

Project Management and the Software Development Plan

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Project Management

The planning, monitoring, and control of the people, process, and events that occur as software evolves from a preliminary concept to an operational implementation.



The 4 P's of Project Management

- People
- Product
- Process
- Project

The 4 P's of Project Management

● People

For success a manager must focus on:

- Recruiting
- Selection
- Performance management
- Training
- Compensation
- Career development
- Organization
- Work design
- Team/culture development

For success each team member must focus on:

- Trusting one another
- Careful distribution skills appropriate to the different tasks
- Mavericks may have to be “fired”
- A team member is not doing their fair share of the work either because of inability or lack of concern.

It will be up to each team to establish a way to ensure everyone is equally accountable for the success of the project and to define what corrective measures are needed when a team member fails to perform.

The 4 P's of Project Management

● Product

Before a product can be produced you must have a clear understanding of exactly what the software must do.

Determining the scope of the project*

- 1. How will the product be used?**
- 2. What are the constraints on the system?**
- 3. What data input is needed?**
- 4. What data output will be produced?**

** This must be clear and unambiguous.*

The 4 P's of Project Management

● Process

- 1. List all general tasks to be completed.**
- 2. Break down each general tasks sub-tasks.**
- 3. List the start and end dates of each task.**
- 4. Determine who will work on each task.**
- 5. State what the resulting product will be for each task.**
- 6. Define the milestone to mark when that task is completed.**

The 4 P's of Project Management

● Project

This focuses on the processes you will follow in the planning, designing, and implementing of the software product.

How do you ensure that problems don't arise?

- 1. Start on the right foot.**
- 2. Maintain momentum.**
- 3. Track progress.**
- 4. Make smart decisions.**
- 5. Conduct a post-project analysis.**

Software Development Plan

Generic Contents

● Project Schedule

● List of Deliverables

- * Documents
- * Demonstrations

● List of Milestones

● Personnel

- * Product Owner
- * Scrum Master
- * Team
 - * Software Lead
 - * Customer Liaison
 - * Requirements Analysts
 - * Designers
 - * Programmers
 - * Test Designers
 - * Testers

● Risks

Software Development Plan

Required for CS 499

● Project Overview

- * Brief description of the project and its' objectives

● Project Schedule

- * Refer to chapter 24 in the text
- * Include for each phase: actions to complete, deliverables, milestone to mark the end

● List of Personnel

- * List roles you have identified and who will fill each role

● Risk Management Plan

- * List all risks identified (refer to chapter 25 in the text) and how the risk will be managed if it occurs.

The format of this document is flexible, but it should have a professional look. It should be well organized with numbered sections and sub-sections.

Software Development Plan

❖ Steps in Identifying Risks

- 1. Risk Identification - list all possible events that could impact product completion and delivery.**
- 2. Risk Analysis - how likely is each event to occur and what will be the damage if it does occur.**
- 3. Risk Ranking - list all risks by probability and impact on the project.**
- 4. Risk Management - develop a plan for handling each risk event if it should occur.**

Hint: One way of ranking the impact of a risk is to categorize each as:

Catastrophic

Critical

Marginal

Negligible

Software Development Plan

Areas of Potential Risks

- Product Size**
- Business Impact**
- Customer characteristics**
- Process definition**
- Development Environment**
- Technology to be built**
- Staff size and experience**

Risk Drivers

- Performance risk**
- Cost risk**
- Support risk**
- Schedule risk**

*Based on the textbook. Your project may have different or additional risks.
It is up to the team to adequately analyze and evaluate all possible risks.

Meetings

Required for CS 499 and, unfortunately,
for all professional software engineers

Making Meetings Meaningful and Productive



- ➊ Have a stated purpose
- ➋ Have a definite time and place
- ➌ Have one person designated as moderator
- ➍ Have one person designated as recorder
- ➎ Moderator should have a planned schedule
- ➏ Moderator should keep everyone on track
- ➐ Have a stated maximum time

Scrum Daily Standup Meeting

- ➊ What have I done since yesterday's meeting?
- ➋ What am I doing today?
- ➌ What roadblocks or problems have I encountered?