

Software Project Management

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Abstract

With the advent of the era of knowledge economy, the enterprise can effectively manage their reasonable just has become enterprise in the fierce market competition to get the key to competitive advantage. The knowledge economy era is also the era of information technology, the efficient operation of the whole society more and more dependent on computer software products. Software quality and software quality management is increasingly becoming the focus of attention. Software quality reflects the nature of the software. The quality of the software development process management is an important way to solve the problem of software quality. The current international popular ISO9001 standard and CMM model is to know how to set up enterprises to meet the requirements of quality management and put forward the development process. But software product is

a special kind of logic, its basic process of "manufacturing" is equivalent to "design" process, obviously can't rotte hardware products quality management methods to manage the quality of software products, therefore, need to set up specifically for the quality of the software product management methods. This paper expounds the understanding of the quality of software project management, and connecting with the practical experience of quality management of software project has made some discussion. Paper detailed introduces the concept of quality and software quality and software quality engineering system of ideas and content, software quality control and management methods and techniques, including software quality standards, configuration management, software quality assurance and software testing, etc.; In view of the actual software quality work, deeply discusses the requirement analysis, software design, programming and testing, the software release and maintenance and so on various stages of the software quality.

1.Introduction

Project quality management is an important part of project management, is a project cost and schedule of the index of some important areas. Quality management is mainly monitoring project deliverable product and the process of project implementation, to ensure that they comply with relevant requirements and standards, while ensuring the unqualified item can in accordance with the right way or prescribed process, project quality management to establish the idea of quality first, user first, to meet the requirements of the general quality of product. In order to guarantee the software product after delivery can perform normal functions according to user requirements, thus effectively in the process of project implementation of quality management necessary.

2. History of software project Management

Juran theory

Juran think that at least 80% of the management is responsible for the quality problem, 20% of the quality problem is the technical problem. His important constant is blessed by the world "juran trilogy" :

Quality plan - to create has the ability to meet quality standard work procedures, quality plan is a must.

Quality control, in order to grasp when should take measures to correct quality problems will have to carry out quality control.

Quality improvement, quality improvement is helpful to find a better way of management.

Six σ theory

In the 1970 s, MOTOROLA six σ theory is established on statistics theory, the concept by is perfect as the ultimate goal of management theory, in so many large companies use. Sigma " σ " is a Greek letters, on behalf of the "standard deviation", in business, it represents the gap between process and perfect. Six-sigma value is 99.99966%, meaning that millions of products in public three or four is defective.

2.Overview

Quality is a reflection of customer satisfaction. ISO quality system, quality is a set of inherent characteristics meet the express, implied usually live must fulfill the needs or expectations.

From the current group in the process of informatization development, and software quality management, the relationship between the informationization in the process of software quality management mainly exist the following problems:

(1) lack of software quality consciousness, software quality assurance technology (review, review and test) not penetrate into the entire software development process. Software production process the demand does not fully attach importance to the quality of the software development completely. Invisible software product is compared with tangible products, software quality examination requires a certain knowledge base, the software to conduct a comprehensive inspection, assessment system of methods and related standards and evaluation system, this caused the software quality consciousness. At the same time, after the project delivery, software quality lack of scientific quantitative indicators.

(2) the blind pursuit of the project schedule, ignore the software research and development, test phase of the quality management, etc. Compared with foreign long-term implementation process of informatization, informatization in China started late, the poor foundation, the informationization process of experience is relatively small, normative standard and the corresponding system has not been formed, cannot form effective development organizations in the implementation of project plan, document control and management is not standard, periodic testing is not thorough quality control problems, such as a large number of existence.

(3) software technology in the process of development, quality management system lags behind. Mainly reflected in the grasp of software product quality to its connotation, only stay in reducing software operation error, to strengthen the software test and avoid the general level of software defects, and the quality of the entire software development life cycle process management, lack of overall architecture. In the process of development, the development of software of software quality.

(4) the informationization process lack of effective quality control system. For example, the test management some mistakes will cause serious quality problems. Not carried out in accordance with the principle of testing testing, continuous testing and automation testing. As soon as possible is to test the province has become the formal pattern of informationization process flow is: demand, research, and a tender, development, testing, online and maintenance. The model. Part of a quality problem is through software production enterprises are

responsible for the product under certain control, but most of the quality control activities for software testing only, not for information at various stages of the process of quality control.

3.Methods/Techniques

In software project quality management stage, the need to use the project's quality management tools and techniques, the following is the development project by using the method to the main.

For a developing organization, the problem of exposure is natural, the improved process is actually in execution in accordance with the plan and tracking the process of problem finding, corrective and preventive process. Then, found the problem, collect and sort out the problem, analyzing problem, arranging importance problem, solving measures are put forward, in the area of the drill, comprehensive promotion as a systematic process improvement steps.

Practical applications, the project team every encounter a problem or often make the mistake for record purpose and published within the project team at any time, this is a problem of collection process; Again on this

foundation for question classification, statistics and cause analysis, then the problem sorting, correction and corrective action or preventive measures against problem, etc., and the formation of such a self feedback system, can achieve continuous process improvement.

4. Conclusion

In the process of software project implementation, should be in different stages of project planning, implementation and monitoring of quality, thereby

Ensure consistent with target planning and system requirements, to ensure fully in the life cycle of software products testing and inspection, eventually to produce software products to meet the requirements of the project objectives that need to be involved in the whole process of the software quality assurance activities. I put on a software project quality, found that most of the customer to the concept of software quality is fuzzy, during the period of demand research, many requirements are ambiguous, customers are can manage the attitude; On the software design phase, some employees of software security, reliability and ease of use is not very care about;

In the software testing phase, the customer request function greatly changes; After the software online, into the operational phase is a constant small request and so on. While the project is successfully completed unluckily, but found in each phase is still have a lot of the lack of quality management. After the software project, I have a new understanding of the software project quality management, hope in the later project has new improvement on quality management.

In this paper, starting from the methodology of software project quality management combined with its own project management experience, with the project quality management in the application of the actual project. Practice shows that the software project management quality activities should be combined with the project development can effectively improve project process control and overall quality.

Acknowledgements

Thanks to my classmates helped me.

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