

The Implementation of Integrated Management System in AUO SunPower Sdn. Bhd. towards Quality Management System

Mohd Hafizzudin Muzaimi¹ and Boon Cheong Chew²

ABSTRACT

Over the past few decades, many companies have embraced the Quality Management Systems since quality appears to be the fundamental requirements for corporate competitiveness. Recently, Environmental Management System, ISO 14001 and Occupational Health and Safety Management System, ISO 18001 need to be considered as one of the additional quality management system dedicated to the management after the ISO 9001 has been implemented. The relations and contacts between the three main management system lead to the existence of Integrated Management System (IMS) as the way to meet the requirements in quality management, environmental management and occupational health and safety management. This study explored the effectiveness of the Integrated Management System in order to enhance the efficiency in management. Furthermore, this study used mixed method, which is quantitative and qualitative method that included interviews and also a questionnaire technique to investigate the related and importance for AUO SunPower in identifying the drivers, benefits, components, processes and barriers for the implementation of Integrated Management System. By doing this, the author can identify the important factors and also the best strategies in implementing the Integrated Management System (IMS). On the other hand, the author also have proposed the innovative suggestions and best practices to enhance the efficiency of the IMS implementation which can enable the company to have the maximum advantages of these comprehensive management systems. As a conclusion, the Integrated Management System might become the best practices for AUO SunPower Sdn. Bhd. in order to maintain the green management system and provided the sustainability practices. Besides, IMS also supports AUO SunPower to be more competitive than the other system and provided the sustainability practices. Besides, IMS also supports AUO SunPower to be more competitive than the other companies.

Keywords: integrated management system, quality management

¹ MOHD HAFIZZUDIN MUZAIMI, Faculty of Technology Management and Technopreneurship, Universiti Teknikal Malaysia Melaka, City Campus Jalan Hang Tuah, 75300 Melaka, Malaysia, hafizzudin.muzaimi@yahoo.com.my.

² BOON CHEONG CHEW, Faculty of Technology Management and Technopreneurship, Universiti Teknikal Malaysia Melaka, City Campus Jalan Hang Tuah, 75300 Melaka, Malaysia, bcchew@utem.edu.my.

1. INTRODUCTION

For the last ten years, many companies in the world have embraced the quality management system; this is because the quality management in the organization becomes the fundamental requirement for company competitiveness. Recently, the issues regarding environmental and safety and health introduced the new additional dedicated control procedure.

One good thing to have the interconnection between the management systems is by integrating all main management system to become one coherent system. Bernado et al., (2009) mentioned that several studies indicate that integration is becoming more common than stand-alone system, so if the management system needs to be integrated, the performances of the system can be maximized and high risk can be reduced. According to the ISO survey (2008), approximately about 983 thousand organizations were certified according to the ISO 9001:2000 standard and 189 thousand organizations to the 14001:2004 standard worldwide. As many organizations today are dealing with several different management standards and corresponding management systems, integration of such system is becoming more common and compulsory to the organization. According to Zutshi and Sohal (2005), it is imperative to integrate different management systems to become one system and achieve the full realization of the potential benefits for each individual system. Past few decades seen the emergences of the management systems become the way in order to meet the requirements for quality management, environmental management and occupational health and safety management. Therefore, the integrated management system could be promoted to achieve the best performance in the management system as it can become the total quality approach to the management.

1.1 Research Questions

In this globalization era, fulfilling the management system is vital for every company in order to gain advantages in competitiveness. Previously, the entire management system standards are conducted separately. However, nowadays situations require the management system to be integrated in order to minimize cost, reduce paperwork, and improve the system to become better and also to eliminate the redundancies. The statement is supported by (Salomone, 2008), integrated management system can simplify the certification process, save human resources, decrease management cost, decrease complexity of internal management, increase cultural compatibility and facilitate continuous improvement.

By referring to this research, the research question that needs to be considered in this study include on what are the factors that contributed to the use of Integrated Management System (IMS) in AUO SunPower? How to implement the IMS in the company? And what are the innovative solutions in order to enhance the efficiency of IMS implementation?

1.2 Research Objectives

The objectives of the study are to investigate AUO Sunpower Sdn. Bhd. regarding the key factors that encourage the use of Integrated Management System (IMS). Next is examining the strategy to implement the integrated management system in AUO SunPower Sdn. Bhd. The other objective is to propose the innovative solution in order to enhance the efficiency of integrated management system implementation.

2. LITERATURE REVIEW

2.1 Quality Management

Quality management is all activities that organizations used to control, direct and coordinate quality. These activities are about formulating a quality policy and setting quality objectives. Besides, quality management also includes planning, quality control, quality assurance and quality improvement. According to Robbins and Coulter (2009), the quality management can be a way for an organization to create a sustainable competitive advantage. Therefore, many organizations apply quality management concepts in an attempt to set the company apart from competitors.

2.2 Why need to have Quality Management?

According to Samuel and Trevis (2009), the quality management builds more effective personnel policies and practices that when developed, it will benefit all employees in the organization and not just the minority. Besides, the quality management provided also effecting customer satisfactions and sustaining the competitive advantage. On the other hand, the quality management plays the important roles for the particular organization, especially for an organization as it is not only enhances the efficiency in productions and managements, but also stabilized the company in the scope of cost effective, global competition and economic factors. This was supported by (Rajkovic & Aleksic, 2009) that agreed about the integration can lead to direct cost saving through reduce audit cost and reduce certification cost. Besides, according to Esquer-Peralta et al., (2008), the integrated management system has received major attention within organization to create competitive advantage and contributed to a sustainable development.

2.3 Integrated Management System

The integrated management system (IMS) is a management system that combines all the components of business into one coherent system. Factors that lead to the management system integration are to allow the achievement of the strategic purpose, mission and goals. Therefore, IMS is the integration of the systems that are focused on quality, environment and occupational health and safety along with the process, practices and documentations. Beckmerhagen et al., (2003) defined the integrated

management system as a process of putting together different function-specific management systems into a single and more effective integrated management system. Villar (2012) stated the integrated management system refers to the actions and the effect of combining or merging the elements of the individual managing system. Villar (2012) also mentioned this implies that organizations need to take action for sharing tools, methodologies and systematic management of different areas and to comply with the different standard or models governing the management systems. The management system that be integrated consists of three main systems. ISO 9001 is a specific requirement in the quality management system where an organization should demonstrate their ability to consistently provide quality products that satisfied customers need, applicable statutory and regulatory requirement. Besides, ISO 9001 also aims to enhance customer satisfaction through the effective application of the system, involving processes for continuous improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements. ISO 14001 is the standard for the environmental management of businesses. ISO 14001 is the controls of the activities that effecting the environment. This standard are include the use of natural resources, treatment and handling of waste and also the energy consumption. OHSAS 18001 is referring to Occupational Health safety and Assessment safety management systems. This management system intended to guide the organizations to control occupational health and safety risks.

2.4 Factors for Integrated Management System Implementation that Enhance Quality Management System

In the decision making process, there are a few factors that influence the success of Integrated Management System (IMS) in the company. Besides, the factors of the implementation also must provide the benefits to the particular industry. The benefits related to implementing and integrated management system (IMS) play a crucial role in management's decision to integrate the management system and the subsequent implementation process (Asif et al., 2009). In this research, the factors are divided into two which are organizational factors and also managerial factors.

2.4.1 Organizational Factors

The organizational factors are important in the implementation of Integrated Management System. This is because the implementation is fully depends on the strategic organizational planning and also involves the policies in order to provide improvements in the company. Simon et al., (2011) and Zeng et al., (2011) stated that it presents that the improvement related to having an integrated system such as operational benefits, better external image, improved customer satisfaction and also enhances employee motivation.

2.4.2 Managerial Factors

The managerial factors also need to consider as one of the main reasons to encourage the use of Integrated Management System (IMS) in the organization. The effective

practice in the particular company is started with the efficiency in the managerial. Zeng et al., (2011) agreed that, IMS gives the external benefit in certification as it simplified certification process, therefore the certification cost will be reduced. Besides, Salomone (2008) stated that implementing the integrated management system can simplify the certification process, save human resources, decrease management cost, decrease complexity of internal management, increase cultural compatibility and facilitate continuous improvement.

2.5 Strategies for Integrated Management System Implementation to Enhance Quality Management System

The strategies for Integrated Management Systems (IMS) are based on business level strategies and also corporate level strategies. Both strategies are very important as it considers the competitive advantage for the company. According to R. Hoskisson et al., (2012), a business-level strategy reflects where and how the firm has an advantage over its rivals. The advantage that is being considered in this case is the implementation of IMS in the company. Other than that, Hoskisson et al., (2012) also stated that corporate-level strategies are intended to help a firm create value leading to high performance. In business level strategies it is consists of identifying what the potential customer needs because the customer are actually being very detail to select the company to do the business, therefore the company must be prepared with the suitable practices or strategic operational planning in order to attract the customer. Next is the cost leadership, cost leadership lead to the use of the integrated management system in the management systems as a company can reduce the risk and also reduce the costs of multiple systems. The third strategies are to maintain the differentiation, IMS itself is unique and not all companies implement it yet. The integrated management system provides the quality in the operational and also in the management and it is sure that the company will come out with the high quality products.

Besides, for corporate- level strategies, it consists of implementation of sharing activities, this is because sharing activities are parts in the integrated management system practices as the combination of the different management system can build the only management system with different function. Second is the diversification, in this case it needs to diversify the excess resources, capabilities and core competencies that have multiple uses. Next is transferring the core competencies as the company needs to identify the ability to transfer skills or expertise among similar value chains. Therefore, based on the factors and strategies, the theoretical framework is shown in figure 1.

2.6 Theoretical Framework

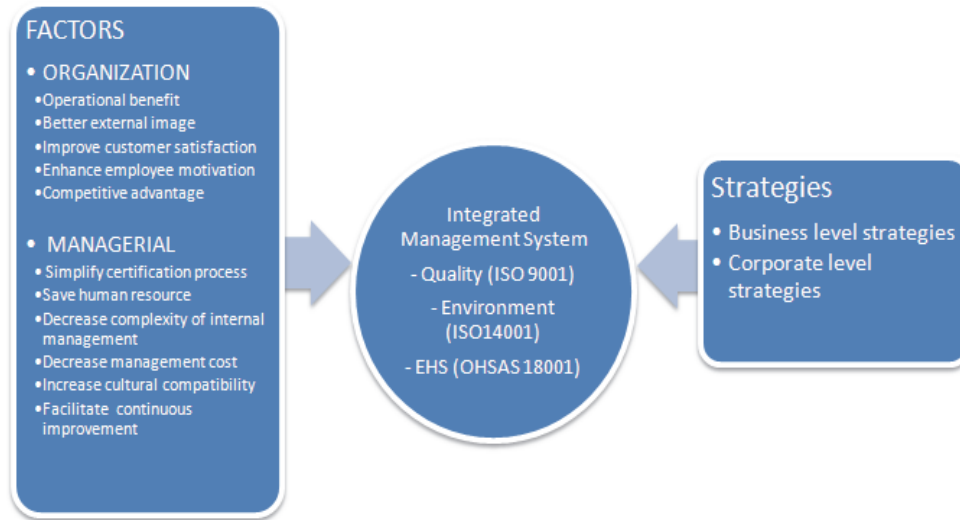


Figure 1: Theoretical framework for Integrated Management System (IMS)

3. RESEARCH METHODOLOGY

According to Saunders et al., (2012), research is defined as work that people undertake in the way to find out things in a systematic and effective way, in order to increase their knowledge. Redman and Mory (2009) mentioned that research is a systematized effort to gain new knowledge. According to Collis and Hussey (2009), research methods can be defined as the overall approach to the entire process of the research study. Therefore, the research methods as per defined is focused towards the problems that need to be investigated in a research study and hence is varied according to the problems to be investigated.

3.1 Research Design

Cooper and Schindler (2008) explained that research design can be defined as the blueprint for the collection, measurement and analysis of data, but warn that it is the wide ranging concept. It shows on how to connect the research questions to the data, what tools and procedures will be used. The research design is also derived from the research question and the research objective; this can be described as the basic framework for the actual research.

According to Aggarwal (2008), the descriptive study is to collect and gather the information on prevailing conditions or situations for the purpose of description and interpretation. What can be concluded from the definition is this type of research design is not simply amassing and tabulating the facts, but also includes proper

analyses, interpretation, comparison, identification for the trends and relationship. Besides, the descriptive research explains the phenomena as they exist and used in identifying the information for the characteristic of the particular problem or issue. Blumberg et al., (2005) mentioned that, descriptive research is to describe the subject, often by creating a profile group of problems, people or events. Furthermore, Shafiee (2012) stated that descriptive study as uses data collected in order to answer the question about the current status of the subject or the topic of a study.

Thus, in the case study of integrated management system (IMS) at AUO SunPower Sdn. Bhd. is suitable to use the descriptive method of research. This is because the implementation of the integrated management system (IMS) has already established in AUO SunPower Sdn. Bhd. and the researcher wanted to investigate how far the IMS led to the quality enhancement in the management system.

The researcher has selected 5 person involving managers and engineer who were responsible for the implementation of integrated management system (IMS) at AUO SunPower Sdn. Bhd. as the main source of investigation. The data collections involving 2 managers (quality manager and environment health and safety manager) that create the IMS and 2 managers including 1 engineer that randomly selected as the IMS users. Next, primary data were collected throughout the mixed method.

3.2 Mixed Method Research

The researcher has decided that the case study of Integrated Management System (IMS) in AUO SunPower Sdn. Bhd. was conducted by using mixed method. Creswell (2012) stated that a mixed methods research is a procedure or method for collecting, analyzing and mixing the both quantitative and qualitative research and methods in a single study in order to identify the research problem. According to Creswell (2012), quantitative research decided what to study, asks specific and narrow questions, collects quantifiable data from participants, analyzes the number using statistics and also conducts the inquiry in an unbiased, objective manner. Creswell (2012) also highlighted that qualitative research allows the researcher to rely on the views of participants, about general question, asks broad, do data collection that consists of words of participants and analyze the data next.

On the other hands, for the case study of IMS, the mixed method approach is suitable to gain the scientific data through organization and staffs. The methods for data gathering are as below:

By using interview, this gave more benefits to the researcher because the information from the expert at the organization can be gained directly and was useful to the researcher. For better understanding, this method is referred to qualitative data collection. By using this method, the researcher interviewed about 4 managers and 1 engineer who involved in IMS formulation.

Questionnaires were designed for quantitative data collection, which was aimed to investigate the implementation of integrated management system in the organization of the general staff. The acceptable level from the sample of 20 staff at AUO SunPower Sdn. Bhd. who are directly involved in the system implementation or execution have been investigated by using quantitative questionnaires and the data collections was analyzed by using statistic graph in order to support the data from the interviews.

3.3 Primary and Secondary Data Sources

According to Collis and Hussey (2009), the data of the research have both primary and secondary. The primary data are the data that are gained from original sources which is the data that were collected through questionnaires and interviews in this study. Secondary data are the data that collected from the other sources like the data from books, magazines, journals and also the data from the internet.

In this case study, primary data collection was executed through the interview involving managers and engineer. Quantitative questionnaires also been distributed to the 20 staff that is involved in the integrated management system in AUO SunPower Sdn. Bhd. Hence, all the information regarding the implementation of IMS in AUO SunPower Sdn. Bhd. can be collected clearly. For secondary data collection, the researcher has obtained the information through books, reading, articles, journals and also internet sources like the company website. These reading materials provide the main sources for secondary data and to complement the understanding in supporting the researcher for better research execution.

3.4 Methods of Primary Data Collection

According to Wilson (2010) in primary data collection, the researcher collected the data and the data are unique to the researcher own particular study. Saunders et al., (2012) mentioned that qualitative research is associated with the variety of strategies. In this research, a case study had become a strategy in order to collect the data.

By using the qualitative methods first in the research, the researcher got more information and understanding regarding the case study as for primary data 4 managers and 1 engineer in AUO SunPower be interviewed directly. This method maintained the validity of the data as the researcher gain the information directly from the people that are involved in the IMS implementation. After the process of qualitative method has been done, the data that's already been collected will be further explained.

Next, the quantitative methods also been used in this case study in order to collect the data. In this research, the distribution of the quantitative questionnaire among 20 staffs also brings its role in the data collection.

4. DATA ANALYSIS AND DISCUSSION

The results of the research for the implementation of Integrated Management System in AUO SunPower were discussed throughout this segmentation. The data has been collected through interview that involved the expert opinion from 4 managers and 1 engineer; they consist of 2 managers that create the system of integrated management system (IMS), 2 managers and 1 engineer that randomly selected as the IMS users. Besides, in order to answer the research questions of the study, the objectives of the research will be discussed one by one. The case study is about the implementation of Integrated Management System in AUO SunPower and the results was presented based on three objectives of the research that's already been stated previously which including the key factors that encourage the use of IMS, the strategy in implementing IMS and the innovative solution to enhance the efficiency of the system.

Moreover, in order to make sure the validity of the data, the qualitative and quantitative data collections were completely collected at the AUO SunPower Sdn. Bhd. The data for this research were collected in two ways which are qualitative interview for the managers that created the Integrated Management System (IMS) and for the acceptance of the systems, about 20 questionnaires has been distributed to the operation staffs and operators that use the IMS practices in their daily works as the sample to observe the trend of acceptance on the IMS. Furthermore, the results of the research explain and elaborated in three parts. Section 4.1 is about the first objective, the key factors that encourage the use of Integrated Management System. Section 4.2 is about the second objective, the strategy to implement the integrated management system in AUO SunPower Sdn. Bhd. and section 4.3 is about the third objective, the innovative solution to enhance the efficiency of integrated management system implementation.

4.1 Overview of the Factors that Encourage the Use of Integrated Management System (IMS)

The factors that encourage the use of integrated management system are divided into two, the organizational factor and managerial factor. The both factors can support the company to use the integrated management system (IMS). The organizational and managerial factors will be discussed in order to conclude which factors is the most significant that can influence the use of IMS in the company.

4.1.1 The Organizational Factors

There are four organizational factors have been discussed and analyze for IMS implementation. The factors are operational benefits, better external images; enhance employee motivation and competitive advantage.

4.1.1.1 IMS Provide the Operational Benefits

Integrated Management System provides the operational benefits to the organization and can enhance the efficiencies and effectiveness in the operational practices. This is because IMS is the combination of three systems which is quality, environmental and also occupational health and safety. Therefore, it will complete each other as one review of the operational system. Therefore, any operating system will be run based on the requirement for these three systems as the operation or practice will fulfill the quality standard, environment standard and occupational health and safety standards. According to Khanna et al., (2010), the integrated management system gives the benefits in operational by improving the multiple audits. Other than that, IMS also provides the reduction in duplication of policies, procedure and records (Zeng et al., 2011). According to Manager 1, IMS can save the redundancies of documentation and save resources as the company could repeatedly use the resources. The other benefit of using the IMS saves the use of manpower. The use of manpower can be reduced because there is no requirement to carry out the overtime and just one time audit, save audit cost as it will cut the 'man day' time and of course the system integration lead to cost saving because it is involving the reduction of the certification cost. In researcher opinion, IMS provides the clear procedures and frequent steps for the users or in this case the employees performs the work and the entire requirements in the management system are followed. The facts supported on how the IMS provides the advantages in the operational in the organization. Besides, Manager 2 also agreed that the operations in term of auditing and also the company corporate direction are basically provided by the implementation of integrated management system. This is because, by referring to the both opinions from Manager 1 and Manager 2, it can be concluded that the implementation of integrated management system can provide the massive benefit to the company in the main scope of cost and time saving. Currently, the IMS was being used for about two years and based on the data from the interview; the researcher believes that IMS can provide the stability in the company operational especially in term of cost and time management for AUO SunPower.

4.1.1.2 IMS Provide Better External Images

The impact that provided by management system integration also consists of the good impression towards the particular company. This is because the company that implemented IMS has better quality instead of the operation, management and also the customer satisfaction. Villar (2012) mentioned that, the integrated management system gives the positive point regarding firm image improvement and this was supported by Asif et al., (2009) which stated that having the IMS help to improved customer confidence and positive company images. The statement by Manager 1 mentioned that, the customer was demanding the company to use the integrated management system as part of the business system management planning. Based on that, researcher can conclude the desire from customer lead to integrated management

system implementations, therefore the customers will be more confident to do the business as they know IMS can provide the effective ways in operational and their business can run better. On the other hands, based on the result of quantitative data, 9 respondents or about 45% stated that 'Neutral'. Neutral means the respondents are not sure either the IMS can improve the external image of the company or not. This result might due to the lack of understanding about the real potential of integrated management system. Moreover, the influence of the results also might be because of the company still in the middle stage of implementation, therefore the impact is not notable by all the employees. The other 11 people or 55% of respondents were agreed about IMS can provide better external images.

4.1.1.3 IMS can Enhance Employee Motivation

Integrated management system can lead to employee motivation. This is because when the managerial and operational practice is good without any major problem, therefore the employee will be more confident and satisfied with their work. This situation can create the positive culture in the company as the implementation of IMS becomes the medium toward the employee motivation. As a proved, there are about 8 people or 40% of the respondents are agreed that the IMS is not only giving efficiency in the management but also can enhance the employee motivation. The other results, about 35% are neutral, 10% is strongly disagreed and 15% is strongly agreed. In researcher observation, the respondents that strongly disagree might not be interested in IMS or lack of understanding about the IMS implementation. The researcher can conclude that the IMS implementation might be too demanding and have the focus group, which is the reason for the respondents to state strongly disagree. Besides that, researcher affirm the element in the IMS like guidance for planning, developing, implementing, maintaining and improving process also can develop the self-motivation for the employees toward the excellence working practices.

4.1.1.4 IMS Provides Competitive Advantages to the Company

In this new industrial era, the competitive advantage becomes one of the important assets for any organization in order to maintain their survivors and market directions. Therefore, to create the competitive advantage, the use of management system integration also plays the big roles. This is because the integrated management system is important for the organization that's willing to move towards continuous improvement and business excellence as it can help the organization to efficiently tackle the quality and environmental issue more systematically and effectively, so the company will have a great core to face any industrial problem and the brand of the company can have the trustworthy. According to the facts, this can be the competitive advantage to the particular organization. According to Esquer-Peralta et al., (2008), the integrated management system has received major attention within organization to create competitive advantage and contributed to a sustainable development. The greatest competitive advantage is developed more progressive development can be produce within the organization. Moreover, the other researcher also supported that

IMS can provide the competitive advantage as being mentioned by (Salomone, 2008), the integration of management system is one of the value creation and improvement of the competitive advantage and also the strategic planning of the organization. According to Manager 2, it is clear that the aim of the IMS implementation is to 'become the head of the other industries' which means to be the best competitors in every aspect in the industry. In researcher opinion, in order to provide the competitive advantage to the company, the better management solution should assimilate as it will generate effective ways in the company operation. Furthermore, the respondents also were asked either the IMS are helping the company to have a better competitive advantage in current industry or not. The results are, about 9 respondents (45%) agreed that IMS can help for better competitive advantage. The other 40% are refusing either can help or not. Researcher agreed that this result might be due to the company are not fully depending on IMS for the competitive advantage because the company have a great brand name, good worldwide networking and more towards the global competitors. The other 15% of the respondents are strongly agreed.

4.1.2 The Managerial Factor

There are five managerial factors have been discussed and analyzed previously in IMS implementation. The managerial factors are IMS can simplify the certification, decrease complexity of external management, decrease the management cost, increase cultural compatibility and facilitate continuous improvement.

4.1.2.1 IMS Simplify Certification Process

The reason integrated management systems become one of the requirements for an industrial company nowadays are because of the globalized world industry requires the effective, efficient and flexible management system. The management system must be provided by the certificates as that is the requirement in the policy to convert it become standards. The factor that convinces the use of integrated management system (IMS) in the organization is to simplify the certification process. This is because when the three management systems are combined into one coherent system; therefore there will be easier for each management system to be certified. Zeng et al., (2011) agreed that the implementation of IMS provided the external benefit in simplified the certification process as the integration will reduce the cost of certification. According to Manager 1, the integration can simplify the certification because previously, the three management systems need to be certified and verify one by one, therefore the process takes more audits and auditors' time because need to audit every single system, use many manpower, spend more resources on documentation and also involving high cost. The situation after applying IMS is the entire element that's been combined becomes one system and auditors need to audit the three systems only at one time. Moreover, Manager 2 also agreed that the combination of the management system can make the systems become easier in term of the audit combinations. In this situation, the researcher can conclude that the IMS can simplify the certification process in the organization

4.1.2.2 Decreases Complexity of Internal Management

The systems that can put up the management team work easier are really important as it can enhance the quality, reduce operational time and save cost. The uses of management system integration also act as the catalyst to improve and enhance the efficiency in the daily work in the organization as the IMS can decrease the complexity of external management. The integrated management system not only can decrease management system costs, but also decrease the complexity of internal management, (Zeng et al., 2011). In this case, Manager 1 affirms that there are many documents can be combined together and can be accessed as a single system. In researcher opinion, by integrating the documentation, manual, procedures and others can reduce the difficulties in the daily task and the complexity can be minimized. Besides, the statement from Manager 2 also supported that the implementation of IMS can resolve the company issues and problems. Plus, Manager 2 also agreed that, the use of IMS also can lead to the combination of resources. According to Manager 3, IMS can reduce the management complexity in Human Resource (Training) Department. The combination of each management system provides the easiest way to review the procedure, policy and more and this can decrease the complexity in the internal management. Besides, in researcher opinion, the use of IMS can make sure many works or operational can be compiled together as one system that surely can reduce the management time, management cost and also decrease the use of manpower.

4.1.2.3 IMS Decreases the Management Cost

The integrated management system (IMS) main objective and aim are towards the cost deduction. The combination of three management system to become one coherent system is perfectly fulfilling the roles in reducing and minimizing the management cost. According to Zutshi and Sohal (2005), the management system was viewed by external parties as a single unit, thus enhancing the credibility of the company and whose audits were reduced in number, time and also cost. Rajkovic and Aleksic (2009) agreed that the financial benefits are refer to financial goals granted by the implementation of integrated management system, integration can lead to direct cost saving through reduce audit cost and reduce certification cost. Manager 2 agreed with the use of IMS can decrease the management cost. This is because the implementation of IMS can shorten the time and also the cost saving in the management as the resources are combined together. In researcher opinion, the combination of resources is the main criteria to reduce the cost as the resources use costlier investment instead of other cost to the company. Therefore, the use of system integration can make sure the cost can be deducted as all the system can use the same or share the current resources. Besides, Manager 1 mentions the cost saving in IMS implementation also involving the cost of certification, the manpower cost and also the cost of resources. In researcher opinion, all of the cost deducted that mention by Manager 1 are about the operational cost, the operational cost is mainly highest cost

in the company, therefore as the implementation of the system integration are perfectly can minimize the cost used. According to the statements, the researcher found out that it is clear proved that supported integrated management system can reduce the management cost. Actually, the most part that uses the high cost were involved the audit cost, manpower cost and resources cost, but by IMS, all the cost can be cut down and can be reduced effectively. Other than that, the respondents also were asked about is the use of IMS can reduce the management cost. As the results, about 10 respondents or 50% is neutral, 8 respondents or 40% were agreed and 5% of the respondents were disagreed and strongly agree simultaneously. The researcher opinion is, 10 respondents were either agreed or disagree because the cost management in the company were moving in larger scale, so the impact cannot be seen drastically but actually the cost are reduced from time to time. The other 40% of the respondents are agreed because the theory of IMS can reduce the cost of management already proved and they might be able to see the impacts to the company.

4.1.2.4 The IMS Implementation can Increase Culture Compatibility

The organizational culture can be influenced by the system or the daily practice in the company. The culture in the organization is important as the medium to create the great working environment. Khan et al., (2012) suggested that the organizational culture is the pattern of beliefs, values and learned ways of coping with experience that have developed during the course of an organization history. This is because when the working culture is good, therefore the work or practice in the organization also good as in this case when the company use IMS as the practice so the management system will be done greatly. Based on the results from respondents about the cultural compatibility, about 9 respondents (45%) were agreed with the potential of integrated management system to create the new management culture. The other 45% of the respondents also stated that Neutral. Based on the results, the researcher can view that the staffs understanding on the IMS implementation give impact to the overall employee in the organization. The data collection shows the staffs at AUO SunPower were aware about the quality culture changes in IMS.

4.1.2.5 IMS can Facilitate Continuous Improvement

The integrated management system can lead to the continuous improvement in the company as the procedure and manual in the organization always be checked to ensure the suitability to the current IMS situation. The integration also involving all departments in the company and major responsibility is on quality department and environmental health and safety department, therefore any changes and improvement can be standardized because all departments have it particular part in IMS. Based on the statement by Manager 1, the improvement of the system still needs frequent improvement from time to time. In researcher opinion, the action taken by the company's top management is correct as the management system integration consists the large percentage of the system that use in the organization. Moreover, the used by IMS also can lead to the management improvement from time to time. Besides, the

current results also provide the proved that IMS enhance the efficiency and effectiveness in the company as be mention by the manager.

As a conclusion, there are 9 factors that encourage the use of integrated management system. There are four organizational factors that included, however the researcher found out that the IMS can provide the operational benefit is the most significant factor, because the aim of the management team to implementing the IMS is to make sure the operation in the company become efficient and effective.

Besides, for the managerial factors, the factors that the researcher found most important is IMS can decrease the complexity of internal management. The best system in the management need to act as the catalyst to improve and enhance the efficiency in the daily work in the organization as the IMS can decrease the complexity of external management.

4.2 Overview of the Strategy to Implement the Integrated Management System

The strategy in implementing the IMS discussed is divided into two, the business level strategy and also the corporate level strategy. The both strategies are playing the important roles in order to provide the best use of integrated management system.

4.2.1 Business Level Strategy in Implementing IMS

The business level strategies detail actions be taken to provide the value to the customer and gain the competitive advantage by exploiting the core competencies in specific. The first thing that the top management must aware of the business level strategy is about the cost leadership. This is because; the cost leadership led to the use of the integrated management system as a company can reduce the risk and also reduce the costs of multiple systems. The next business level strategy is to maintain the differentiation. The IMS is unique and not all companies involved in implementation, therefore the differentiations ensure the uniqueness. The integrated management system provides the quality in the operational and also in the management and it is certain that the company will produce the high quality products.

4.2.2 Corporate Level Strategy in Implementing IMS

The corporate level strategy is the strategies that detail actions to gain a competitive advantage through the selection of management. The developing and implementing the business strategy like integrated management system might effectively affect the use of resource, capabilities and core competencies in corporate level strategy. The corporate strategy indicates the implementation of sharing activities. The sharing activities are actually a part in the integrated management system practices as the combination of the different management system can build the only management system with different function. In corporate strategy sharing activities often lower the cost and raises differentiation. Next is by transferring the core competencies. The

organization can identify the ability to transfer skills or expertise among similar value chains.

As a conclusion, there are two strategies in implementing the integrated management system and the researcher found out that the business level strategy is more important for the organization as it is considered the cost leadership in implementing IMS and also the differentiation in the management. The business level strategies can help the organization to have the better competitive advantages.

4.3 Overview on the Innovative Solution to Enhance the Efficiency of the Integrated Management System (IMS) Implementation.

There are five innovative solutions provided in order to enhance the efficiency for the integrated management system. The solution for this objective is through the quantitative questionnaires and the qualitative interview with the managers. Besides, the researcher also referring to the secondary data for better innovative solutions for integrated management system implementation. The solution is included to reduce risk and cost of multiple systems, reduce audit or assessment time, develop a system or process approach, improve intercommunication and create consistency and repeatability.

4.3.1 Reduce Risk and Cost of Multiple Systems

The implementation of IMS provided the cost efficiency in the management system. The integration provides the cost deductions and decreases the risk in the management. Manager 1 stated that, the components that be integrated in IMS are the manual that combine quality management system, environment management system and occupational health and safety management system, the management review, audit procedure, actual practice, corrective and preventive action procedure and document or record control procedure. There are many components that can be integrated in IMS as being stated by Manager 1. In order to make sure the sustainability of the integrated management system, the IMS policy need to be verify to make it compatible with the current situations as the other elements in management system also can be further look in order to improve the management systems. In researcher opinion, the IMS should be always consider in every single point in the system, therefore, all the redundancies in the system can be further cut down from time to time.

4.3.2 Reduce Audit or Assessment Time

The IMS is effectively can reduce the audit or assessment time. The system can reduce the audit cost, time and also can limit the use of manpower as the auditors does not require to perform the audits in over the time and just one time audit. Based on the statements by Manager 2, the solution to enhance the IMS efficiency is by combining the resources. Researcher understood that the resources mentions by Manager 2 are involving the use of manpower or auditor, the manual and procedure,

and also the operation. In this case, researcher suggests that the three experts from each management system are being together as the auditors to work on the integrated manual or procedure for the particular system that be combined. Based on the interview, Manager 3 gave the innovative suggestions in order to reduce the audit time to enhance the efficiency in IMS implementation as Manager 3 suggested the use of lead auditor and external auditors. The researcher opinion about this statement is by using the lead auditor the all three systems can verify together as the lead auditor is very familiar with the three different management systems. Besides, Manager 4 also agreed that IMS can reduce the audit time and responsibility, and the solution is to add on the documentation replication issue to prevent the problem in audits. In researcher opinion, the IMS implementation can provide the procedure in combination of every system of documentation that can be used in the audit; therefore the problem of mismatch document can be deducted. The researcher can conclude that, in order to settle up the documentation issue the number of audits should be minimized and the IMS is a great solution as it can reduce the number of audits.

4.3.3 Develop a System or Process Approach

The implementation of IMS requires a strategic planning as the company must combine the three systems to become one coherent system. Manager 1 mentions that, there are the needs of the knowledge in order to implement the different elements in integrated management system. Based on researcher opinion, to make sure all individuals understand and get the information about IMS, one specific system should be developed to provide the effective outcomes toward the IMS approach. On the other hands, Manager 3 suggests that the needs of constraining resources from outsiders in order to develop the system. The researcher also agrees that by constraining outsources, the system can be developed in better ways as they might have the expertise and also experts that fulfill the IMS system requirements. The challenge in IMS is to adapt the three different management systems to be assimilated together as one. The effective way or solution to overcome this problem is by redefining the role for each of the department and managers and divided the responsibility for each of the components in IMS. Furthermore, the suggestion from Manager 3 is to constrain the resources in order to develop the system that is compatible with the policy in IMS.

4.3.4 Improve Intercommunication

The next solution to enhance the IMS is by improving inter-organization communication. In this case, there are needs of full responsibility for all the employees and also the top management in order to spread the information and news about the combination of the management system. Based on the statement from Manager 4 that suggest the involvement from all employees, in researcher opinion is all the employees in the company must take the responsibility in order to make sure the IMS can be successfully implemented. Moreover, the employees also need to give the corrective action or bright idea in order to improve the IMS and then the IMS implementation can be effective and efficient practice in the organization.

4.3.5 Create Consistency and Repeatability

The management system also can become better if the consistency can be create in improving the integrated management system. The consistency is important in order to make sure the system integration can be sustainable and useful in the organization; therefore, the management team should take the responsibilities in planning, organizing, leading and controlling the system.

As a conclusion, in researcher opinion, in order to enhance the integrated management system, the organization should reduce risk and cost of multiple systems. This is because the audit is also the major thing in the IMS as it has the relationship with the certification in the management system. Manager 2 also suggests that in order to reduce the audit time, auditors can combine the resource in term of auditing. Other than that, to improve the IMS, Manager 3 suggests the use of many auditors and also use of external auditors.

4.4 Recommendation for Further Study

In nowadays situation, the management in the organization becomes more challenging because need to consider many different issues and cases in different field. Besides, the effective management in the globalized world also requires the effective, efficient and flexible management system, therefore, one of the solutions to enhance the management quality is by implementing the Integrated Management System (IMS). The implementations of IMS in the organization will completely benefits for both management and operation. The effectiveness and efficiency of the management system integration are the main point to implement the IMS in the organization and this is the main subjects that discussed in this research. The author hopes that the industry player and academician could gain benefit and more information about the integrated management system implementation through this research.

In this research, the criteria for the IMS implementation that covered by the author are about the factor that encourage the use of IMS, the strategy and also the innovative suggestion for the IMS improvement in the future. Therefore, for further studies of IMS, there are many more criteria that can explore and discover towards the improvement of integrated management system. Besides, it is also important to look at the other management system that can be integrated together with the quality, environment and also occupational health and safety management system.

Moreover, in order to develop the research, another researcher also can look for the suitability of the integrated management system in the other industry. In this case, the researcher that further this research must consider the strategic planning for that particular industry, the resource utilization, acceptance and understanding within the organization and the communication enhancement. This is because the

implementation of integrated management system may be different from one industry with another.

Furthermore, the research about integrated management system also can be further developed and be practiced in the government and private sectors. This is because both sectors are the major organization that involve fully in the management. As for now, there are only a few governments and private sector in Malaysia that implementing the IMS even though the IMS system already establish in the other developing nations. In facts, the use of management system integration can provide the benefit to the organization and also the other parties that related to the organization. Besides, the use of IMS can give the benefit experienced from operating one integrated system such as cost saving, better utilization of resources and improve communication across the organization.

On the other hands, the academicians can also benefit from the theoretical framework that created in this research. The researcher has generalized the theoretical framework so that it is practical for other researchers. The research on integrated management system can be further as there is a lot of new field about the management system integration can be done as well as the IMS is still new in Malaysia. Besides, the improvement and continuous development of the IMS can help in providing the most effective, efficient and increase the potential in organization.

REFERENCES

- Abrahamsson, S. (2010). Integrated management System – Advantages, Problems and Possibilities Retrieved 14 October 2013, from <http://www.diva-portal.org/smash/get/diva2:391834/FULLTEXT01.pdf>
- Asif, M. (2008). Corporate motivation for Integrated Management System Implementation
- Certo, Samuel C. Certo and S. Trevis. (2009). *Modern Concept and Skills Management* (11 ed.).
- Chew, B. C. (2012). How to Write a Good Abstract. A General Guide, Lecture Notes Distributed in Research Method BPTP4103 at Universiti Teknikal Malaysia Melaka.
- Chew, B.C. (2012). General Format for Bachelor Degree Dissertation and Master Degree Dissertation, Lecture Notes Distributed in Research Method BPTP4103 at Universiti Teknikal Malaysia Melaka.
- Coulter, Stephen P. Robbins, & Mary. (2009). *Management* (10th ed.). New Jersey: Pearson.
- Economic, Engineering. (2010). Towards Effectiveness of Integrated management System for Enterprises Retrieved 19th October 2013, from <http://www.ktu.edu/lt/mokslas/zurnalai/inzeko/67/1392-2758-2010-22-2-171.pdf>
- Emeraldinsight. (2012). Difficulties and Benefit of Integrated Management System.
- Enli, G. S. (2011). Case Study and Comparative Analysis.

- Fischler, Abraham S. (2012). *Mixed Methods*. Retrieved 10th October 2013, from www.fischlerschool.nova.edu/Resources/uploads/.../mixed_methods.pdf
- Hesterly, Barney and. (2008). *Strategic Management and Competitive Advantage Concept* (2nd ed.). USA: Pearson Education.
- Hesterly, Barney and. (2008). *Strategic Management and Competitive Advantage Concept*.
- Hoskisson, R., Hitt, M., Ireland, R. D., & Harrison, J. (2012). *Competing for advantage*. Cengage Learning.
- M. Saunders, P. Lewis, & A. Thornhill. (2012). *Research Methods for business Students (6th ed.)*. England: Pearson Educational Limited.
- Management, International Journal of Research in. (2009). Corporate Motive on Implementation of Integrated Management System (IMS).
- Management, International Journal of Research in. (2012). Get along with quantitative research process Retrieved 19 October 2013, from rpublication.com/ijrm/march%2012/2.pdf
- Management, International Journal of Transformations in Business. (2012). Meaning of the Term Descriptive Survey Research Method.
- Management, Joint IAEA/ KHALIFA University School of Nuclear Energy. (2012). *Integrated Management System*. Retrieved 19 October 2013, from http://www.iaea.org/nuclearenergy/nuclearknowledge/schools/NEMschool/2012/AbuDhabi/PDFs/day4/03_Integrated_Management_System_for_NuclearOrganisation.pdf
- Salford, University of. (2011). Case Study of Research Strategy, Retrieved 19 October 2013, from <http://usir.salford.ac.uk/18250/>