



Standard Synergy

Combining ISO 9001 and ISO 14001 compliance efforts can reduce costs and improve quality

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Many companies today face increased scrutiny of both their quality efforts and their environmental activities. While these two business activities might appear disparate on the surface, they are similar at the core. This article will discuss how a company that combines its efforts in these areas just might realize reduced costs, improved quality, and lower environmental impact for their troubles.

For more than a million companies, quality is documented and subsequently improved through adherence and certification to ISO 9001 quality management system standards. And, as the marketplace moves toward heightened environmental awareness, especially globally, a growing number of companies have implemented environmental management systems (EMS) as part of their corporate plans. Often, this is in an effort to comply with the ISO 14001 environmental management systems standard.

Complying with a single international standard such as ISO 9001 can be challenging in and of itself, but for an increasing number of companies that challenge becomes even more challenging as they attempt to simultaneously comply with multiple standards. While these companies can choose to conduct separate compliance efforts for each standard, this piece-meal approach can come at a cost. A cost not simply measured in dollars and cents, but in inefficiencies, inconsistencies, and lost opportunities for growth and continual improvement. For them, an integrated approach might be the better answer.

As it happens, two standards that are a natural fit for integration are ISO 9001 and ISO 14001. In fact, there is about an 80 percent overlap between the two. This commonality is not happenstance. ISO technical committees tweaked the ISO 14001 standard to bring it more in line with ISO 9001.

By combining ISO 9001 and ISO 14001, a company can enjoy the benefits of a synergistic, integrated management system in which labor is used more effectively, paperwork is reduced, bottlenecks are cleared, and a more global picture of a company's activities is captured.

ISO 9001

In a nutshell, the ISO 9001 standard addresses quality management and requires companies to establish a quality management system (QMS) in order to fulfill the following goals:

- meet customer quality requirements
- meet applicable regulatory requirements
- enhance customer satisfaction
- and, achieve continual improvement of its performance in pursuit of these objectives through Plan Do Check Act.

ISO 14001

The ISO 14001 standard addresses environmental management, in which the organization works to:

- analyze how business activities affect the environment
- minimize harmful effects on the environment caused by its activities
- provides a framework for environmental regulatory compliance
- and, achieve continual improvement of its environmental performance.

The Differences between ISO 9001 and ISO 14001

Diligence is needed to make these goals a reality. The typical ISO 9001 certified company has four levels of documentation. At the top of this list is a quality manual, which on a high level determines the order and interaction of a company's procedures

and processes. The second tier is the document that explains how individual processes work. The third level documents how to carry out specific operations, i.e. work instructions (WI), standard operating procedures (SOPs), and the fourth level contains the reports that document organizational compliance.

ISO 14001 is not necessarily a tiered system, but it utilizes many of the same functional systems. Top management, working closely with personnel from all levels within the company, should determine what areas to integrate compliance efforts. Four areas will typically provide the most synergistic bang for their buck: document control, training, corrective actions, and management and audit reviews.

The certification process often begins with a quality manual, which is a required component to comply with ISO 9001. While ISO 14001 does not have a formal requirement for a manual, most companies keep an environmental management system (EMS) manual. In most cases, there really is no reason to have separate manuals.

The documents that were developed during the drafting of the quality manual provide the foundation for the integrated approach. During the manual's procedure development phase, documents such as work lists, checklists, and training and operation procedures were created.

Each process is documented to determine the most effective way to operate and control a process, ensure that all information is available to support the operation, and monitor the process. Most importantly, by monitoring the process, a clearer picture comes into view and opportunities for continual improvement can become apparent.

For instance, on a manufacturing line, documents might describe material handling, machine loading and offloading, manufacturing operations, test and measurement procedures, assembly, and packaging. Each step is meticulously detailed including the personnel in charge of that step, the equipment that they use, and the procedural work lists and checklists they must complete.

Symmetry Between ISO 9001 and ISO 14001

Because of the symmetry between the two standards, an integrated management system can adapt these core documents to cover both quality and environmental concerns with

individual modules that ask specific questions designed to satisfy the needs of that particular standard.

For instance, an automaker, a refrigeration company, petrochemical manufacturer, or other organization may leak test a component to determine whether the leak rate is within prescribed control limits. This process is both a quality and environmental concern. A common form might be adapted to ask specific questions about the process and document the leak test results.

There are many tools available to make integration easier. A number of companies offer integration tools such as gap analysis software, but many common devices already in use at a company can be used. Flow charts can help identify the sequence and interaction of processes. For instance, automakers and their tiered suppliers use failure mode and effects analysis (FMEA) as part of their quality assurance programs. Flow diagrams are often used in this process, which can be expanded to include environmental aspects.

When integrating environmental requirements into a quality-based document, the new document must be modified to cover environmental conformance. New material must be carefully added to check lists, audit reports, corrective action responses, and other records. Many documents come into play, and it is essential that they be accurately modified. If not, an auditor might find that the system is not truly integrated and this may delay time to the audit.

As these documents are created, they must be controlled, which means they must be part of the company's EMS and QMS. Both standards call for a formal document-control system to oversee all documents, whether they are generated internally or by outside vendors. These documents include work lists, corrective action reports, work procedures, and training reports.

Document control means just that. It is not enough to know that a report is sitting in a filing cabinet or electronic folder. Often, documents are active, evolving files. Anytime a new work list is introduced, engineering specifications altered, correction action reports filed, or any other records are introduced, the system must incorporate them into the QMS or EMS: New documents are created, old documents updated, and obsolete files deleted.

How these documents flow through the workplace is a vital component of a document control system and is pivotal to standard's compliance. Document accessibility and levels of access are mandated. Representatives filling out appropriate forms should have an appropriate access level and access clearance, while top management should be able to see all of the documentation. Along the way, as changes are made to documents, they must undergo additional review and authorization. The most recent version must be available to the appropriate person at the appropriate user level.

Changes to a document might be a signal that updated training is required, and training documentation is another area of potential overlap. Training must be provided and documented for all personnel whose job function may affect product quality or the environment. Documents must meticulously show the type of training needed to complete specific tasks, and identify the personnel who must be assigned, qualified, and supported with documentation. Formal records must be maintained and approved by authorized personnel because auditors look at the training record for all tasks.

Training activities may also stem from corrective actions/preventive actions (CAPA), another area for integration. CAPA can be triggered by specific events including customer complaints, out-of-tolerance alerts, plant accidents, fugitive emissions, or other quality or environmental issues. Procedures must include activities to identify the nonconformities, evaluate actions, and prevent the nonconformity from happening again. The company must develop methods to identify customer complaints, to determine and implement corrective action, record results, and review the actions taken. These are all common factors between the two standards.

Authorized managers review CAPA and other documents. Each standard calls for internal audits and management review. Management and auditors review the documents that detail the actions taken to correct the problem. Their review should also be documented.

Integrating management systems can reduce the number of reviews that top management must undertake. If a company attempts to comply with multiple standards on an individual basis, then separate reviews would likely be required. And, each review would require a presentation and separate action plans. By integrating, multiple review meetings can be combined into one, and, if need be, a single coordinated action plan can be

launched. A company may wish to integrate the documentation process, but conduct separate quality and environmental reviews.

By integrating the compliance processes and activities for compliance to ISO 9001 and ISO 14001, a company can reduce the time it takes to initially comply with the standard and soothe potential future audit headaches. Integration reduces bottlenecks, improves efficiencies, and provides a more global awareness of a company's quality and environmental activities. As this awareness grows, quality can be improved and environmental impact reduced.

Management's role

Management's role is pivotal to compliance efforts. In addition to developing the ISO 9001 and ISO 14001 policies, it must see that the policy is understood and implemented throughout the organization.

Top management obligations go further than that when it comes to integrating compliance efforts. First, they must make the decision to integrate systems. Although "grass roots" efforts for integration have been effective, integrations is much smoother when management defines an objective. The considerations for making the decision to integrate areas can vary. Unique business scenarios might require a higher level of environmental compliance. In these cases, there might be financial risks for a company if it does not make clear its environmental requirements.

To make this decision, it is pivotal that management understands the potential efficiencies of integration. Top management may need to break down territories that developed in the ISO 9001 and ISO 14001 areas of conformance. The current revisions' of the standard is being structured so that they can be integrated. If there are two separate management representatives for ISO 9001 and ISO 14001, management will need to assure these individuals that they are not integrating themselves out of a job. Cooperation will be unlikely if employees fear for their job.

An employee needs to be selected for identifying the differences in ISO 9001 and ISO 14001. The management representative do not have to be different people, but they should be well versed on both standards and compliance requirements. A good consultant can be used to supplement the knowledge of the management representative if they are weak in one of the areas. Consultants can take an objective view and see if everything that can be integrated, actually is.

When it comes time to be registered, it is important to find a registrar that is accredited to the standards that are targets for integration. The registrar should be able to explain what it means to integrate management systems. Companies must employ auditors that can competently audit both standards.

By taking these steps, management can oversee the smooth integration and compliance of the multiple standards.

Integration Benefits Go Beyond Dollars

Actual cost to comply with a single standard can vary based on myriad factors such as size, number of employees, number of processes, and other factors, but a typical ISO 9001, 3-year cost for a small manufacturer is around \$10,000. Integrating compliance efforts can save these companies as much 30 percent savings, depending on how many systems the company chooses to integrate.

Monetary factors, however, are not the only things to consider. Less quantifiable are the paperwork bottlenecks that can occur as multiple people attempt to gain required information – different representatives gathering similar information about the same processes, but filing that information in different document trails. The information can be inconsistent in terms of style and information gathered.

Essentially, efficiency falters while non-value added activity grows.

Certification to ISO 9001 standard helps assure customers that a company has developed a quality management system (QMS) and has literally thought of the best way to document its business process, measures effectiveness, and improves.

Attaining compliance can be a financial boon for that company. Several studies have shown that organization's that are ISO 9001 registered have a perceived higher value: they produce higher quality parts; have more competitive advantages, fewer customer quality audits, and improved customer demand.

For more information on NSF-ISR's range of quality management systems registrations available globally, please contact information@nsf-isr.org or visit www.nsf-isr.org