

Discussion on bettering quality management and product performance from quality management system

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Abstract. Enterprises thrive on a good product performance. In that case, most of them shift focus on establishing a quality management system, thus enabling a string of quality controls to safeguard product quality. System constructions of certain companies, however, belie actual practices, resulting in modest improvements and even minus effect, no matter what management mode is adopted. This paper expounds feasible paths of enhancing product performance by making the best of quality control works, ground on an assumed well-functioning quality management system.

Keywords: Quality management system, Quality control.

1. Introduction

The degree of programming determines the maturity of the system, and the degree of detail directly affects whether the standardization is well implemented. Difficulties in formulating standardized detailed rules and regulations remain, as quality personnel are unskilled in specific business, competent personnel are weak in writing the program and deny the necessity of refining the task to the greatest extent so that the unable can perform it. In spite of existing detailed documents, employees' mastery still has the final say, leading to a mere scrap of paper [1].

To enable technical personnel of equal skills to be competent for projects, efforts should be redoubled in refining certain fixed tasks, getting both experienced technical personnel and quality staff involved in the compilation to better guide the work. Since project personnel value the implementation, they may lack understandings on problems and pitfalls occurred in other links or encountered by certain groups. Such a gap can only be filled with actual practices. Hence, including key links, precautions, operation procedures, and specific details into the detailed documents can guide and remind them, and benefit the standardization of works and improvement of product performance [2].

2. Optimize the quality organization

Quality inspectors of many enterprises are now kept in an awkward position, and suffering from certain deficiencies. For instance:

Defective products picked out by quality inspectors working overtime turn out to be acceptable by the production department.

Quality control staffs are commonly rejected to refund the flawed purchased parts.

In addition, there is almost no inspection cycle due to the hurry schedule, resulting in shipment of untested goods.

Crucially, troubles come unasked when requirements on going through non-conforming process and issuing corresponding reports at the occurrence of violates behaviors.

Moreover, problems were generally repeated. For example, inspection standard documents were turned out to be lacked when new products were ready to be shipped.

Concessions were agreed due to repeated failures of attempting to maintain the product.

Procurement schedules issued before the New Year were postponed due to funding issues.

Quality problems reported were usually resolved through strengthening inspections without dispatching assisting personnel.

In addition, the awkward position of quality personnel, stuck between superiors of different levels, made them unable to access to efficient solutions. Because leader's recognition directly determines outcomes of problem solving. Quality problems were cutting down going through layers of feedback. And when all leaders care nothing about the feedback, middle layer stay the seemingly trifles.

Similarly, many aspects would affect the inspection work if the quality personnel did not shoulder the responsibility of supervision of product quality, such as the inspection requirement for different goals.

If you want to make a good job in the quality in the enterprise, an organization mode must be clarified and the responsibility of quality personnel in different posts; otherwise, the quality management work would be hard to carry out. It is suggested that all departments should cultivate part-time quality management personnel to take part in the project, understand the requirement of quality management and the common quality issues and be familiar with the implementation of the project. Deeming implementation with an eye of supervision in each process of the project implementation could find out vast of problems; and there would be direct revision along with the generation of problems. This is good for the smooth implementation of the project and greatly shortens the time for stopping and rectifying the quality problems found and implemented. The personnel in the safety quality department should take part in the process review of the project. The personnel in each part should be responsible for the part reviewed by them to push the enhancement of product quality.

3. Results Enterprises should focus on the collection, analysis and enhancement of quality data

3.1 Doing a good job in the basic job of quality data collection

Enterprise needs to focus on the collection of quality data to enhance quality. Here are the problems of the quality information collection of enterprise:

No awareness to collect quality information;

Quality data would be generated in all parts of project implementation, so the quality data is scattering and the chance of data collection would be missed carefully;

Incomprehensive information collected by quality data;

Doing it for collecting the quality data without pre-consideration on the goal of quality data collection, so that the collected data could not be used by the late analysis [3].

According to the questions, it is suggested that the enterprise should regulate the goal, dimensions and channels of quality data collection in the system procedure and strengthen the management of quality data.

3.2 Analyzing data and carrying the quality enhancement job

Quality enhancement job is the one that is easy to ignore in each enterprise. When the enterprise is running, no problem could be found in a short time if there was no risk awareness to have a quality enhancement; however, as time goes by, the enterprises with the competitive awareness to keep engaging in quality enhancement would accelerate their steps while those without the awareness of quality enhancement would stumble and fall behind unconsciously. Therefore, quality enhancement is the key point of corporate development. The enhancement of quality management could be carried out combined with the annual management review or topic of a quality team, so as to solve and improve the protruding problems in the enterprises.

3.3 Monitor work improvement suggestions

As seen from the supervision result in the past few years, there are much more problems found from the review of documents and records. Normally, the supervision of enterprises would be carried out in a fixed time node instead of the carryout of project, so there would be an atmosphere, such as

finding out that the downstream procurement technical specification does not convey the technical requirements of the upstream scheme, so the project team should have a rectification for the following one or multiple items, and then it could be carried out with the approval of the auditor.

Upgrading the procurement technical specification

Sending the upgraded procurement technical specification to supplier

Supplier taking action according to the new procurement technical specification

Organizing project team to study the requirement of the new procurement technical specification

Even if the rectification works mentioned above are completed, there is still a higher possibility of reoccurrence in the projects that would be implemented later, so it does not solve the quality problem from the essence.

Quality problems are suggested to be solved from three levels, correction, management improvement and pursuit of excellence.

Correction, to solve the inappropriate problems and draw inferences to prevent from the occurrence of the same problems.

Solve the inappropriate problems from process and analyze the improvement of management.

The probability of error would be greatly reduced in the management and process. At the same time, we should not only supervise the project implementation but also inspect the supervision of inspectors. In the process, the verification of inspection by supervisors should be added in the process so that the job could be well landed. For example, in the entire procurement process, the review of quality assurance personnel should be added in the approval part of procurement technical specification with the requirement of the key point of the quality assurance review. Business supervision should be added to the procurement process approval process. It would be sent back to the procurement process without the review of quality assurance personnel, which would greatly reduce the probability of the project team making mistakes. Like wisely, several papers on the key nodes of project implementation should be selected to add the quality assurance review when auditing the paper. In the next part, the implementation supervision of quality assurance review should be added in the next part, which would greatly improve the quality of project implementation. It means that the quality assurance personnel would have an inspection before the project papers are signed and approved during the implementation. These key nodes of the project include but are not limited to the following situations:

Table 1. Timing of supervision and inspection intervention

Papers Supervision Point	Design Scheme Review	Review of Testing/ Debugging Procedure	Review of Test/Debugging Report	Review of Procurement Technical Specification	Review of Completion Report
Quality assurance review of paper	Compliance of actual design content with upstream contract requirements	Whether the test / debugging content meets the contract requirements and whether it has not been verified	Whether the test / debugging results can judge the correctness of the results, etc.	Does the procurement content completely transfer the upstream requirements to the supplier	The completion report is to be sent to the owner, so its review should be comprehensive.
Compliance supervision of being signed and approved	Supervision of document approval	Supervision of document approval	Supervision of document approval	Supervision of procurement process approval phase	Supervision of document approval Supervision of finished product inspection part

Pursuit of excellence and high-quality development

Keep creating values for customers, staff and other relevant parties, so as to improve the overall performance and ability of the organization to push the organization to gain sustainable development and success.

4. Conclusion Enhancing experience feedback

Experience feedback is an important job. The same problem that happened in Department A should be prevented in Department B. The problems that happened in Enterprise A should be avoided in our enterprise, and so on. The collection of experience feedback should be consistent to the work engaged by the enterprise; and the sorting job after collection should highlight the key point, such as highlighting the key points, the precautions of certain departments, certain crew and certain projects. Only the things related to itself could raise the attention of the mass.

Think highly of the experience feedback job. The experience feedback personnel should be sensitive to the feedback information. He should keep expanding the information collection channel, and the range of quality information collection should include: refining good experience during the supervision and inspection, the practice result of the core safety device manufacturing, developing information collection channel, notifying good practice within the industry, typical quality accident and making experience feedback, so as to effectively prevent from the occurrence of common problems.

The form and method of the organization decide the effect of experience feedback. Through various forms of attempt, it would find out such work as experience feedback that all staff should get familiar. There would be a bad effect if it is organized with a publicity activity to all staff because most of the participants would think less of it for having no relationship with them. Only leaders who think highly of it and deliver grades by grades can people's attention be caught. The supervision based on it would arouse people's awareness well. Enhancing experience feedback needs us to have experience feedback on the problems that happened before to publicize to each one. Normally speaking, the publication to all staff has a worse effect than that on the team; and the publication to the team is not practical as the pertinent publication for the actual problems.

It is also critical to refining good experience during summarizing and carding the supervision inspection process. For the problems happening to others, we could also effectively prevent the reoccurrence of the same one through experience feedback; and we could refer and have a study of others' good experiences.

5. Conclusion

Quality management enhancement is the job in need of continuous implementation. The stability of quality management also decides the effect of quality enhancement jobs. The quality enhancement job also needs the common struggle of our quality workers to suggest much more valuable and feasible suggestions.

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