What is SPM?

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Abstract

The article gives a brief and concise explanation to the highly valuable nature of software project management (SPM). It describes the various project management activities; planning, organizing, monitoring and controlling. It outlines the importance of management to the success of a project and also problems that can be encountered during the process and possible solutions.

1 Introduction

Software, like any other project, needs to be managed to ensure the achievement of its requirements. Software project management is a sub-discipline of project management in which software projects are planned, monitored and controlled. A project, being temporal, must have a time frame, that is, a fixed start and end date. Project management begins when a client indicates a need. It is very critical in that the success or failure of any project depends on its management. In the next sections we will discuss the various activities involved during the management of projects to ensure successful completion and also see how to deal with problems/changes.

2 Project Planning

The project manager plans and guides the software project. She is responsible for identifying the users and stakeholders and determining their needs and also coordinating the entire project team. A stakeholder is anyone who has an interest (or stake) in the software being completed. A project plan should consist of a statement of work, a resource list, a work breakdown structure(WBS), a project schedule and a risk plan. Usually when stakeholders indicate a need they have several questions that need to be answered :

- Do you understand my problem and needs?
- Can you design a system that will solve my problem or satisfy my need?
- How long will it take you to develop such a system and how much will it cost?

3 Organizing the Project

During the project start project management assembles teams according to the work breakdown structure and task models that have been created. To ensure the success of the project, the project manager has to address the following issues :

- Setting up a clear and accurate communication infrastructure.
- Identifying skills: The project manager has to identify individuals with the right combination of skills required for each task. For example, tasks related to requirements elicitation require application domain knowledge.
- Assigning management roles: Management roles are assigned to individual participants.[1]

4 Project Monitoring and Control

It involves gathering status information from the team so as to make effective decisions. This is done through status meetings. Project monitoring and control keeps team members and management up to date as to the progress of the project. Also progress can be measured by determining if developers deliver work products on time. Managers can increase the accuracy of this method by defining sharp ***millestones***. such that they can be accurately monitored. Management also needs to works closely with stakeholders to ensure that the project is going according to requirements. This is to avoid situations where the project is completed and the product delivered but it turns out that the stakeholders are not satisfied with the results.

5 Dealing with Problems (Scoop creep and overruns)

It is normal to encounter problems during the project. In this section we are going to discuss possible ways to mitigate them.

- ***Scope Creep***: This occurs when additional features and functionalities are added to the project (beyond those defined in project scope).In order to avoid scope changes it is advisable that the project scope is documented and signed by both the client and the vendor before the work actually starts.Such an agreement will restrain users from making new demands, and if they deem them necessary, the vendor will get paid accordingly.
- ***Budget Overruns***: Comparing planned costs against actual costs in the context of actual progress enables the manager to assess the financial health of the project. Other problems may include losing an employee or change in technology. Management needs to be able to turn cer-

tain problems or changes into an advantage.

6 Conclusion

Software Project Management (SPM) is an essential tool. Most importantly, it enables you to create better software solutions more reliable, scalable and efficient.Establishing clear and concise goals ensures a smooth running project. Good project management may not gaurantee a successful completion but poor management will definitely lead to failure.

References

[1] Bernd Bruegge and Allen H. Dutoit, *Object Orriented Software Engineering using UML, Patterns and Java; 3rd Edition*