provide references to the definition of all terms and acronyms required to properly interpret the SPMP.

2. Project Organization

This section specifies the process model for the project and its organizational structure.

2.1 Process Model

Specify the life cycle model to be used for this project or refer to an organizational standard model that will be followed. The process model must include roles, activities, entry criteria and exit criteria for project initiation, product development, product release, and project termination.

2.2 Organizational Structure

Describe the internal management structure of the project, as well as how the project relates to the rest of the organization. It is recommended that charts be used to show the lines of authority.

[Image]

Figure F-2: Organization Chart

2.3 Organizational Interfaces

Describe the administrative and managerial interfaces between the project and the primary entities with which it interacts. A table may be a useful way to represent this information.

Organization	Liaison	Contact Information
Customer: <name>	<name>	<phone, email, etc.>
Subcontractor: <name>		
Software Quality Assurance		
Software Configuration		
Management		
<etc.>		

Table F-1. Project Interfaces

2.4 Project Responsibilities

Identify and state the nature of each major project function and activity, and identify the individuals who are responsible for those functions and activities. Tables of functions and activities may be used to depict project responsibilities.

Role	Description	Person
Project Manager	leads project team; responsible for project deliverables	<name>
Technical Team Leader(s) <etc.>	<define as locally used> <etc.>	<name>

Table F-2. Project Responsibilities.

3. Managerial Process

This section of the SPMP specifies the management process for this project.

3.1 Management Objectives and Priorities

Describe the philosophy, goals, and priorities for managing this project. A flexibility matrix might be helpful in communicating what dimensions of the project are fixed, constrained and flexible. Each degree of flexibility column can contain only one "X".

Project Dimension	Fixed	Constrained	Flexible
Cost		X	
Schedule	X		
Scope (functionality)			X

Table F-3: Flexibility Matrix

3.2 Assumptions, Dependencies, and Constraints

State the assumptions on which the project is based, any external events the project is dependent upon, and the constraints under which the project is to be conducted. Include an explicit statement of the relative priorities among meeting functionality, schedule, and budget for thi project.

3.3 Risk Management

Describe the process to be used to identify, analyze, and manage the risk factors associated with the project. Describe mechanisms for tracking the various risk factors and implementing contingency plans. Risk factors that should be considered include contractual risks, technological risks, risks due to size and complexity of the product, risks in personnel acquisition and retention, and risks in achieving customer acceptance of the product.

The specific risks for this project and the methods for managing them may be documented here or in another document included as an appendix or by reference.

3.4 Monitoring and Controlling Mechanisms

Define the reporting mechanisms, report formats, review and audit mechanisms, and other tools and techniques to be used in monitoring and controlling adherence to the SPMP. Project monitoring should occur at the level of work packages. Include monitoring and controlling mechanisms for the project support functions (quality assurance, configuration management, documentation and training).

A table may be used to show the reporting and communication plan for the project. The communication table can show the regular reports and communication expected of the project, such as weekly status reports, regular reviews, or as-needed communication. The exact types of communication vary between groups, but it is useful to identify the planned means at the start of the project.

Information Communicated	From	To	Time Period
Status report	Project Team	Project Manager	Weekly
Status report	Project Manger Team	Software Manager, Project Team	Weekly
Project Review <etc>	Project Team	Software Manager	Monthly

Table F-4: Communication and Reporting Plan

3.5 Staffing Approach.

Describe the types of skills required for the project, how appropriate personnel will be recruited, and any training required for project team members.

4. Technical Process

This section specifies the technical methods, tools, and techniques to be used on the project. It also includes identification of the work products and reviews to be held and the plans for the support group activities in user documentation, training, software quality assurance, and configuration management.

4.1 Methods, Tools, and Techniques

Identify the computing system(s), development method(s), standards, policies, procedures, team structure(s), programming language(s), and other notations, tools, techniques, and methods to be used to specify, design, build, test, integrate, document, deliver, modify or maintain the project deliverables

4.2 Software Documentation

Specify the work products to be built for this project and the types of peer reviews to be held for those products. It may be useful to include a table that is adapted from the organization's standard collection of work products and reviews. Identify any relevant style guide, naming conventions and documentation formats. In either this documentation plan or the project schedule provide a summary of the schedule and resource requirements for the documentation effort.

To ensure that the implementation of the software satisfies the requirements, the following documentation is required as a minimum:

4.2.1 Software Requirements Specification (SRS)

The SRS clearly and precisely describes each of the essential requirements (functions, performances, design constraints, and attributes) of the software and the external interfaces. Each requirement is defined such that its achievement is capable of being objectively verified and validated by a prescribed method, for example, inspection, analysis, demonstration, or test.

4.2.2 Software Design Description (SDD)

The SDD describes the major components of the software design including databases and internal interfaces.

4.2.3 Software Test Plan

The Software Test Plan describes the methods to be used for testing at all levels of development and integration: requirements as expressed in the SRS, designs as expressed in the SDD, code as expressed in the implemented product. The test plan also describes the test procedures, test cases, and test results that are created during testing activities.

4.3 User Documentation

Describe how the user documentation will be planned and developed. (This may be just a reference to a plan being built by someone else.) Include work planned for online as well as paper documentation, online help, network accessible files and support facilities.

4.4 Project Support Functions

Provide either directly or by reference, plans for the supporting functions for the software project. These functions may include, but are not limited to, configuration management, software quality assurance, and verification and validation. Plans for project support functions are developed to a level of detail consistent with the other sections of the SPMP. In particular, the responsibilities, resource requirements, schedules and budgets for each supporting function must be specified. The nature and type of support functions required will vary from project to project. The absence of a software quality assurance, configuration management, or verification and validation plan, however, must be explicitly justified in project plans that do not include them.

5. Work Packages, Schedule, and Budget

Specify the work packages, dependency relationships, resource requirements, allocation of budget and resources to work packages, and a project schedule. Much of the content may be in appendices that are living documents, updated as the work proceeds.

5.1 Work Packages

Specify the work packages for the activities and tasks that must be completed in order to satisfy the project agreement. Each work package is uniquely identified. A diagram depicting the breakdown of project activities and tasks (a work breakdown structure) may be used to depict hierarchical relationships among work packages.

5.2 Dependencies

Specify the ordering relations among work packages to account for interdependencies among them and dependencies on external events.

Techniques such as dependency lists, activity networks, and the critical path method may be used to depict dependencies among work packages.

5.3 Resource Requirements

Provide, as a function of time, estimates of the total resources required to complete the project. Numbers and types of personnel, computer time, support software, computer hardware, office and laboratory facilities, travel, and maintenance requirements for the project resources are typical resources that should be specified.

5.4 Budget and Resource Allocation

Specify the allocation of budget and resources to the various project functions, activities, and tasks.

5.5 Schedule

Provide the schedule for the various project functions, activities, and tasks, taking into account the precedence relations and the required milestone dates. Schedules may be expressed in absolute calendar time or in increments relative to a key project milestone.

6. Additional Components

Certain additional components may be required and may be appended as additional sections or subsections to the SPMP. Additional items of importance on any particular project may include subcontractor management plans, security plans, independent verification and validation plans, training plans, hardware procurement plans, facilities plans, installation plans, data conversion plans, system transition plans, or the product maintenance plan.

6.1 Index.

An index to the key terms and acronyms used throughout the SPMP is optional, but recommended to improve usability of the SPMP.

6.2 Appendices

Appendices may be included, either directly or by reference, to provide supporting details that could detract from the SPMP if included in the body of the SPMP. Suggested appendices include:

- A. Current Top 10 Risk Chart
- B. Current Project Work Breakdown Structure
- C. Current Detailed Project Schedule