

Application of Integrated Management Systems in Hong Kong

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ABSTRACT

This paper is to evaluate the effectiveness of implementing the Integrated Management Systems (IMS) in Hong Kong. The first objective is to study the feasibility of integrating ISO9000 and ISO 14000 systems. The second objective is to identify key elements affecting types of system integration. The results indicated that IMS is generally acceptable to be implemented in Hong Kong. The findings of key elements affecting types of integration to different sizes of company include type of business, size of company, resources allocation, and location of business.

Keywords: Integrated Management System (IMS), ISO9000, ISO14000, environmental management, quality management

1.0 Introduction

The ISO 9000 and ISO 14000 families are among ISO's most widely known and successful standards ever (ISO 2004). In Hong Kong, there are many organizations being certified with the quality management system by accredited certification bodies. There is an increasingly certification demanding with the environmental management system by the client's and Government's requirements. Both ISO9001 Quality Management Systems (QMS) and ISO14001 Environmental Management Systems (EMS) are the most common systems being applied in Hong Kong with Government recognition. The way to integrate the two systems would have great benefits to them, for example rewarding tenders and improving their management practice to the end user and public. However, the challenge is that the IMS is relatively new in Hong Kong, thus less stakeholders really understand the concept of this system and the way to integrate management systems. In this paper, it is presented the feasibility of integrating ISO9000 and ISO 14000 systems and to identify key elements affecting types of integration.

The approach is firstly to study the documented case study with the discussion of its success of IMS implementation in MTR Corporation. Then the second part is to report field research discussion of the interview results among six companies with ten interviewees in order to find out their opinions toward IMS implementation.

2.0 Successful Application of IMS in MTR Corporation

MTR Corporation Limited is currently operating a railway network of five Urban Lines, one Airport Express Railway and one Disneyland Resort Line totaling 91.0 km route length, which includes over 120.6 km of tunnels (some route sections have several tunnels) with 53 stations. Among them, 35 out of the 53 stations are underground stations with depths varying from 12 to 37 meters below the street level. A daily patronage of over 2.4 million passengers out of the city's population of 6.8 million, it is one of the most intensively utilized systems in the world. For example, during the morning peak hours, 8-car trains with a capacity for 2,500 passengers will run at 2.1-minute intervals, carrying 70,000 passengers per hour and direction on the Tsuen Wan Line. Each of the Urban Lines, however, is capable of running 34 trains per hour in each direction. This gives a full capacity of 85,000 passengers for each Urban Line in each direction. The Corporation's train fleet has grown from 140 cars in 1979 to 1,050 cars in 2005 (including 88 cars for the Airport Express and 12 cars for the Disneyland Resort Line) to meet escalating passenger demands, 88.4% of which are in service to meet the daily morning peak demand (MTR Corporation, 2005).

MTR Corporation was established by the Hong Kong Government in 1975. Brown (1998) said that the principle purpose of MTR Corporation is to construct and operate on prudent commercial principles, a

mass transit railway system with regard to the reasonable requirements of the public transport system in Hong Kong. In 1992, the core departments started establishing ISO 9000-based QMS and establishing the framework for total quality management (Gaffney and Chan, 1998). The Operations Engineering Department of the MTR Corporation began to implement an integrated management system to incorporate different kinds of management system including occupational health and safety system, railway safety system, security management system, and TQM in 1998 (Chan et al., 1998). Chan and Sing (1999) mentioned that after being succeed in implementing the IMS, the system was extended to the whole operations in 1999. Later, the ISO 9001: 2000 standard has been issued to further enhance the IMS with new initiatives and MTR Corporation received its ISO 9001:2000 certificate on 15 December 2000 (ISO 9000 + ISO 14000 News, 2001).

In 2004, BVQI announced that the Operations Division of MTR Corporation Limited was Integrated Management System (IMS) Certificate awarded for compiling the internationally recognized standards in safety, quality and environmental management systems on 24 February 2004, BVQI (2004). With the award of an IMS certificate, the operations division's achievement of implementing an integrated management system for safety, quality, and environmental issues has been widely acknowledged.

The MTR Corporation's Managing Director – Operations and Business Development Mr. Phil Gaffney said:

“Unlike other industries, there were no regulatory external factors forcing us to get certification: there were no regulatory requirements or pressing business needs to be met. The main advantage in going for certification was to get further incremental improvement.” (MTR Corporation, 2005)

For the IMS implementation, the MTR operations division successfully developed the system based on TQM concepts and integrating the requirements of safety, quality and security, while linking all core business processes to the divisional goal. The system requirements have been documented in the IMS manual and Balanced Scorecard System has been used as one of the tools incorporating with the IMS system for business performance monitoring. In addition, customer satisfaction surveys were being carried out to measure the degree of customer satisfaction (Chan et al., 2002). Therefore, the company confidants that everyone in the organization should clearly understand what is required of them in line with their service provision to continually provide safe, reliable, efficient and environmentally friendly service up to the world-class standards (MTR Corporation, 2005).

The success of integrating several systems by MTR Corporation indicated that IMS is possible to be implemented in Hong Kong. Another implication was that even a large firm like the MTR would also be suitable for running the integrated system. Although they did not mention what difficulties and burdens found during the implementation, the results enlightened the other organizations IMS will be the trend to follow.

3.0 Interviews of Companies with Various Business Natures

In order to investigate the IMS implementation, six companies have been selected with 10 interviewees. Their business natures include 1) the foundation works, 2) electrical related components production, 3) A&A and maintenance works, 4) material testing, 5) valuation & property management works, and 6) aluminum related works as shown in Table 1.

	Business Natures	Roles	Position of Interviewees	No. of Interviewees	No. of Employees	Period of Interviews
1	Foundation works (Piling works)	Piling Contractor	Director	1	11 to 20	Sep 2004
2	Electrical related components production (AT & PT)	E&M Specialist Contractor	Division Managers	2	> 100	Sep 2004
3	A&A and maintenance works	General Building Contractor	Managing Director	1	1 to 10	Oct 2005
4	Material testing	Testing	Manager	1	1 to 10	Feb 2006

		Laboratory				
5	Valuation & property management works	Surveying	Managing Director/ s	4	11 to 20	Oct 2004
6	Aluminum related works	Supplier	Manager	1	11 - 20	Jan 2005

3.1 Staff Being Employed by the Company

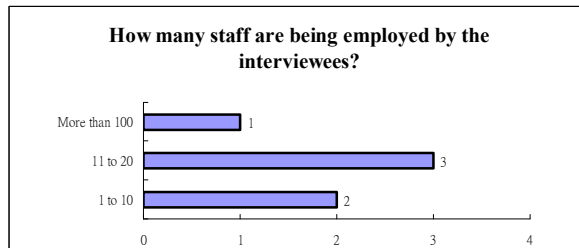


Figure 1: Number of staff employed by the interviewees' company

A total of six companies have been interviewed, half of them (Piling Contractor, Surveying and Supplier) employ 11 to 20 staff in their company, one of third (General Building Contractor and Testing Laboratory) are within the group size from 1 to 10 and the remaining one (Electrical related components production) is more than 100 employees. All of their employees are engaged as direct office staff and site labour. By conducting the interviews from small firms to large firm with different business natures, their opinions were gathering in different perspectives to the management systems implementation.

3.2 Company Being Awarded with the QMS/ EMS Certificates

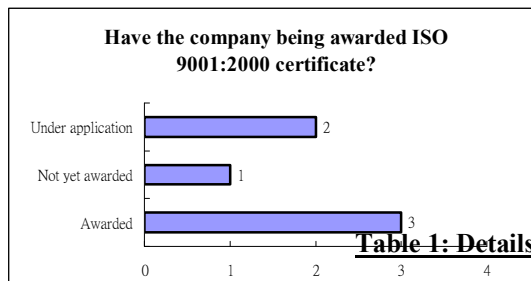
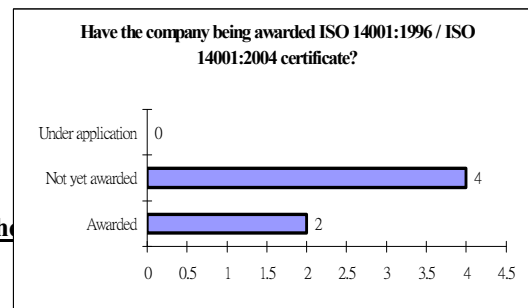


Figure 2: ISO 9001: 2000 Being awarded to the interviewees' company

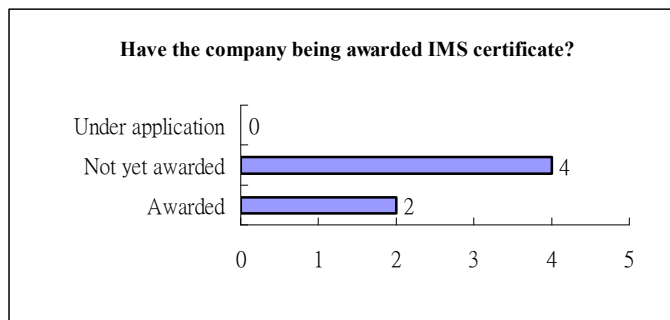


awarded to the interviewees' company

By comparing Figure 3 and 4, it seems that most of the companies were already awarded ISO 9001:2000 certificate or under application. However, more than 60% of the companies were still without the ISO 14001: 1996 / ISO 14001: 2004 awarded or even not yet under application. The results were due to the following reasons:

- ISO 14001:1996 / ISO 14001:2004 certificate is not related to their business nature with regard to their product or service;
- Resources have been allocated to the maintenance or application of ISO 9001:2000 certificate.
- Extension of other management systems will be conducted later;
- More workloads may adversely affect their core business operation.

3.3 Company Being Awarded With the IMS Certificate



The result shown that two of them were being certificated with IMS. By conducting in-depth interviews with them, whether the IMS could be helpful to their companies, their perspectives are summarized as follows:

- IMS can achieve time and cost saving in audits;
- Some forms of QMS and EMS can be combined for better

register filling and easy filing;

- Management review and internal audit for QMS and EMS can be conducted together once a year
- Staff can have more time in dealing with the company business;
- Better improvement of the system operation through systematic approach.

Alternatively, some negative feedbacks were collected after the interviews, they are:

- Not familiar with the IMS audit requirements;
- Unclear integration structure;
- Difficult to update the documents especially if those QMS and EMS procedures were written together;
- Quality manager may have more workload if dealing with several management systems;
- Some EMS requirements were difficulties to implement, e.g. less using plastic and wooden package for goods deliver protection but those services were outsourced to other service providers. Monitoring of their activities would be hard

4.0 Key Elements Affecting Types of Integration

Although some negative feedbacks were collected during the interviews, the initial setup always tends to be difficult and will be running smooth after a certain periods. In order to have a better business operation with the management system, any company should select a system that will suit for its own unique business environment effectively. Some major key elements that may affect their decision are concluded after the interviews as follows:

- 1) Type of business – whether their business creates environmental impacts and what is the degree of those impacts?
- 2) Size of company – how many staff for business operation? How many divisions in the company organization?
- 3) Resources allocation – how many resources including human, material, tools, machines, capital, space, training and techniques, etc can be provided by the company to the management system?
- 4) Location of business – where will be the audit conducted? Some audits may be conducted outside Hong Kong; independent audit may not be the best choose but the joint audit to achieve more economic value.

5.0 Conclusion

A large firm like MTR Corporation, the success of IMS implementation leads to a new trend of running management systems in Hong Kong. By conducting six interviews with 10 interviewees in various types of company with different sizes and business natures, their opinions to the IMS implementation were collected. Their feedbacks indicated that IMS is generally acceptable to be implemented. On the other hand, more efforts shall be put in describing what the integration requirements will be and how it can be achieved. In addition, the updating of those IMS documentation should be taken into account to prevent any unclear statement in integrated manual, procedures and forms. Besides that, decision should be made to ensure their choice of integrated systems are appropriate to their business, i.e. type of their business, size of their company, resources allocation and location of their company business, etc. since unique business environment would have unique requirements.

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Authors' Backgrounds

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