Software Project Management

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Abstract

With the rapid development of information technology, the scale of the software product is becoming more and more big, the development of individual contribution mill way has become more and more not adapt to the needs of the development of various enterprises are actively introduces software project management in development activities, to carry on the effective management of the development

Software development is different from other products manufacturing, the whole process of software design process (not made slightly; in addition, the software development do not need to use a lot of material resources, and mainly is the human resources, and software development of the product just program code and technical documents, and there is no other material results. Based on these characteristics, software project management compared with other project management, there is a lot of uniqueness

1 The organization mode of the software project management

Implement project management company, the first to set up project management committee, the project management committee has project management project team, project review team and software products.

1.1　Project management committee. Project management committee is the highest policy-making body of the project management company, generally consists of company general manager, deputy general manager.

1.2　The project management team. The project management team responsible for the project management committee, general management personnel by the company

1.3　The project panel. Project review team responsible for the project management committee, has developed panel and panel products, general technical experts and marketing experts by the company

1.4　Software product project. Software product team responsible for the project management committee, but consists of software project team and production team. Each software project team and product team development manager and product manager. Members of the general technical personnel by the company and marketing personnel. Main responsibility is according to the arrangement of the project management committee to be responsible for software development and market research and sales of the project work

2 The content of the software project management

From the perspective of software engineering, software development mainly divided into six stages: demand analysis, general design, detailed design, coding, testing, installation and maintenance phase

According to the actual circumstance of the company, the company in the software project management, will focus on the

software configuration management,software quality management,risk management and developers manage four aspects into the stage of software development In the software project management, also should follow the principle of seven, and they are:

1) strictly with the phases of the life cycle plan management;
2) insist on stage review;
3) implement strict product control;
4) using modern design technology program;
5) the results should be able to clearly review;
6) development team personnel should be few and well chosen;
7) admitted to continuously improve software engineering practices to necessity

3 Write the software project plan

The team set up the first thing is to write the software project plan, development schedule, resource requirements described in the plan, the general content of the project management, and other conditions. Plan mainly distribute to all the relevant personnel, make them understand roughly the software project situation to plan a content and should have the corresponding specific implementation manual, the manual is for the use of project related members

4 Software quality management

As the scale of the software development is more and more big, the quality problem of the software is more and more prominent. Software quality control is not just a question of software testing, in all stages of software development should be introduced quality management

4.1 Software quality assurance plan. Before to software development, need to have a "software quality assurance plan". Is now more commonly used ANS1 / IEEE STOL730-1984.983-1986 standard

4.2 The basic principles of quality management
1) the quality control of all the process;
2) the starting point of the process control is to prevent unqualified;
3) the central task of the quality management is to establish and implement documented quality system;
4) continuous quality improvement; Evening and effective quality system should meet the needs of both customers and internal organization and benefit
Profit;
5) regular evaluation of the quality system;
6) association, do a good job in quality management is the key to leadership

4.3 the software quality factors. Software quality factors include: correctness, robustness, efficiency, integrity, availability, risk, understandability, maintainability, flexibility, adaptability, testability, portable, reusable, and run

4.4 software review. Software evaluation is not in the software development after the review, but in every phase of software development to review. Because in every phase of software development may produce errors, if these errors are not found and corrected in time, will continue to expand, may lead to the failure of the development in the end

Review the goal set first, and then set up the review process, finally concluded according to the assessment criteria for review

5 The software risk management

Risk in software project management exists, if attaches great importance to the risk in advance, and safeguards, can minimize the occurrence of risk. Risk management is the effective means

5.1 the classification of risk

According to the content of risk, we can be divided into project risk (increase cost, longer) (immature), technology risk, business risk (pin wei), strategic risk (the company's business strategy has changed), risk management (company's managers are mature), budget, risk is accurate (budget), etc.In addition, can also be divided into known risk (such as employee turnover), can forecast the risk (from past experience might be at risk) and unpredictable risks.

5.2 risk identification.

Risk identification of the effective method is to establish a project risk checklist. Check mainly involves the following aspects: product size, business impact, customer, process, technology and development environment, mode and experience of the staff, etc

5.3 risk assessment.

Risk assessment is mainly from the following seven aspects:
1) the likelihood of occurrence;
2)The results of the ;
3) establish a scale said risk possibility;
4) describe the consequences of the risk;
5) estimate the impact on the product and project;
6) to determine the accuracy of risk assessment
7); Association, according to the limited influence scheduled queue

5.4 risk evaluation of risk evaluation based primarily on three factors: the risk description and risk probability and risk impact. From the three aspects of cost, schedule and performance to evaluate risk. Determine something in the project, than points in the risk assessment again

5.5 risk control and monitoring. Risk control and monitoring depend mainly on the experience of the managers to implement

6 People management

Requirements for the project manager.
1) to make the team without a member can play to the ability;
2) has certain organization ability;
3) can make the team each member has a sense of accomplishment;
4) has the ability to put forward solutions to problems;
5) the understanding of problems has certain depth;
6) need to be able to let members know the importance of software quality

7 Conclusion

The goal of software project management is in order to control cost, complete progress and improve the quality on the basis of the software development work. Let the whole lifecycle of the software project, including analysis, design, coding, testing and maintenance of the process, all under the grasp of project manager, able to finish in accordance with the expected time, cost and quality. Good learning software project management, to a greater extent ensure the success of software project.

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