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THE IMPLEMENTATION STRATEGY OF QMS INFORMATION TECHNOLOGY PROJECT: CHALLENGES & BENEFITS

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Abstract:

It cannot be denied that many types of information projects have emerged. However, because of this convenience, many people forget that the quality of a project is also essential in supporting it to last long and getting good feedback from users of the products or services produced by a project. This journal uses a qualitative research method, where existing research results will be reviewed to get a new view. There are several objectives of this study: 1) Knowing the Strategy for Implementing the Quality Management System in Informatics projects, 2) why a Quality Management System is needed in Informatics projects, 3) implementing the Quality Management System in Informatics projects, what are the challenges, 4) Behind a challenge or risk, there is an advantage. There are benefits of applying the Quality Management System to the Informatics project. The research instruments used are observational and interview guidelines. The result is to find out the strategies that can be made to implement the Quality Management System so that this project can improve its quality and can also have an impact in the future on other Informatics projects.

Keywords: Strategy, Informatics Project, Quality Management System

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INTRODUCTION

With the development of technology in the current era, the ease of creating an information project is no longer difficult for many people to do (Theis & Wong, 2017; Hair Jr et al., 2019; Vermesan et al., 2022). Many ideas are obtained from various sources to help them work on their projects (Moser & Korstjens, 2018). Therefore, it must be accepted that many types of information projects have emerged. However, because of this convenience, many people forget that the quality of a project is also essential in supporting it to last long and getting good feedback from users of the products or services produced by a project.

Therefore, it is essential to implement a Quality Management System to help the durability of a project in the long term and also make users satisfied (Luthra et al., 2020). The goal of a project is to be something useful, and it can be helpful to help various consumer activities.

However, do not underestimate the amount of intense competition, especially in creating better projects because they follow technological developments. Therefore, the Quality Management System also plays an important role in maintaining the quality of an existing product or service so that it is not left behind and can still compete in an era of intense competition (Mitra, 2016).

METHOD

This journal uses a qualitative research method, which is based on the results of previous research (Taroreh, 2016) "E-LEARNING APPLICATION IN ANDROID-BASED INFORMATIC ENGINEERING PRODI IN POLITEKNIK NEGERI MANADO." Student thesis, Politeknik Negeri Manado.

RESULT AND DISCUSSION

The use of e-learning for students certainly has a significant impact on making it easier for them to access lecture information (Putra et al., 2020). It cannot be denied that some do not believe in it and do not want to use this application. Therefore, looking for what users need to satisfy them is still essential. Of course, the Quality Management System plays a vital role in this matter, and how we formulate a strategy by increasing management commitment and leadership, honing the tenacity and awareness of developers, adjusting the implementation of QMS to suit the project, integrating QMS with project management process analysis, and how developers continue to monitor and evaluate the effectiveness of the Quality Management System.

The implementation of a Quality Management System is more challenging than imagined. Various challenges must also be faced to get good results. The challenge is the project itself. As a result of the implementation of the Quality Management System, many changes will allow a mix of opinions and can result in conflict because there is still a lack of awareness about the Quality Management System in informatics engineering projects. Also, the changes may require a long process and cause constraints on resources and time pressure (Sanuri Mohd Mokhtar et al., 2013).

Behind the various challenges of implementing a Quality Management System are many benefits that can be obtained which of course stand out in improving project quality and customer satisfaction, improving risk management and mitigation, increasing efficiency and productivity, compliance with industry standards and regulations, and sustainable failures can be overcome.

Implementing a Quality Management System itself is not easy. To get maximum results, there must always be challenges to overcome. These challenges are:

1) Change Resistance: Employees may experience resistance to change within new work methods or policies required by the QMS.
2) Implementation Costs: Implementing a QMS can require significant investment in training, certification, and infrastructure changes, which can be a financial burden for some organizations.
3) Difficulty in Performance Measurement: Measuring performance objectively and efficiently can be challenging, especially if the metrics used are inappropriate or the data required is difficult to collect.
4) Documentation Complexity: Stringent documentation requirements in a QMS can be complex and time-consuming, leading to potential administrative overload.
5) Difficulty Integrating with Existing Systems: Integrating QMS with existing systems within an organization can be difficult, especially if there are significant differences in management systems.
6) Inconsistent Understanding: Not all organization members may have an understanding consistent about the goals and benefits of QMS, which can hinder its effective implementation.
7) Selecting the Right Standard: Selecting a QMS standard that suits the type of organization and business requirements can be a challenging task.
8) Ongoing Maintenance and Updates: Maintaining the QMS to ensure compliance

9) Continuously improving performance can be challenging, especially if there is a lack of support or resources.
10) Difficulty Achieving Employee Engagement: For the success of QMS, it is essential to obtain all employees' full involvement and support, but achieving this can be a challenge.
11) The Importance of Quality Culture: Creating an organizational culture that prioritizes internal quality in every aspect of the job can be time-consuming and require deep cultural change.

However, if you can understand and overcome it, this challenge will also bring success, especially for informatics projects. Of course, there are always ways to overcome existing challenges. To overcome the challenges of implementing a Quality Management System (QMS), it can be taken following steps:

1) Effective Communication: Communicate the benefits and objectives of QMS implementation to all organization members, invite employees to actively participate in the change process, and provide a comprehensive understanding.
2) Intensive Training: Provide adequate training to ensure employees understand QMS requirements and apply them in daily work, facilitating regular training to update skills and knowledge.
3) Effective Risk Management: Identify potential risks in QMS implementation, develop strategies to manage them, and regularly review and update the risk management plan.
4) Leader Participation: Ensure full involvement and support from management and leaders organizations, involve leaders in the decision-making process, and monitor QMS performance.
5) Phased Approach: Implement QMS in stages to reduce the impact of deep change, focusing on priority areas that have a significant impact on quality and organizational performance.
6) Re-evaluate existing systems: Assess and adjust existing systems for compliance with QMS requirements, ensuring smooth integration into existing systems.
7) Routine maintenance: Create, review, and update routine maintenance schedules, documents, procedures, work instructions, and do not neglect equipment and infrastructure maintenance
8) Creative efforts: Encourage employee initiative and creative ideas to improve processes and quality
9) Continuous monitoring and measurement: Set up a performance monitoring system, carrying out effective and regular evaluations. Use data to identify improvement opportunities and measure the effectiveness of corrective actions.
10) Quality culture: Building a quality culture by prioritizing quality values and collective responsibility for the quality of a product or service.

Implementing a quality management system (QMS) on an Informatics Engineering project provides many benefits and has the following advantages:

1) Improving product quality: QMS helps ensure that the products or information systems produced comply with the requirements of established quality standards.
2) Increased customer satisfaction: QMS focuses on customer needs and helps ensure the availability of Informatics Engineering solutions developed according to the expectations and needs of end users.
3) Process efficiency: QMS provides a structured process approach to identify and eliminate redundancies and inefficiencies in the software development cycle
4) Risk Mitigation: QMS helps identify potential risks impacting informatics engineering projects and provides a framework for better management.

5) Better Plan: The planning process built into QMS helps manage resources and time and reduce the costs of Informatics Engineering projects more effectively.
6) Transparency and Accountability: QMS ensures clear and measurable documentation and increases transparency, plans each development phase, and assigns responsibilities.
7) Performance monitoring and evaluation: QMS allows continuous monitoring, continuous impact on project performance, early identification of problems, and improvement opportunities.
8) Compliance with laws and regulations: QMS helps ensure that your Informatics Engineering project complies with all laws and regulations and reduces legal risks by enabling applicable standards.
9) Improved team collaboration: By prioritizing good communication and collaboration, QMS improves the effectiveness of development and implementation teams.
10) System reliability and security: QMS helps ensure the implementation of rigorous testing and validation processes, guaranteeing the reliability and security of information systems.
11) Business Sustainability: QMS contributes to this by ensuring high-quality Informatics Engineering products or systems company sustainability by building a good reputation in the market. Applying QMS to Informatics Engineering projects brings significant added value and increases opportunities for project progress (Rahayu, 2021; Lestiningsih & Widodo, 2023).

CONCLUSION

The conclusion that can be obtained from this research is that Quality Management systems can have a significant effect on various informatics projects. Something of quality provides comfort and satisfaction for users who can support the success of an informatics project. The success of a project is not only based on what can be created but how it is created, which is helpful for its users. Creating a perfect thing for developers who create a product or service takes work, but we can gradually improve every side that can be improved. Quality Improvement is essential, not easy to do, but can be done gradually by implementing various strategies to help provide satisfaction to users. After summarizing the various challenges, how to overcome challenges, and the benefits obtained from the Quality Management System, it is very clear that the Quality Management System has a big impact if we understand and apply it. The influence is very beneficial and can bring our project high quality and attract many users. In the case of E-Learning itself, if a Quality Management System is implemented, the use of E-Learning will increase and be better known by students. How do we improve quality, attract customers, streamline processes, identify potential risks, better plan, transparency, accountability, monitor and improve and maintain reliability and security of information systems.

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