

Overcoming the Five Major Challenges to a Successful EHS Management System

The concept of environmental, health, and safety (EHS) management systems has been with us for over ten years now and is well-understood. Or is it?

Common problems and how to deal with them

The Concept and Its Challenges

A number of organizations, including the International Organization for Standardization (ISO), the British Standards Institute, the European Union, and the U.S. Environmental Protection Agency (EPA), have adopted their own formal definitions of an EHS management system. Although there is no single globally accepted definition of the term, the existing definitions are strikingly similar.

For purposes of this article, we will use the definition set out by the American Chemistry Council, which captures the concept nicely, both in terms of its focus and components: "The collection of programs, operations, people, documents, policies, guidelines, procedures, facilities and equipment required to effectively manage environmental, health and safety activities."

The concept was not always so well-understood. In fact, there once appeared to be a mis-

conception that one "system" fit all. Ten years ago, when EHS management systems were becoming a common topic of discussion among EHS professionals, there

was a great deal of confusion regarding the breadth and scope of such systems.

Even five years ago, some uncertainty remained regarding what to include in an EHS management system, how to construct one, and how to quantify the value of a program.

These days, the concept is better understood. For example, there is little confusion about the structural components of an EHS management system. Structuring such a system for an organization is not the daunting task it once was.

Where EHS managers continue to struggle, however, is in integrating and sustaining these systems within their organizations.

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In some ways, these problems are not surprising. The skills required to construct an EHS management system differ markedly from those required to implement and nurture it.

Our experience and discussions with EHS managers have identified five common challenges to the implementation and sustainability of EHS management systems:

- the absence of active participation and visibility by senior management;
- the failure to demonstrate the system's value to key stakeholders;
- the failure to properly plan for implementation;
- the failure of the management system to accurately reflect the culture of the organization; and
- the absence of true systems thinking.

In this article, we describe these challenges and suggest ways to meet them.

Challenge No. 1: Top Management Participation

The critical role of top management support for organizational change is well-understood. Yet lack of top management participation is often at

the root of the difficulties in implementing change.

Senior managers provide the leadership for organizational change and control the resources needed to effect that change. While the

president or chief executive officer need not take an active role in the process (although that certainly helps), a senior manager with broad authority to direct people and commit resources (e.g., a vice president of operations) must do so.

The implementation of any new management system, not just the EHS variety, is best spearheaded by a senior manager with broad authority.

The Value of Visibility

It is important that the senior managers involved be visible with respect to their participation in, and ownership of, the process. Mid-level managers and other employees tend to direct their energies and resources in the direction they perceive that senior management wants them to go.

Typically, they focus on the yardsticks against which they are measured in performance reviews or incentive compensation programs. In the absence of direction from senior management, people often conclude that system changes are not all that important. The status quo is maintained.

What senior managers often neglect is that their direction and support must be explicit and continuing. They believe their role ends with their approval of the project. That is understandable but regrettable.

Organizational change requires the continuing support and guiding hand of senior management. People need to see frequent signals that development and implementation of a new EHS management system is important to the organization, and that they are expected to continue to contribute resources and accommodate to changes.

In the absence of these signals, inertia will dominate. It is therefore critical that senior management remain visibly engaged throughout the implementation process.

The Importance of Authority

The implementation of any new management system, not just the EHS variety, is best spearheaded by a senior manager with broad authority. Unfortunately, however, it is most often directed by the vice president or director of EHS.

A manager at that level has limitations of authority that can keep the program from being pushed forward. For instance, it is difficult for a vice president of EHS to direct changes in other

areas of the organization, such as purchasing or operations.

What works best is having a senior manager as the implementation team leader, and an EHS manager as the facilitator. This arrangement aligns their implementation roles with their authorities.

The Power of Experience

Senior managers bring other value to the process in addition to their leadership abilities and authority to commit resources. Often these individuals have been with the company long enough to have intimate knowledge of its organization and various management systems. They know the formal and informal routes for getting things done, and where systems interact.

This knowledge is very useful when implementing a new EHS management system, which by its nature must cut across several organizational management systems and authorities. A senior manager often can provide direction on how to make system changes that are the least disruptive to established procedures.

Making It Work

In one example of successful EHS management integration at a Fortune 100 company, performance was tied to the compensation process. Managers at the company integrated environmental management system goals into the performance review process at both the individual and the company level.

Each business unit vice president became the chairperson for implementing the management system in order to ensure integration into each of the business units. Each vice president then created goals and measured performance based in part on how well the program was being integrated.

Under this system, acceptable performance is based on the results of the program as compared to its initial goals. Performance is then tied to the

company's incentive compensation structure, which affects pay increases.

If one business unit does not meet the goals set forth at the beginning of the year, none of the business unit vice presidents receive that portion of their incentive compensation bonus.

The purpose of this structure is two-fold: to ensure that the program gets implemented, and to ensure that business units support each other to achieve the common goal of the company as a whole, not as different business units.

Challenge No. 2: Demonstrating the System's Value to Stakeholders

Failure to demonstrate the value of an EHS management system to key stakeholders is one of the biggest challenges an EHS department must overcome.

Most business managers in other departments (such as accounting, real estate, purchasing, and legal) do not understand technical environmental issues. Furthermore, most environmental professionals do not understand the business issues behind corporate decision making.

While environmental professionals do not need a business degree, they do need to understand the basic business goals and issues that are important to their firms. They must integrate non-EHS business professionals into their EHS management system decision making.

Stakeholder Analysis and Outreach

The EHS group also must identify their stakeholders—that is, the individuals both inside and outside of the organization who are affected by the decisions the EHS group makes.

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Exhibit 1 shows a simplified diagram outlining stakeholder analysis. This diagram is confined to identifying the first tier of stakeholders. The process typically is expanded to three or four tiers and identifies the specific people who must be included.

Once key stakeholders are identified, they must be integrated into the decision-making process. The key is to use existing staff and committee meetings as forums to integrate EHS management systems into the organization.

It may take the equivalent of a marketing campaign to ensure that these people understand that EHS is an investment and not a drain on profits. This will require learning to speak their language, rather than hoping they will understand the language of EHS.

Capturing Value

Value cannot be demonstrated to stakeholders unless it is properly captured and reported.

Capturing value requires identifying the alternatives available to improve a process.

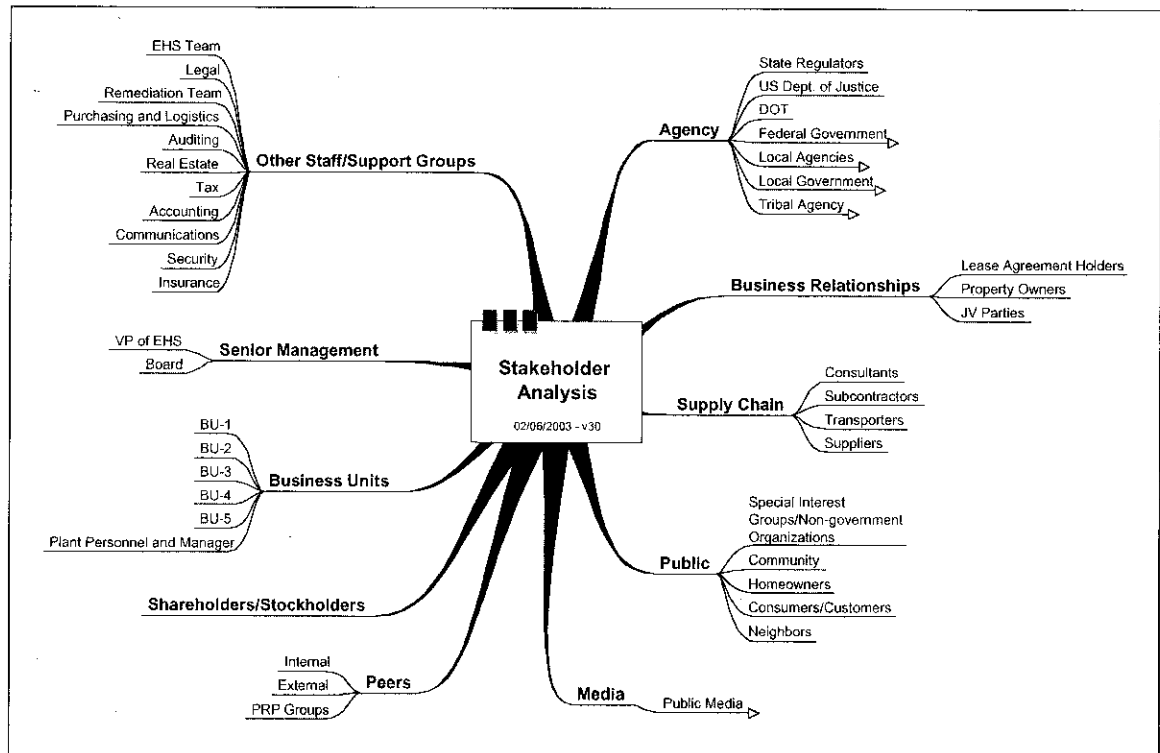
Various tools exist to identify and evaluate options. Two we have found helpful are “morphological analysis” and “aspect and impact analysis.”

Morphological analysis can involve a simple table that is used to generate alternatives based on options and the characteristics or alternatives associated with each option.

For example, if the goal is to manage environmental cleanup liabilities, a key characteristic of that goal would be identifying cost-effective vehicles to achieve cleanup. The options available under this characteristic might include: shifting liabilities to a separate company, selling them, funding them, donating the problem assets, or obtaining insurance to cap the liabilities.

An aspect and impact analysis looks at an aspect of your business and how it interacts with the environment. For example, it allows you to

Exhibit 1. Stakeholder Analysis



evaluate energy use and its impact on fuel depletion and greenhouse gas emissions.

To ensure that value is captured, goals need to be set, responsibilities assigned, and progress tracked. For example, if the goal is to decrease the number of findings in agency-led compliance audits, an internal corporate EHS-led audit program can be implemented.

To track the effectiveness of the program, the corporate audit group leader could be required to periodically report the number of findings to a designated tracking person or enter them into an electronic scorecard.

The value of the management process would then be indicated by comparing savings from having to respond to fewer findings against the time costs or system expenses involved in implementing and tracking the corporate audit program.

Measuring Financial Benefits

In evaluating the financial benefits of EHS process improvements, or when making decisions about EHS projects, it is critical to use standard financial measurements, particularly those that are standard to the organization.

Nevertheless, it can be quite difficult to identify the appropriate EHS metrics and quantify their value. Environmental projects add value, but determining how much and over what time period can be a challenge.

As indicated above, one approach is to identify and calculate the internal costs associated with the various options for addressing a given issue. In some cases, this will show the real cost savings associated with an EHS project.

In other cases, the calculation will not indicate cost savings unless you include benefits that are more difficult to quantify, such as savings accrued from fines not incurred or lawsuits that do not happen, or goodwill gained from customers or the community.

Fortunately, these less tangible financial benefits may also result from other corporate functions (e.g., public financial reporting, corporate charitable efforts, or product return policies). Thus, the corporate financial or accounting groups will likely already have developed mechanisms to account for such benefits. These often can be adapted to quantify EHS value.

Communicating with Stakeholders

The final step in the business process is communicating the value of the EHS management system to all stakeholders. The best way of accomplishing this is to keep the discussion brief and to the point. Stakeholders will want the convenience of a summary, along with the comfort of knowing that there is a computer full of backup to support it.

The best way to ensure that the message will get through is to use the company's other corporate communications as a model. This will allow you to present the information with the look, feel, and language that are characteristic of your company's other routine communications, and thus familiar to your intended audience.

Knowing what stakeholders want, and giving it to them in a manner they will embrace, are keys to successfully communicating the fruits of your EHS management efforts.

Challenge No. 3: Failure to Plan for Implementation

Firms that fail when implementing a well-designed environmental management system invariably have omitted key elements from their planning. They may have failed to:

- recruit the right stakeholders;

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- communicate effectively, avoiding jargon;
- set goals and assign resources and accountability; and/or
- provide deadlines for action items.

Critical Success Factors

For a program to be successful, certain elements are critical:

- operating under a written, well-designed plan;
- evaluating the programs of competitors to determine what works and what does not;
- creating a performance baseline within the organization against which to chart all progress;
- communicating diversely and effectively throughout the process; and
- creating a reputation for excellence.

A successful plan starts with understanding those who are being affected by the programs. Identifying stakeholders and getting their input eases their buy-in.

Employee awareness of the proposed changes and their importance is key to successful integration. Implementing environmental management

systems places temporary demands on corporate resources. Planning and scheduling to accommodate limitations on resources within the organization will help keep these limitations from becoming roadblocks.

Proper planning can prevent the implementation process from overwhelming resources and systems—which would lead to stress, discouragement, procrastination, and ultimately failure. A systematic integration plan is essential.

Researching environmental management system programs developed by firms similar to yours

can provide insights into where successes or failures are likely to occur, as well as arguments to bolster support for your program. Reinventing the wheel wastes time and costs too much.

EPA's website (www.epa.gov/ems/index.htm) is another good source of information, as are those of international organizations such as the Global Environmental Management Initiative (www.gemi.org) and the International Organization for Standardization (www.iso.org).

Knowing Your Baseline

It is essential to gain a thorough understanding of the current status of your organization's environmental performance in order to measure the progress that results from implementing the elements of an environmental management system. Critical data for developing this baseline include:

- total numbers of inspections, notices of deficiencies, and fines;
- emissions and wastes generated;
- annual EHS budget and EHS department budgets;
- energy use;
- stranded assets;
- success rates of acquisitions and divestitures;
- remediation project costs;
- time allocations; and
- evaluations by internal and external clients.

Part of the benefit derived from developing this baseline is identifying areas where improvements can be made quickly and cost-effectively.

Communicating Your Goals and Accomplishments

Communicating the vision, goals, milestones, and accomplishments of your EHS management system broadly throughout the implementation process not only helps ensure that your efforts will be recognized but also helps in-

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vite the feedback necessary to ensure the success of your program.

Meeting with the company's public relations and communications personnel can provide insights into what works best in getting critical messages to every stakeholder. Publicizing successful projects, processes, and accomplishments can stimulate others in the company to adopt these programs. Understanding the informal and formal communications networks in the organization will help ensure that messages are broadcast widely.

Create a reputation for excellence by tying your environmental management system to your company's mission, vision, and goals, and then integrating them into daily operations.

Challenge No. 4: Failure of the Management System to Reflect the Culture of the Organization

Two distinct cultures exist within every company: the formal and the informal.

The formal culture is the easiest to evaluate because it is outlined in the company's mission statement, vision, goals, organization chart, and job descriptions. It specifies who is in charge and what the company expects of them.

But does it reflect reality? Every company also has informal networks of communication and influence. It is crucial to understand how these informal networks behave, and how to use them to help develop and integrate the environmental management system.

Krackhardt and Hanson (1993) explain the different types of corporate networks and how to analyze and use those networks to allow organizations to thrive. The same process should be used to create and integrate a successful environmental management system.

Tapping into Informal Networks

As Krackhardt and Hanson state, "Much of the real work in a company happens despite the

formal organization." The key is to understand the networks of relationships that employees form across functions and divisions to accomplish tasks, and then use those networks to test and integrate the environmental management system.

This approach will help ensure that your EHS management program is successful no matter what the formal culture dictates. By contrast, if your program is created and issued in a vacuum, without input from the right individuals, few people will follow it and the plan will fail.

Being sensitive to the informal corporate culture means getting input from each stakeholder group before developing and integrating the EHS management plan. The modus operandi of the informal network will not change unless the people who are its key components buy in to the process and sign off on it.

They must understand how the management program benefits them, the company, and ultimately the environment. They must also understand how to successfully integrate the management system into their jobs.

Knowing Your Subcultures

Large organizations, especially those that operate internationally, face additional cultural challenges. In such organizations, several different subcultures often exist within the main company culture.

The key to success in these organizations is getting input and creating ownership outside of headquarters. You must reach out to each cultural group that will be affected. Giving them the opportunity to provide meaningful input into the EHS management system development and im-

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plementation process will help ensure that they champion the cause when the system rolls out.

Challenge No. 5: Absence of True Systems

Thinking

It truly is amazing how often EHS and other management systems are developed by people with no background at all in the theory and application of systems.

It is imperative for EHS managers charged with the responsibility of developing and implementing a new EHS management system to spend some time learning about the structure and function of systems before undertaking the task

of building one. It is indeed a pity that the works of W. Edwards Deming, Eli Goldblatt, Peter Scholtes, and others go largely unnoticed by most managers these days.

Systems thinking is the general method of viewing things in terms of interdependencies, interactions, and sequences. Management systems, such as those dealing with EHS functions, are complex enough that failure to understand them thoroughly can lead to problems in developing and implementing new systems.

There are three categories of root causes that can lead to difficulties when implementing an EHS management system:

- lack of integration with other management systems;
- failure to recognize that for the overall organization to operate optimally, some of its subsystems must necessarily be suboptimized; and
- failure to simplify and streamline work processes.

Need for Integration

Lack of integration with other management systems results from failing to properly account for the interconnections and interdependencies between the EHS management system and other systems within the organization.

Such lack of integration often leads to difficulties with other departments when implementing an EHS management system. The EHS system is but one of many subsystems that make up the overall management structure of the organization.

All work is part of a process that is interconnected with other processes within the organization. It is where these work processes intersect that management difficulties can arise.

People in different departments tend to be primarily concerned with their own specific needs and objectives, often failing to see the broader organizational objectives they support. The result can be disconnects between the departments regarding EHS activities and data.

For example, it can be challenging to convince the accounting groups at each production facility to change the way they compile environmental costs—especially if it means additional work for them. There are perhaps hundreds of similar examples within the typical manufacturing company—a fact that testifies to the potential magnitude of the problem.

Fortunately, this is an area where senior management's involvement can be invaluable. The right senior manager can use his authority and organizational knowledge to guide the implementation of systems changes so that they can be sustained for the long term.

There are two ways that senior managers can assist in the transition: They can impress on mid-level managers the importance of accommodating the desired changes, and they can assist in structuring the interfaces between subsystems that lie in different functional areas within the organization.

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The EHS manager, whether acting as implementation team leader or facilitator, must pay careful attention to these interfaces as well. A manager who thoroughly understands the interconnections and interdependencies between work processes or subsystems is better able to work with managers in other functional areas to accommodate the required system changes.

Understanding Optimization

One of the most widely misunderstood aspects of system function is optimization. A core aspect of systems thinking is continuous improvement (i.e., working toward optimization) via the plan-do-study-act cycle.

The goal of continuous improvement is the optimization of the *overall* management system of the organization, not just the EHS management system. In similar fashion, when we seek to improve work processes and subsystems within the EHS management system, our goal is the optimization of the overall EHS management system.

Experience has taught us that optimization of all the work processes and subsystems within a system results in a severely suboptimized system whole. Because of the nature of work, and the varying times required for individual tasks and work processes, it is almost always the case that some processes necessarily must be suboptimized in order for the system to operate at maximum effectiveness.

Laboratory analysis of water samples can serve as an example here. The wait for laboratory results often delays the completion of a report. Sometimes the wait is sufficiently long that it affects the continuity of thought regarding the subject of the report, which results in inefficiency in the report-writing process.

While reducing the time required for the laboratory to generate the data certainly would enhance report writing, there are practical limits on how much the process can be speeded up. Sample

preparation procedures, equipment accuracy, and precision cannot be compromised in the interest of time. To do so would result in faulty data, which could lead to erroneous conclusions. Thus, the output of the system as a whole would be jeopardized in the interest of optimizing just one of the work processes within the system.

EHS management systems need to be developed with an awareness of, and sensitivity to, the effects that optimizing a work process or subsystem can have on the efficiency of the overall system. Failure to do so can create many difficulties both during and after system implementation.

Eliminating Old Inefficiencies

Another common mistake when rebuilding an EHS management system is carrying over inefficient existing work processes into the new system. Failure to simplify and streamline work processes at this juncture can affect people's perception of the system and its functioning.

A typical example might be the computerization of work processes. Often the existing work process is simply translated into an electronic function without examining the process for unnecessary steps, duplication of effort, and other forms of waste and inefficiency.

Carrying old inefficiencies over into a new system can affect the system's credibility. People often recognize the presence of waste and inefficiency within the work processes in which they participate. They also often have an expectation that the new system will eliminate these problems.

Failing to eliminate unnecessary waste and inefficiency may affect people's perception of a new EHS management system so much that it reduces

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their commitment to implementing and sustaining system changes.

Similarly, there generally is an expectation on the part of managers at all levels that performance improvement and greater efficiency will result from implementation of a new or revised EHS management system. If the expected level of improvement fails to materialize, the willingness of managers to accommodate and sustain the system changes may wane.

Except in the case of a brand new company, the development of a new EHS management system is really just revision of the existing system, no matter how informal the existing system may be. Because many of the functions of the existing system will be carried over into the new one, this is the best time to reexamine old work processes.

Every important work process should be mapped out using a flow schematic or an equivalent tool in order to identify each work step, who performs it, and its process outputs.

The value of each work task and each output should be examined and questioned. Is it necessary? Who obtains value from it? Is there a better way to accomplish the same thing?

The process of eliminating wasteful and inefficient work steps does not need to be resource- or time-intensive. Redundancies and unnecessary activities can be flushed out relatively quickly.

Closing Thoughts: Awareness and Advance Preparation

By being aware of the challenges discussed in this article and preparing in advance to deal with them, environmental managers can greatly increase their chances of implementing a management system that is well-integrated with other business systems and sustainable over the long term. Advance preparation includes:

- securing the active participation of senior managers throughout the entire process of developing and implementing the EHS management system;
- understanding the business value of the EHS management system, quantifying it, and demonstrating it to key stakeholders;
- looking beyond development of the EHS management system and planning for implementation;
- reflecting the organization's culture in the EHS management system and implementation plan; and
- becoming a true systems thinker.

Reference

Krackhardt, D., & Hanson, J. R. (1993, July–August). Informal networks: The company behind the chart. *Harvard Business Review*, 71(4), 104–111.

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