Risk Management For Software Projects

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Abstract- **The risks associated with software are increasing with the growth of the software industry. Modern software development presents specific challenges and risk areas to the software industry which need to be considered and managed. With more and more organizations investing substantial resources in software development, risk management becomes crucial. In this paper we will discuss some of the risk management threats and try to find some solutions or techniques to tackle the risks.**

Index Terms- **Risk Management, Software Risk Management (SRM), Software Development, Project Quality**

I. INTRODUCTION

Risk management is the identification, assessment, and prioritization of risks. Risks can come from uncertainty in financial markets, threats from project failures at any phase in design, development, production, or sustainment life-cycles, legal liabilities, credit risk, natural causes and disasters. The main purpose of risk management is to identify potential problems of technical and management aspects before they occur.

II. SOFTWARE RISK MANAGEMENT (SRM)

Software risk management is one promising approach to deal with system failures. Boehm defined SRM as "a discipline whose objectives are to identify, address, and eliminate software risk items before they become either a threat to successful software operation or major sources of software rework". In addition, software project managers view risk management as a key to success (Barki et al., 1993).

III. RISK MANAGEMENT CYCLE

In any given organization or environment, projects will have some common risks. In developing a risk management plan for a project, other projects should be reviewed for risk occurrences that can be anticipated and avoided.

3.1. Risk Identification

The identification of the possible risks which can occur must be done to avoid that risk before occurrence. It is essential that customers/users/stakeholders be involved in the risk identification process, as along with members of the project team. Risk identification is an ongoing process to document the future risk events.

3.2. Risk Analysis

Assess the loss probability and loss magnitude for each identified risk items and it also analyzes compound risks in risk-item interactions.

3.3. Risk resolution

Generate a situation in which the risk items are eliminated or resolved.

3.4 Risk Quality Assurance

Risk management quality assurance should measure:

- Total number of risks identified.
- Number and percentage of risks successfully mitigated.

- Number of occurrences of risk events, both identified and unidentified.
- Number and percentage of occurrence of unidentified risk events.
- Impact of the occurrence of risk events on scope, cost and schedule.

IV. CONCLUSIONS

Software risk management is a continuous process rather than sequential activity. Some researchers say that we only need to do risk management in system analysis and design stages in system development life cycle. However, because risk management is a continuous process, each stage of development needs to consider risk management.

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