4 Benefits of ISO System Integration

4.1 INTRODUCTION

In the past, a business' manufacture of a quality product was the consuming public's main concern, but this is now changing. The public in general is more concerned about the pollution which local industry is emitting to the air, drinking water, and soil — too many "Love Canals" have done nothing but fuel their concern. Additionally, with increasing requirements for both the public and business sectors to recycle their waste materials, environmental issues have now begun to command the most attention. Business stockholders and other stakeholders are also becoming more concerned about increasing litigation against companies through private individuals and regulatory agencies because of the severe impact on profitability and dividends.

As our economies continue to merge globally, fragmented systems can potentially create barriers for a company attempting to penetrate new markets or even maintain current markets in the long run. Without one fully integrated management system, businesses will face critical decisions concerning their survival and long term prosperity. When there is a diversity of management systems, it becomes very difficult to manage them — inefficiency and substandard product can result. Management must realize that a product manufactured in their own country may not be acceptable in another country because of quality and/or environmental "deficiencies." As you can see from the previous chapter, the weaving of sustainable development into the World Trade Organization's agenda will continue to cause business management to include and consider environmental issues as part of their overall business strategy.

Although Appendices B and C provide a very detailed comparison of various environmental standards, it is difficult to see the benefits that can be derived from the integration process. Figure 1 shows the goal of the integration process with the programs that potentially may influence a single system and the potential benefits coming out of it. The figure is not all inclusive, but merely gives you a snapshot. This chapter is intended to focus on more of the specifics.

4.2 COST EFFECTIVENESS AND PROFITABILITY

One of the first questions senior management will ask when confronted with a decision to implement ISO 14001 will be, "How much will it cost?" Like any other investment or expense, managers want to know what their Return on Investment (ROI) will be. A more appropriate question should be, "How much will it save?" Environmental professionals have tried to demonstrate to senior management that an EMS integrated into everyday business decisions can and will save money. Efforts

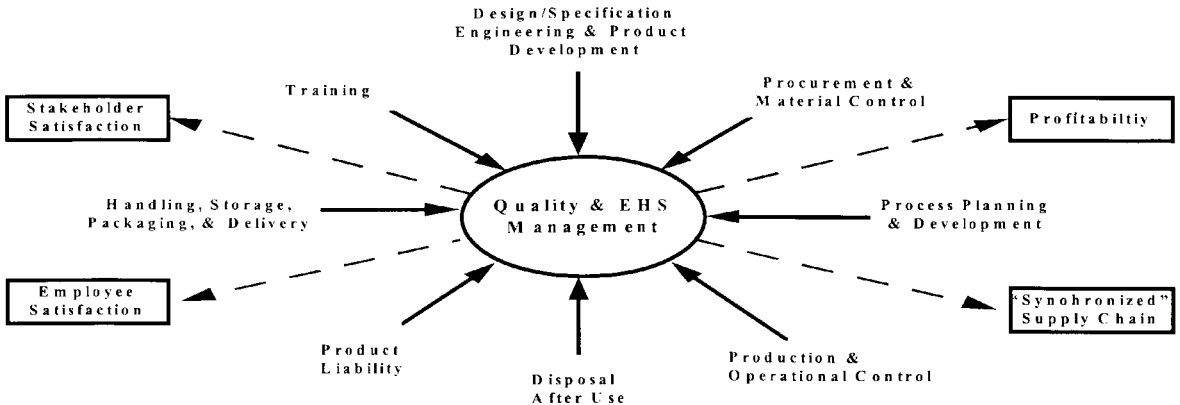

FIGURE 1. The goal of quality and environmental integration.

to prevent pollution, reduce solid waste generation, ensure legal compliance, etc. can have a significant impact on the efficiency of a process line by helping to identify process losses and, thus, improve yields.

An example of this might be where an environmental manager is attempting to eliminate an air emission's permit for a process. In working with a process engineer, it is seen that yields and quality fluctuate due to a poor soldering process. The product being manufactured uses an alcohol-based flux (e.g., a volatile organic compound) for the soldering operation that, additionally, must be run through a wash system with a cleaning solution. The environmental manager and/or engineer may determine that a water-based flux provides an excellent solder bond and that the washing system can now use warm water without a cleaning solution to provide a very clean, high quality product. The project has resulted in the elimination of an air emission's permit, the associated regulatory fees, and any logging or database requirements. Additionally, the purchase of the cleaning solution has been eliminated and the costs associated with its waste disposal. Another side benefit is the elimination of a potential regulatory noncompliance with the conditions required by the air permit. Thus, actual and potential savings have occurred. The basic premise behind this scenario is to demonstrate that operating costs can be reduced through sound environmental practices, primarily through the identification of an environmental aspect and determining how best to control or eliminate it.

In addition to the environmental aspects, there are other specific areas within the ISO 14001 standards that will contribute to cost savings. In particular, the development of objectives and targets can provide the driving force behind continual improvement and legal compliance. Utilization of an environmental review as part of a design review can minimize the impact of a new product or process.

Cost savings will also be evident if one realizes that integration into ISO 9001 will reduce the amount of man-hours spent in developing and implementing an environmental management system. With the ability to "piggy back" on an already existent ISO 9001 management system, the environmental manager can keep new program and procedural development to a minimum.

4.3 DOCUMENT CONTROL

As the ISO 14001 EMS was being drafted, one of the initial arguments which came out was the concern over the potential burden that would be placed on an already overloaded ISO 9001 document control program. This would, of course, be a valid concern if integration were not possible. Since the ISO 14000 standards were deliberately fashioned after the ISO 9000 standards, it is obvious that providing the ability to integrate was not far from the drafters' minds. The draft ISO 14000 guideline, in fact, states:

> Where elements of the EMS are integrated with an organization's overall management system, the environmental documentation should be integrated into existing documentation.

By developing and writing programs and procedures in a manner consistent with the ISO 9000 framework, an organization can very easily control its EMS document framework. Specifics of document control integration will be discussed in a later chapter.

4.4 INSURANCE

Several prominent members of the insurance industry have indicated that companies who pursue ISO 14001 or some other environmental management system may potentially see a reduction in their insurance costs. Insurance and industry representatives may see an EMS as a form of liability protection and may include special exclusionary language in insurance policies. Insurance companies pay out millions of dollars annually for coverage they provide for environmental pollution, legal penalties, lost revenues, and court and other litigation costs. An environmental management system shows the insurance carrier that a company is committed to its stakeholders: the insurance company itself, the regulatory agencies, the public, and company stockholders.

In order to put a price on an environmental management system, it has been recommended that insurance carriers put a "price tag" on environmental aspects and then prorate the level of "significant impact." By considering a company's list of significant impacts, an insurance carrier can potentially charge lower premiums. A downside to this, however, is the potential for providing legal compliance and any other information associated with environmental risks or audits.

4.5 AUDITING

The costs incurred to maintain compliance with ISO 9001 over the course of a three-year period potentially can run into the hundreds of thousands of dollars. By adding to this the potential costs for auditing an EMS, a chief financial officer will automatically become "gun shy." Because of the many expenses incurred for a third party certification for such things as document and report preparation, travel expenses, and the cost in man-hours for the auditee, etc., it's important to consider the benefits from conducting a joint QMS and EMS audit. For some large firms, the initial and triennial certification for just the QMS program can take anywhere from a week to two weeks. Due to its large size, the same firm can incur similar costs for an EMS audit. The combined auditing time can thus be anywhere from two to four weeks and may not include the time and expense incurred from mid-year surveillance audits! A joint QMS and EMS audit can save money in the areas already mentioned above, as well as making it much easier to prepare and train personnel to understand their responsibilities.

One of the critical issues concerning an integrated audit stems from potential complications that may arise from an audit team's confusion over the general architecture or structure of the joint systems. If integration of a QMS and EMS is in your plans, it is highly recommended that the integration take place over a period of time

in order to minimize the initial disruption and to allow the joint system to have time to function smoothly. Only then should the joint audit be considered.

4.6 OVERALL BUSINESS DECISION-MAKING

With the preponderance of quality systems and ever-increasing environmental systems, it becomes even more important to integrate all of the systems into one synergistic business system. As nations and industries continue to adopt QMS and EMS systems and, potentially, require their supply chain to comply, it becomes critical that all of the various elements of a business be managed as a unified structure. Many businesses have become too fragmented with the "right hand not knowing what the left hand is doing."

Throughout this book I have attempted and will continue to show that good environmental management makes "good business sense." Over and over again, good environmental management has demonstrated its impact on improving operational and process control and, ultimately, on cost effectiveness and profitability. Personnel not only become aware of the impact their job has on quality, but also on the environment — they understand that the two cannot be separated. A waste generating process can become much more efficient and profitable if operators are aware that inefficiency can also increase pollution — the consequences of their mistakes can create product waste which, in most cases ends up in a landfill (i.e., it is also an environmental waste):

Product Waste = Environmental Waste = Reduced Profits

4.7 CONCLUSION

Implementing and integrating quality and environmental systems can have a significant impact on the financial success of a business. Financial institutions have begun considering the evidence of a sound environmental program as a potential credit evaluation tool. Lenders could be more willing to extend long-term credit and financing and give preferential treatment to a company if there is:

- a potential increase in market share access and acceptance.
- a reduction in costs.
- the attainability of a competitive advantage and faster time to market.
- a reduction in the costs on components and materials acquisition.
- a reduction in administrative and material expenses.

It will continue to become more evident that management must make environmental strategy as important as its marketing, financial, operational, and R&D strategies when establishing its short-term and long-term business objectives and targets — to include the environment as part of its vision and mission statements, as well as in its policy.