GUTcert study

ISO Management Systems in the Chemical Industry 2019: Status of Implementation

GUTcert took a close look at several audit reports to see how companies in the chemical industry are developing in terms of management system challenges

A standardized template for audit reports ensures that standard-specific requirements are met. But it also provides the trained eye with a quick comparison of system maturity, implementation paths, and company specifics.

In the language of the certification companies, the term "Scope 12" covers a wide range of products - from basic materials and industrial precursors to cosmetics. According to Statista (2018), the chemical-pharmaceutical industry is the third-largest German industrial sector. This makes Germany one of the top five countries in foreign trade with chemical-pharmaceutical products.

From the certification reports of various management systems at medium-sized and large companies in the chemical-pharmaceutical sector, it can be summarized: Larger industry players have generally been operating several ISO management systems in parallel for years. Quality, environmental, occupational safety and energy management are integrated across the board or in various combinations. The auditors describe the systemic development as "mature" for the most part.

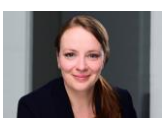
Strengths: What the auditors praise

Level of knowledge and commitment of those responsible for management / growing role of leadership

This development is primarily due to the requirements of the High Level Structure (HLS) of the ISO world. The mandatory consideration of stakeholder concerns and the requirement to base the planning process on the results of the context analysis bring top and middle management levels closer together. According to the audit reports, the joint work of top management, management representatives and department heads in workshops is an established instrument for defining risks and opportunities for the next financial year and thus starting the planning process prepared.

Maturity and availability of documented information that maps relevant business processes

The documented information is still mostly in the form of manuals, even though this is no longer required by the ISO standards. However, the documentation is kept almost exclusively in digital form, which ensures that the information required in everyday work - process descriptions, procedural and work instructions, safety sheets, etc. - is available and up-to-date for employees via the intranet. However, notice boards also remain a proven means of information and communication in plant halls.



Your contact person:
Christiane Breitbarth
christiane.breitbarth@gut-cert.de
+49 30 2332021-30

GUTcert AFNOR Group
GUT Certification Company
for Management Systems mbH
Environmental verifier
Eichenstraße 3 b, 12435 Berlin

GUTcert study

Legal and hazardous substances register and established compliance audits

High environmental and occupational safety risks are part of business in the chemical industry. Comprehensive and complex legislation and regulatory influence counteract these. To meet the challenges of day-to-day business, many plant operators in the industry have been operating management systems for a long time. The legal registers that have been audited and practiced internally and externally over the years and the existing reporting system to the authorities have thus become an integral part of everyday work for employees at all levels of the company, which can definitely be seen as a major strength.

Internal audits

The high quality of internal audits reflects a high level of system maturity at many companies. Well-trained and experienced auditors check the implementation of standard requirements, the achievement of objectives and further opportunities for continuous improvement. A well thought-out and adhered-to audit program is highlighted as a strength in many reports by external auditors.

Potential: There is room for improvement

Management systems integration

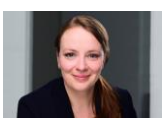
If several management systems are operated, they are often not yet consistently integrated: Planning processes, budgeting, internal audits and management reviews often run in parallel, while documentation, training and internal communication are already largely implemented on an integrated basis.

It is particularly important for the sustainable development of the company to assess the risks and opportunities in an integrated process. It is well known that system-relevant interests can collide with each other. For example, energy savings put tax refunds at risk, or existing quality requirements allow little leeway for procurement and process optimization when the same technological solutions are at stake. A corporate strategy that is sustainable in terms of consistency and risk resistance consequently requires a multidimensional approach, to which a truly integrated management system can at least contribute.

SMARTE Goals

SMARTE goal setting at the operational level is often not consistently present for all divisions and functions, although larger players in the chemical industry usually have clearly (often globally) defined medium-term strategic goals. In practice, however, the goal-setting chain then breaks off at the company or site level.

In these cases, the auditors' plea is unanimous: For successful corporate management, it is essential to establish a clear cascading of goals for individual business areas and link them to multiple interests, including implementing strategically planned resource savings, reducing waste and emissions, and improving energy efficiency.



Your contact person:
Christiane Breitbarth
christiane.breitbarth@gut-cert.de
+49 30 2332021-30

GUTcert AFNOR Group
GUT Certification Company
for Management Systems mbH
Environmental verifier
Eichenstraße 3 b, 12435 Berlin

GUTcert study

On the one hand, it is a matter of creating clarity for those responsible for management with regard to all upcoming tasks, and on the other hand, investment decisions: Because the selection of the essential topics and the associated investment decisions of the management are based primarily on business necessities, i.e., on the objective.

Considering that the willingness to invest is rather declining despite a global increase in demand for the industry's products, the SMART operational target for budgeting becomes even more important. According to Statista, the investment rate is 3.6% in 2018 vs. 5% in 2000 and 6.5% in 1990.

Relatively few references to control metrics in QMS, EMS, and SGAMS.

If several management systems are audited externally, the audit reports usually write less about conclusions (notes, recommendations or deviations) on the corresponding key performance indicators in the case of quality, environmental or occupational safety systems than in the case of energy management.

This certainly does not mean different stringency when checking relevant key figures of the various management systems in the audits. On the contrary, compliance with legally defined or self-imposed limit values for environmental issues, occupational accidents and return rates or complaints is an indispensable part of every (relevant) audit. The difference with energy management (EnMS) is probably that for EnMS, since 2017, ISO 50003 and now the revised ISO 50001:2018 require a new methodology to demonstrate the actual improvement achieved in energy-related performance. The standard-compliant implementation in the industry is not trivial due to the technological complexity and takes time.

EnMS - a special case?

The chemical industry is very energy-intensive, which historically gives EnMS a high priority. Companies often operate their own power plants to secure supplies and optimize costs. This was noted by the auditors:

- All reports show a high level of metrological coverage of SEUs, which is largely due to the requirements of ISO 50003 on metrological transparency as the basis for the certification audit. This makes it easier for companies to transition to the new ISO 50001:2018 with its corresponding requirements.
- As a rule, the verification in 2019 runs via the plausible, comprehensible presentation of the improvement in energy-related performance via individual measures. The kWh saved are verified in the audit and recorded in the report.
- The majority of the evaluated audit reports show the greatest potential for improvement primarily in the definition of specific energy indicators and in the adjustment of energy bases that reflect the progress of the company under constantly changing conditions (order situation, use of raw materials and their quality, etc.).
- However, in the definition of overriding energy indicators, which are primarily used for operational control and commercial monitoring, the product quantity remains the decisive factor. The reference for energy consumption in reporting, especially to management, is usually kWh of electricity, gas or (converted) steam per ton or kg. This reporting, which has been "stuck" over the years, should be

Your contact person:
Christiane Breitbarth
christiane.breitbarth@gut-cert.de
+49 30 2332021-30

GUTcert AFNOR Group
GUT Certification Company
for Management Systems mbH
Environmental verifier
Eichenstraße 3 b, 12435 Berlin

GUTcert study

be revised, not only for the sake of transparent verification, but above all from a commercial perspective. For example, insufficient normalization of baselines from year to year may distort the decision-making basis for further sensible investments and innovations. Concentration in the analysis and subsequent target setting should therefore be directed to individual consumer groups with defined and normalized relevant variables.

- Quantifying influencing factors is a major challenge in the industry. The usually complex, often interlinked plants may mean several variables that are difficult to quantify. However, the auditor reports suggest that the certifying companies are describing their plants and processes quantitatively in ever greater depth, bit by bit. In addition, there has been an exchange of experience, albeit cautious, in the market for several years in the industry-specific or regional energy networks and at the level of associations or certifiers.

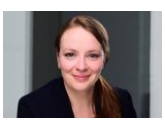
Conclusion

The totality of the evaluated audit reports proves that great commitment coupled with a great deal of knowledge dominate in the industry. Compliance is regularly assessed internally, supported by living legal and hazardous substance registers, and documentation is comprehensive and thorough. However, anyone who wants to act true to the GUTcert motto of "getting better all the time" could turn the following adjusting screws in particular:

- Complete integration of all management systems operated in parallel
- Target cascading for individual business units
- Identification of key issues for related investment decisions
- Key performance indicators

Especially in the area of EnMS, there is still room for improvement in the definition of specific energy indicators. The previously common reports on energy consumption to the management according to kWh electricity, gas steam per ton or kg should also be reconsidered in order to avoid a distorted basis for decisions on investments.

The author Yulia Felker is Head of Sustainable Development/Academy/Sales at GUTcert and lead auditor for ISO 50001 and ISO 14001.



Your contact person:
Christiane Breitbarth
christiane.breitbarth@gut-cert.de
+49 30 2332021-30

GUTcert AFNOR Group
GUT Certification Company
for Management Systems mbH
Environmental verifier
Eichenstraße 3 b, 12435 Berlin