

VISION ZERO

Vision Zero versus Standardization: A Position Statement

Vision Zero
PRACTICE



Vision Zero versus Standardization: A Position Statement

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Key Facts

- ▶ Standardization is a valuable tool for setting requirements for safe machines and work equipment.
- ▶ Standardization can support implementation of the Seven Golden Rules.
- ▶ Standards should be limited to product safety requirements. They should not interfere with national rules and regulations governing the safety and health of workers at work.

The concept of Vision Zero, which champions the elimination of occupational accidents and diseases, stands at the forefront of contemporary occupational safety and health (OSH) discourse. In the pursuit of safe and healthy workplaces, standardization is a valuable instrument for ensuring the safety of work equipment. This article delves into the relationship between Vision Zero and standardization, highlighting both potential and limitations of the latter.

We often take for granted that the products we purchase and use in our daily lives are safe. When buying chocolate, for example, we assume that although it may not be particularly healthy, it is nevertheless free of heavy metals, solvents and sharp metal parts from production machines. This assumption is built on several labels and a foundation of laws, rules and standardized testing methods, such as the European Cocoa and Chocolate Directive and various national rules (such as those of the Federal Office of Consumer Protection and Food Safety in Germany), many of which have been adopted in standards.



Foundations of safe workplaces: laws, regulations and standards

The same principles apply to the realm of occupational safety and health (OSH). By formulating design specifications and safety requirements, standards support manufacturers in complying with the laws applicable to their products. Standards contain reliable measurement and quality management methods that serve as a basis for testing and certification. They therefore constitute an important link in the chain from the idea for a product to creation of a safe and healthy workplace, and support implementation of Vision Zero and its Seven Golden Rules.



1. Take leadership – demonstrate commitment



2. Identify hazards – control risks



3. Define targets – develop programmes



4. Ensure a safe and healthy system – be well-organized



5. Ensure safety and health in machines, equipment and workplaces



6. Improve qualifications – develop competence



7. Invest in people – motivate by participation

Vision Zero and standardization: three aspects

The relationship between Vision Zero and standardization can be broken down into three aspects. Firstly, the two overlap where standardization aids in reducing hazards, organizing systems effectively, and designing and testing safe work equipment. Secondly, limitations arise when concepts are not yet mature enough to be standardized, or when standards contain requirements that are excessive from an OSH perspective or lie outside the standards' remit, such as extensive management requirements. Finally, synergies can be achieved when standards reflect the practical state of the

“ Standards contribute most effectively to Vision Zero when they focus on setting verifiable requirements for safe machines, work equipment, and workplaces. ”

art whilst at the same time respecting the competence of the legislator and other regulatory bodies.

Several examples highlight the role of standardization in the implementation of the Seven Golden Rules:

Employers are obliged to identify and assess hazards, such as exposure to vibration at the workplace, to formulate suitable protective measures. Standards can support this rule, Golden Rule 2, by providing the standardized test methods that are necessary to ensure compliance with the legal requirements. An example is ISO 2631-1: Mechanical vibration and shock – Evaluation of human exposure to whole-body vibration.

Golden Rule 4 requires organizations to ensure safety and health by good organization. The ISO 45001 OSH management standard is a well-known example of a standard addressing the occupational safety and health of workers at work. It covers aspects such as leadership by and accountability of top management, senior management's role-model function in a safety and health-conscious culture, communication of OSH measures, and consultation and involvement of employees' representatives. The standard can therefore contribute to safe workplaces and the prevention of work-related accidents and diseases.

Following development of the standard in a project committee, ISO redesignated the project committee as a regular standards committee, ISO TC 283, Occupational health and safety management. The formation of TC 283 and the committee's current projects (ISO 45002 concerning OSH management in small and medium-sized enterprises, and ISO 45003 concerning psychological health and safety at work) have confirmed the concerns of German OSH stakeholders that ISO 45001 was merely the prelude to further standardization activity in the sphere of occupational safety and health. The KAN Secretariat will continue to monitor the international activity constructively and if necessary, critically.

Golden Rule 5 addresses the essence of standardization: ensuring that machinery and other work equipment is of safe design and does not present any hazards to workers. Pressure vessels are an example of how standards can contribute to greater safety: technicians must frequently climb into the vessels to perform construction, maintenance, repair and inspection work. However, the openings through which they

must pass for this purpose are often elliptic in form and so small (the equivalent of two A4 sheets of paper) that although access is possible, rescuing a person in the event of an accident presents considerable difficulties, particularly when the affected individual is unconscious. Through a joint initiative, several OSH institutions brought about corresponding changes to standards, requiring larger access openings and thus providing greater safety for employees.

Another example are quick couplers on construction machinery, which enable machine operators to switch tools without leaving the machine. Many serious and fatal accidents occur when tools are not interlocked correctly and fall as a result. In order to prevent this, it must be ensured that operators are aware of the locking state and warned in the event of incorrect locking. In addition, operation of the device should be possible only when the tool is properly locked. European authorities and OSH institutions advocated the addition of requirements to this effect to the relevant standards, which resulted in the design of these couplers becoming safer.



Limitations of Vision Zero and standardization

Standardization undeniably presents benefits regarding Vision Zero and implementation of the Golden Rules. Time and again, however, standards interfere with operational procedures, national regulatory competences or employers' responsibilities. One such example are management standards supplementing ISO 45001. The ISO project on OSH metrics is intended to make OSH statistics comparable internationally by means of key indicators such as lost

working hours, the number of occupational accidents and OSH qualification measures. However, it fails to consider that the definition of an occupational accident varies between countries. Statistical distortions may arise, especially in SMEs with a low number of cases. The standard could also create incentives not to report minor accidents, particularly where minor.

Problems also arise where new technologies or immature concepts are standardized. This was the case with EN 12464-1, Light and lighting – Lighting of indoor workplaces – Part 1: Indoor workplaces, which addresses both the visual and non-visual aspects of light. Non-visual effects of light, which have an influence on the circadian rhythm, are however still very much the subject of research.

Service standards are on the rise and are strongly supported by the European Commission and standards organizations. The objective is for standards to make services more easily comparable and to permit trade in them across national borders. Occupational safety and health of the service providers is seldom a focus of such standards but is considered a criterion for the quality of a service, even though this aspect is already subject to other rules and regulations. Where contradictions arise, they may result in users applying only the standard and failing to fulfil binding requirements. Safety-relevant qualification requirements for service providers are also repeatedly addressed in standards, e.g. in rail track construction, the safe handling of chemical and biological substances by pest exterminators, or the work of tattooists. All these aspects are part of the safety and health of workers at work, raising the question: Is this really a task for standardization?

Do standards support Vision Zero, or not?

Standards contribute most effectively to Vision Zero when they focus on setting verifiable requirements for safe machines, work equipment, and workplaces. These synergies have the potential to prevent occupational accidents and diseases. In other areas, the OSH community should recognize the need to impose boundaries on standardization where it fails to add value, takes up concepts that are not mature, imposes excessive management or other requirements, or infringes upon the competence of national or international regulatory bodies. Adequate involvement of all stakeholders in the standards development process must be ensured in all

cases. In Germany, KAN supports this involvement by serving as the collective voice of OSH stakeholders in standardization. The dialogue between Vision Zero and standardization must continue, ensuring that both contribute effectively to the shared goal of safe and healthy workplaces.

About KAN

The German Commission for Occupational Health and Safety and Standardization (KAN) has the task of monitoring and supporting standardization activity from an OSH perspective and presenting the technical and political interests of the OSH lobby in standardization activity. Its members use KAN as their common voice and benefit from the influence gained by presenting a unified standpoint. However, KAN is not itself a standards body.

Standards development work is conducted primarily at European and international level. KAN's European representation in Brussels serves as a point of contact between the German OSH sector and the EU.

KAN was founded in 1994. It is maintained by the Association for the Promotion of Occupational Safety in Europe (VFA) and funded by the German Federal Ministry of Labour and Social Affairs (BMAS). The VFA's members are the German Social Accident Insurance Institutions.





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