How to Improve **Environmental, Health and Safety (EHS) Management**

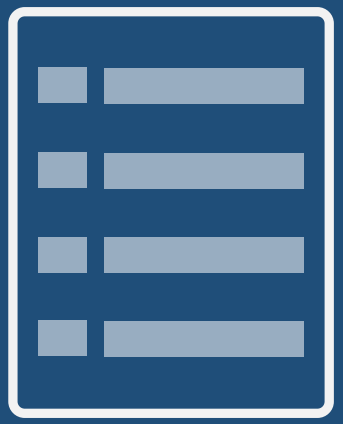
Soft Expert
Software for Performance Excellence

Across many industries, problems with collaboration and data analysis present barriers to effective Environmental, Health and Safety Management (EHSM). Companies often rely on email chains or shared network drives to exchange EHS data. This approach reduces productivity and allows information to easily become lost or buried.

EHS data is often spread across various systems, from EHS point solutions to related business systems such as human resources and quality records. These data silos block visibility, making it impossible to get a comprehensive view of risk across a plant, business unit or enterprise. Companies can't see which issues should be their priority in terms of allocating resources to risk mitigation.

A representative number of companies still use spreadsheets and manual tools to track management activities like risk assessments and audits. This makes it difficult to gather information, creating a huge paperwork load and limited functionality that allows EHS records to go unmanaged.

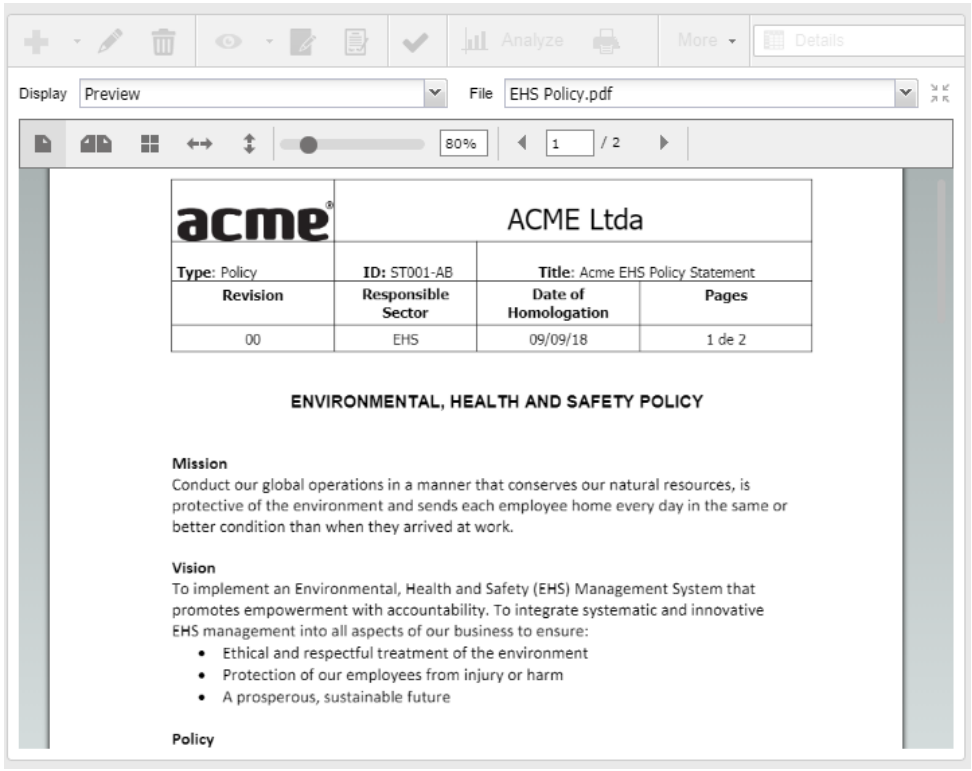
This eBook aims to provide a practical approach to EHS management. We'll look at some basic activities, ordered logically, to promote simple but efficient guidance for an EHS management program.



01 | Create and maintain your EHS Policy

Strong and effective written environmental, health and safety (EHS) policies are the foundation for a successful EHS program. The written EHS program generally includes several policies that establish the minimum requirements for your company.

Research and preparation include reviewing and reading applicable regulations (federal, state and local). Based on regulatory requirements, a determination will be made as to what requirements apply.



The company policy concentrates the applicable requirements into a standardized format. While each company will differ, most policies will contain the following information:

Purpose – Why is this policy being developed? The purpose of the policy should be based on the findings of the research stage of policy development.

Scope – Who does this policy apply to/affect? For example, does it apply to a specific task or trade, department or site, or is the policy company-wide, including global affiliates?

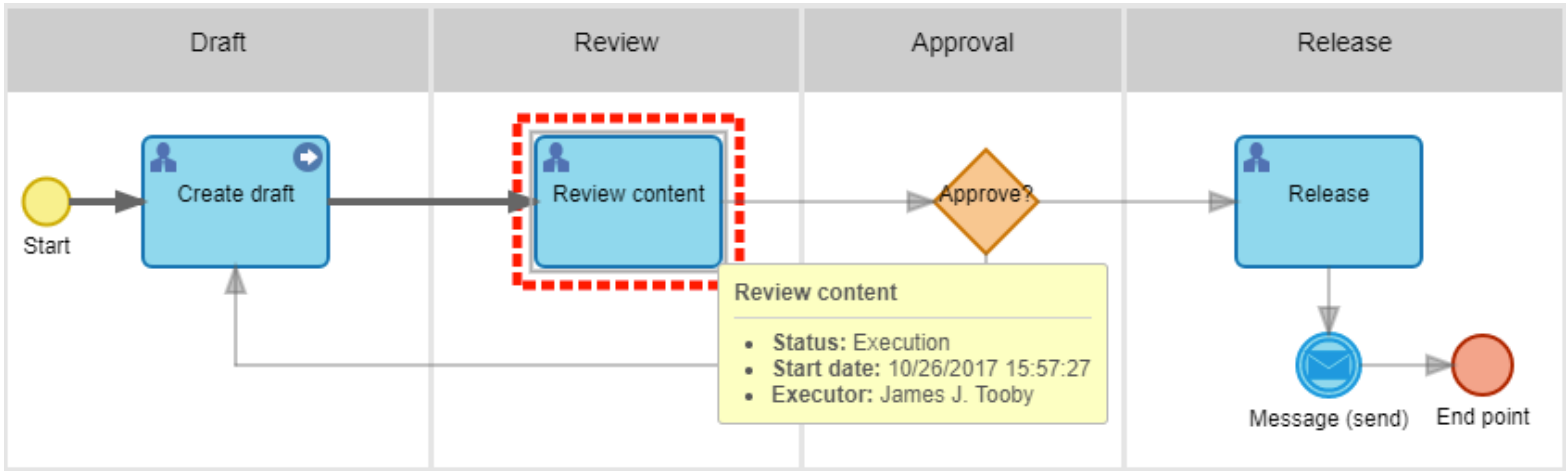
Definitions – It is important to define the terms used in the policy. Additional terms and definitions that are not actually used in the policy should be omitted. You may want to include exceptions and company interpretations in the definition section to keep your policy requirements streamlined and focused.

References – The regulations or consensus standards that are the bases for the policy should be cited in the policy. References also serve as an additional resource and support if policies are challenged.

Responsibilities – This very important section of the policy is where, based on the impact of the regulation or standard, responsibilities are assigned to the employee, management, EHS department, etc. Clear and concise responsibilities make training, implementation and enforcement more effective.

Requirements – This section contains the main requirements of the policy. There should be a significant amount of planning to determine the main categories of this section. Once this section is determined, the policy statements are developed along with the requirements for policy conformity. The statement specifies what is required but does not detail how it will be accomplished. Generally, this is the most robust section of the policy.

While the EHS group typically drafts the policy, it is always good to seek feedback from the group(s) most impacted by the policy. There should also be approval from company leadership. The company's EHS organization should maintain a level of control over policies to ensure the most current policies are available.



02 | Always keep your risk plan updated

EHS risk management is a way to identify potential safety and environmental hazards and minimize their impact on your company. While EHS leaders have been using tools like job hazard analysis for years, risk management hasn't always been a big part of the conversation. But today, most EHS leaders name it as a prime factor in ensuring EHS success.

The risks companies face today have changed, and so have the technologies used to identify and manage those risks. Keeping a log of risks in a spreadsheet is no longer the best way to get ahead of potential issues.

In the EHS environment, effective risk management requires 4 basic elements:

- Hazard identification to uncover potential risks involving people, processes and equipment.
- Risk assessment to prioritize which risks need controls. This is essential for allocating resources to the right places, instead of trying to fix everything.
- Implementing controls such as additional training or engineering controls.
- Monitoring of controls and measurement of residual risk to ensure controls are effective.

Identify risks

Companies encounter many different types of risk related to environmental, health, and safety. Here are some of them:

Compliance risk: Potential exposure to fines, legal penalties, and losses when a company fails to comply with laws and regulations.

Example: A company receives a serious OSHA violation for failing to use proper fall protection.

	Risk analysis	Plan	Risk analysis					
	Risk type	Upper element	Risk	Actual	Actual sc.	Sig	C	Trt
◉	EN2 - Soil	Ativ01 - Sugarcane cutting	#00056 - Soil contamination	High	12.00	⚠		
○	EN4 - Concerned parties	Ativ07 - Juice heating	#00154 - Noise pollution	Moderate	6.00			
○	EN3 - Atmosphere	Ativ02 - Transport	#00060 - Air pollution	Moderate	6.00			
○	EN3 - Atmosphere	Ativ07 - Juice heating	#00078 - Air pollution	Moderate	6.00			
○	EN1 - Water	Ativ01 - Sugarcane cutting	#00055 - Water contamination	Moderate	3.00			
○	EN5 - Natural resources	Ativ01 - Sugarcane cutting	#00057 - Depletion of renewable natural resources	Low	2.00			
○	EN1 - Water	Ativ09 - Destilation	#00058 - Water contamination	Low	2.00			
○	EN4 - Concerned parties	Ativ02 - Transport	#00061 - Noise pollution	Low	2.00			
○	EN3 - Atmosphere	Ativ06 - Evaporation	#00059 - Air pollution	Low	1.00			

Total records: 9 ◂ 1 ▸

Safety risk: A potential source of injury, death, or adverse health consequences.

Example: An extension cord lying across a walkway poses a trip hazard.

Environmental risk: A potential source of negative impacts on the environment or on living organisms as a result of a company's emissions, waste, and resource usage.

Example: Improperly stored hazardous chemicals can lead to a chemical spill.

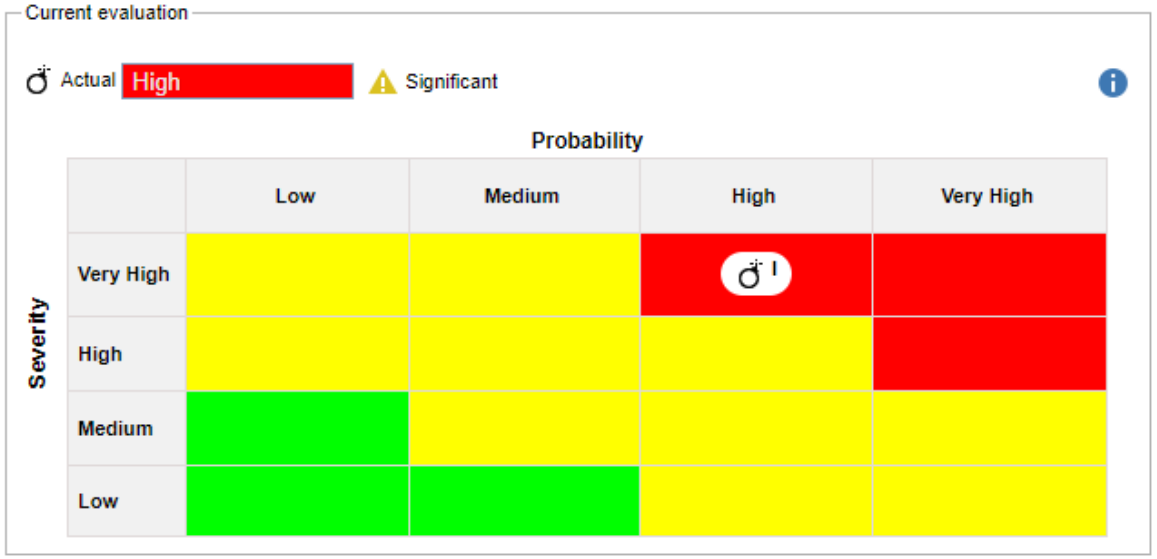
Management of change risk: The risk of injury or accident resulting from inadequately planned changes in process chemicals, equipment, facilities, etc.

Example: An explosion occurs when employees aren't properly trained on new operating procedures.

Analyze risks

EHS professionals use a number of risk models for different situations. The model they use most often is the risk matrix. It allows you to quantify the risk associated with a hazard, allowing you to set clear guidelines on whether the risk is acceptable.

To create a risk matrix, you first break out different levels of probability and impact into verbal scales, assigning each level a numeric value. You then plot the levels on a matrix or chart, with each square calculated as the product of the corresponding frequency and severity level.



This allows you to quantify the risk associated with a given hazard. Each hazard will fall into one of the following areas on a color-coded risk matrix:

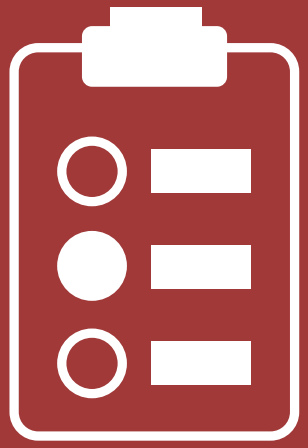
- Green: Low or generally acceptable risk.
- Red: High or generally unacceptable risk.
- Yellow: Moderate risk.

Next, you must interpret the results and decide how to act. This requires your company to agree on a definition of risk. From the CEO to production line workers, everyone must have a common understanding of what defines high and low risk.

It is also important to create decision-making guidelines. Company policy should dictate the specific number or range that requires new controls to be implemented before proceeding.

Control and monitor

Each critical risk must then receive the appropriate controls. These controls should be monitored to ensure that the risks identified do not occur. The result of all this planning is an active list of all elements that are essential for EHS risk management. Accurate, up-to-date information that should be part of the EHS manager's daily routine.



03 | Report incidents and/or accidents

Injuries and illnesses cost employers billions every week in workers' compensation costs. Part of the reason is because companies often treat incident management as a reactive process, using it solely to address incidents that have already occurred. Companies with strong EHS performance also use incident data as a predictive tool, reducing organizational risk and minimizing the likelihood of recurrence.

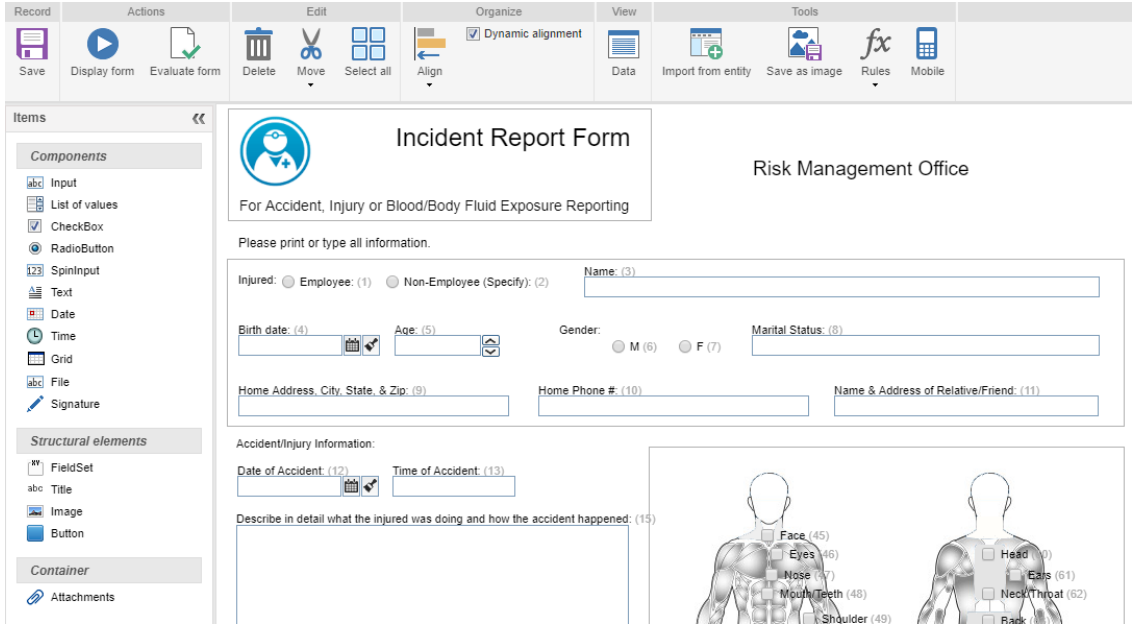
All near misses, incidents and accidents should be reported no matter how slight they may appear. Accidents happen for a reason, it could be machine failure, unsafe work practices or poor housekeeping, but reporting these occurrences can help identify the cause and help prevent a given accident from reoccurring.

Reporting on issues varies from organization to organization as procedures are different. Therefore, it is important to have a clear definition of these two elements: the report form and the process that will follow the report.

Design your report form

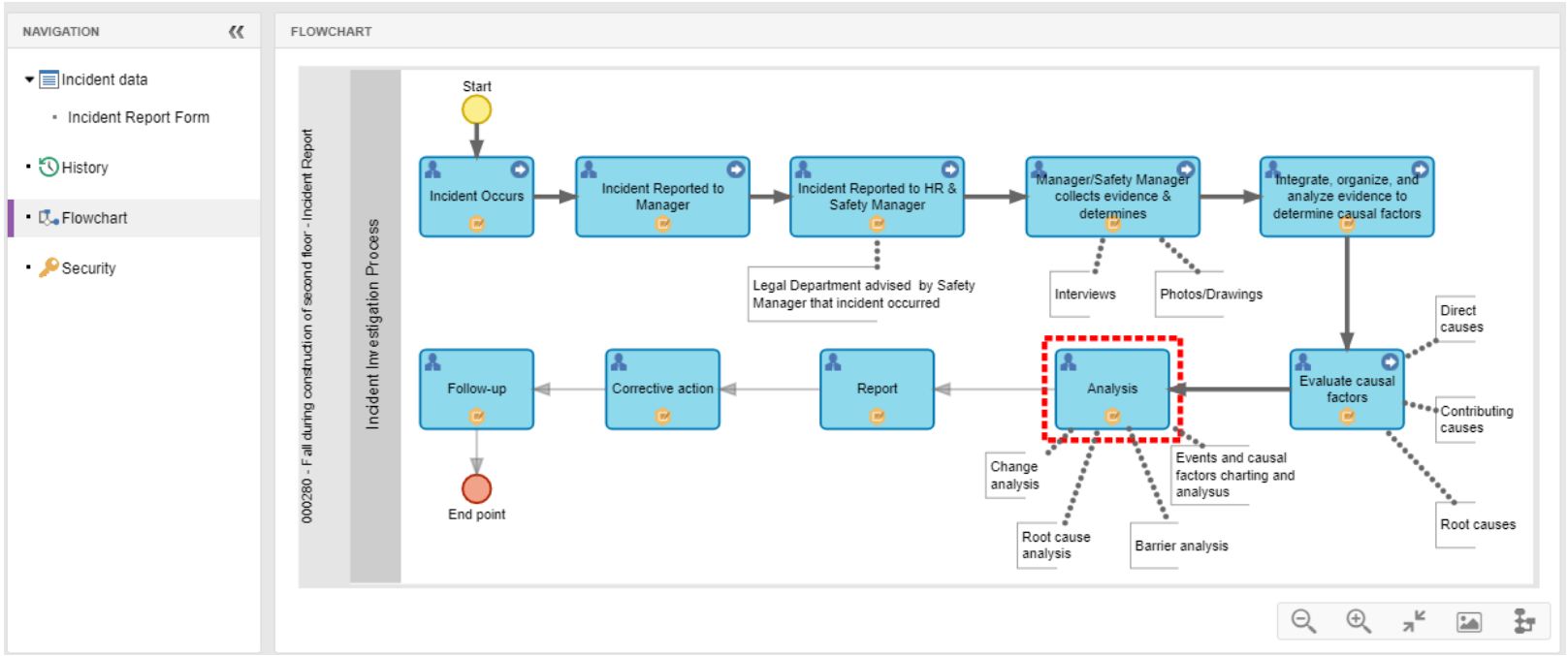
The form should contain a detailed description of the accident/incident, the location information, the persons and tasks involved, injuries obtained, any medical treatment given, company-specific questionnaires/checklists, witness statements if they are available and any associated environmental data. If possible pictures of the scene should also be included.

The more and better qualified the information, the better it is for conducting a good investigation and analysis. Time is also an important factor. The faster this record is completed, the better.



Define your process

A series of activities and tasks need to be performed after an incident record is made: approvals, disposition actions, cause analysis, action plan planning, action plan performing, effectiveness verification, legal notifications, etc. This sequence also varies from organization to organization, so it is important to define this process precisely. Only then will you ensure that your incidents are handled properly and that you succeed in resolving them.



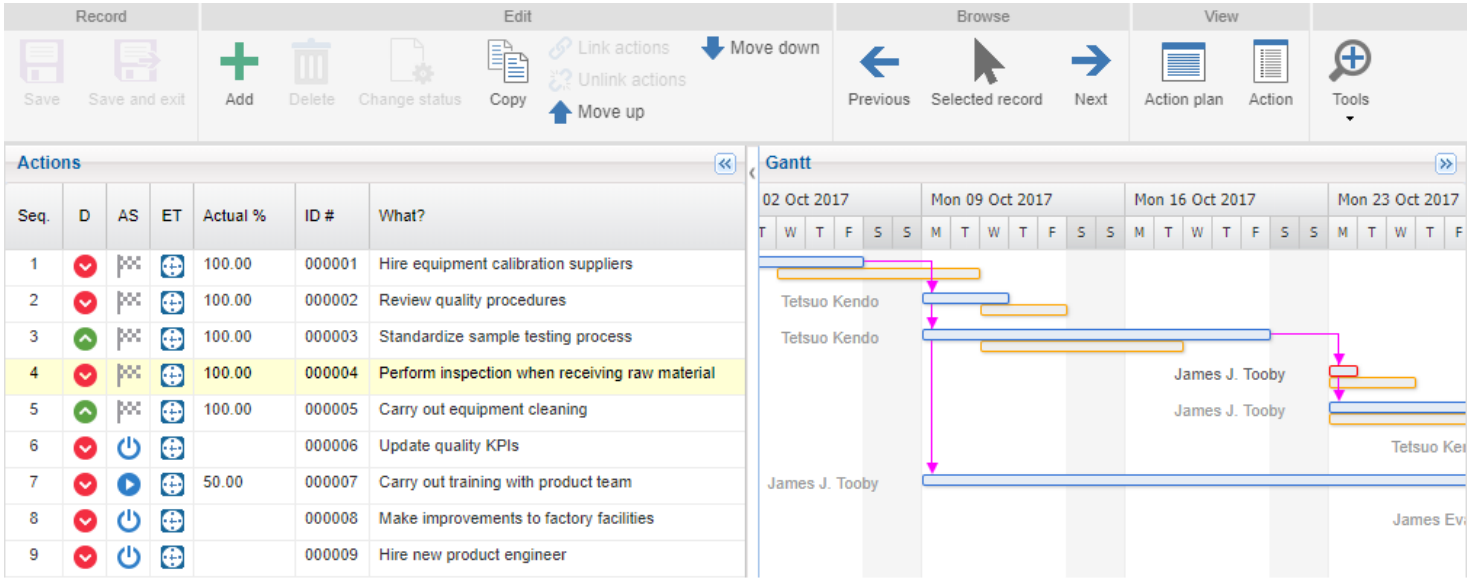
04 | Put your action plans into effect!

Too often, organizations use corrective action as a punitive tool rather than a continuous improvement process. This approach leads to underreporting and increases risk, a key reason why companies must move away from assigning blame and towards identifying how to minimize the risk of recurrence. A robust corrective action process focuses on corrective action effectiveness while enabling a deeper understanding of the context and causes of environmental and safety incidents.

Incidents typically involve intersecting processes and uncovering the true root cause often requires multiple viewpoints. Before planning your actions, it is important to perform a thorough root cause analysis to make the results less subjective.

Plan your actions

Planning is always the most important activity in any process. Corrective action planning involves physical and human resources, deadlines, efforts, availability, alignment of expectations, etc. A visual tool is important so that the manager can have a broad view of this plan and all these variables before putting it into practice.



Execute the tasks

With the plan in place, the person responsible for each activity knows exactly what to do and when they need to do it. The manager should then monitor this execution and be aware when something needs to be adjusted so as to ensure that actions are executed as planned. Measuring residual risk is a final verification step to ensure the corrective action reduced the risk to acceptable levels.

Keep note of the lessons learned

Proactively apply lessons learned across the enterprise. Root cause findings identified in one plant should be applied in all other facilities, reducing risk by preventing the problem from occurring in other locations.

05 | Monitor your performance

The task of collecting and reporting on a range of metrics (such as water and energy use, waste generation, number of accidents/incidents for one facility) is difficult, but feasible. However, when you have to collect metrics from multiple facilities, in a variety of countries, the level of difficulty multiplies exponentially.

If you're using a spreadsheet, maintaining data integrity through the process is a huge challenge – especially if you have multiple users accessing the same document. The pain of maintaining performance metrics with a manual system is real. It costs you time, you lose accuracy, and you often have no time left for analysis and strategy building.

It is important to be able to collect the most important KPIs for your business. Only with centralized information you will be able to:

- Analyze and compare performance across locations using unit conversions and intensity calculations
- Manage your company's impacts by measuring, monitoring and setting targets on performance
- Promote transparency by providing real-time access to data and reports throughout the organization
- Demonstrate your company's commitment to improving impacts and performance

Now that you already **know How to Improve Environment, Health and Safety (EHS) Management**, learn more about SoftExpert EHSM, the most complete and innovative solution on the market for process automation and improvement, regulatory compliance and excellence in EHS management.

SoftExpert EHSM is a robust web-based software that facilitates the complete and closed-loop management of the EHS program, drastically reducing the risk of health and safety incidents and strengthening compliance with environmental regulations and labor laws.

The complete set of capabilities offered by SoftExpert includes incident management and investigations, environmental management, audits and inspections, management of change (MOC), proactive measures and risk management, corrective and preventive action, waste management (treatment, storage, and disposal requirements), and compliance management. With the help of an integrated and advanced framework, these processes can be simplified and strengthened to improve the performance of the EHS program.

About SoftExpert

SoftExpert is a market leader in software and services for enterprise-wide business process improvement and compliance management, providing the most comprehensive application suite to empower organizations to increase business performance at all levels and to maximize industry-mandated compliance and corporate governance programs.

Founded in 1995 and currently with more than 2,000 customers and 300,000 users worldwide, SoftExpert solutions are used by leading corporations in all kinds of industries, including manufacturing, automotive, life sciences, food and beverage, mining and metals, oil and gas, high-tech and IT, energy and utilities, government and public sector, financial services, transportation and logistics, healthcare, and many others.

SoftExpert, along with its extensive network of international partners, provides hosting, implementation, post-sales support and validation services for all solutions to ensure that customers get the maximum value from their investments.

SoftExpert Excellence Suite is the most comprehensive framework of independent yet united solutions to achieve business performance excellence, streamline corporate governance, risk and compliance programs, and ensure continuous business process improvement.

Companies may not need all applications at once, or may want to deploy one application module at a time, growing gradually as the need arises. Whatever the strategy chosen, only a fully shared environment allows its applications to fit together like puzzle pieces and work seamlessly.

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