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Requirements for a successful management of Environment, Health and Safety (EHS)

Companies in the European Union and at national level are obliged to ensure the safety of their employees, have to be compliant with environmental regulations and shall use resources sparingly. In order to be able to carry out these tasks systematically, the implementation of an "Environment, Health and Safety Management" can be appropriate.

Beside the Legal Duties gives it still more Complementary Reasons for one such Management, e.g.B.:

- Health is the most important asset and prerequisite for a high level of motivation and productivity among employees
- Good occupational safety and environmental protection can lead to a better image as an employer.

However, a corresponding management system will not lead to success if it is not possible to "take the company management and the employees with you". This is due to the fact that tasks such as occupational safety and health are usually considered boring, if not superfluous or unnecessary. necessary extra work can be felt.

Since the scope of this article should remain manageable, the basics of the topics dealt with were omitted. Therefore, basic knowledge of the topics of occupational safety, environment and the mentioned standards for EHS management systems is required. The author's references are suitable for further self-study [1].

Occupational safety

In 2019, 506 people (+24.9% compared to 2018) lost their lives in Germany as a result of accidents at work [2]. 506 fatal accidents at work are exactly 506 too many! Identify, control and avoid risks

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must be learned, practiced and trained from the beginning. Nobody should be reckless and thoughtless .

Nevertheless, not only the errors, but also the processes that work should be looked at and found out why they work! An effective safety culture allows a company's employees to communicate bad news to their superiors without having to fear any disadvantages .

Environmental protection, energy consumption

In order to minimise global environmental damage, companies and consumers must significantly change their behaviour. There will be a further rise in temperature and increased climate change in the coming decades . This will have an impact on all sections of the population, on businesses and on the environment. Today's energy generation based on fossil fuels must undergo a complete transformation. This energy transition affects areas such as power and heat generation, the transport sector and industrial processes. This change will be accompanied by profound changes in our production methods and our consumption habits.

The extraction of biomass (e.g. food, wood) has almost quadrupled in the past 100 years. The consumption of fossil fuels (coal, oil, natural gas) has increased by a factor of 12. At around 22 trillion joules, energy turnover since 1950 has been far above the consumption of the 11,700 years before – the current epoch since the end of the last ice age (14.6 trillion joules) [3].

The production of ores and building materials has also increased significantly. Due to the continuing growth of the world population, special attention must be paid to the sustainable supply of food, water and clean air as well as the loss of biodiversity [4].

Das 20. It was marked by the explosion of mass consumption. In earlier civilizations, the elites consumed status or even wasted. What was new in the last century was that consumption reached huge masses of people . Mass consumption requires mass production, distribution and marketing. These consume huge amounts of natural resources and also generate huge amounts of waste [5].

Introduction and implementation of an EHS management system

The introduction and implementation of an EHS management system [6] in the company can

help prevent accidents and illnesses and use available resources more sparingly and efficiently.

This management system is an organizational project. It examines all tasks, activities and processes in the company. The project entails numerous risks,

e.g.:

- ▶ the scope of work is underestimated,
- ▶ the problems are not recognized in time,
- ▶ employees lack the necessary knowledge,
- ▶ the timeframe is not respected,
- ▶ the costs are running out.

A number of success factors characterize a good project management for the development of an EHS management system:

- ▶ careful planning of the human, technical and financial framework,
- ▶ realistic timelines and ideas about the scope of the tasks,
- ▶ Concentration on work priorities with appropriate prioritization,
- ▶ Motivation and promotion of teamwork,
- ▶ regular information on the project and appropriate documentation.

Objectives and benefits of an EHS management system

The ultimate goal of an EHS management system is to improve a company's occupational safety, environmental and energy performance. Minimum requirements for this result from compliance with the regulations in the form of laws, ordinances, permits, etc. To this end, the effects of all processes, activities, products and services must be analysed and evaluated. Achieving good business performance is facilitated by systematic EHS management. The introduction of an EHS management system therefore depends on the content aspects and continuous improvements . The performance of a company can only be proven if it is made measurable and transparent.

The demand for improvement of the EHS management system often leads to bureaucracy. Thus, the standards (ISO 45001, ISO 14001 and ISO 50001) themselves point out that their application does not yet guarantee optimal results [7].

Work on an EHS management system is very often started with the intention of certification . However, a certification certificate only documents compliance with the formal requirements of the standard. No statement is made about performance. Primarily, therefore, the company's resources are very often based on

directs the passing of certification and the maintenance of the EHS management system and not on improving performance!

However, the goal- and performance-oriented introduction and application can be of benefit to both the company and other interested parties. The potential benefits result from, for example:

- ▶ Compliance with legal requirements and approvals as a minimum standard,
- ▶ Development of operational objectives,
- ▶ Identification and implementation of measures to improve performance,
- ▶ Reduction of events with liability consequences,
- ▶ Identification of significant aspects of products, services and processes,
- ▶ Use of the best available technologies with higher efficiency and better product yield,
- ▶ competence development and motivation of employees,
- ▶ Increasing added value by optimizing processes and increasing resource efficiency,
- ▶ Clarification of responsibilities/responsibilities for managers and employees,
- ▶ future-oriented development of products and services with increased customer confidence-building ,
- ▶ improved relations with authorities and easier granting of permits;
- ▶ Communication and maintenance of good relations with the public and residents.

Employees must be involved in the development of goals . The company management (the standards speak here of supreme management [8]) then puts the objectives into effect. For persons entrusted with the system, e.g. B. The EHS Manager has proven successful in monitoring the pursuit of objectives in a so-called EHS programme .

High Level Structure

With the introduction of the so-called High Performance Structure, not only a uniform basicstructure was created for all ISO standards. Identical requirements and text building blocks as well as common terms and definitions now make work easier. Thus, a common structure for the table of contents with identical chapters (numbers and titles) was created.

The 10 sections of the High Level Structure of each management system standard are as follows:

1. Section: Scope
2. Section: Normative References
3. Section: Terms
4. Section: Context of the Organization

5. Section: Guided Tour
6. Section: Planning
7. Section: Support
8. Section: Operation
9. Section: Performance Evaluation
10. Section: Improvement

This has made it easier to implement several management systems together at the same time, as the standard chapters are structured identically. For example, the standards ISO 45001, ISO 14001, ISO 50001 can be combined with the ISO

9001 for quality management systems can be implemented simultaneously.

But be careful! The documentation effort is high and very often the company management is of the opinion that the commissioned employee can do this in addition to his or her current tasks.

Money and personnel, however, are scarce in commercial enterprises and other institutions.

So what do people who have been given the task of introducing (integrated) management for EHS not need? These are e.g. B. Page-long descriptions and explanations of why what has to be done in which time and who is involved.

On the other hand, there is a need for easy-to-understand and efficient practical aids, which are best developed together with experienced practitioners .

The implementation and maintenance as well as – importantly – the improvement of a management of occupational safety, environmental protection and energy alone cannot be achieved by one person full-time, even in a company with less than 150 employees. If then e.g. internal reporting systems, the project is doomed to failure.

Therefore, company management must consider whether they need a management system and, if so, which one. What are the internal/external reasons for this? Is it prospects/customers who ask for a certificate ? Is it the external pressure to bring more "sustainability" into the company? These are not good arguments for such a system. "Greenwashing" must not be carried out. Customers will notice this.

Or do you really want to change something in the company? Should accidents at work and on the way to work as well as work-related illnesses be prevented?

Should we produce more sustainably, consume less energy, water and raw materials?

But then it must also be clear that personnel and money are needed not only for management documentation, but above all for the implementation of the right measures . to achieve the self-imposed goals. Then all company departments

are obliged to do so by the company management.

Likewise, the information and training needs of the workforce must not be forgotten.

I.e.: Who creates the training content? Who should train? Are there sufficient resources available for this?

And: What is the schedule? It is usually not possible to implement an effective system within 6 months. Motivators are needed to keep the workforce constantly engaged. These persons must have the appropriate "operating lever" and must also be allowed to demand work. Otherwise, day-to-day operations immediately return and the whole project falls asleep.

Only if all this is ensured (and this is usually not the normal case) can the project succeed.

With all the work packages, the important things must not be forgotten! What are the goals and how will they be achieved by when and by which measures? Are those responsible and deadlines for action determined? What happens if delivery is not made or not delivered on time?

How can EHS management be brought to success in the company? All employees must be addressed and informed about the goals, measures and project progress. But only the really interesting

This is the first time that we have had a debate on this subject in the European Parliament. The meaning and function must first be explained and then the methodological steps:

- ▶ It is best to start with the people who have a common concern. For example, employee representatives and safety officers have common concerns in occupational safety and health.
- ▶ For each (interim) goal, it must be made clear that it benefits the company and thus all employees.
- ▶ Positive as well as negative reports of experience should be used.
- ▶ In order to achieve a positive image, you should start with a (small) project that quickly leads to success. As a supplement to this, it is essential to provide advice, e.g. B. the know-how of experienced employees, if necessary. external advice can also be used.

But: Don't over-regulate. Sometimes less is more.

Here is an example from **road safety**: At a busy intersection in Drachten (Netherlands), where 22,000 cars as well as thousands of pedestrians, motorists and cyclists passed through every day, all traffic lights and curbs as well as the most of the signs were dismantled. The road thus became a common

This is the first time that we have had a debate on this subject. In Drachten, there were a total of 36 accidents in the four years prior to the introduction of the split intersection. In the two years after the introduction of the "Shared Space", the number fell to a total of two accidents! [9]. The remarkable thing is that no one tells people to behave this way. In the square, drivers are not told to pay attention to speed. There is only one overarching rule: "Don't bump into anyone." Even this rule is not announced by signs. Most people have a strong intrinsic motivation not to collide with anyone.

Transferred to an EHS system, this means:

- ▶ What can be changed or removed from this system? Are there unnecessary "bureaucratic monsters"? Are there snowfalls?
- ▶ Are there rules that no one believes in? This can be found out by asking colleagues what the stupidest thing is that they have to do every day to be able to work. Enlightening answers can emerge.

Here is an example from **occupational safety**: A skilled worker cut his hand with a knife (no safety knife). He had cut open a big bag [10] at the top in order to put more big bags (all of which should be disposed of) into the first, open big bag for reasons of space. The accident analysis showed that the employee had not been trained and had not used a safety meter. If the employee had been asked at some point beforehand whether this activity made sense, he would probably have said no. The big bags could also have been put piece by piece into a large cardboard box or something similar. The space requirement would have been identical, the cutting would not have been necessary. The employee's working time could have been used much more sensibly!

Breaking new ground ?

Admittedly, some of the following theses are daring and contradict e.g. T. the philosophy of ISO standards in the field of EHS. But it's still worth thinking about:

- ▶ Benchmarking can be a good way to reduce its success. Therefore, good stories must be told and not the addresses must be stunned with numbers.
- ▶ The mind is designed to prioritize bad news over good news. Therefore, not only the accidents, incidents and problems should be looked at, but the causes of the successes should be explored!

- ▶ Then you can learn from the mistakes. To achieve this, management and all supervisors must create a culture that is also able to learn from mistakes instead of feeling threatened by them.
- ▶ In order to learn from mistakes, it is necessary to analyse not only the data that can be seen, but also the data that cannot be seen (For example, during the Second World War, fighter planes returned with accumulated inputs on certain aircraft parts). Bullet holes back from the fight. The victims tried to reinforce the most frequently damaged parts of the aircraft in order to reduce the number of aircraft shot down. However, mathematician Abraham Wald pointed out that the reason why certain areas of the aircraft were not covered with bullet holes could also be that aircraft hit at these points. We never returned. This realization led to the reinforcement of the armor on those parts of the aircraft where there were no bullet holes, see also [11]).
- ▶ Decisions must be delegated downwards.
- ▶ Safety must be promoted as a common guiding principle.
- ▶ Local efficiency must be optimized in the corporate group, but you should be prepared to make sacrifices.
- ▶ Interaction must be facilitated and connections between people must be established across departments.
- ▶ self-organization must be encouraged
- ▶ Admonitions in the form of posters, slogans should be eliminated.
- ▶ Targets and management bonuses for safety performance should be abolished.

Results

The topics of occupational safety, environmental protection, sustainability and energy saving will become increasingly important in the coming years. This applies to both private end consumers and

Enterprise. The current cost explosion in energy sources and other consumer goods in particular requires a much more efficient use of the resources available to us than before. The topic of renunciation must not be ignored either.

A successful, practical and honest EHS management system that was created not only for the purpose of certification.

can make an important contribution to this in companies. ■

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