KAN Kommission Arbeitsschutz und Normung

KAN Position paper

Standardization of AI: key points formulated by the OSH stakeholders

May 2025

1 Background and objectives

This paper is addressed to standards committees that develop documents of relevance to occupational safety and health and artificial intelligence (AI). It formulates key points that should be implemented in standards relevant to AI. These bodies include, for example, committees addressing the properties or processes of AI systems or that are confronted with AI during activity in a different field of their own, such as the standardization of machinery. The key points referred to below describe the joint position of the German OSH stakeholders represented in KAN, comprising employers, employees, the German federal and regional governments and the German Social Accident Insurance (DGUV).

The safety and health of workers at work concerns the actual working environment in a company for which operators/employers are responsible, and lies within the scope of Article 153 of the Treaty on the Functioning of the European Union (TFEU). Accordingly, minimum requirements are in place throughout the EU, but not complete harmonization. No provision is made for the minimum requirements of the occupational safety and health directives described in Article 153 of the TFEU to be supported by standards. How standards containing provisions regarding the safety and health of workers at work are dealt with in Germany is addressed by the policy paper on the role of standardization in the safety and health of workers at work[1]. This states that aspects impacting directly or indirectly on assurance of the safety and health of workers at work are to be addressed in standards only within the framework outlined in the policy paper.

A distinction must be drawn between product safety and the safety and health of workers at work. The former is the responsibility of distributors/manufacturers (and where applicable, also importers and dealers) placing a product on the market. It lies within the scope of Article 114 of the TFEU, and is therefore fully harmonized in the interests of an EU single market. Standardization in the area of product safety is necessary, and is also viewed positively by the OSH stakeholders. Numerous European legal acts (such as the Machinery Regulation[2]) make provision for the essential safety requirements to be supported by harmonized standards (New

[1] German Federal Ministry of Labour and Social Affairs (BMAS), "Grundsatzpapier zur Rolle der Normung im betrieblichen Arbeitsschutz", published by the BMAS, 12 February 2021 – IIIb4-34201-2 (English version: www.kan.de/fileadmin/Redaktion/Dokumente/Basisdokumente/en/Deu/2021-02_Grundsatzpapier-Update-en.pdf).

[2] Regulation (EU) 2023/1230 of the European Parliament and of the Council of 14 June 2023 on machinery (https://eur-lex.europa.eu/legal-content/en/TXT/PDF/?uri=CELEX:32023R1230).

Legislative Framework[3]). The OSH stakeholders consider it essential that these standards, in particular, should be free of contradictions and that care should be taken in their development. The AI Act[4], too, is to be supported by standards. In the view of the OSH stakeholders, these standards should be intended primarily for providers of AI systems; they should be addressed to operators and users only within the aspects narrowly defined in the AI Act.

2 KAN's position

2.1 General positions

1. **Sectoral standardization**
   In the view of the OSH stakeholders, projects conducted by sectoral technical committees (TCs), e.g. in the machinery sector, should not formulate AI-related requirements of their own. Rather, affected sectoral TCs should await availability of the generic AI standards and, wherever possible, refer to them and base their work upon them where required.

2. **Design of AI systems**
   The characteristics of AI-assisted work systems may present both opportunities and challenges for the design of work. These systems must therefore observe the OSH stakeholders' requirements for work to be shaped humanely, consistent with European occupational safety and health regulations.
   These requirements are already supported at national level by state rules and regulations: in Germany, by the Occupational Health and Safety Act (ArbSchG) and the rules of the German Social Accident Insurance. Further support of these requirements by standards (in particular, by harmonized standards giving rise to a presumption of conformity) must remain within the

[3] Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008R0765); Decision No 768/2008/EC of the European Parliament and of the Council of 9 July 2008 on a common framework for the marketing of products (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008D0768); Regulation (EU) 2019/1020 of the European Parliament and of the Council of 20 June 2019 on market surveillance and compliance of products (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32019R1020).

[4] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence (https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202401689).

framework stated in the introductory section concerning the background and objectives. Supporting requirements may be included in the text of standards only in exceptional cases and where they do not conflict with the national occupational safety and health systems. The acknowledged human-centric criteria of occupational safety and health in accordance with the European occupational safety and health arrangements must also be observed.

2.2 Specific positions

3. **Risk management**
   As called for in the AI Act, risk management should serve to ensure the safety of AI users and protect their health and fundamental rights. It should follow the rationale of the risk assessment of products, as implemented, for example, by EN ISO 12100 in the area of machinery. In the view of the OSH stakeholders, risk management should expressly not be understood in the sense of ISO 31000, where the focus lies on risks to organizations. A safety risk, or the risk of fundamental rights being violated, concerns individuals or population groups and always has negative impacts; organizations are affected by it only indirectly. By contrast, organizations may take risks to achieve something either positive or negative. In the OSH stakeholders' view, it is not sufficient for only this organizational management concept to be transferred to AI systems.

4. **Explainability of AI systems**
   Decisions and action taken by AI systems that may influence the safety and health of workers should be explainable to a reasonable degree and in a suitable manner in the sense of ISO/IEC 22989:2022. This applies both to AI systems fulfilling the safety-related functions of products, and those with an influence on the humane design of work.

5. **Re-interpretation of established standards and methods from the sphere of functional safety**
   In the OSH stakeholders' view, established methods and requirements set out in the generic standards for functional safety with regard to the objective of protection to be reached by technical systems and the level of protection to be assured by them must also be considered and observed for AI systems. In the process, the methods must be transferred to the new sphere of application and adapted to the characteristics of AI processes.
   It must be noted that at this stage, not all AI processes can be described and evaluated by the established functional safety methods. It must always be determined on a case-by-case basis whether and to what extent these established methods, described in the relevant safety standards, can

contribute to reducing the risk to functional safety when applied to AI systems.

6. **Handling of errors output by AI systems**
   The OSH stakeholders perceive a need for extensive technical and non-technical error-avoidance measures for AI-specific risk factors. Such measures may address, for example, the robustness of the AI system. They support the best possible version of an AI component being created. The implementation of measures for error control is also essential for safety functions.

7. **Safeguarding of the system as a whole**
   Where AI systems perform safety functions, or assistive product functions with a bearing on safety, it must be demonstrably ensured that incorrect decisions by AI components of the products are not able to give rise to unsafe system behaviour. If the overall risk to safety during operation is too high, the system must switch to a safe state.

About KAN

In the Commission for Occupational Health and Safety and Standardization (KAN), the German representatives of employers, employees, the federal and state governments and the German Social Accident Insurance Institutions pool their interests and discuss them with DIN (German Institute for Standardization). KAN analyses standards and other outcomes of the work of the standards bodies, and where applicable other organizations developing standards, that have a direct or indirect impact upon safety and health at work.

KAN's activities therefore include the monitoring of standardization activity where it impacts upon occupational safety and health, and also the associated legislative activity in Europe, and drawing attention to needs for action. It is in KAN's interests that regulations and directives set out suitable and coherent statutory provisions and lead to corresponding standardization mandates.

KAN is registered in the EU Transparency Register with the number **90520343621-73**.

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