

Environmental issues are increasingly becoming routine topics of discussion across the world. This is certainly because unlike many issues that impact us and our businesses that are regional in nature, the problems of the environment know no boundaries and are truly global. For proof of this look at some of the recent volcanic eruptions, the volume of ash that has been disgorged into the atmosphere certainly has been known to impact communities thousands of miles away. In the same way, impacts of deforestation, CO2 emissions, and ocean pollution may all be felt by individuals and communities far from the source of the offending problem. Therefore, across the developed and developing world there is more and more interest in taking action to improve upon our environmental stewardship.



Environmental Management Systems – ISO 14001

One of the tangible ways for businesses to address these issues is to adopt what is known as an Environmental Management System. Like any Management System, companies may develop any system that meets their needs. However, we are fortunate that institutions like the International Organization for Standardization (ISO) have taken on the task to assemble standards that can be globally used and establish a common and consistent framework that we can all accept. To this end, ISO has published the ISO 14000 family of guidance documents to assist companies in developing their own Environmental Management System (EMS).

“Management Systems” refer to any set of activities, which taken as a whole define the way an organization conducts themselves towards achieving performance in a specific area or the entirety of their business. It is very important to distinguish that these systems are not intended to mandate specific performance requirements but rather establish the processes by which the system meets the organization’s performance goals. This new way of approaching the management of the business first emerged in 1987 with the publication of ISO’s Quality Management System, ISO 9001. As this approach was accepted and began to flourish, additional, and more specific, management systems began to evolve, including industry specific examples like those found in automotive, aerospace, medicine, and IT. Additionally, specific management systems complimentary to

the QMS also began to emerge. Included in this category was ISO 14001, an environmental management system.

ISO 14001 can trace its roots to the 1992 BSI standard BS7750. This was the first ever, formally established environmental management system, drafted in response to a growing interest in environmental stewardship. BS7750 would serve as a template for the ISO technical committee, ISO/TC 270, to draft and publish the first edition of ISO 14001 in 1996. Since its inception, it has undergone two additional revisions with the current third edition released in 2015.

ISO 14001 is the guiding standard in a family of other guidance documents on the topic. It should be clearly understood that adoption of this standard to create an environmental management system (EMS) is entirely voluntary. The purpose of having such an EMS is threefold:

1. The primary goal is to develop a system that minimizes how a company’s operations negatively affect the environment.
2. To help the organization comply with local and national regulations.
3. To provide ways for the system to be continually approved.

ISO 14001 accomplishes these goals by defining the criteria necessary for a high functioning EMS. Once again, it does this



not by setting performance requirements on products or environmental outcomes but rather by providing a “road map” by which the organization can achieve its environmental goals and then subsequently improve upon them. Typical results of a well-functioning EMS include improved resource efficiency, reduced waste, reduced costs, higher level of compliance to applicable statutory requirements, and better communication to and between stakeholders.

ISO 14001 seeks to build an EMS that can implement, achieve, and maintain an environmental policy by addressing the following items:

- **Organizational structure** – the EMS identifies the organization’s structure, with special attention given to top management involvement, organizational awareness, and competency.
- **Planning Activities** – the EMS sets activities and processes that help the organization to review what environmental issues are relevant to them and establish goals and objectives around addressing those items.
- **Responsibilities** – the EMS helps the organization to identify those responsible for specific activities and provide them the authority needed to effectively complete their tasks.
- **Practices, procedures, and processes** – the EMS has the organization define and develop a system comprised of individual practices, procedures, and processes that achieve the goals and objectives of the organization.
- **Resources** – the EMS helps the organization identify, define, and place the necessary resources within the system that are needed to achieve the goals and objectives of the organization.
- **Continual Improvement**- the EMS is full of guidance that helps the organization in developing a systematic approach to focusing on ways to improve upon earlier successes.

Just like ISO 9001, the ISO 14001 EMS is founded on the Deming Circle of “Plan-Do-Check-Act” (PDCA).

Plan: In the planning stage, the goal is to establish the objectives and processes required. The organization will conduct a review or gap audit to understand what the organization is currently doing about environmental issues. They will also review what needs to be done and then put these two together to understand how well or poorly the operation currently is meeting relevant environmental issues. The picture that emerges from this will then be used to inform the organization in how to structure the “Do” aspect of the loop.

Do: In the “Do” stage it is all about implementing processes. Using the information gleaned in the “Plan” stage, the organization will begin to identify and assign resources, generate procedures and processes, and communicate what they are doing across the organization, especially to top management.

Check: In the “Check” stage the organization begins to measure, monitor, and report results of the processes generated in the “Do” stage. In addition to monitoring and measuring performance, internal audits are constituted at this stage.

Act: The final stage, “Act”, is when the organization brings it all together with the goal of improving past performance. This is usually accomplished through Management Review, a process where the results and health of the system are reported back to top management for them

to assure that things are on track and to make course corrections as necessary. Additionally, after a couple of cycles, top management should have enough “history” to begin evolving to a strategic, longer-term perspective. The outcome of the actions taken in this stage then filter back to the “plan” stage and the cycle starts again. It perpetually continues in this way, ever getting better and fulfilling the objective of a properly run management system, i.e., continual improvement.

ISO 14001 has followed similar content evolution as ISO 9001. Like ISO 9001 it has undergone two major revisions in its lifetime with the latest occurring in 2015. This revision is characterized by the following highlights:

- **It places greater responsibility of top management to play a part in the EMS.** In former versions, top management was always a player, but unfortunately, sometimes a very bit player. In this revision that gets addressed and top management has greater responsibility to be more aware and active in the EMS.
- **It adds a new expectation that the organization must commit to proactive steps to “protect the environment”.** Like all management system standards, it specifically does not mandate what this looks like for a particular organization, only that they must assess how they can do it and take proactive steps to see it through.
- **It has placed emphasis on improving communication channels both inside and outside of the organization.**
- **It adopts a consistent structure to ISO 9001.** In ISO terminology this is referred to as the “High Level Structure”. What it means is that there is a common framework in the format of the standards so that companies choosing to simultaneously operate an ISO 9001 QMS and an ISO 14001 EMS, have consistent system frameworks which make it easier for the cross pollination of these multiple standards within a single organization.

There are a family of ISO 14000 documents. **ISO 14001 is the primary standard and the foundational document used by anyone seeking to create an EMS. ISO 14004, “General Guidelines on Implementation” provides additional guidance on implementing an EMS and was last revised in 2016. ISO 14005, “Guidelines for a Flexible Approach to Phased Implementation” was last revised in 2019.**

In summary, an EMS and, specifically, ISO 14001 are completely voluntary. No company has to initiate one. However, with the increased interest in environmental stewardship and global citizenship, many companies are seeking to incorporate an environmental policy into their corporate ethos. Using the ISO 14001 standard and joining over 300,000 other organizations from 171 different countries would put you in good company and help set you on a pathway towards better environmental stewardship. ■

