

The New Frontier: Integrating EHS into the Business

**Katherine A. Hart, Ed.D., CSP
ClearVision Consulting
Alameda, CA**

Introduction

Since time immemorial the envisioning of new frontiers have represented change at its most basic human level, starting with a break from the past, release from restraints, and the emergence of a new identity. The concept of Integrating environmental health and safety (EHS) is the new frontier that now beckons EHS professionals and is the imperative for a sustainable future of environment and employee health, safety and well-being embedded within the organization structure. Integrating EHS, also known as business integration of EHS functions, is the next step in the evolutionary process of a company's maturity in addressing the needs of the environment and its people.

The purpose of this paper is to identify the four levels of progress a company makes in its EHS excellence journey, starting from non-compliance through to integration, and then focusing on why the traditional notion of an EHS management system is not sustainable over time without integration occurring in a continuing journey of excellence. In discussing this notion of sustainability, the concept of socio-technical systems (STS) theory will be introduced to explain how organizations are organized, and how the current EHS management system model does not increase the level of safety performance. After establishing the need for integrating EHS, a model for how to move forward with respect to integration will be explored. It needs to be clear that the intent of this paper is not to serve as a rubric for achieving integration, rather as a high-level roadmap for various points of entry.

EHS Excellence Journey

The journey of EHS excellence is depicted in Figure 1, EHS Excellence Journey, and identifies four distinct levels of progress an organization takes with respect to EHS improvement. While the entry phase may vary for each organization, depending on their point of entry, progress is typically a linear one. It needs to be clarified that formal changes in the organization's management (succession of new leaders), strategic direction, mergers and acquisitions, shifts in economies, can create a back-and-forth movement from one to stage to next, and back down to a previous stage. It should never be assumed that once an organization moves from one stage to another they are permanently "ensconced" in that stage of development.

In reviewing the model, the beginning stage is that of non-compliance. In this stage, the organization, namely senior leadership, makes the decision whether to meet the regulatory

demands imposed by formal government oversight. While certainly a starting point, most companies in today's litigious environment quickly realize that fines imposed and negative consequences will move them toward a compliance stance. In this stage, basic requirements are established for a formal EHS program. Support of the company's management, personnel provided to drive the effort, and resources approved will determine the extent and depth of the EHS program. The primary reasons for implementing this program are either moral or economic duty:

- **Moral Duty:** Put an EHS program in place because we don't want to injure or kill our employees.
- **Economic Duty:** Put an EHS program in place because we don't want regulatory fines or the cost of the incidents occurring is driving our claim or insurance costs.

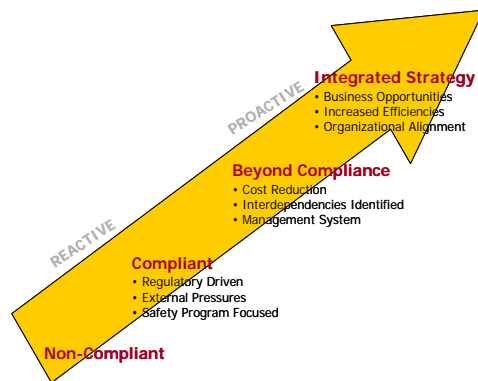


Figure 1. EHS Excellence Journey

The fundamental difference between a formal EHS program and an EHS management system, the next stage in our EHS excellence journey, is a matter of structure and connectivity. A program is a loosely held together structure made up of independent pieces and parts that do not support or link with anything else. Any EHS professional who implements and maintains an EHS program very quickly realizes that it is somewhat akin to killing the Greek mythology creature known as the Hydra. The Hydra was a many-headed serpent, and as soon as you cut one head off, several more immediately grew back in its place. As an EHS professional, as soon as you tackle one piece of the program, such as hazard communication, and get all the pieces and parts working, something occurs within the organization and you have to address it all over again. Additionally, very often the actions realized from an EHS program do not necessarily equate to results achieved in reducing injuries or reducing fines. The reason, as various research and history has played out, is that meeting regulatory compliance does not necessarily make your workplace safer, it just makes it more compliant with the laws. The work of maintaining the program is exhausting at best, and very quickly the EHS professional realizes there must be some other opportunity to reduce the energy and effort being expended, along with obtaining the results that the management of the company has still not realized. They have not seen a decrease in their injuries, and hence they are not meeting either their moral or economic duty to shareholders.

So like Hercules who killed the Hydra by cutting off the head and burning the neck to stop further growth, EHS professionals go out and learn techniques to more strategically manage their EHS

program. What they learn is that all the various pieces and parts of the program need to link together, to support each other, and to create a structure that enables the learning from one piece of the program to support and reinforce another piece of the program. Simply put, though certainly not simple to implement, is that an EHS management system needs to be designed and implemented. As the purpose of this paper is not to discuss in detail how to design an EHS management system; let's just say there are a great many structures for ESH professionals to select from that will provide an EHS management system. A few of the more well-known EHS management systems are identified as:

- ANSI/AIHA Z10-2005: Occupational Health and Safety Management Systems
- International Safety Rating System
- Voluntary Protection Program, although typically there are some additional pieces and parts that need to be included to bring it up to a system structure.
- OHSAS 18001:2007, an internationally recognized occupational health and safety management system standard
- ISO 9000 (Quality Management) and 14000 (Environmental Management), which many people have combined together, either with OHSAS 18001 or just added the safety piece into this equation.

So let's step back and look at our EHS excellence journey. Certainly there are companies still at Stages 1 or 2 trying to figure out whether this EHS makes sense for their business. And with this new regulatory environment, there will become fewer and fewer of them. Most companies, however, are typically at some stage of development between Stage 2 and Stage 3, solidly into Stage 3, or on the upper edge of Stage 3 and peering ahead wondering what's next. It is those EHS professionals whose companies are in a solid Stage 3 or upper edge of Stage 3 who are the intended audience for this paper.

As Dr. Charles Redinger, an EHS consultant and leading authority in EHS strategic management and performance improvement, states (2007:1):

Through my work with Environmental Health & Safety management system design, measurement, and implementation, I have observed that the implementation of a formal EHS management system does not necessarily maximize EHS performance. Implementation of a formal system is a valuable and necessary step to achieving higher performance, but to reach top performance, or even a performance ideal, there is "further east to go."

Most EHS professionals would not disagree with Dr. Redinger's summation. The question is more of so what does "further east" look like? What really needs to be achieved here? And most importantly, is the trip to move to the next level really worth it? These are all questions that need to be asked, but within a different context than how EHS was originally addressed—moral duty and economic duty. And remember, the economic duty was based solely on the costs associated with injuries in the workplace and for no other economic basis. This then becomes the rub, in moving through the EHS excellence journey to date, EHS professionals have been operating separate and distinct from the overall business. According to an article on business integration from Howard Brown and Timothy Larson (1998:1):

In most companies, even when the EHS function has been elevated to the vice presidential level, EHS goals and initiatives are isolated from core business strategy and functions such as marketing, production, accounting, and finance. EHS issues are viewed as separate: a necessary afterthought, an unwelcome but necessary cost of doing business. If EHS management systems are to become truly effective, this distinction must dissolve.

So how does the mindset of EHS being a cost of doing business and separate from the business move to an equal footing and a partner at the executive table? Put very simply, the cost to business of maintaining an effective but separate EHS management system strains the time and resources, both in dollars and human capital, to the point where it is not sustainable. The organization, namely the executives of the organization and EHS have a choice to make. Either the efforts of EHS get ratcheted down to free up resources, or a complete shift in how and where EHS is situated within the organization has to take place. To explore this fundamental concern from a different vantage point, it is incumbent to take a look at what is happening using a different lens. The one being tapped into comes from the field of organization development, and is an approach to understand the complexities involved with looking at organizational design and work.

Socio-technical Systems Theory and Linkage to EHS

Socio-technical systems theory (STS) was coined in the 1960s by Eric Trist and Fred Emery when they were working as consultants at the Tavistock Institute in London. The theory looks at the interactions, interrelationships, and interdependencies that exist between people and the tools and technology systems they do or use to accomplish the work. In examining this relationship, there is the approach to look at the joint optimization of the two and determine how to best align the people with the tools and technology.

Putting theory into practice, let's examine what an organization looks like from a socio-technical perspective. Figure 2 identifies those elements of an organizational structure, divided into the technical or tools, processes, and knowledge on the left, and social or relationship orientation on the right.

Figure 2. Table of Socio-technical Structure for Organization

Technical (Tools, Processes, Logical)	Socio-cultural (Human Relationships)
Mission and Strategy	Vision and Values
Targets and Metrics	Goals and Measurements
Management Structure	Teamwork
Operations and Processes	Capabilities and Capacity
Systems and Data	Information and Communication
Departments and Work Groups	Collaboration
Jobs	Roles
Resources and Training	People and Education
Products and Services	Outcomes
Specifications and Standards	Expectations and Accountability
Budgets	Needs

Rewards and Compensation	Feedback and Reinforcement
Policies, Procedures, and Rules	Culture and Relationship Power
Practices	Work-styles
Contracts	Agreements
Activities	Human Behavior

The technical side of the organization consists of the formal, disciplines, and pure logic parts of the structure. This breakdown reflects the formal lay-out of the organization, its specific documents, practices, and functions that take place to achieve the results or outcomes required to keep the business functioning and viable. This side of the organization is very orderly, often almost regimented, and quite clear on what needs to be achieved. The socio-cultural side of the organization consists of the much messier, often contradictory, largely paradoxical world of the human and implementation side. This breakdown recognizes the human element of the professionals working and co-creating their relationships and interface with the work to actually achieve the outcomes. The work of this side builds the social relationships across departments and functions, and is the backbone for how the work really gets accomplished. From an organization development or effectiveness perspective, this system is quite complex and functions interdependently, each feeding into the other to keep the organization humming along. This perspective of the organization does not examine the more typically organization from a functional level or reporting relationships, though that is built in under the management structure under the technical side. Rather, it is a view that looks holistically at the organization, at how the pieces and parts work together to function as an entity.

So as you look at Figure 2, there is tremendous opportunity of where EHS could fit itself. The reality however, is a bit more disheartening. What happened while EHS was trudging the EHS excellence journey is that it became, rather unknowingly, an appendage to the humming organization structure and not part of the business. EHS professionals worked diligently to create a side-by-side structure, which now resides under the label of an EHS management system.

Figure 3. Table of Socio-technical Structure Linked with EHS Management System

Socio-technical	EHS Management System
Mission and Strategy/Vision and Values	Values and Key Initiatives
Targets and Metrics/Goals and Measurements	Leading and Lagging Indicators
Management Structure/Teamwork	Management Commitment and Safety Oversight
Operations and Processes/Capabilities and Capacity	Programs and Processes
Systems and Data/Information and Communication	Hazard Assessments, Audit Data, and Communication
Department and Work Groups/Collaboration	Safety Teams and Coordinators
Roles/Jobs	Standard Operating Procedures (SOP) and Job Safety Analysis (JSA)
People and Education/Resources and Training	Training
Outcomes/Products and Services	Incidents and Injuries
Expectations and	Audits, Investigations, and Corrective Actions

Accountability/Specifications and Standards	
Needs/Budgets	Cost Benefit Analysis and Budgets
Feedback and Reinforcement/Rewards and Compensation	Safety Incentives and Rewards
Culture and Relationship Power/Policies, Procedures, and Rules	EHS Culture and Regulatory Requirements
Work Styles/Practices	Documentation and Hierarchy of Controls
Agreements/Contracts	Contractor Safety and Internal MOUs
Human Behavior/Activities	Inspections and Behavior Based Safety

Figure 3 shows how each piece of the EHS management system matches to correlating sections of the socio-technical structure. Survival of the current EHS management system as a standalone structure requires it to compete for and be in constant conflict with every functional aspect of the organization, vying for dollars and resources. From a longer term perspective, this approach is a tenuous one at best. If anything disrupts the organization structure, such as changes or shifts in the external environment, the resulting effects cause a decrease of energy to be provided to the EHS management system. According to Brown and Larson (1998 1):

Yet as progress is made in assembling the requisite EMS elements, the real challenges become apparent. How do you get employees to actually read and implant the policies and procedures? How do you get non-EHS employees to understand and follow through on their EHS responsibilities? How do you use metrics to improve performance? The devil is in the implementation.

The other difficulty is that the current structure requires that EHS professionals continue to sell and push the EHS management system as a separate entity out to the organization. This becomes apparent when conversations from EHS professionals talk about how to develop an EHS culture within their company or how to sell senior management on the importance of the EHS function to increase dollars and resources. In this type of structure the EHS professional becomes the hero and lone voice advocating for the continual improvement of the EHS system. They focus on trying to entice champions from different levels of the organization to help them push EHS efforts forward. This is an exhausting and difficult journey to continue on, and many in the EHS profession get burned out and question the futility of their efforts. During turbulent external times the organization willing releases them to downsize and reduce expenses in this area.

All is not doom and gloom however. There is a light at the end of the tunnel, a new frontier on the path to EHS excellence that waits for the brave few who are willing to tackle it. This path is the integration of EHS into the very essence of the business or organization structure. In talking about integration as the new frontier, it needs to be clearly understood that EHS professionals have continued to strive in this direction. What typically happens however, according to Brown and Larson (1998 2) is that “the momentum typically dissipates before integration occurs.” The reasons for this difficulty with integration need to be explored and understood before revealing a roadmap for the integration work ahead of EHS professionals. It is the exploration of the difficulties that opportunities become apparent.

EHS Integration Challenges

The biggest barrier or deterrent to achieving EHS Integration is EHS professionals themselves, specifically the mindset that EHS professionals have available to them from their current journey to reach EHS excellence. The tools and resources that helped them to achieve this level of the journey do not equip them with what is needed to conquer the new frontier ahead of them. For the journey to date, EHS professionals have been on a hero's path, relentlessly pushing all those within the organization to recognize and pay attention to EHS. They have used their knowledge of regulatory requirements to move the organization from non-compliance to compliance, and they have used their understanding of structure and form to create the framework for the EHS management system. Along this journey they have had to be courageous and willing to voice their knowledge to those that may not have wanted to listen. They have picked up slang expressions such as "the cop" or "the enforcer." When they have tried to move away from this role, they have moved into a trainer and coach role. Their focus has moved from enforcing EHS to selling/marketing EHS to those within the organization. Along this road they acquired skills in sales, listening, and negotiation. On this part of the journey they acknowledge the support of the people they encounter, but fundamentally believe that they are the only ones equipped with the knowledge and responsibility for pushing EHS forward on its excellence journey. The current mindset is one that is all encompassing and consuming with respect to EHS.

As the new frontier for EHS integration beckons, it is cruel and treacherous for those who want to continue to the hero's journey. The new frontier requires a mindset that moves from the individual and coach to the partner, collaborator, and strategist. Figure 4 identifies some key shifts in thinking that need to occur when visioning EHS integration. It requires entrenchment in rules and regulations to make way for interpretation of meaning to address the business challenges of the organization. It challenges long-held values and beliefs of the EHS professional being the one who drives changes in the EHS system based on regulations to shift based on the needs of the organization and the shifting currents of other functions within the business. And most importantly, it requires the EHS professional to be a hero no longer, but rather to relinquish tight control and hold on the EHS elements. They must give up control to be able to offer the invitation and engage the rest of the organization to pick-up the responsibility for EHS excellence moving forward.

Figure 4. A New Vision of Integration

Traditional EHS	EHS Integration
<ul style="list-style-type: none"> • Entrenched and stifled • Reactive • Command and Control • Enforcement • Closed System • Regulatory-Driven and Human Error • Blame • Lagging/Leading Measures • Segmented • Dependent 	<ul style="list-style-type: none"> • Innovative and Creative • Proactive • Participatory • Collaborative • Open System • Performance-Oriented • Continuous Improvement • Goals and Strategy • Holistic • Interdependent

No longer do EHS professionals sell EHS and the value of EHS to business. Rather they partner with others to realize the results EHS will have for and with the business. This is an enormous shift, one that does not push EHS but rather advocates for results that achieves the overall strategy and strategic objectives of the organization. According to Brown and Larson (1998 2), “the benefits [must] be business-oriented – improved process efficiency, more rapid commercialization, increased employee engagement, and reduced overall risk.” Some examples cited could include:

- Increased resource utilization rates
- Reduced resource consumption per unit of product/service delivered
- Decreased EHS management costs
- Streamlined product development cycles
- Improved process results and productivity
- Improved worker productivity and morale
- Increased employee engagement and retention rates
- Enhanced marketability of products and services

EHS integration is not about selling EHS. Rather it is about clarifying value and affecting change for end results. The focus is creating room for all within the organization to become active and engaged players, contributing to improved EHS performance and thereby realizing increased results in their own spheres of control. No longer do EHS professionals need to push EHS; rather, they partner with others to visualize and realize the results of collaborative efforts.

In the new frontier, the EHS professional does not see a divide between themselves and the organization’s strategy and initiatives; rather, they become the architects of change for how to improve upon and fully contribute to the work of the organization. The new skills that EHS professionals must acquire to operate in this frontier of integration include:

- Accounting
- Business strategy
- Marketing
- Finance
- Community organizing
- Education
- Management consulting

EHS Integration Road Map

In providing a roadmap for the next stage of the EHS excellence journey, some foundation needs to be provided upon which to build the map. For this next stage a modified performance approach will be selected, using the framework developed by Geary Rummler and Alan Brache (1995) in their work on performance consulting. Figure 5 identifies the nine performance variables they created as the architect or lens for viewing the organization.

Figure 5. Nine Performance Variables

3 Levels of Performance	Goals	Design	Management
Organization Level	Organization Goals	Organization Design	Organization Management
Process Level	Process Goals	Process Design	Process Management
Job/Performer Level	Job Goals	Job Design	Job Management

The three levels of performance are aligned to three vertical slices of the organization, cutting across traditional functions and boundaries. The levels of performance are a cascade approach, typically used by organizations as part of a result-orientation focus. The goals category are the specific standards and measures that are developed and must be met to achieve customer expectations for the product or service, quality, quantity, timeliness and cost. Regardless of the management structure of the organization (functional, matrix or combination), the reality is that the executives on the management team are responsible for articulating and defining the overarching goals/results that their company needs to achieve in a coming year or shorter or longer timeframe. These goals or targets are then cascaded throughout the organization, re-framed into goals and targets that are to be achieved at the process and then at the job/performer level.

The design category consists of the structure and components necessary for each level within the company to achieve its goals and targets. Design has to do with how each level functions, the ability for inter-departmental communication, flow of information, technology infrastructure to support. The management category is the practices, leadership, and oversight that tracks and ensures the goals are current, being achieved, and identifies course correction along the way.

In applying the Rummler/Brache model to EHS integration, the author has used the three vertical slices, but added an additional step, requiring an examination of the EHS organization, focusing on alignment with the rest of the organization and a restructuring. Figure 6 shows graphically what the EHS integration roadmap looks like.

Figure 6. EHS Integration Roadmap



In describing the model presented, it should be noted that the entry point for beginning EHS Integration work can take place at either the leadership alignment/engagement point or the EHS organization alignment. While either is possible, the issue focuses on where the invitation for work arises. If the EHS organization wants to pursue the work, then it would probably start with the second level of EHS organization alignment/restructuring and then involve the senior leadership. If senior leadership is requesting the work, then it may involve a key member of the EHS organization, say at the Vice President or Director level, and work at the senior leadership level, and then cascade to the EHS organization. Regardless of the point of entry, there is going to be considerable planning and envisioning done with these groups to realize where they currently are and what the vision for EHS Integration looks like for the future.

Let's now take a look at each layer of the model shown in Figure 6. The topmost piece is leadership engagement/alignment. The executives or senior leadership have to have a clearly defined and agreed upon vision for how they want to see EHS function within the organization. While EHS may be the champions and strategist to assist leadership, this is work that the senior leadership of the company needs to embark upon. In some cases it may be simply a tweaking and aligning of a direction they have already determined. In others it may include a fundamental shift and thinking of how EHS is embedded into the future strategic direction of the organization. While grassroots efforts in other areas of the organization can sometimes occur in parallel and support this work of leadership, it cannot replace the work that must be done by leaders.

EHS organization alignment/restructuring has to do with shifting the mindsets and equipping EHS professionals with the capability and tools necessary to examine how they are currently structured and operate within the organization and where they see themselves for the

future. This is a difficult undertaking because it addresses some core values and beliefs of EHS professionals that may not support them for the work ahead. The relief on the other side is a complete shift and focus of resources and activities. While the roles will change significantly, the opportunities for the embedding within the organization business will emerge naturally and be immediately apparent. The more important undertaking will be to prioritize and use scarce resources wisely and to realize the immediate results needed with large-scale change efforts.

Process redesign is a deliberate focus on identifying key business processes within the organization where EHS can be embedded and integrated. As indicated, the opportunities will be abundant. This where the focus shifts from selling EHS to rather identifying key initiatives within the organization where EHS may already have leverage to partner and collaborate. An example that the author has focused on is with respect to learning and development. The work processes for developing training curriculum and subsequently delivering training can be mapped out and the principles of EHS can be integrated into these. The result is that any training provided within the organization incorporates EHS values, awareness, principles and techniques appropriate to the training being developed and conducted. No longer is there simply EHS training, but rather all organizational training incorporates EHS. And while there still may be regulatory required training that occurs, this diminishes in the amount that can be incorporated into the larger organization learning and development perspective.

Human engagement and performance is embedding EHS in all aspects of employee's work and subsequent performance systems used to measure, course correct, and support employee efforts. In most cases the need for permanent standing safety teams are eliminated or significantly reduced. The concept of teams are still used, but with respect to overall improvement and initiatives designed to continuously improve operations (that now have EHS integrated) and other company-wide business efforts.

At the bottom of the model specific enablers are identifies that will support, foster and leverage the EHS integration efforts. These include:

- Collaboration across boundaries
- Capacity building
- Systems thinking
- Shifting orientations
- Continuous improvement
- Business opportunities
- Information flow and technology
- Creativity and innovation

Two of the enablers, business opportunities and information flow and technology, focus on the specific organization structures and technology already in place to increase the ability for EHS integration. The remaining enablers are tools and concepts necessary to be interwoven throughout the EHS integration efforts.

Conclusion

Like the frontiers of old, the new frontier of EHS integration beckons EHS professionals to dare to imagine a world where EHS is not the step-child or extra appendage of the organization, but embedded deep within the fabric of the business institution. To shift the focus from selling EHS

to providing vision and strategy of the value-add opportunities EHS offers to businesses in their growth and development. A huge first step in beginning any type of change journey is becoming aware of and dissatisfied with the current reality before them. EHS professionals are reaching this stage, and with it the frontier invites and calls to them for understanding and recognition. The journey of EHS integration is fraught with perils and rocky outcroppings, but there is a vision of community, acceptance, and collaboration on the other side. The question that remains is: Are EHS professionals ready to hear and take action?

Bibliography

- Bolman, Lee G. and Terrence E. Deal. 1997. *Reframing Organizations: Artistry, Choice and Leadership*, 2nd ed. San Francisco: Jossey-Bass Publishers.
- Bragdon, Joseph H. 2006. *Profit for Life: How Capitalism Excels. Case Studies in Living Asset Management*. Cambridge: Society for Organizational Learning.
- Brown, Howard and Timothy Larson. "Making Business Integration Work; A survival Strategy for EHS Managers." *Environmental Quality Management*. Spring 1998: 1 – 8.
- Jonker, Jan and Stanislav Karapetrovic. "Systems Thinking For the Integration of Management Systems." *Business Process Management Journal*. 2004. Vol. 10, No. 6: 608-615.
- Larson, Gray. 2008. *Project Management: The Managerial Process*. 4th ed. New York: McGraw-Hill/Irwin.
- Redinger, Charles. 2007. "A New Model for Environmental Health & Safety Integration: Daring to Reach an EHS Ideal." Harvard: Redinger & Associates, Inc.
- Rummler, Geary A., Alan P. Brache. 1995. *Improving Performance: How to Manage the White Space on the Organization Chart*. 2nd ed. San Francisco: Jossey Bass Publishers. 1995.