

Impacts of Integrated Management System in Dornier Technology Inc

Harlow Jan V Picart^{a*}, Lino N Nicdao^b, Joefil C Jocson^c, Rick Donald S Manzon^d

^{a,b}*Student, Graduate School, Nueva Ecija University of Science and Technology, Nueva Ecija, Philippines*

^c*Subject Adviser, Graduate School, Nueva Ecija University of Science and Technology, Nueva Ecija, Philippines*

^d*Subject Adviser, Graduate School, Nueva Ecija University of Science and Technology, Nueva Ecija, Philippines*

^a*Email: hjpicart18@gmail.com, ^b*Email: lino.nicdao@gmail.com, ^c*Email: joefiljocson@gmail.com***

^d*Email: rickdonaldsmanzon@gmail.com*

Abstract

The integrated management system (IMS) has received a lot of attention as a tool for managing organizational activities, particularly in approved maintenance organizations (AMOs). The purpose of this study is to look into the impact of implementing an IMS in Dornier Technology Inc. The study takes a quantitative approach which are collecting data.

The study's findings indicate the implementing an IMS has favorable impact on the AMO. The IMS deployment improved efficiency and efficacy of the AMO's procedures, as well as increasing employee engagement and customer satisfaction. Furthermore, the IMS deployment allowed the AMO to meet regulatory criteria while also improving safety performance.

Another study's finding that implementing an IMS has challenges like merging policies, procedures, and processes, difficulty in integrating different systems.

Keywords: Integrated Management Systems; Approved Maintenance Organization.

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* Corresponding author.

1. Introduction

An integrated management system is a framework that combines multiple management systems, such as quality management, environmental management, and health and safety management, into a single system that is designed to streamline processes and reduce duplication of effort. In the past decades, many certifiable management systems, such as ISO 9001 Quality Management System (QMS), ISO 14001 Environmental Management System (EMS) and OHSAS 18001 Occupational Health and Safety Management System (OHSMS) that implemented and many companies all over the world used this systems and now there's an Integrated Management System.

For this study, the researcher aims to analyze the benefits and challenges of IMS in approved maintenance organization which is Dornier Technology Inc. Approved Maintenance Organization (AMO) is an organization that approved by the Civil Aviation Authority of the Philippines (CAAP) to perform maintenance of aircraft, engine, propeller or aircraft parts.

2. Review of Related Literature

2.1 Integrated Management System

An Integrated Management System (IMS) is a comprehensive system that integrates all aspects of an organization's operations, including quality, environmental, health, and safety management systems. Approved Maintenance Organizations (AMOs) are organizations that have been approved by regulatory authorities to provide aircraft maintenance services. A study conducted in [1] that integrated management system focus on team work. According to [2], implementing an IMS in their organization have some positive impacts on employees' satisfaction rate in the technical institute like achieving their satisfaction, the efficiency of operation increases and the costs of providing services reduce too. A research conducted [3] and have a findings that IMS establishment cannot ensure full development in safety indices, and that some safety indices may not be enhanced as a result of IMS establishment. As a result, it could be claimed that holding safety training sessions and involving all workers were two major aspects in attaining IMS implementation goals. Based on the research study [4], it was observed that many companies, regardless of nationality, follow the guidelines of management systems' integration and such a procedure brings many benefits, such as: to improve the organization's image to stakeholders; to increase the corporation's competitiveness; to promote sustainable development; to improve health of the workplace; to improve quality of life at work, among others.

Based on the research conducted [5], each business is in charge of putting a continuous improvement strategy into action by enhancing all procedures and activities across the various phases of the production cycle. According to [6], the findings demonstrated significant advantages of the IMS (such as increased operational effectiveness, cost savings, sustainable development, stakeholder satisfaction, decreased occupational risks, etc.) and a broad acceptance of its integration. In according to [7], the implementation of management systems in businesses frequently relies on a "blind" compliance with the standards chosen, even while these standards don't directly address the risks of the organizations. As a result, it frequently occurs that the established management

system is ineffective or is not in line with the situation and the organization's actual demands.

In accordance to the research conducted [8], internal and external advantages result from the company's use of an integrated management system (IMS), which eventually boosts business success. Process effectiveness, better management standards, and organizational effectiveness are all internal benefits. Additionally, the business gains external advantages like boosted consumer confidence, competitive power, and additional corporate communication ease. Based on the research by [9], it has been a common occurrence in many nations throughout the world for organizations to implement and certify quality, environmental, occupational health, and safety systems. Duplicate efforts must be made for paperwork, procedure execution, form verification, form control, and other paper labor while implementing parallel systems. Separate management systems for quality, the environment, and occupational health have shown to be challenging to run. Integrated Management System implementation experience by [10], there are two basic ways of designing and implementing the IMS in manufacturing companies. First is the single- step introduction of IMS as a whole (the implementation of various management systems simultaneously, including their integral interconnection) and the second one is the continuous implementation of IMS in several steps (the implementation of a single management system, then the subsequent implementation of other management systems and their continuous integration). Research conducted by [11], that there's a benefits and difficulties for the integration of management system such as, improving internal processes and its products, increasing customer satisfaction, decrease in number of non-compliance and returns, increase productivity and profits, improved management of resources, enhance the image of their marker, systematic processes and management systems and reduction of costs and time to the integration of management system. The difficulties it stress: resistance from employees, lack of top management commitment, and understanding of low standards, and the integration of management systems. Findings on the study conducted by [12], revealed that a number of quantifiable and unquantifiable benefits experienced by the companies from operating one integrated system, such as saving of dollars, better utilization of resources and improved communication. However, it is essential that organizations are aware of the challenges and obstacles accompanying integration of systems/standards. If these challenges are not addressed early in the process they can delay the completion of the integration process.

2.2 Total Quality Management System

Total Quality Management is a management concept that emphasizes continual improvement, customer happiness, and employee involvement in all parts of an organization's operations. TQM can be considered a philosophy or approach that guides an IMS's implementation, whereas the IMS provide a structured framework for managing multiple management systems, including quality management. By incorporating TQM principles into an IMS, firms may aim for quality excellence while also addressing other critical parts of their operations. Based on the conducted study by [13], TQM was viewed as a management approach that prioritizes continuous improvement, client satisfaction, employee involvement, and supplier relationship. A research study conducted by [14], noted that the certification process had improved, management costs had decreased, and there was a minimum amount of paperwork and [15] highlighted the operational benefits, better external image, improved customer satisfaction, and employee motivation, while [16], noted a chance for continuous improvement.

3. Methodology

The researcher used a quantitative approach to learn and evaluate the benefits and challenges using integrated management system. The researchers utilized deductive reasoning in which the researcher defined the study's purpose, collected data through electronic form and questionnaires and the findings when statistical treatments were applied. The information was collected between March to April 2023. All information through surveys were gathered from employees of Dornier Technology Inc. only. Afterwards, conclusions were made by the researchers to complete the study.

The researcher sent a formal request to the Director of IMS of Dornier Technology Inc. to conduct the study. The researcher created a questionnaire to assess the benefits and challenges when implementing of integrated management system. The researcher was then distributed the questionnaire to the respondents electronically for convenience and ease of dissemination, and participants in the study needed to have an email account to access the form. The researchers employed this to ensure the questionnaire collection processes confidentiality and integrity. Furthermore, it was already mentioned to the respondents that their replies would be kept anonymous and used solely for research purposes. The respondents were told of the importance of their response to the study, and specific words were clarified so that respondents could complete the questionnaire fully aware of their obligations as the study's subject. Following the respondents' responses to the questionnaire, the researcher analyse and interpret the data by using quantitative analysis and draw a conclusion.

4. Results and Discussion

We were able to determine the impacts of implementing an integrated management system in an approved maintenance organization based on the data gathered that conducted. We were also able to determine the changes that will occur when the integrated management system is implemented. Results are shown in Table 1.1 and 1.2

4.1 Results

Table 1.1: Benefits of Implementing Integrated Management System.

Benefits of Implementing of Integrated Management System (IMS)	No. of Respondents	Percentage of the Total
Improved Efficiency	7	70%
Improved Safety	9	90%
Improved Quality	9	90%
Improved compliance with regulations	6	60%
Improved Customer Satisfaction	7	70%

Table 1.1 shows that seven out of ten respondents answered that the benefits of integrated management are improved efficiency and customer satisfaction. Six out of ten respondents answered that the benefits of IMS is compliance regulations. In addition, nine out of ten respondents answered that the benefits of IMS are improved safety and quality.

Table 1.2: Encountered Challenges when Implementing Integrated Management System.

Encountered Challenges When Implementing of Integrated Management System (IMS)	No. of Respondents	Percentage of the Total
Merging of Policies, procedures, and processes.	10	70%
Resistance to Change and Difficulty in integrating different systems	5	90%
Lack of training	5	90%

Table 1.2 show that the challenges of when implementing of IMS are merging policies, procedures, and processes. Five out of ten respondents answered that the encountered challenges when implementing IMS are resistance to change, difficulty in integrating systems and lack of training.

4.2 Discussions

The results were intended to answer what are the impacts of implementing IMS in Dornier Technology Inc.

By analysing the data shown in Table 1.1, it is revealed that the most answered in the question what are the benefits of implementing IMS are improved quality and safety. In total, 90% of the respondents said that improved quality and safety are the benefits of IMS.

In addition, by analysing the data shown in Table 1.2, it is said that the most encountered challenges when implementing of IMS in their organization is merging policies, procedures, and processes. Followed by, resistance to change, difficulty in integrating different systems and lack of training.

5. Conclusion

From the study the researchers concludes that the implemented of integrated management system in Dornier Technology Inc. has a positive impacts on the efficiency, safety, quality, compliance and regulation, and customer satisfaction. Upon Dornier Technology Inc. implemented the integrated management system their benefits will improved quality, safety, compliance and regulation, and also the customer satisfaction.

From the study the researchers also concludes that they encountered challenges when implementing of integrated management within their organization which are the hard to merge the policies, procedures, and processes from different department like the safety, quality, and security. They also encountered the difficulty of integrating different systems.

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