

Germany's approach to supporting occupational safety and health compliance: the role of labour inspectorate and prevention services

Report

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Executive Summary

This report is part of a European Agency for Safety and Health at Work (EU-OSHA) project on the topic 'Improving compliance with OSH regulations'.¹ It contains the main findings of the study on the role of the labour inspectors of the federal state occupational safety and health (OSH) authorities and the statutory accident insurance institutions (*Unfallversicherungsträger*, UVTs) as well as the external (private and public) prevention services in supporting OSH compliance in Germany. This study includes a country report, as well as six case studies². In addition, two policy briefs³ were developed on the role of the labour inspectorate and prevention services in supporting compliance. The results are based on a comprehensive literature review and qualitative interviews conducted with representatives of the Federal Government, the federal states, UVTs, social partners and academia.

Research pointers: Labour inspectorates and monitoring practices

The OSH system in Germany is characterised by a dual structure. On the one hand, state authorities in the federal states are responsible for monitoring compliance with OSH regulations in companies, advising employers and penalising violations. On the other hand, the statutory UVTs operate in accordance with Social Code VII with the aim of preventing accidents at work, occupational illnesses and health risks in the workplace, restoring health and performance after accidents at work or occupational illnesses, and compensating insured persons or their surviving dependents with cash benefits. Both organisations have a monitoring function and have been obliged to cooperate with the Joint German Occupational Health and Safety Strategy (GDA)⁴ since 2008.

Differences in the role of labour inspectors from the federal states compared to the labour inspectors of the UVTs relate to their different legal basis, their distribution of tasks and different priorities. Although the labour inspectors in Germany have limited resources — the same for the federal states and the

¹ See: <https://osha.europa.eu/en/themes/good-osh-is-good-for-business/improving-compliance-osh-regulations> (last retrieved 26 October 2023).

² The six case studies are referred to continuously throughout the report. The cases are numbered as 'case DE1', 'case DE2', etc., DE referring to Germany. This is further explained in the chapter on methodology.

See EU-OSHA - European Agency for Safety and Health at Work, *Germany's Tele-OSH approach to ensuring consulting: supporting occupational safety and health compliance (Case DE1)*, 2024. Available at:

<https://osha.europa.eu/en/publications/germanys-tele-osh-approach-ensuring-consulting-supporting-occupational-safety-and-health-compliance-case-de1>

See EU-OSHA - European Agency for Safety and Health at Work, *The Prevention Process Management System (PPMS) in Germany: supporting occupational safety and health compliance (Case DE2)*, 2024. Available at:

<https://osha.europa.eu/en/publications/prevention-process-management-system-ppms-germany-supporting-occupational-safety-and-health-compliance-case-de2>

See EU-OSHA - European Agency for Safety and Health at Work, *Germany's Alternative demand-based supervision project AB+: supporting occupational safety and health compliance (Case DE3)*, 2024. Available at:

<https://osha.europa.eu/en/publications/germanys-alternative-demand-based-supervision-project-ab-supporting-occupational-safety-and-health-compliance-case-de3>

See EU-OSHA - European Agency for Safety and Health at Work, *Initiative 'Micro enterprises and risk assessment (KuG 2)' in Germany: supporting occupational safety and health compliance (Case DE4)*, 2024. Available at:

<https://osha.europa.eu/en/publications/initiative-micro-enterprises-and-risk-assessment-kug-2-germany-supporting-occupational-safety-and-health-compliance-case-de4>

See EU-OSHA - European Agency for Safety and Health at Work, *Occupational safety and health (OSH) for non-OSH professionals in Germany: supporting occupational safety and health compliance (Case DE5)*, 2024. Available at:

<https://osha.europa.eu/en/publications/occupational-safety-and-health-osh-non-osh-professionals-germany-supporting-occupational-safety-and-health-compliance-case-de5>

See EU-OSHA - European Agency for Safety and Health at Work, *Germany's programme for 'Safe handling of carcinogenic hazardous substances (KEGS)': supporting occupational safety and health compliance (Case DE6)*, 2024. Available at:

<https://osha.europa.eu/en/publications/germanys-programme-safe-handling-carcinogenic-hazardous-substances-kegs-supporting-occupational-safety-and-health-compliance-case-de6>

³ See EU-OSHA - European Agency for Safety and Health at Work, *Labour Inspectorate in supporting occupational safety and health compliance in Germany*, 2024. Available at: <https://osha.europa.eu/en/publications/labour-inspectorate-supporting-occupational-safety-and-health-compliance-germany>

See EU-OSHA - European Agency for Safety and Health at Work, *Prevention services in supporting occupational safety and health compliance in Germany*, 2024. Available at: <https://osha.europa.eu/en/publications/prevention-services-supporting-occupational-safety-and-health-compliance-germany>

⁴ The Joint German OSH Strategy (GDA) was launched to improve OSH in Germany. A special feature of the German strategy is that it is embedded in the German OSH Act, which called for joint work by the Federal Government, the federal states and the OSH authorities to enable effective and uniform OSH and to raise awareness of and motivate companies to engage in OSH.

UVTs — all experts surveyed consider the monitoring activities to be essential for supporting compliance. The possibility of an inspection alone encourages companies to pay more attention to compliance.

Nevertheless, both labour inspectorates (state and UVT) have reservations about the effectiveness and efficiency of compliance audits. On the one hand, there are hardly any scientific studies on the actual efficiency of the current procedures, and on the other hand, the lack of human resources is a major problem for the implementation of an effective compliance audit.

Sanctions are a central and necessary tool for promoting compliance. The imposition of fines is an essential instrument for bringing about compliance-compliant behaviour on the part of companies. Nevertheless, sanction proceedings are repeatedly discontinued by the courts due to a lack of sensitivity to long-term causal relationships in accident and illness cases. An enormous bureaucratic burden also hinders the smooth imposition of sanctions by labour inspectors.

In this constellation, there is an imbalance that leads to sanctions being avoided in certain situations, as the high bureaucratic effort involved in imposing sanctions acts as a deterrent.

The statutory UVTs advocate a balanced relationship between sanctions and counselling, which is based on different understandings of the roles of federal state OSH authorities and UVTs. While federal state OSH authorities focus on monitoring companies, advising on compliance with legislation and, if necessary, imposing sanctions, the UVTs advocate that counselling comes first and monitoring and punishment play an important, but not primary, role.

Digitalisation processes are changing monitoring activities. Labour inspectors of the UVTs in particular are increasingly being supported in their day-to-day work by digital assistance systems. Such assistance systems, which are often available in the form of apps, simplify the selection of companies to be inspected, for example. They offer labour inspectors risk-oriented (and sometimes geocoded) key figures and thus support them in deciding which business should be visited next. In addition, the documentation and archiving of operational and inspection data is digitalised and thus compressed for data exchange. However, such assistance systems are not yet in widespread use.

With the extension of the OSH Act (ArbSchG) by the OSH Inspection Act (ArbSchKG), the federal state OSH authorities are required to carry out a minimum inspection quota of 5% of companies in the respective federal state per year.⁵ This quota presents the federal state OSH authorities with organisational, structural and personnel challenges.

The OSH Inspection Act (ArbSchKG) has also established data transfer between the federal state OSH authorities and statutory UVTs in law. The reciprocal transfer of specified information on company inspections is intended to strengthen cooperation between the federal state OSH authorities and UVTs within the framework of the GDA.

New approaches and methods are required on the part of the federal state OSH authorities and UVTs in order to be able to react appropriately to flexible working models and employment relationships in companies.

In the third GDA period (2021-2025), the aim is to carry out 200,000 company inspections, which are to be undertaken by federal state OSH authorities and UVTs. The inspections are to be documented and exchanged between the institutions using a standardised 'basic data sheet' and corresponding 'specialist data sheets'. The 150,000 companies will be selected jointly according to agreed criteria. The remaining 50,000 visits will be selected at random. At least 10% of the companies will be surveyed using the specialised data sheets on the key topics of this GDA period.

Safety and health at work are currently not sufficiently valued in many companies and have a pronounced image problem. The prevailing perception is that OSH is seen either as a bureaucratic burden or as a cost factor, rather than as an essential component of a healthy and productive working

⁵ While OSH legislation is enacted at national level, the authorities of the federal states are responsible for enforcing the legislation. The specific principles for the federal state OSH authorities are regulated in the 'Act on the Implementation of Measures of Occupational Safety and Health to Encourage Improvements in the Safety and Health Protection of Workers at Work', or 'OSH Act' (ArbSchG), while the statutory accident insurance institutions (UVT) receive their mandate via the Social Code VII. On 1 January 2021, important aspects of the OSH Act were extended by the 'Act on Improving Occupational Safety Enforcement', or 'OSH Inspection Act' (ArbSchKG) (see above).

environment. This negative perception can make the implementation of measures more difficult and reduce the motivation of companies to actively promote the health and safety of their workers.

Research pointers: Prevention service

The prevention services in Germany are provided by various players:

- Internal prevention services: OSH personnel employed in the companies.
- External prevention services:
 - external freelance/self-employed occupational safety specialists ('Fachkraft für Arbeitssicherheit' (Sifa)) and occupational physicians;
 - external services of occupational physicians and/or occupational safety specialists (Sifa);
 - OSH services coordinated by the UVTs; and
 - OSH services provided by the UVTs.
- Via the catalogue of prevention services offered by the UVTs.

The following research pointers arise for Germany.

Micro and small enterprises (MSEs) in particular face specific difficulties when it comes to the implementation of OSH. In addition to the scarcity of resources in the companies, a lack of expertise (partly due to a shortage of occupational physicians) presents the companies themselves with difficulties in implementing OSH. There is no legal clarity about the consequences for companies if, for example, OSH consulting cannot be guaranteed due to the unavailability of occupational physicians.

In Germany, initiatives and projects to analyse the effectiveness and efficiency of preventive measures are currently only being pursued to a limited extent; findings are available from older studies. Scientific studies on compliance with OSH regulations are still largely lacking. A common concern in the areas of OSH and compliance research is that there is no measurable indicator for the status and effectiveness of OSH in companies.

The demand in the field of occupational medicine cannot be met with the available resources. From the perspective of all OSH actors, the perceived lack of support for small and medium-sized enterprises (MSEs) is a key motivation for the further development of prevention services. This issue gives rise to solutions and initiatives that should enable customised support (see case studies) especially to MSEs.

The interviews show that compliance tends to be achieved through company- and sector-specific references to health and economic benefits of the rules, rather than by simply referring to the rules themselves. Health and safety should not be guaranteed by mere compliance with legal regulations, but rather OSH must be integrated into the company organisation and the company processes must be taken into account.

Policy pointers: Labour inspectorates and monitoring practices

Digitalisation of inspection objects and tools

The digitalisation of inspection activities and inspection tools (apps, artificial intelligence (AI), etc.) is considered a key area and should increasingly become the focus of future research projects. They must be fit for the changing world of work.

Pursue minimum standards for inspections throughout Germany

Uniform inspection procedures lead to standardised data, better understanding of OSH terminology and comparable compliance audits. Common minimum standards can also be utilised at EU level. Upcoming research projects must clarify, for example, whether the same aspects fall under 'compliance audits' in the EU-wide understanding.

Introduction of autonomous self-disclosure procedures by companies

During the COVID-19 pandemic, autonomous control mechanisms in the form of organisational checks, checklists and mandatory self-disclosure have been tested by necessity and have generated a positive response. In view of the enormous lack of human resources, there is also a need to introduce further

'self-disclosure procedures' or 'company reporting systems' that relieve the burden on monitoring activities by allowing companies to provide the necessary information themselves.

Qualification of labour inspectors

As part of the third GDA period, qualification and training modules were created to support, among other things, standardised operational 'system assessments' (inspections with focus on OSH organisation and risk assessment) by labour inspectors. Similar measures are also conceivable at EU level when it comes to the introduction and development of standardised qualification modules for labour inspectors in European countries. In addition to the common standards for training programmes that have already been published by the European Commission, further practical qualification and learning modules can be developed.

Data exchange and communication across jurisdictions/institutions

The exchange of data within Germany between the OSH authorities of the federal states and the UVTs has been placed on a new basis with the OSH Inspection Act. Empirical findings are still lacking for further recommendations in this context. A need for political discussion arises from the data protection obstacles identified in the transfer of data beyond the borders of authorities or (federal) states. This problem cannot be addressed solely from an OSH perspective.

Policy pointers: Prevention services

Addressing and advising MSEs

New approaches must be tried out and evaluated. The operational benefits of safety and health at work must be made immediately clear and linked to other operational objectives. Campaigns and training materials must be better oriented towards the MSE target group (e.g. comprehensibility, relevance to action, linguistic diversity).

Interaction between different prevention services

In order to ensure a coordinated approach to prevention, the synergy of research, the consideration of new (labour) scientific findings in the regulations, as well as the qualification of external and company-internal OSH players (specialists, representatives, managers, etc.) and workers and the practical preparation of requirements for OSH in companies in action is essential.

Digital tools for company support (in accordance with the OSH Expert Act (ASiG))

The use of digital tools (video consultation, etc.) for occupational medical and safety-related support is recommended to counteract the shortage of company medical resources and reach a larger number of companies.

Procedure oriented towards company needs – cross-professional/expanding

The legally required OSH support should not be focused purely on technical issues/professions (engineers, technicians or foremen) and occupational physicians, as has been the case to date. It is beneficial for OSH if the expertise of different professional disciplines is utilised.

Policy pointers: Monitoring practices and Prevention services

Research on in-company and external OSH situation

Research has revealed a lack of basic data on the activity and perceptions of safety specialists (Sifa), occupational physicians and labour inspectors and their contribution to supporting compliance. The further accumulation of national reports and uniform evaluation systems are necessary to further enhance the current data situation (e.g. on the actions, perception and efficiency of OSH safety specialists (Sifa), occupational physicians and labour inspectors) and to form the basis for the derivation of targeted OSH programmes.

Work design competences and health competences

The changing nature of work implies that employers and managers have less and less influence on the shaping of working conditions and therefore on the safety and health of workers. As a result, the

promotion of the workplace and work environment design competences as well as health competences are becoming more important.

Countering image problems and barriers to implementation in OSH

Additional research programmes on implementation gaps, barriers to action and motivation problems in OSH are crucial to develop effective strategies for improving active OSH in companies. The economic impact of OSH measures on productivity, worker satisfaction and sickness costs can be further substantiated by scientific studies so that companies can be convinced of the long-term profitability. Effectively utilised and authentically written advertising campaigns can contribute to improving the image of OSH.

1 Introduction

Improving the extent and quality of compliance with occupational safety and health (OSH) regulations and improvement of OSH is a longstanding objective at the European and national levels. However, given the rapidly evolving world of work, particularly in terms of new forms of employment, business models, the nature of work and the impact of globalisation on it, achieving this goal is an increasing challenge.

In 2020, the European Agency for Safety and Health at Work (EU-OSHA) started an OSH overview activity on the theme of 'Supporting Compliance'. The main aim of this overview was to provide high-quality data to researchers and policymakers to improve the understanding of 'supporting compliance' and enabling better informed policies.

The first research project carried out in the framework of this OSH overview was the development of an overarching review on improving the extent and quality of compliance with OSH regulations. The research report⁶ published in 2021 contributed to set the scene of current knowledge in this area and it was used as a basis to guide and develop in-depth follow-up projects.

Among others, the study concluded that improving arrangements and practices for managing OSH across a whole range of industry sectors and firm sizes — large, medium and small — is stimulated, supported and sustained by a range of institutional actors and processes both internal and external to firms. The latter include state regulators for OSH, such as OSH and labour inspectorates and the government ministries or departments of which they are a part. However, they are not limited to regulators and ministries.

In some EU Member States external prevention services have played a significant role in supporting practices that promote OSH and legislative requirements. The influence of powerful principal business actors in supply chains is increasingly seen in the conduct of work everywhere. The direct or indirect influence on OSH arrangements of insurance associations both in incentivising prevention and in providing support for compensation, rehabilitation and return to work is evident in some Member States, although less so in others.

As there is a lack of data, information and knowledge about the role of the Labour Inspectorates and prevention services in supporting OSH compliance at EU level, as underlined in this report, it was decided to carry out country case studies in: Norway, Germany, Poland, Portugal and Ireland followed by a comparative analysis of the five countries.

⁶ EU-OSHA, 2021a: [Improving compliance with occupational safety and health regulations: an overarching review](#); EU-OSHA, 2021b: [Literature review - Improving compliance with occupational safety and health regulations: an overarching review](#).

The present report delineates the outcomes and findings of the research project carried out in Germany. In addition six case studies⁷ and two policy briefs⁸ were developed on the role of the labour inspectorate and prevention services in supporting compliance.

To elucidate the findings pertinent to the German context, a comprehensive overview of the distinctive OSH system, recognised as the 'dual system' is provided in section 1.2 and section 2 expounds upon the methodological framework employed in this research project.

Section 3 categorises the topic of OSH compliance in Germany in relation to the dual OSH system and shows the state of discussion before the start of the project and the understanding of compliance among the interviewees.

While section 4 presents the research outcomes associated with monitoring action and supporting compliance, section 5 delineates findings related to prevention services and their role in supporting compliance. In both sections, a synthesis of insights derived from an extensive literature review is harmonised along the outcomes from the conducted interviews.

Section 6 contains an abridged version of six case studies that were developed within the framework of this research project. These case studies are published (as stand-alone products) by EU-OSHA and are available in English and German.

The explication of findings arising from the sources of the literature review, interviews and case studies is systematically deliberated upon in section 7. The convergence of insights from these diverse methodologies enriches the depth and comprehensiveness of the ensuing discussion.

Policy pointers are addressed in section 8, where they are placed in the broader context of the general conclusions. This strategic embedding facilitates a cohesive presentation of not only the empirical findings but also their policy implications, thereby enhancing the utility and applicability of the research outcomes.

⁷ The six case studies are referred to continuously throughout the report. The cases are numbered as 'case DE1', 'case DE2', etc., DE referring to Germany. This is further explained in the chapter on methodology.

See EU-OSHA - European Agency for Safety and Health at Work, *Germany's Tele-OSH approach to ensuring consulting: supporting occupational safety and health compliance (Case DE1)*, 2024. Available at:

<https://osha.europa.eu/en/publications/germanys-tele-osh-approach-ensuring-consulting-supporting-occupational-safety-and-health-compliance-case-de1>

See EU-OSHA - European Agency for Safety and Health at Work, *The Prevention Process Management System (PPMS) in Germany: supporting occupational safety and health compliance (Case DE2)*, 2024. Available at:

<https://osha.europa.eu/en/publications/prevention-process-management-system-ppms-germany-supporting-occupational-safety-and-health-compliance-case-de2>

See EU-OSHA - European Agency for Safety and Health at Work, *Germany's Alternative demand-based supervision project AB+: supporting occupational safety and health compliance (Case DE3)*, 2024. Available at:

<https://osha.europa.eu/en/publications/germanys-alternative-demand-based-supervision-project-ab-supporting-occupational-safety-and-health-compliance-case-de3>

See EU-OSHA - European Agency for Safety and Health at Work, *Initiative 'Micro enterprises and risk assessment (KuG 2)' in Germany: supporting occupational safety and health compliance (Case DE4)*, 2024. Available at:

<https://osha.europa.eu/en/publications/initiative-micro-enterprises-and-risk-assessment-kug-2-germany-supporting-occupational-safety-and-health-compliance-case-de4>

See EU-OSHA - European Agency for Safety and Health at Work, *Occupational safety and health (OSH) for non-OSH professionals in Germany: supporting occupational safety and health compliance (Case DE5)*, 2024. Available at:

<https://osha.europa.eu/en/publications/occupational-safety-and-health-osh-non-osh-professionals-germany-supporting-occupational-safety-and-health-compliance-case-de5>

See EU-OSHA - European Agency for Safety and Health at Work, *Germany's programme for 'Safe handling of carcinogenic hazardous substances (KEGS)': supporting occupational safety and health compliance (Case DE6)*, 2024. Available at:

<https://osha.europa.eu/en/publications/germanys-programme-safe-handling-carcinogenic-hazardous-substances-kegs-supporting-occupational-safety-and-health-compliance-case-de6>

⁸ See EU-OSHA - European Agency for Safety and Health at Work, *Labour Inspectorate in supporting occupational safety and health compliance in Germany*, 2024. Available at: <https://osha.europa.eu/en/publications/labour-inspectorate-supporting-occupational-safety-and-health-compliance-germany>

See EU-OSHA - European Agency for Safety and Health at Work, *Prevention services in supporting occupational safety and health compliance in Germany*, 2024. Available at: <https://osha.europa.eu/en/publications/prevention-services-supporting-occupational-safety-and-health-compliance-germany>

1.1 Aims of the project

The project was part of the OSH overview on 'Supporting Compliance' launched by EU-OSHA in 2020.

The objectives of the project were to analyse and describe in detail:

- the role of the labour inspectorates in the dual OSH system in Germany with a focus on traditional as well as innovative enforcement measures regarding OSH compliance support;
- the role and activities of external (private and public) prevention services to ensure compliance with OSH in workplaces; and
- the cooperation between OSH inspectorates and external prevention services in the dual OSH system in Germany.

An overall aim of the project was to derive pointers for policymakers and researchers on the future development of labour inspectorates and prevention services.

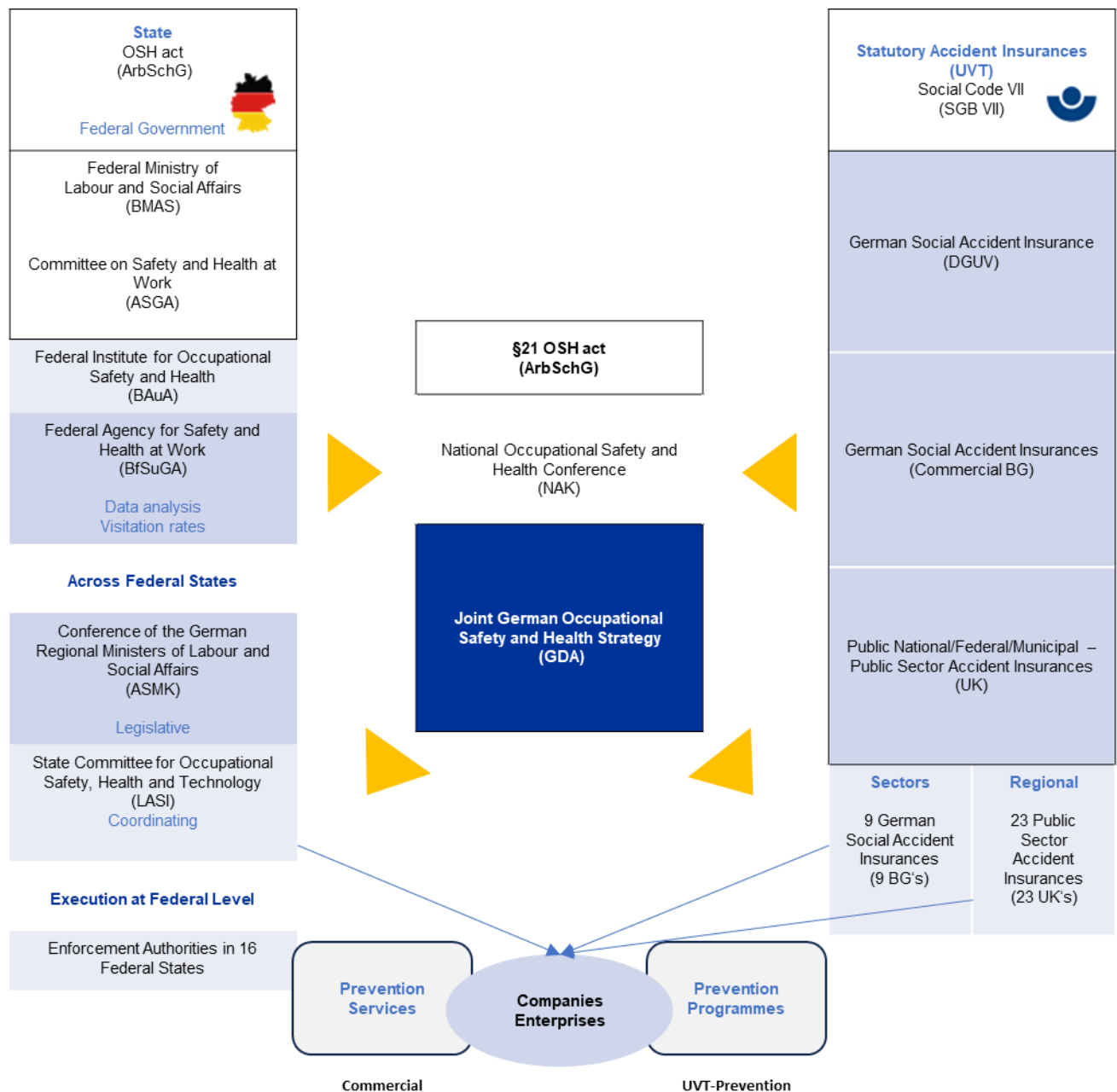
The content of the research was divided into two main subjects: labour inspectorates and prevention services.

1.2 The dual OSH system in Germany – between monitoring and advising activities

The OSH system in Germany is organised in a dual system (see Figure 1). On the one hand, it is organised by the state via the tripartite administrative structure (Federal Government, federal states, municipalities) of the Federal Republic of Germany with the federal states and their respective competent state authorities and, on the other hand, by the self-governing statutory accident insurance institutions (UVTs) on the basis of Social Code VII (Bundestag der Bundesrepublik Deutschland 07.08.1996).

The requirements for employers to implement comprehensive measures for safety and health at work and for prevention are in turn derived from Council Directive 89/391/EEC of 12 June 1989 and its transposition into national German law (Der Rat der europäischen Gemeinschaften 1989). The mandate to control and monitor the compliance with the requirements by companies is also based on the EU Framework Directive 89/391, in this case Art. 4 (2). Both were transposed into national law by the OSH Act (ArbSchG) introduced in 1996. The Member States are responsible in particular for ensuring appropriate monitoring and control (Bundestag der Bundesrepublik Deutschland 18.12.2008).

Figure 1: Presentation of the dual OSH system



1.2.1 The OSH system in Germany

The OSH system in Germany, with its diverse institutional players, forms a complex organisational structure that can merely be outlined in the following section.

While OSH legislation is enacted at national level, the authorities of the federal states are responsible for enforcing the legislation. The specific principles for the federal state OSH authorities are regulated in the 'Act on the Implementation of Measures of Occupational Safety and Health to Encourage Improvements in the Safety and Health Protection of Workers at Work', or 'OSH Act' (ArbSchG) (Bundestag der Bundesrepublik Deutschland 2020), while the statutory UVTs receive their mandate via the Social Code VII.

On 1 January 2021, important aspects of the OSH Act were extended by the 'Act to improve the enforcement of occupational health and safety', or 'OSH Inspection Act' (ArbSchKG) (Bundestag der Bundesrepublik Deutschland 2020): the stipulation of a 5% minimum inspection rate by the federal state OSH authorities, digital data transfer between the federal states and the UVTs, the establishment of a

Federal Centre for Safety and Health at Work (BfSuGA)⁹ with strategic tasks, and the establishment of a Committee for Safety and Health at Work (ASGA)¹⁰ (further information under section 4.2.1).

As the responsible federal ministry, the Federal Ministry of Labour and Social Affairs (BMAS)¹¹ uses various instruments to implement safety and health at work. These include the further development of legislation (preparation of laws, enactment of regulations, drafting of rules), the setting of standards and drafting position papers, the implementation of funding programmes, action plans and initiatives.

As a new advisory body, the ASGA supports the BMAS in all matters relating to OSH legislation. Experts from various areas of OSH work together here to create a sub-legal set of regulations. The BfSuGA is tasked with strengthening the government's monitoring activities and giving more importance to company inspections as an important inspection instrument. At the BfSuGA, the data from the activities of the federal states flow into a joint database as a basis for calculation and evaluation. This is intended to analyse the effectiveness of labour inspections and OSH measures in the long term.

The Conference of Ministers for Labour and Social Affairs (Arbeits- und Sozialministerkonferenz, ASMK)¹² discussed important technical policy issues at an inter-state level. Joint positions on OSH are also developed and resolutions passed here.

The State Committee for Occupational Safety, Health and Technology (Länderausschuss für Arbeitsschutz und Sicherheitstechnik, LASI)¹³ serves to coordinate overarching political issues. It deals exclusively with strategic issues and fundamental questions of enforcement:

- advises the ASMK on all matters relating to safety and the protection, maintenance and promotion of health in the world of work, as well as the safe design of products and the associated issues of market surveillance in specific areas of legislation;
- develops strategic positions of the federal states on fundamental issues of safety as well as the protection, maintenance and promotion of health in the world of work and the market surveillance of products in specific legal areas;
- implements and further develops the Joint German OSH Strategy (Gemeinsame Deutsche Arbeitsschutzstrategie, GDA)¹⁴ in cooperation with the Federal Government, the UVTs and the social partners; and
- focuses on fundamental and overarching issues of law enforcement (enforcement strategies, organisation, personnel, reporting and information, training and further education, quality assurance, evaluation), with the aim of achieving uniform administrative practice and application of the law across the federal states.

The tasks of the **OSH authorities of the 16 federal states** consist of:

- monitoring compliance with OSH requirements in companies;
- advising employers on the fulfilment of their duties;
- sanctioning of violations; and
- enforcing other areas relevant to OSH (e.g. Working Hours Act, driving time regulations, Young Persons (Protection of Employment) Act, Maternity Protection Act and Product Safety Act).

The respective federal states organise the tasks and responsibilities very differently. Depending on the federal state, the OSH authorities located below the ministerial level are organised as upper and middle (regional president, district government or special state office) or as lower state authorities. In some federal states, the tasks of the lower state authority are performed by the middle level, and in some cases, they have even been transferred to the municipalities.

⁹ See: <https://www.baua.de/DE/Die-BAuA/Organisation/Fachbereich-1/Gruppe-1-6.html>

¹⁰ See: https://www.baua.de/DE/Die-BAuA/Aufgaben/Geschaeftsfuehrung-von-Ausschuessen/ASGA/ASGA_node.html

¹¹ See: <https://www.bmas.de/DE/Startseite/start.html>

¹² See: <https://www.berlin.de/asmk/>

¹³ See: <https://lasi-info.com/>

¹⁴ See: https://www.gda-portal.de/DE/Home/Home_node.html

1.2.2 The OSH system of the statutory accident insurance institutions (UVTs)

The statutory UVTs for the private sector are the German Social Accident Insurances (*Berufsgenossenschaft*, or BG), while in the public sector they are organised as Public Sector Insurance (*Unfallkassen*, UK) or Municipal Accident Insurance (*Gemeinde Unfallversicherung*).

Today, every company in Germany is a mandatory member of one of these UVTs, that is, and depending on the sector, the company is covered by either the BG or through the Public Sector Insurance (UK). In accordance with a reporting obligation under § 192 of the Social Code VII, notification must be made to a competent UVT within one week of registering the business (Bundestag der Bundesrepublik Deutschland 07.08.1996).

The UVTs include nine BGs and 23 UKs responsible for the public sector.¹⁵ They are not financed by the workers but by the contributions paid by the respective companies.

According to the Social Code VII (Bundestag der Bundesrepublik Deutschland 07.08.1996), the tasks of the UVT consist of:

- the prevention of occupational accidents, occupational diseases and work-related health risks in companies by all appropriate means;
- restoring health and performance by all appropriate means after the occurrence of an occupational accident or disease; and
- compensation of insured persons or their dependents by means of cash benefits.

To this end, they must monitor the implementation of the measures and advise employers as well as insured persons in accordance with § 17 of the Social Code VII (Bundestag der Bundesrepublik Deutschland 07.08.1996).

The umbrella organisation of UVTs is the German Social Accident Insurance (DGUV).¹⁶ The DGUV represents the statutory UVTs vis-à-vis policymakers, German Federal Government, federal states, European and other national and international institutions as well as social partners. In the field of prevention, the DGUV coordinates the inter-agency activities of the UVTs.

1.2.3 Institutional cooperation of the state and UVTs

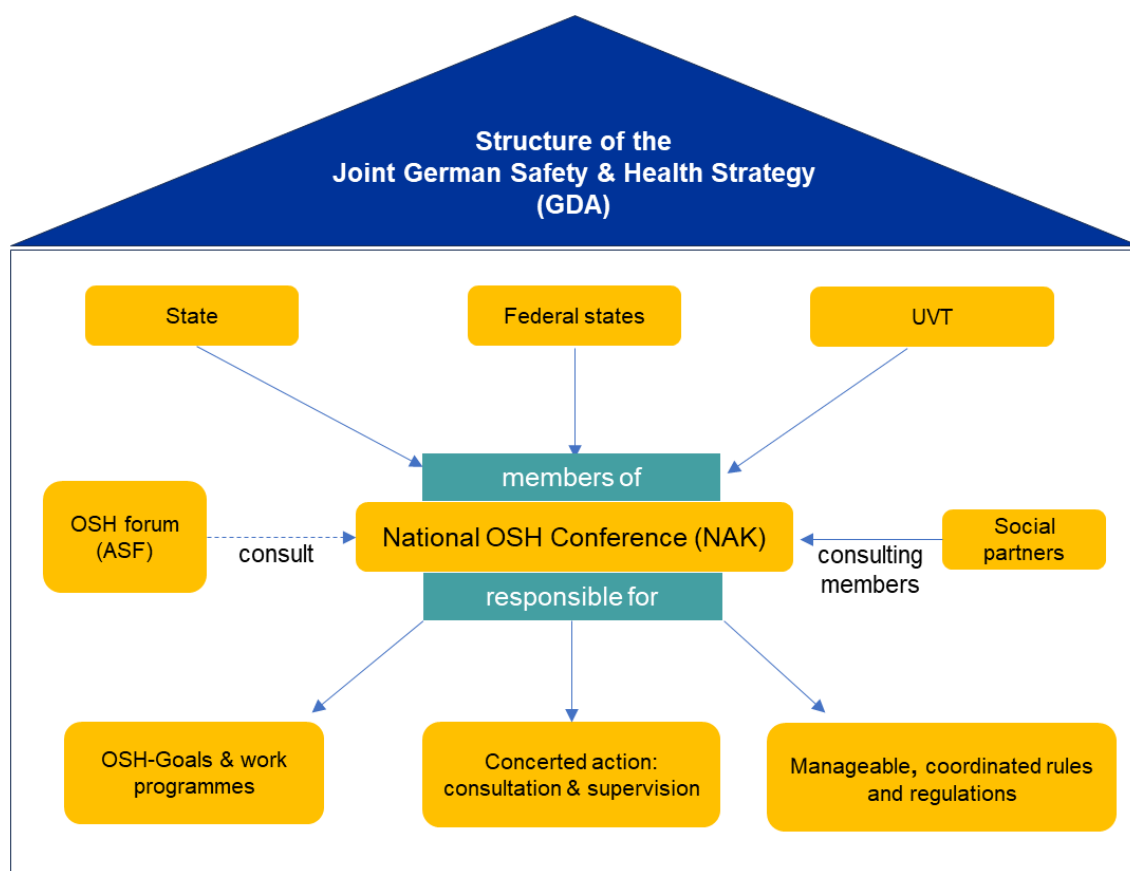
Both sides of the dual system are legally obliged to cooperate, which was institutionalised with the Joint German OSH Strategy (GDA) in 2008 (see OSH Act § 21 sections 3 and 4 (Bundestag der Bundesrepublik Deutschland 1996)), as well as Social Code VII § 20 (Bundestag der Bundesrepublik Deutschland 07.08.1996).

The GDA is a permanent platform of the federal and state government and UVTs that is anchored in the OSH Act and the Social Code VII (see Figure 2). Originally stemming from European and international commitments, the GDA is now firmly established in the German OSH system. The aim of this alliance is to continuously modernise the OSH system in Germany in line with the changing world of work and to create incentives for companies to further strengthen the safety and health of their workers (see section 4.5.1).

¹⁵ See: <https://www.dguv.de/en/bq-uk-lv/bgen/index.jsp>

¹⁶ See: <https://www.dguv.de/en/index.jsp>

Figure 2: Structure of the GDA¹⁷



The GDA aims to promote an approach based on standardised principles (see section 4.7.3) among the OSH authorities of the federal states and UVTs. In addition, the human resources of the federal state OSH authorities and the UVTs should be better coordinated and deployed so that operational cooperation in monitoring and advising companies can also be improved.

The National OSH Conference (NAK)¹⁸ is the central decision-making body for implementing the GDA and is responsible for planning, coordinating and evaluating the planned GDA measures.¹⁹ The NAK develops specific joint OSH objectives and fields of action and derives joint key points for work and action programmes in consultation with the parties involved. The programmes are each defined for a period of up to five years and are dedicated to different thematic areas.

Currently, in the third period of the GDA, the work programmes are (see section 4.5.2):

- Safe handling of carcinogenic hazardous substances (KEGS).
- Musculoskeletal strain (MSB).
- Working together and systematically for good work design in the case of mental stress - risk factors and potential for optimisation (Psychological strain, or Psyche).

The OSH Forum,²⁰ which is held regularly, promotes exchange beyond the institutional bodies; its documentation shows the ideas, discussions and approaches for monitoring action over the past years and into the future. In accordance with the OSH Act, the OSH Forum advises the NAK on the development and updating of the GDA and is intended to ensure the early and active involvement of the expert professional public.

¹⁷ Based on: https://www.gda-portal.de/EN/Home/Home_node.html (last retrieved 13 September 2023).

¹⁸ See: https://www.gda-portal.de/EN/GDA/NOSHC/NOSHC_node.html

¹⁹ See: https://www.gda-portal.de/EN/Home/Home_node.html

²⁰ See: https://www.gda-portal.de/EN/GDA/Forum/Forum_node.html

The topics of the OSH Forum in recent years emphasise that this project is of current interest and significance:

- 17th OSH-forum (2023): Simply Do it (Einfach machen);
- 16th OSH-forum (2022): OSH-Compliance – Strategies and Benefits (Compliance im Arbeitsschutz – Strategien und Nutzen);
- 15th OSH-forum (2021): Monitoring and consulting activities of the federal states and the accident insurance institutions in companies - internal perspective and external perception of labour inspection (Aufsichts- und Beratungstätigkeit der Länder und der Unfallversicherung in Betrieben – Binnenperspektive und Außenwahrnehmung der Aufsicht);
- 14th OSH-forum (2020): Assessing hazards - avoiding hazards in companies with up to 250 workers (Gefährdungen beurteilen – Gefährdungen vermeiden für Betriebe bis 250 Beschäftigte); and
- 13th OSH-forum (2019): Shaping the OSH of the future together: Continuity in change (Gemeinsam den Arbeitsschutz der Zukunft gestalten: Kontinuität im Wandel).

1.3 Prevention services (*Präventionsdienste*)

The provision of prevention services in Germany is carried out by various players:

- Internal prevention services: OSH personnel employed in the companies.
- External prevention services:
 - external freelance/self-employed occupational safety specialists ('Fachkraft für Arbeitssicherheit' (Sifa)) and occupational physicians;
 - external service companies employing occupational physicians and/or occupational safety specialists (Sifa);
 - OSH services coordinated by the UVTs; and
 - OSH services provided by the UVTs.
- Via the catalogue of prevention services offered by the UVTs.

While the internal and private-sector external services meet the requirements of Directive 89/391/EEC, the external services organised by the UVTs and the prevention services provided by the UVTs go beyond this. They represent a specificity of the German OSH system.

The prevention services in Germany therefore differ in terms of their main task: in accordance with the OSH Expert Act (ASiG) and DGUV Regulation 2, the internal and external prevention services consist of occupational medical and, above all, safety-related support for companies. The catalogue of UVT prevention services (see Table 1) includes additional prevention services whose overarching strategic objective is to use all suitable means to prevent accidents at work, occupational diseases and work-related health risks (Deutsche Gesetzliche Unfallversicherung (DGUV) 2019).

This report emphasises the special features of the German OSH system and focuses on the prevention services provided by the UVTs and external services (private sector and UVTs).

Table 1: UVT catalogue of prevention services with focus on prevention²¹

Prevention Service	Description of the Service	Legal Basis
Consultation on demand	Advice at the request of all persons and organisations entrusted with or involved in safety and health at work and training, in particular employers, company interest groups, insured persons and other OSH players. Advice (written, face to face or by telephone) about the integration of safety and health into the work of member companies on request in individual cases. Investigation services in connection with advisory services.	§ 17 (1) Social Code VII
Occupational medical and safety consultation	Support in the implementation of the OSH Expert Act (ASiG) in companies. Provide tools for the implementation of qualified consultation.	OSH Expert Act (ASiG) OSH Act (ArbSchG) § 24 Social Code VII DGUV regulation 2
Research, development and exemplary projects	(Sector-specific) research and development in the field of safety and health. Test prevention measures.	§ 1, § 9 section 8 and § 14 Social Code VII
Information, communication and prevention campaigns	Presentation of prevention concepts (such as the 'Kommittmensch' ²² and 'Think of me! your back!' ²³ campaigns) at events (e.g. in forums, congresses, trade fairs). Systematic demand-oriented development, updating and distribution of focus, activity, sector or company-related information materials on safety and health as aids for action in practice.	§ 14 Social Code VII
Qualification	Carry out qualification measures for the persons entrusted with or involved in OSH and training.	§ 14, § 17, § 23 Social Code VII

²¹ According to Deutsche Gesetzliche Unfallversicherung (DGUV), 2019.

²² See: https://www.dguv.de/de/praevention/kampagnen/paev_kampagnen/ausblick/index.jsp

²³ See: https://www.dguv.de/de/praevention/kampagnen/paev_kampagnen/dein_ruecken/index.jsp

2 Research questions and methodology

The research work comprised a literature review, a review of quantitative studies, guided interviews, a qualitative analysis, and the methodical selection and description of case studies. The same methodology and scientific work were used for the two main subjects of the report: labour inspectorates and prevention services. The research questions that guided the research are listed below followed by a brief description of the methodological approach.

2.1 EU-OSHA research questions

The starting point for the research was the research questions on supporting compliance set by EU-OSHA, which are divided into two main subjects: labour inspectorates and prevention services.

2.1.1 Labour inspectorates

The aim was to analyse the compliance approach pursued by the labour inspectorates. Innovative approaches and studies from different federal states were to be considered. The following questions were examined:

- Are there any important recent developments in OSH monitoring/inspection, compliance promotion and enforcement in Germany (especially developments aimed at addressing challenges arising from new forms of work design and emerging hazards) that have not yet been documented in English (e.g. innovative inspection methods)?
- Is there (or was there) a debate (or initiatives) in Germany to rethink existing enforcement methods and to develop a strategy to use or integrate them?
- What is the current OSH strategy in Germany and to what extent does it address the challenges and issues to be addressed by this research project?
- Is there a unified model in Germany that brings together those enforcement, inspection and monitoring strategies? Could this address the complexity of enforcing OSH regulations in the gig economy? What data and information would regulators/supervisors need to identify priority sectors and companies?
- What data and procedures are needed to establish a unified and coordinated OSH assessment system?
- Are there innovative and, above all, cohesive approaches to compliance promotion in Germany that include, for example, economic incentives, social norms/regulations or other aspects?
- What are the background relationships here with the DGUV for various branches of business (BG)? [Note: And public-sector accident insurance institutions].
- Can those innovative approaches also be applied in other EU Member States? What factors promote and hinder the effectiveness of such instruments?
- What has changed in OSH compliance, monitoring and enforcement by OSH authorities during the COVID-19 pandemic? What can we learn from the new techniques — and the factors that influence their effectiveness?
- How high should financial sanctions be? Under what circumstances can very high fines lead to 'regulatory resistance', under-reporting or possible corruption? What factors prevent organisations from obtaining accurate information about fines imposed on others?
- What is the actual role of labour inspectors and how do they contribute to building a culture of safety?

2.1.2 Prevention services

The aim is to present the existing model of prevention services in Germany, including the available data on prevention services (type, quality, reach and effectiveness) and to generate examples of initiatives and programmes to improve the accessibility of SMEs (to these services) and increase the effectiveness of prevention services. The following research questions were to be answered:

- Are data currently collected in Germany on the nature, scope and effectiveness of prevention services? If not, is there an existing debate (or an ongoing initiative) about the need to collect such data?
- What model(s) of prevention services exist in Germany and what are the main drivers for their development?
- The German social/employment insurance model for the provision of prevention services is proving to be a successful and sustainable approach to preventive services in modern economies. Does this model offer solutions that are transferable and sustainable to all (or other) EU Member States?
- How can prevention services in Germany adapt/change to support/capture/serve the needs of hard-to-reach sectors (e.g. like those of small companies)?
- What needs to be done to ensure that the role of prevention services becomes more relevant and useful in the German post-industrial economy?
- What skills, structural frameworks and resource models are needed to ensure greater effectiveness?
- Prevention services often work 'independently' of other institutions that take care of 'compliance' (labour inspectorates, social partners, company incentives, etc.). But maybe this is not the case in Germany. Is there evidence or examples of synergies between such services and other forms of compliance?

2.2 Literature review and analysis

As part of the study 'Improving compliance with occupational safety and health regulations: an overarching review' (EU-OSHA 2021b), a literature/bibliographic database-supported and systematic literature analysis was carried out, which primarily comprised English-language sources. Building on this, this study should be expanded to include German-language sources relating to the external OSH system in Germany. The literature search was carried out following the steps described below:

- definition of selection criteria for a more precise selection of the literature and ensuring reliability and replicability;
- grouping of the research questions regarding the extent to which they can be answered within the framework of desk research;
- derivation of the category system based on the research questions;
- substantiation of the category system with concretising search terms;
- empirically guided literature research supported by selection criteria; and
- content-related literature analysis based on the created categories.

2.3 Review of quantitative studies

In addition to the literature analysis, the results of quantitative studies such as the GDA umbrella evaluation (Hägele 2019) and the Third European Survey of Enterprises on New and Emerging Risks (ESENER 3) dataset (EU-OSHA 2022a) were reviewed. For instance, ESENER 3 provided a detailed insight into the inherent tension of legal obligations and regulations in OSH, including for the country case study of Germany. A clear lack of data can be recognised by the fact that no studies were found that explicitly addressed compliance in OSH as a research topic. Only inferences can be made from existing studies on compliance in OSH, so there was no basis for a meaningful quantitative secondary analysis (in general, the data situation regarding prevention services and labour inspectorates in Germany is scarce). A list of relevant publications including data on prevention services can be found in section 5.2.1.

2.4 Guided interviews

The interviews played a key role in this research project. The research questions set by EU-OSHA referred to implicit and explicit knowledge that had to be uncovered and answered by experts. The

development of modular, guideline-oriented expert interviews therefore offered the opportunity to work on the two subjects of labour inspectorates and prevention services at the same time and still be able to maintain a categorical distinction in the course of the interviews — which was expressed in the respective closeness or openness of the questions. This separation was by no means understood as a clear-cut distinction but rather as a categorical framework that supported the conduct of the interviews. The two subjects were differentiated, but their interactions were considered and researched together.

The composition of the experts was a central aspect of the research. Gläser and Laudel (2022) provide three criteria on the basis of which the selection was systematically carried out:

- Which experts possess the relevant knowledge and information?
- Which experts in this selection are likely to be able to convey concrete statements and knowledge?
- Which experts from this selection are likely to be available for the survey?

A total of 18 people was interviewed. It should be noted that due to the large number of relevant institutions, it was not possible to include every federal state or UVT, for instance.

2.5 Qualitative analysis

All interviews conducted were systematically analysed and integrated into the analysis based on Kuckartz and Rädiker (2020). Firstly, relevant interview passages were identified in the exploration phase and then paraphrased. To be able to carry out the analysis systematically, the individual research questions were tailored and focused on the key points to simplify the coding process. The category system was formed based on these key points. The close relationship to the research questions meant that the categories could be formulated clearly and comprehensibly. The category system therefore supported the analysis effectively and efficiently.

In general, different data from the literature review, the review of quantitative studies, and the interviews and their qualitative analysis were combined and mixed throughout the whole report. For example, the findings of the literature analysis form the basis for the presentation of results in sections 4 and 5. Additionally, the results of the interview analysis are integrated to support or contrast the findings of the literature analysis.

2.6 Case studies

Based on the literature research and analysis as well as the interviews conducted, three innovative, concise and detailed case studies of strategies, initiatives, approaches or methods that have been or are being implemented to support compliance with OSH regulations were presented for each of the subjects of labour inspectorates and prevention services. The methodological selection of the case studies was based on a deductive–inductive approach to categorisation as selection criteria. The case studies are presented briefly in section 6.

3 'Compliance' in OSH

In Germany, 'compliance' is initially translated as adherence to rules, that is, adherence to all public law and internal company requirements.

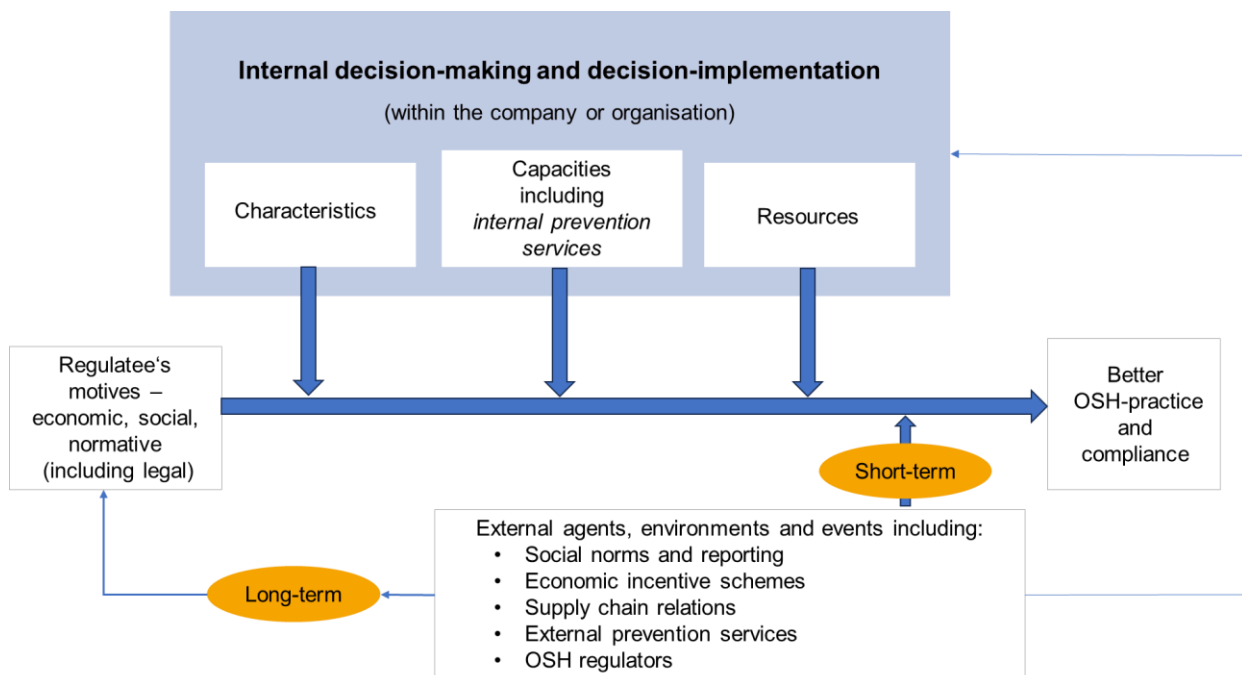
In expert discussions, such as the OSH Forum, it becomes evident that the term 'compliance' encompasses more than just legal compliance, rule monitoring or adherence to internal company regulations. Compliance also concerns the creation of organisational precautions in the company — a compliance management — to ensure compliance with public law and internal company requirements. Effective corporate compliance also requires a corresponding understanding and corporate culture that is not exclusively characterised by the thinking of 'avoiding punishment' but also includes other motivations and values. To establish a culture of compliance for OSH, there is, for example, the possibility of a normative approach. This usually starts top-down with defining the norms for desirable and undesirable practices and behaviours. Compliance is strengthened, for example, through behaviour-based safety programmes or by promoting clearly defined healthy behaviours.

The EU-OSHA report 'Improving compliance with OSH regulation: an overarching review' offers a well-founded discussion of the ambivalent levels of meaning and references of 'compliance'. However, different interpretations and concepts of compliance are not only to be found in conceptual interpretations but are also evident in the organisationally anchored practice of compliance itself (see Figure 3). Thus, compliance must be thought of as a comprehensive instrument that includes different types, standards and mechanisms for compliance with OSH regulations, which can be found in different ways and with different accentuations in regulatory and control practices. As explained in EU-OSHA's report, different framework models of compliance offer the possibility of profoundly grasping the actual complexity of the practice of compliance as well as the diversity of the respective strategies at the institutional, procedural and actor-specific levels in connection with their effectiveness (EU-OSHA 2021a).

It is this conceptual groundwork of the study that the present research project consistently incorporates into the content and methodological elaboration of its own research design. Especially within qualitative research, it is of particular importance to elaborate on predefined definitions and — in line with the present research project — to treat compliance as a conceptually more open category.

This is ensured in the development of the interview guidelines, through the interpretation of the term by the interviewee as well as the relevance for their practice.

Figure 3: Reference model for Compliance EU-OSHA report²⁴

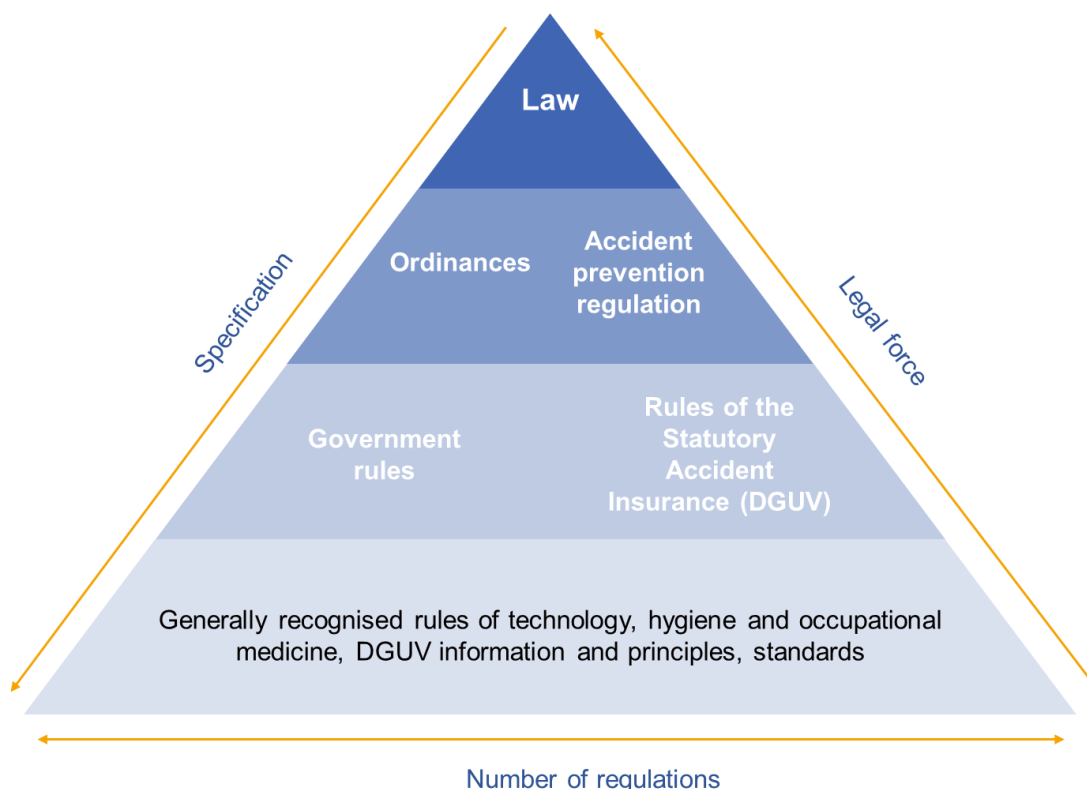


3.1 Compliance in the German legal system

The concept of holistic and preventive OSH is based in both German and European legislation on the fact that employers are obliged to continuously improve working conditions for the benefit of workers (Der Rat der europäischen Gemeinschaften 1989; Hägele 2019). To this end, employers must identify and implement the necessary OSH measures and ensure that they are suitably organised for planning and implementation. OSH measures include those of human-oriented work design (§ 2 OSH Act (ArbSchG)) (Bundestag der Bundesrepublik Deutschland 1996). Germany has a comprehensive set of OSH regulations and rules, including the below laws and ordinances in the form of generally recognised rules, norms, standards, principles, the state of the art and so on, whose fulfilment the compliance approach must include (see Figure 4) because the accident prevention regulations of the UVT (according to § 15 Social Code VII) (Bundestag der Bundesrepublik Deutschland 07.08.1996) must always be taken into account.

²⁴ According to EU-OSHA 2021a.

Figure 4: Legal system in Germany²⁵



Fulfilling these requirements is a major challenge for many companies. This is particularly noticeable in MSEs, which find it difficult to implement these requirements due to a lack of knowledge and limited means (Sczesny et al. 2011) (EU-OSHA 2018). There are often gaps in OSH that are overlooked for various reasons. To close these gaps, the obligations in this area must be identified and their fulfilment in the company monitored. If the law is violated, the possible consequences range from labour law measures to fines or imprisonment (see section 47). Companies in this state are referred to as non-compliant.

In addition, there is the generally formulated prevention concept of the OSH Act, based on the description of goals and objectives and not on concrete specifications of limit values, measures or means. It requires a higher degree of knowledge about how to achieve the objectives in order to comply with the legislation. In practice, this open, target-based approach is controversial, as it seems to favour large organisations that have specialised management, while small companies tend to prefer more concrete regulation (such as the directive on minimum requirements for workplaces and its implementation in Germany).

For the first time, a different way of communicating and enforcing the law was chosen at the beginning of the SARS-CoV-2 pandemic: in April 2020, a SARS-CoV-2 OSH standard was published with concrete prevention and protective measures. This was not backed up by an OSH rule until August 2020. The gap between the Occupational Health and Safety Act and the OSH Regulation was only closed in January 2021 by the SARS-CoV-2 OSH Regulation.

²⁵ According to Deutsche Gesetzliche Unfallversicherung (DGUV) 2020a.

3.2 Current discussion and interpretation of 'Compliance' in OSH in Germany

The 16th OSH Forum of the National OSH Conference (NAK) was dedicated to the discussion on 'Compliance in OSH' in 2022. There, compliance was considered from a behavioural science perspective, among other things, and the question of whether it can be the starting point in the Joint German OSH Strategy (GDA) was discussed. Two prerequisites were named as essential for a successful compliance strategy: trust between labour inspectors and companies as well as know-how of labour inspectors in the context of application in the respective companies.

This discussion, innovative approaches discussed (e.g. on digital assistance systems) and case studies are taken up within the framework of the research project.

Understanding of compliance from field research

The interviews conducted about 'labour inspectorate and compliance' confirm that 'compliance' is an extremely multifaceted term. Across all institutions, compliance is defined as a rule-abiding behaviour of the supervised companies. This 'classic' understanding of compliance, according to which a rule is established and followed with increasing understanding by the company and ultimately leads to success — 'prevent accidents, maintain health' — is shared by the Federal Government, the federal states, the UVT, trade unions and social partners.

At some points in the interviews, the concept is expanded to include a pragmatic level, according to which companies not only have to comply with certain rules to behave in a compliant manner but are also responsible for acquiring knowledge of the regulations that apply to them. Worker participation is also increasingly understood by the UVTs as an essential feature of successful compliance.

The participation of workers in the preparation of the risk assessment (the risks to safety and health at work) or the selection and implementation of preventive measures are cited here as examples. Trade unions emphasise that sensitive management with corresponding standards of integrity should also be included in the concept of compliance.

According to the UVTs, a broader scope of interpretation is desired for labour inspectors when assessing compliance. According to this, companies should be assessed and advised appropriately and company-specifically, rather than in a mirror image of the prescribed rule.

A similar argumentative line is followed in the interviews by the social partners when they oppose the binary distinction of 'compliant/non-compliant' and rather understand compliance in terms of 'process formulations'. Accordingly, compliance should not be pressed into a yes/no category, but rather captured in development terms: compliance is a process and not a state.

4 Labour inspectors, monitoring practices and compliance: Results of desk and fieldwork research

The literature review focused on monitoring practices carried out by labour inspectors of the federal state OSH authorities and the UVT. This analysis was supported by an empirical survey consisting of structured interviews with German OSH institutions, including representatives of the Federal Government, individual federal states, UVTs, trade unions and social partners. The results of these interviews built on a thorough and prior literature review to establish a comprehensive portfolio of opinions that integrated both older and current discussions in the various sections of the report.

The section opens with the understanding of the roles of the labour inspectors of the federal state OSH authorities in section 4.1.1 and UVTs in section 4.1.2. While the federal states have a narrow understanding of monitoring action, the UVTs expand the concept of monitoring and relate it to a wide variety of advisory and 'pilot functions'. In addition to the different role definitions that exist between the federal state OSH authorities and the UVTs, the following sections 4.1.4 and 4.1.5 examine, among other things, the influence of supervisory behaviour on the development of a safety culture and compliance in the companies.

Section 4.2 is dedicated to presenting a variety of more recent developments related to the monitoring activities of the federal state OSH authorities and the UVTs.

In section 4.2.1, developments in monitoring activities and practices on both institutional sides during the COVID-19 pandemic are considered. These include temporary suspensions of monitoring activities, the adaptation of monitoring methods through the use of online procedures and self-reporting as well as increased prioritisation within certain areas of work. In addition, certain findings from the COVID-19 pandemic are explained with regard to (internal) operational changes. At the political and legal levels, the implementation of the OSH Act and the establishment of the OSH Inspection Act of 2021 in particular are cited as milestones in the German OSH field during the pandemic.

Section 4.2.2 turns to various debates that are closely linked to the rethinking of the current understanding and actions of monitoring activities and supervision. From increasing work location flexibility to the introduction of the federal states' specialist unit, to the 'Work: Safe + Healthy' work programme of the Federal Ministry of Labour and Social Affairs (BMAS), the debates discussed pose new challenges, adaptation processes and discussions for monitoring practices.

Section 4.2.3 focuses on the question of how monitoring activities can (continue to) be efficient using digital development processes in the modern world of work. The development of digital assistance systems is seen as a great opportunity to make monitoring activities more efficient and reduce the workload. This section provides an insight into three different (already implemented) assistance systems.

Section 4.3 takes a detailed look at incentive systems in German OSH that aim to promote OSH awareness and its implementation in companies.

In section 4.4, sanctions are then discussed as the 'negative' version of incentives. The interviews conducted make it clear that sanctions are characterised as a necessary instrument for monitoring activities across all OSH experts and institutions, but that there are different opinions and approaches regarding their priority. While the federal state OSH authorities, for example, have a stricter understanding of sanctions, the UVTs tend to favour cooperative advisory approaches.

This is followed by the transition to the Joint German OSH Strategy (GDA) in section 4.5. Section 4.6 differentiates between the different approaches to company selection between the federal state OSH authorities and the UVTs, while section 4.7 is devoted to further standardisation processes for company assessment through the third GDA period. These aspects are addressed with regard to the joint documentation of the inspection results (see section 4.7.4). Section 4.8 addresses the advantages and disadvantages of the dual OSH system in Germany and examines the results to date in terms of their potential transfer at EU level.

4.1 Labour inspectors

This section deals extensively with the procedures on compliance (see section 4.1.1), the tasks (see section 4.1.2) and the roles (see section 4.1.3) of the labour inspectors of the federal labour protection authorities and the UVTs. While the federal states adhere to a conventional and limited scope of monitoring, the UVTs expand the concept to include advisory and pilot functions (the pilot function is discussed in detail in section 5.3). Beyond the differences in role definitions of the labour inspectors between the federal states and the UVTs, the following sections examine the impact of monitoring on promoting a safety culture (see section 4.1.4) and ensuring compliance in enterprises (see section 4.1.5).

4.1.1 Procedure of the state labour inspectorate on compliance

For enforcement purposes, compliance is understood as conformity with rules. 'Compliance audit' or 'rule conformity audit' is accordingly defined as 'the systematised and documented audit to determine whether OSH regulations under public law, as well as those under accident insurance law, and the obligations specified by an organisation itself (e.g. operating instructions) are being complied with. It aims to assess compliance with the OSH regulations' (Länderausschuss für Arbeitsschutz und Sicherheitstechnik (LASI) 2020b).

The federal states' Committee for OSH and Safety Technology (LASI)²⁶ publication LV1 contains basic concepts for enforcement on the state side, including cooperation with other authorities and the UVTs.

The OSH Inspection Act (Bundestag der Bundesrepublik Deutschland 2020), which came into effect on 1 January 2021, obliges federal state OSH authorities to carry out a minimum inspection rate of companies (§ 21 section 1a OSH Inspection Act). According to this, at least 5% of the companies in Germany are to be visited and monitored annually. Previously, the inspection rate was left to the discretion of the federal state OSH authorities and had fallen continuously over the past decades. Compliance with this minimum inspection quota is to be flanked by the establishment of the Federal Centre for Safety and Health at Work (BfSuGA). This specialist unit will be set up at the Federal Institute for Occupational Safety and Medicine (BAuA) (Nöthen-Garunja 2021). In the discussions, the minimum inspection rate (see section 4.2.1) goes hand in hand with the idea of proactive monitoring of the risk potential.

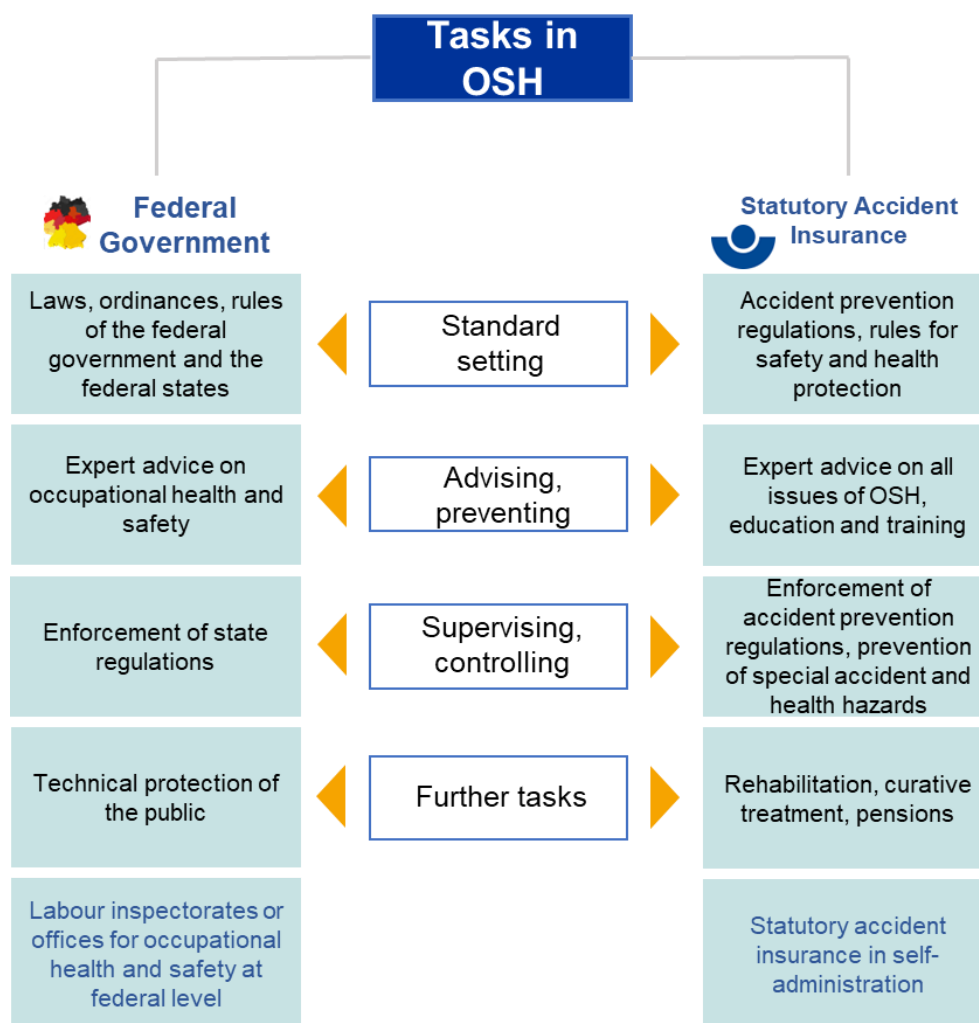
Finally, the Federal Government has been empowered to define the 'criteria for the selection of establishments for monitoring' with the consent of the Bundesrat by amending Article 24 of the OSH Act. This also applies to the definition of facts that are to be examined at least in the company audits.

4.1.2 Tasks of the federal state OSH authorities and the UVTs

The federal state OSH authorities and the UVTs have similar tasks in many areas. Nevertheless, important differences can be found (see Figure 5), which must be considered when understanding labour inspectorates and prevention services in Germany.

²⁶ See: <https://lasi-info.com/>

Figure 5: Tasks of the dual OSH system²⁷



▪ Task catalogue (*Produktkatalog*) of the state OSH administration

The basic legal mandate is the enforcement of state OSH law, which is achieved through monitoring, counselling and application processing. There is a coordinated catalogue describing the tasks (*Produktkatalog*) for this, which is shown in Table 2 with a focus on the area of 'enforcement'. The area of 'enforcement support' is kept short and is in the peripheral area of responsibility, which coincides with the strict monitoring understanding of the labour inspectors of the federal state OSH authorities.

²⁷ According to Deutsche Gesetzliche Unfallversicherung (DGUV) 2020a.

Table 2: Tasks included in the catalogue of the state OSH administration (Länderausschuss für Arbeitsschutz und Sicherheitstechnik (LASI) 2020b)

Tasks	Description
Supervision/Monitoring – proactively	Risk-oriented monitoring according to nationwide uniform risk classification. Supervising within the framework of GDA work programmes and other cross-country monitoring programmes. Supervising programmes of individual federal states. Supervising in individual cases.
Supervision/Monitoring – reactively	Investigating complaints from workers and establishing facts. Responding to accidents, occupational diseases or work-related illnesses in the form of investigations and inspections (in accordance with LASI LV 54 Principles of regulatory system control).
Consulting – per offer	Advising on the implementation of legal requirements in conformity with the law, for example, obligations incumbent on the employer, consequences of violations of the law. Enquiring from employers or their representatives regarding complex planning, facilities or procedures for OSH and so on. (Partial) on-site inspections in individual cases.
Consulting – per request	Recommending optimising OSH beyond the legally required state (e.g. introduction of OSH management system, measures for workplace health promotion or start-up advice). Advising (when setting up a company) on basic OSH issues.
Application processing	Processing of notifications required by law (e.g. according to the Maternity Protection Act). Examination of applications for permits, authorisations, determinations (e.g. exception from prohibition of employment on Sundays and public holidays). Legally justifying requests for opinions (e.g. on occupational diseases). Processing of enquiries and complaints.
Additional 'Enforcement Support'	Informing and maintaining public relations (reports, guidelines, events). Strategy and regulations (GDA, committee work in state committees and expert bodies, standardisation). Partnerships (international, national, regional).

▪ Prevention services of the UVTs

The UVTs describe their catalogue of 10 prevention services. Table 3 shows the selected four services with a focus on monitoring. The full range of prevention services is presented in section 5.1.

Table 3: Selected prevention services with focus on enforcement²⁸

Prevention Service	Description of the Service	Legal Basis
Investigation	Conducting suspicion- or incident-related investigations related to the possible causes and accompanying circumstances of occupational accidents, occupational diseases or work-related health hazards. Conducting investigations through interviews, company visits, document inspection and measurement. Reporting on the results of investigations. Processing of investigation results to gain new knowledge for prevention purposes. Conducting workplace investigations related to work-related health hazards. Providing written and personal analysis/assessment of accidents as well as occupational diseases reported based on work-related preconditions.	§ 19 section 2 Social Code VII.
Examination/ Certification	Assessing compliance of work equipment and systems with safety and health requirements. Carrying out product testing and certification. Carrying out audits and certification of management systems. Carrying out personal certifications.	
Surveillance including event-related counselling	Monitoring of operational measures to prevent occupational accidents, occupational diseases and work-related health hazards as well as to ensure first aid. Preparing of inspection reports. Ordering the rectification of defects. Ensuring follow-up of the rectification of defects, if necessary, initiation of appropriate administrative procedures, for example, fine proceedings. Conducting systematic written or on-site inspections and active counselling of companies with the aim of ensuring that the technical, organisational and personal requirements for OSH and the working environment are implemented in conformity with the law. The focus of the review is always on advising all those involved in the implementation of measures to improve safety and health. Conducting investigation services in connection with monitoring services.	§§ 17, 18, 19 and 209 Social Code VII.

²⁸ According to Deutsche Gesetzliche Unfallversicherung (DGUV) 2019.

Rules and regulations	Preparing accident prevention regulations, rules and information. Reviewing, bringing into force / revoking, updating and distributing the regulations and rules of the statutory UVTs. Participating in the development of state rules in committees in accordance with § 18 OSH Act (ArbSchG) and of standards.	§§ 18 section 2 Nr. 5, 20 a section 2 Nr. 5 OSH Act (ArbSchG). §§ 14, 15, 20 Social Code VII. § 2 DGUV regulation 1. Guidance paper on the reorganisation of the body of rules and regulations in OSH. Policy paper on the role of standardisation in OSH of workers at work.
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4.1.3 Roles of labour inspectors in Germany

▪ Role of the federal state OSH authorities' labour inspectors

The labour inspectors of the federal state OSH authorities are responsible for monitoring and enforcing OSH regulations in companies. According to § 21 (1) of the German OSH Act, the supervision of OSH is a state task. The competent authorities at the state level monitor compliance with the legal regulations and ordinances and provide advice to employers.

The State Committee for Occupational Safety, Health and Technology (LASI) understands 'monitoring' as a comprehensive concept that includes the collection and evaluation of data on the factual compliance and consideration of company actors regarding OSH requirements. These data are assessed based on target–performance comparisons. According to the traditional understanding, this monitoring is carried out by the state in the form of company inspections by labour inspectors.

One of the main objectives of any monitoring activity in German OSH is the creation of legally prescribed conditions. To achieve compliance, the labour inspectors have various instruments and means at their disposal, ranging from verbal agreements to fines and criminal charges (see section 4.4) (Länderausschuss für Arbeitsschutz und Sicherheitstechnik (LASI) 2020b).

▪ Role of the UVT's labour inspectors

Furthermore, the mandatory UVTs assume an additional supervisory role in OSH. According to § 21 (2) of the OSH Act, this role relates to the provisions of the Social Code VII which sets out the responsibilities, tasks and powers of the UVTs. The UVTs have a broader and comprehensive scope when it comes to prevention (see section 5.1), including, among other things, instruments and means related to monitoring, advice and training. For supervisory personnel with a university qualification (AP I) and supervisory personnel with a master craftsman/technician qualification (AP II), extensive task spectra apply, which require distinct and different forms of action competence (Flesch and Gerten 2023).

Despite the most comprehensive qualifications and continuous further training, the AP I cannot act at expert level in all specialist areas. This circumstance is made more complicated by the fact that the regulations and directives have room for interpretation and relevant OSH instructions are not

comprehensively included in the regulations (DGUV Deutsche Gesetzliche Unfallversicherung Spitzenverband 2015).

This is where the supervisory personnel with master craftsman/technician qualifications (AP II) come in. Their core task is also the supervision of companies and enterprises as well as an extensive understanding of counselling. Their practical relevance with specific orientation allows them to be used as support for AP I (DGUV Deutsche Gesetzliche Unfallversicherung Spitzenverband 2021).

The UVT supervisory personnel are also referred to as 'labour inspectors' (UVT).

▪ **Role conformity**

In the interviews, statements are made about the role of the respective labour inspectors (federal state or UVT) that go hand in hand with the respective tasks, expectations and legal mandate found in the literature review. The UVTs have a broader definition of monitoring/supervision, ranging from systemic coaching and advisory approaches to the pilot function (the concept of the 'pilot function' is an extension of the role of the UVTs' labour inspectors, see section 5.3) and classic control activities, whereas the federal state OSH authorities focus on compliance with rules and regulations, and they tailor their advisory activities exclusively to working towards the compliance of a company.

From an external perspective (i.e. scientific expertise), the role expectations for labour inspectors are closely linked to the instrument called 'system assessment', that is, the name of the inspection procedure followed when inspecting (or visiting) a company (see section 4.7). Above all, the evaluations of the risk assessment as well as the OSH organisation in the company are defined here as essential characteristics of a company visit/inspection. Furthermore, 'qualification' is named as an additional prevention service of the UVT labour inspectors (see section 5.1). The trade unions see the promotion of legally compliant risk assessment in companies — in addition to control — as an important element of labour inspection.

4.1.4 Contribution to OSH culture

Schmitt-Howe and Hammer classify the term 'safety culture' as strongly related to 'prevention culture' (Schmitt-Howe and Hammer 2019). Since safety culture can be understood as a sub-area of organisational culture, the authors hope that they can also transfer the results of research on organisational culture to research on safety culture. Nevertheless, they postulate that there is still too little research related to why companies follow OSH regulations and which mechanisms, actors or values could positively promote safety culture and compliance (Schmitt-Howe 2022).

The direct influence of the labour inspectors (federal state and UVT) on the prevention culture of a company is seen rather cautiously by the interview partners. However, the indirect influence should not be underestimated. In the view of some of the interviewees, the strengthening of safety awareness, the promotion of OSH as a given, and a positive and compliant attitude can be promoted by the monitoring activities. Regarding this effect, a systemic advisory approach of the labour inspectors and a wise use of resources are described as beneficial.

The fact that the successful implementation of a safety culture depends strongly on the managers of a company is emphasised by Schmitt-Howe and Hammer in their study (Schmitt-Howe 2022). In view of an increasingly digitalised world of work, Schmitt-Howe and Hammer also see great responsibility in the occupational safety professionals, occupational physicians, human resources departments and company health management to establish effective prevention mechanisms. Accordingly, the authors precisely see these actors (and less the labour inspectors) behaving as classic owners when it comes to spreading the values of a safety culture within companies.

In their paper, Schmitt-Howe and Hammer used extensive qualitative and quantitative field research to identify categories of companies that have different safety cultures and thus specific ways of dealing with OSH. This categorisation can help labour inspectors to use a 'quick diagnostic tool' to develop appropriate and company-specific monitoring and advisory strategies that are conducive to building a safety culture:

Type 1: The 'standard setters'. This type of company is convinced that prevention is an important pillar of every company. The implementation and promotion of their own prevention culture is in the foreground here. OSH are seen as changing issues that are constantly being revised. They work

independently in the field of OSH and are reluctant to submit to authorities. Their own standards often go beyond the minimum legal requirements and also integrate employee wellbeing and health promotion.

Type 2: The 'systematics'. This is a type of company that is highly structured and follows a systematic approach to OSH. This approach makes it easier to follow their own routines and comply with health and safety regulations. This type often maintains close contact with the labour inspectors. According to Schmitt-Howe and Hammer, because of the strong structure, the participation of workers is particularly important to allow criticism of existing work processes.

Type 3: The 'error avoiders'. Within these types of companies there is good communication between managers and staff. Here, safety and health issues are discussed together and thus participation spaces are created. Workers are seen as a valuable resource, but also as a source of hazards/conflicts/accidents. As human error is acknowledged as a possibility, not everything is done in every respect for continuous improvement of OSH.

Type 4: The 'technicians'. These types of companies accept prevention regarding the handling of hazardous substances and machinery, but do not feel up to the task of analysing 'new' risks (such as psychosocial risks). The legal minimum requirements are used as a standard and the workforce is required to act on its own responsibility. In this context, workplace health promotion is neglected and the social interaction between managers and staff is often strained.

Type 5: The 'do-it-yourselfers'. These types of companies work pragmatically and rely on their own judgement in matters of OSH. Here, many hazards are neglected and regarded as theoretical constructs that can be avoided with individual finesse. Most of the time, these are small companies for whom OSH is a formal matter. External influences are usually limited to the advice of occupational safety specialists and/or occupational physicians, who visit the company on average only every two years.

Using the three-part quick diagnosis tool, which is provided in the form of a questionnaire by Schmitt-Howe and Hammer, it is now possible to work out what form of prevention culture exists in the company in question (Schmitt-Howe 2022).

4.1.5 Contribution to OSH compliance

In 2021, 54,784 companies were inspected and a total of 127,737 inspections were carried out by the federal state OSH authorities. The UVTs inspected 210,413 establishments and carried out 440,051 inspections. This compares with a total of just under 3.1 million establishments in Germany (Bundesministerium für Arbeit und Soziales (BMAS) and Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA) 2022).

Even if the personnel resources of labour inspectors are limited (see section 4.2.1), monitoring action makes a clear contribution to OSH-compliant behaviour. If there is no sufficient motivation in the visited companies, this can be induced by the inspection (e.g. by fine procedures). It is companies that do not have intrinsic motivation for human-oriented working conditions that need regular monitoring, counselling and, in certain situations, sanctions (Arenz et al. 2023).

On the part of the federal states, 'compliance' is understood as a central *raison d'être* of enforcement in general. The mere possibility of monitoring and control already has the effect that companies increasingly deal with the issue of compliance. The influence of supervision on the OSH-related actions of the company is essential, even if some companies would establish effective OSH even without direct monitoring. But simply gaining an external perspective can have a major influence on the way OSH is handled in the company. The term 'supervision' implies not only control but also the function of initiating processes. This could take the form of orders and penalties, for example, while the actual implementation of measures always remains the responsibility of the company.

From the perspective of the statutory UVTs, the actions of their labour inspectors also have an enormous influence on compliance with regulations and guidelines, as they increasingly encourage risk assessments and promote discussion of the OSH organisation. Especially in companies where there is regular in-person contact between employers, workers and the labour inspector, the influence is obvious. Instead of the restrictive attitude of labour inspectors of the federal states, the UVTs in the interviews sometimes emphasised an appreciative and systemic advisory approach that strongly encourages the

involvement of employers and workers as experts. Finally, monitoring serves as a 'door opener' for further prevention services that go beyond mere compliance with regulations.

The employers' representatives interviewed confirmed this perspective, as they do not consider rule-compliant and, above all, sustainable changes in behaviour to be possible through the implementation of fines alone. Supervision should adopt a sympathetic approach when interacting with companies. According to the social partners, a partnership approach should be chosen, which is less pointing and more based on mutual understanding, to improve compliance and OSH in companies in the long term.

Nevertheless, both labour inspectorates (federal states and UVT) have reservations about the effectiveness and efficiency of compliance audits (see section 4.1.1). On the one hand, there are hardly any scientific studies on the actual efficiency of the current procedures, and on the other hand, the lack of human resources is a major problem for the implementation of an effective compliance audit.

4.2 New developments

Labour inspectors (federal state and UVT) face major challenges in their monitoring and control activities. In view of the comprehensive transformation of the world of work (Rat der Arbeitswelt 2023). In addition to well-known problems of labour inspectorates in Germany (e.g. lack of personnel resources, see section 4.2.1), new forms of work and difficult-to-access working environments (e.g. home office) require systematic and innovative adaptation processes in monitoring activities.

On the part of the State Institute for OSH and Work Design of North Rhine-Westphalia (Landesinstitut für Arbeitsschutz und Arbeitsgestaltung Nordrhein-Westfalen, LIA),²⁹ the reappraisal and improvement of IT-supported equipment for monitoring activities is emphatically considered necessary to be able to react adequately to these challenges of the modern world of work (Seiler et al. 2021). This requirement is confirmed in the interviews conducted. The promotion of the ongoing digitalisation process in monitoring activities — through modified databases that promote the exchange of data between the individual OSH institutions, for example, or the increased use of artificial intelligence (AI) systems — proves to be a necessary measure here without reservation (Seiler et al. 2021).

In a study published in 2022, the potentials of digital technologies for advisory and monitoring/supervising activities in OSH were investigated (Becker et al. 2022). The focus was primarily on digital solution approaches for optimising the data basis for a risk-oriented selection of companies; at the same time, digital approaches for improved linking of OSH institutions and companies were collected and evaluated. Of a total of 117 identified IT applications, 23 different fields of application were identified, of which 22 applications could be assigned to the digital application field of OSH. The area of AI learning systems represented the largest area here with seven potentially applicable solutions. At the time of the survey, eight of the identified applications were already being actively used by OSH institutions (three Big Data solutions and one application each in the areas of AI, neural networks, risk management systems and drones). One of the applications examined could not be assigned to any category. Especially on the technical level, various approaches to solutions for improving monitoring activities can thus be found.

In addition to the finding that digital solution approaches can efficiently support monitoring and advisory activities, and in some cases already do so (see section 4.2.3), the study points out that the practical introduction and implementation of digital solution approaches often fails not at the technical level but rather due to organisational, data protection and, in particular, inter-institutional aspects and implementation margins (Becker et al. 2022). This point is underlined by the interviews, as it is precisely the challenge of recruiting and attracting new staff that takes up many resources, so that the development of technical tools is sometimes secondary.

4.2.1 Changes due to COVID-19

At this point, it is not possible to offer an extended analysis of OSH during the SARS-CoV-2 pandemic. However, if one looks at the annual reports from 2020 to 2022 of the OSH authorities of the federal states or even of the UVTs, they bear witness to a significant preoccupation with measures to comply

²⁹ See: <https://www.lia.nrw.de/>

with the SARS-CoV-2 OSH standard (Länderausschuss für Arbeitsschutz und Sicherheitstechnik (LASI) 2020b).

Furthermore, it can be stated, and this has already been discussed in detail in many other places, that OSH in Germany — beyond the pandemic — has gained new forms of attention (Robelski et al. 2022). Many of the current OSH-related debates on the monitoring and advisory activities of the federal states and UVTs — on which there is a separate section below (see section 4.2.2) — existed in part in pre-pandemic times, but they have in any case been exacerbated by the pandemic. Some other debates, on the other hand, only arose during the pandemic.

- **High demand for information and support**

The interviews conducted also highlight the high (sector-independent) demand for guidance provided by the federal states and the UVTs. The relevance of these guides was reflected in the exceptionally high response from the target groups. In general, there was an increased awareness of the need to implement new OSH regulations correctly, and this drove many companies to make greater use of the information provided. Employers and workers actively sought contact with the competent authorities to obtain clarity on OSH. At the same time, there was an increase in the number of justified complaints submitted to the authorities by many workers.

- **Changed monitoring behaviour**

Regarding the surveillance behaviour on the part of the federal states and the UVTs, different trends could be observed during the pandemic. Depending on the different phases of the pandemic, surveillance activities were reduced in some cases, while in others certain sectors were monitored more intensively. There were various reasons for the reduction in surveillance activities. In addition to the general 'migration' to the home office and the thus more difficult possibilities for labour inspection, the protection of the labour inspectors was also an essential feature of the restriction. They equipped themselves with appropriate protective equipment or increasingly carried out their work with the help of digital supervision formats, which replaced a classic physical inspection (Ministerium für Klimaschutz, Umwelt, Energie und Mobilität 2022).

Inspections in close sequence, on the other hand, were primarily carried out in work areas where deficiencies in OSH law quickly became apparent — especially in sectors such as the meat industry or within the healthcare sector, where there were numerous cases of COVID-19 infections among workers. This increased awareness to improve OSH measures and tightened controls by OSH authorities. In Schleswig-Holstein et al., for example, the state labour inspectorate at UK Nord (public-sector accident insurance)³⁰ intensively inspected meat processing plants at different intervals, especially with a focus on the SARS-CoV-2 OSH standards. As part of these inspections, the companies were provided with checklists, for example, so that they could independently identify deficits in their protective measures in advance (Schleswig-Holstein et al. 2021).

In addition, certain special campaigns were planned and implemented in many federal states, which pursued large-scale inspection as well as advisory strategies regarding the coronavirus protection measures. For example, in Brandenburg, the State Office for Occupational Safety, Consumer Protection and Health (LAVG) initiated a special campaign during the asparagus and fruit/vegetable harvests to ensure that farms had taken and implemented sufficient protective measures to prevent COVID-19. The inspection through the responsible inspectors of the OSH Department of the LAVG took place in two phases and lasted from 18 May to 26 June 2020. Sixteen asparagus farms were inspected during the first phase, while 12 other harvesting farms were the focus of the monitoring in the second phase. The selection criteria focused on farms that were suspected or known to employ seasonal workers due to their size. The farms were visited spontaneously and checked for compliance with the coronavirus protection measures (Ministerium für Soziales, Gesundheit, Integration und Verbraucherschutz (Brandenburg) 2021).

For both the companies and the labour inspectors, the protection rules were continuously adapted and changed in relation to the respective pandemic phases. The companies were confronted with multifaceted changes in OSH law. These changes ranged from non-binding recommendations by the

³⁰ See: <https://www.uk-nord.de/>

OSH authorities to new legal regulations with fines. In the context of the company inspections carried out, a risk assessment adapted to the pandemic-related requirements was considered the first point of contact for the inspection (Ministerium für Klimaschutz, Umwelt, Energie und Mobilität 2022).

▪ **New ways of assistance**

In general, checklists have become an integral part of the monitoring and advisory activities of the federal states, but also of the UVTs. Using these checklists, companies were able to obtain information on OSH law on how to deal with infections. In Bremen, for example, various checklists were drawn up that were tailored to the specific working conditions at construction sites (Die Senatorin für Gesundheit, Frauen und Verbraucherschutz Bremen et al. 2021).

In the federal state Mecklenburg-Western Pomerania, pharmacies, among others, were requested to notify the OSH authorities about implementing appropriate infection control measures, for example by a new layout and division of the rooms or an additional room rental. For this purpose the OSH authorities also created corresponding checklists to strengthen pharmacies' compliance (Landesamt für Gesundheit und Soziales Mecklenburg-Vorpommern (LAGuS) 2022).

From the interviews, especially from the perspective of the social partners, critical voices are also raised about numerous measures. According to them, many measures were not primarily understood as OSH but rather as population health protection. As a result, many companies were confronted with a multitude of tasks, some of which went hand in hand with different legal provisions and thus placed hardly implementable demands on the companies.

Despite the pandemic, around 84% of the company visits from 2019 were able to be carried out in 2020; in some federal states, the number of companies visited and the total number of all visits (inside and outside company premises) was even increased through targeted prioritisation (Bundesministerium für Arbeit und Soziales (BMAS) and Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA) 2022).

▪ **Increasing importance of OSH and operational changes**

In general, there is an overall increase in the importance of OSH in Germany, which will most likely continue in post-pandemic times. For example, more than half of the companies surveyed can envisage providing masks as a permanent measure even after the pandemic has passed (Tisch et al. 2021).

Worker participation in OSH has also increased in importance: employee motivation and compliance is considered a driving factor for the success of OSH during the pandemic. Nevertheless, there are clear differences here depending on the size of the companies (Klein et al. 2022). Thus, employee participation is considered to play a more important role in SMEs than it does in large enterprises (Tisch et al. 2021).

It is noticeable that it is precisely the focus on behavioural preventive measures instead of structural and organisational preventive measures that has brought success. The success of behavioural preventive measures is necessarily linked to the understanding of the workers who have to understand and actively follow the new rules. One factor that has undoubtedly contributed to this is the exceptionally strong support for the protective measures by the company managements themselves (Rothe 2022).

In addition, many companies planned to increase the qualification and training of managers and company management in OSH-related problem areas and — especially in large companies — to increase the use of digital OSH tools (Tisch et al. 2021). These points apply above all to sectors that were heavily affected by the pandemic. Especially in the hospitality and education sectors, OSH is seen as a point to be included more in the future. This also includes the inclusion and participation of workers (Tisch et al. 2021).

In addition, it can be seen that companies and sectors that were more affected by pandemic-related restrictions and OSH controls also put a greater focus on personnel and technical OSH measures. These findings confirm the effectiveness of OSH controls and underline the urgency of continuing to improve and support OSH controls and proactive advisory services in the aftermath of the pandemic (Klein et al. 2022).

▪ **SARS-CoV-2 Occupational Health and Safety Ordinance**

Even though recommendations of the Federal Ministry of Labour have since taken the place of the SARS-CoV-2 OSH Ordinance, which expired on 2 February 2023, the ordinance can be considered a milestone of German OSH. This was also continuously emphasised in the interviews. Above all, the ordinance contained special hygiene precautions that had to be implemented at the workplace. This example shows that OSH ordinances can be implemented quickly as soon as a goal is jointly formulated and pursued.

In addition to the content of the regulation itself, however, a special feature must be seen above all in its implementation. The shortened consultation phase and the use of existing legal instruments enabled the reduction of bureaucratic obstacles and an accelerated implementation process. It was recognised that work-related measures were needed to minimise the risk of infection in the workplace. The rapid introduction of an OSH standard by the Federal Government also made it possible to explain and make transparent central measures and strategies for OSH and infection control in companies (Eickholt et al. 2021).

For future crises, examples of 'good practice' were also created that can be used for more than just the coronavirus pandemic. On the one hand, 'cross-industry' examples can be found here that relate to the procedure for deriving and implementing measures in times of crisis as well as to the measures themselves. On the other hand, the evaluation contains sector-specific examples (industry, catering and hospitality, health and social care, schools, etc.) that can be used, among other things, as recommendations for action and tools for future pandemics (Eickholt et al. 2021).

▪ **Occupational Health and Safety Inspection Act**

Another major change is the OSH Inspection Act (Bundestag der Bundesrepublik Deutschland 2020) introduced in 2020, which was already discussed in pre-pandemic times but was only implemented during the pandemic. The OSH Inspection Act is a development at the federal legislative level and makes changes to the OSH Act, the Workplace Ordinance (ArbStättV) and the Social Code VII (Nöthen-Garunja 2021).

What changes does the OSH Inspection Act bring about? Many of the changes listed here that are triggered by the OSH Inspection Act are discussed in more detail later in the report:

▪ **Minimum inspection rate:**

Federal state labour inspectors are required to carry out a minimum inspection quota of at least 5% of the companies in the respective state per calendar year in accordance with § 21 para. 1a of the OSH Act.

▪ **Establishment of a federal agency:**

To ensure that the minimum inspection quota is achieved, the work of the federal state OSH authorities is supported by the federal specialist unit set up for this purpose at the BAuA.

▪ **Monitoring with consideration of the risk potential:**

With the OSH Inspection Act, proactive monitoring with a special focus on considering the potential risk at the workplace is established in law.

▪ **Committee for Safety and Health at Work (ASGA):**

According to § 24a of the OSH Act, a committee for safety and health at work is to be formed, the operation of which is to be conducted by the BAuA. According to § 24 para. 3 of the OSH Act, the committee is to take on the following tasks:

1. determine the state of the art in technology, occupational medicine and hygiene and other established occupational science findings for the safety and health of workers;
2. determine rules and findings on how the requirements set out in this act can be met;
3. draw up recommendations on safety and health at work; and
4. advise the Federal Ministry of Labour and Social Affairs on all matters relating to OSH.

- **Data exchange between OSH authorities and UVTs:**

Electronic data exchange between the OSH authorities and the competent statutory UVTs will be mandatory (more on this in section 4.6.3).

- **New powers of labour inspectors:**

With the new OSH Inspection Act, labour inspectors are allowed to take preventive measures in private homes (as long as the home serves as a place of work) to contain acute hazards without the consent of the occupants (Nöthen-Garunja 2021).

- **New regulations for shared accommodation:**

The OSH Inspection Act influences the Ordinance on Workplaces (ArbStättV § 3, § 3a and No. 4.4 of the Annex) and creates new regulations for communal accommodation in the meat industry and agriculture. This amendment creates certain minimum requirements for collective accommodation to counter precarious OSH conditions in the aforementioned sectors.

The results of the field research strengthen the fact that both the German Federal Government as well as the individual federal states regard the OSH Inspection Act as a milestone in the history of German OSH. In particular, the introduction of the 12 information points of data exchange between the federal states and the UVTs, which will be listed in detail below (see section 4.6.3), is considered significant. These information points create common quality and quantity standards for the uniform assessment of companies by the federal states as well as the UVTs. The creation of a common database now enables the federal states and the UVTs to exchange the essential elements of the 'system assessment' (see section 4.7).

The OSH Inspection Act can thus be seen as the result of the discussion on cooperation between the UVTs and the federal states that was stimulated by the Senior Labour Inspectors Committee (SLIC) evaluation report (Geschäftsstelle des Länderausschusses für Arbeitsschutz und Sicherheitstechnik 2018). The UVTs also recognise the OSH Inspection Act as a statutory promotion of communication and cooperation between the federal state OSH authorities and their own activities. Although the minimum inspection rate is primarily directed at the federal state OSH authorities, the UVTs have also felt the impact of this rate on their own work. This has led, for example, to the question of how they too can achieve such a minimum inspection quota. Nevertheless, the UVTs emphasise that caution is needed to ensure that the law does not create an incentive for activities to be aimed solely at meeting certain minimum figures.

4.2.2 Debates and initiatives to rethink current methods

- **Dealing with workplace flexibility**

Even if monitoring activity has experienced a renaissance because of the pandemic and has become acquainted with new procedures, further digitalisation processes of methods are seen as a necessary condition across institutions to be able to continue to enable labour inspection in the future in view of the increasing flexibility of the workplace. Among other things, the interviewees spoke of an erosion of monitoring activities, as workers are hired more and more in self-employment relationships and the classic image of the 'workplace' to be inspected is becoming increasingly flexible and dissolving.

While the statutory UVTs are already gaining initial experience with digital and algorithmic assistance systems, the use of AI systems that can determine the inspection case more specifically based on accident predictions is still being called for by some federal state interviewees. In addition to the increasing flexibility of working locations, the shortage of skilled workers must also be counteracted by efficient and digitally based action. Examples of innovative and digital assistance systems can be found in section 4.2.3.

The employers' representatives described the promotion of health and OSH work design competences as essential, especially in view of the challenging monitoring landscape in a changing and flexible world of work. The interviews reveal the increasing importance of health competence so that workers can develop a deeper understanding of their health and safety at work. This should enable them to actively contribute to compliance with standards, even when traditional monitoring presents difficulties due to the flexibility of the work environment. In addition to standardisation and rulemaking, there should be a

greater focus on the workforce's duty to participate. Workers should not only be seen as recipients of instructions but as active shapers of their own working conditions. Closer interaction between employers and workers can help to ensure a higher level of OSH.

The trade unions considered the discussion about the supposed 'inaccessibility' of flexible workplaces to be outdated. This is mainly since methods such as photo documentation, video documentation and questionnaires can also be used effectively in flexible work environments and thus OSH standards must take effect. Based on the trade unions' opinion the debate is rather classified as an employer-heavy discussion, according to which employers want to keep their OSH obligations in home office or co-working sites in a 'legal limbo'.

▪ **The expert office for OSH of the federal states**

The establishment of a permanent federal states office for Occupational Safety by the Conference of Labour and Social Ministers (ASMK) serves to further develop federal state OSH and cross-states cooperation to be able to adequately meet the challenges of the modern world of work.

The central objective of this expert office of the federal states is therefore to promote and strengthen the cooperation structures at state level. The expert office is to be affiliated to the State Institute for OSH and Work Design of North Rhine-Westphalia (LIA) and structure the cooperation of the federal states in the field of OSH and make it more successful.

The expert office began its work in 2024 and will actively engage in the development of uniform monitoring concepts for OSH and support cooperation between the federal states (ASMK 2021). Its goal is to establish uniform standards in OSH and to promote cooperation between the federal states. In the area of data processing at work, the expert office will promote standardisation processes so that uniform processing and evaluation of data between the federal states is possible (Hessisches Ministerium für Soziales und Integration 2023).

▪ **Anchoring OSH in the political federal coalition agreement: 'Work: Safe + Healthy'**

Since psychological problems cause a large number of lost hours, an anti-stress regulation has been discussed and demanded by the metalworkers' union at least since 2012. This demand for a binding regulation within the framework of an ordinance against psychological/mental dangers and illnesses has been joined by various political actors in the following years and has since been negotiated at the federal level. However, in a question by the Left party (Die Linke) in 2018, this demand was not met by the Federal Government with any binding regulations or provisions, but instead referred to the existing methodology of risk assessment, which has been further developed in recent years (Deutscher Bundestag 2018).

But this has by no means shut down the political debate. The new coalition agreement has also put the topic of 'healthy work' on the political agenda (Bundesregierung der Bundesrepublik Deutschland 2021). From this initially brief concept, the programme 'Work: Safe + Healthy' has emerged during the current legislative period, which is led by the BMAS and aims to initiate a general debate on various challenges of the modern world of work.

The results of the field research also confirm that new OSH standards are needed, for example for the service economy or also for grassroots work, which should possibly take an activity-based rather than workplace-based approach. Such points have already been discussed or are to be discussed within the framework of policy workshops, in which different policymakers and players from science and economics are brought together and negotiate approaches to solutions for a healthy working world 'from multiple perspectives'.

Thematically, the programme 'Work: Safe + Healthy' is divided into four policy workshops. Thus, in addition to the thematic blocks 'Mobile Work', 'Climate Change' and 'Grassroots Work', the policy workshop 'Mental Health' was launched in 2023.

4.2.3 Digital technologies for monitoring/supervision

A major debate is the development of digital assistance systems to increase efficiency and relieve the burden of selecting the companies to be inspected. Accordingly, the assistance systems listed here are

intended to offer a small insight into forms of digital assistance already in use regarding monitoring action in Germany.

▪ **Information system Occupational Safety (IFAS)**

The 'Information System for Industrial Safety' (IFAS) programme is now a very widespread IT approach to efficiently support labour inspection activities. IFAS is an information and documentation system and enables a risk-oriented selection of companies. IFAS is now used by almost all the federal states. In Brandenburg, for example, at the beginning of each year the labour inspectors receive a list with a selection of companies that must be visited during the course of the year as part of their regular inspections. The decision on which companies to visit is based on various system data, such as the size of the company, the extent of potential hazards, and the deficiencies and deficits already detected in relation to OSH measures (Geschäftsstelle des Länderausschusses für Arbeitsschutz und Sicherheitstechnik 2018).

▪ **SmartServicePrevention-App**

The 'SmartServicePrevention-App' (SSP) is a digital application in the field of prevention and has been used by the German Social Accident Insurance Institution for the trade and logistics industry (BGHW),³¹ among others, since 2020. The app allows labour inspectors to flexibly access information databases (e.g. CUSA prevention (CUSA = computer-assisted case processing)), for example with a tablet. On the one hand, the SSP is equipped with a search function that enables the labour inspectors to view general data about a corresponding company, but also to find specific information about prevention-related factors such as the allocation of time for occupational physicians and occupational safety specialists or the business sector that specific company belongs to (Keller et al. 2022). At the same time, the app allows to retrieve an overview of the previous documentation of the supervision history, OSH organisation, insurance cases and prevention letters issued by the selected company (Keller et al. 2022).

▪ **Prevention Process Management System**

The Prevention Process Management System (PPMS) ([case study DE2](#)³²) developed by the German Social Accident Insurance Institution for the foodstuffs and catering industry (BGN)³³ is another digital assistance system and is intended to increasingly facilitate the monitoring activities of BGN labour inspectors (Keller et al. 2022). On the one hand, it provides — similar to the SSP app — a wide range of operational information and, on the other hand, enables text- as well as photo-based documentation of the respective company visit. In addition, the PPMS offers users further details about the company: the history of the company's accidents and occupational illnesses can be called up, as can previous company inspections and even participation in prevention-related training measures. The adaptability of the system is demonstrated, among other things, by the fact that the requirements for company inspections of the third GDA period and the OSH Inspection Act (ArbSchKG) can be met without any problems. A particular strength of the system is its 'geocoding'. This is a map and radius search that enables labour inspectors to sort all the companies in their area of responsibility according to various criteria ('company size, sector, risk index, accident frequency') and to filter them (Keller et al. 2022).

▪ **BG-Motis**

The German Social Accident Insurance Institution for the energy, textile, electrical and media products sectors (BG ETEM)³⁴ offers its labour inspectors the digital tool 'BG-Motis' in addition to internal instructions for action. BG-Motis works as a database and allows labour inspectors to view various company-related criteria, such as the company's 'Gefahrtarif' (instrument for grading insurance contribution) and even the accident history (Büsse and Fochmann 2023). In order to counteract the monitoring demand, which can hardly be covered, a particular challenge is to identify companies where a company inspection proves to be useful due to different criteria. For this purpose, the BG ETEM works with an internal algorithm that estimates the probability of future occupational accidents based on more than 100 characteristics. The main characteristic values used for this purpose are then presented to

³¹ See: <https://www.bghw.de/>

³² Case DE2 is available at: <https://osha.europa.eu/en/publications/prevention-process-management-system-ppms-germany-supporting-occupational-safety-and-health-compliance-case-de2>

³³ See: <https://www.bgn.de/>

³⁴ See: <https://www.bgetem.de/>

BG ETEM labour inspectors in the digital tool BG-Motis, whereupon the selection of the relevant companies can be made (Büsse and Fochmann 2023).

The three selected assistance systems represent only a limited selection of the existing digital assistance systems. Another example is the cooperation between the German Social Accident Insurance Institution for the administrative and management sector (VBG)³⁵ and the German Social Accident Insurance Institution for the woodworking and metalworking industries (BGHM)³⁶ via their internal company 'NOVA', which have entered into an IT cooperation since January 2022. Among other things, this cooperation aims to make company selection more efficient and strategic with the help of data such as accident history.

The interviews show that further innovative approaches exist in the area of digital assistance systems, many of which are already being actively used.

In addition, methods of self-disclosure are becoming increasingly important in view of the challenges in monitoring action (KUG 2 ([case study DE4](#)³⁷)). For example, companies are requested by the BGHM to provide information on certain criteria such as number of workers and existence of the risk assessment. If the answers are insufficient, targeted contacts, inspections or orders can follow.

Furthermore, novel and effective approaches are mentioned, for example, targeted focal actions to promote OSH in small enterprises or the closer linking of company start-ups with OSH measures. The trade unions emphasise that an electronic file, in which every employer must upload their risk assessments, can be classified as an innovative control option and should be discussed.

Furthermore, it can be stated, and this has already been discussed in detail in many other places, that OSH in Germany — beyond the pandemic — has gained new forms of attention (Robelski et al. 2022). Many of the current OSH-related debates about the monitoring and advisory activities of the federal states and UVTs — on which there is a separate section below (see section 4.2.2) — already existed in part in pre-pandemic times, but they have in any case been exacerbated by the pandemic.

4.3 Incentive systems

In the German OSH system, incentive systems play a decisive role in promoting company compliance. While the federal state OSH authorities traditionally deal with sanction systems, the focus of the statutory UVTs is more on 'positive' incentive systems. However, this dualism has led to an interesting development in which both incentives and sanctions are effectively used to improve OSH in companies.

4.3.1 German Occupational Safety Award³⁸

One initiative in the 'incentive systems' category is the German OSH Award of the National OSH Conference (NAK), which is awarded jointly by the UVTs and federal state OSH authorities. It has been granted since 2009 within the framework of the GDA to companies with outstanding OSH performance and recognises companies according to five different criteria:

- strategic
- operational
- cultural
- personal
- newcomer

This award encourages companies to develop and implement innovative approaches to OSH.

³⁵ See: https://www.vbg.de/DE/0_Home/home_node.html

³⁶ See: <https://www.bghm.de/home>

³⁷ Case DE4 is available at: <https://osha.europa.eu/en/publications/initiative-micro-enterprises-and-risk-assessment-kug-2-germany-supporting-occupational-safety-and-health-compliance-case-de4>

³⁸ See: <https://deutscher-arbeitsschutzpreis.de/>

4.3.2 Incentives in the prevention system of the UVTs

The UVTs offer various incentive systems for companies and institutions to promote OSH. Special efforts that go beyond the legal requirements are rewarded in various ways. Often these efforts generate new ideas and trigger the further development of OSH in practice. The legal basis for these incentive systems is provided by the Social Code VII, which mentions bonus-malus systems (Deutsche Gesetzliche Unfallversicherung (DGUV) 2023). They have also been found in the prevention services of the UVTs for several years and have been successful according to studies (Ernst et al. 2023).

Three most important incentive systems of the UVTs are:

- financial premiums for prevention measures, which are listed in sector-specific premium catalogues;
- recognition for innovative ideas in OSH, such as certificates; and
- certified seals of quality, such as the introduction of an OSH management system (Deutsche Gesetzliche Unfallversicherung (DGUV) 2023).

The focus of these incentives is explicitly not on 'negative' sanctions but on operational behaviour that is considered exemplary and should be emphasised. Most incentive programmes integrate different aspects of the three different incentive systems (Ernst et al. 2023). The underlying objective of the three incentive systems is to promote and increase the awareness of companies about the relevance of a safety-compliant design of work systems. At the same time, the avoidance of absenteeism, accidents and occupational diseases can increase the competitiveness of the company and generate further financial benefits (Berufsgenossenschaft der Bauwirtschaft Präventionskoordination 2022; Vision Zero 2017).

- **From practical experience – to best practice**

The Promotion Award of the German Social Accident Insurance Institution for the raw materials and chemical industry (BG RCI)³⁹ is the highest endowed prevention award in Germany with a sum of €100,000 (Berufsgenossenschaft Rohstoffe und chemische Industrie 2021). The social accident insurance institutions also have various certification procedures and quality seals with which companies can be awarded, for example, the 'Healthy with a System' seal of the BGHW⁴⁰ (Berufsgenossenschaft Handel und Warenwirtschaft 2023) and the cross-sectoral 'Safe with a System' award from the BG RCI, BGHW and the Public Sector Accident Insurance of the federal state Berlin (UK Berlin).⁴¹

In addition, the German Social Accident Insurance Institution for the administrative and management sector (VBG) awards special OSH projects with the VBG-NEXT prize (VBG 2022a) and carries out its own award procedure in which special prevention services or the acquisition of certain equipment or aids are rewarded or reimbursed on a pro rata basis and thus contribute to the establishment of an OSH management system in the long term (Ernst et al. 2023).

First-time purchases of health and safety aids that have not yet been purchased can also be subsidised with the help of application procedures, as can the development of or participation in seminars and qualifying training courses on safe behaviour at work (Berufsgenossenschaft der Bauwirtschaft 2022).

In order to highlight exemplary companies and at the same time motivate other actors, prevention award winners with their innovative ideas and improvements are featured in sector-specific brochures so that other companies in the sector can learn from them and have an incentive to also think of new systems and apply (Berufsgenossenschaft Rohstoffe und chemische Industrie 2021).

The Public Sector Accident Insurance of the federal state of North Rhine-Westphalia (UK NRW)⁴² has three major incentive schemes to offer, including a reward scheme for specific purchases and exemplary behaviour, as well as a school development award and a day-care award, which reward the

³⁹ See: <https://www.bgrci.de/>

⁴⁰ See: <https://www.bghw.de/>

⁴¹ See: <https://www.unfallkasse-berlin.de/>

⁴² See: <https://www.unfallkasse-nrw.de/>

establishment of a healthy educational institution. This sector has suffered particularly from the coronavirus pandemic and now enjoys an increased focus on OSH (Ernst et al. 2023).

▪ Bonus–malus system

At various points in the interviews conducted, reference was made to the UVT bonus–malus systems, according to which the membership fees of companies and enterprises are often linked to their accident frequency. As soon as a company achieves an accident rate below the industry-specific average, the membership fee is immediately reduced. An above-average accident rate, on the other hand, leads to a corresponding increase in membership fees (Kohstall et al. 2010).

Such systems can be based on a pure award system (bonus system), as is the case with the German Social Accident Insurance Institution for the building trade (BG BAU).⁴³ Here, exemplary companies are awarded prizes and poorer-performing companies participate more in the contribution system in order to compensate for the premiums paid out. (Berufsgenossenschaft der Bauwirtschaft Präventionskoordination 2022; Berufsgenossenschaft Energie, Textil, Elektro, Medienerzeugnisse 2019) The BG ETEM⁴⁴ and the BGN⁴⁵ rely on reduced membership fees for exemplary companies. The BGHM⁴⁶ and the BGHW⁴⁷ work with classic bonus–malus systems in which the accident rate leads to a reduction or increase in membership fees accordingly (Deutsche Gesetzliche Unfallversicherung (DGUV) 2023).

In the interviews, the presentation of particularly exemplary and positive companies in the annual reports of the federal states was also seen as a good approach to create additional incentives for compliant behaviour.

Factors that promote the effectiveness of such systems include close cooperation between the various actors, such as companies, authorities and associations. A high level of acceptance among workers as well as clear communication and transparency are also important (especially for managers). On the other hand, factors such as lack of resources, unclear responsibilities, or too much focus on sanctions and penalties can hinder the effectiveness of such instruments.

4.3.3 Eligibility of financial incentive systems (return on prevention)

Financial incentive systems and bonuses for having reached prevention achievements have a particularly sustainable effect in companies if they show a significant improvement in the direct relationship to previous occupational accidents and non-compliant behaviour (Eichhorst and Linckh 2016). After recognition, whether financial or in the form of a certificate, a demonstrable and excellent commitment to OSH also promotes interest among potential customers or applicants and strengthens the trust of existing customers in a company. Incentive systems thus make a lasting contribution to economic success and are decisive for the external image and future viability of a company. Topics such as sustainability and social responsibility have increasingly become the focus of social attention, especially in recent years, and have a lasting influence on the acquisition of companies in times of a shortage of skilled workers (Berufsgenossenschaft Energie, Textil, Elektro, Medienerzeugnisse 2020). A study by the VBG made it clear that companies with a conspicuous market orientation were particularly easy to convince to establish an OSH management system in order to be able to add this to their portfolio for positive publicity effect (Bräunig and Kohstall 2018).

According to studies, the 'return on prevention' is clear evidence of the cost-effectiveness of OSH measures, as every euro invested in safety is returned for €2 of positive benefit. In addition, accidents are reduced, occupational illnesses are minimised and thus additional costs are saved for the company (Berufsgenossenschaft Rohstoffe und chemische Industrie 2017). A VBG study, however, argues with regard to the return on prevention that the direct economic factor and the supposed increased production rather takes a back seat, in contrast to effective image improvements that indirectly contribute to the improvement of the economic efficiency of a company. The central question here is whether the

⁴³ See: <https://www.bgbau.de/>

⁴⁴ See: <https://www.bgetem.de/>

⁴⁵ See: <https://www.bgn.de/>

⁴⁶ See: <https://www.bghm.de/home>

⁴⁷ See: <https://www.bghw.de>

companies make use of the economic benefits of the prevention and premium procedures and know about the direct connection between healthy and productive work (Bräunig and Kohstall 2018; Gutheil and Muster 2022).

According to the field research, the social partners consider the use of economic arguments to be an extremely helpful and insufficiently exploited option. Employers should increasingly be persuaded based on the potential economic profit that they will gain in the long term by a suitable OSH system.

The UVTs also agree with this in the interviews. Here, economic incentives are generally seen as a helpful means of getting employers to adopt OSH and at the same time to be able to maintain the dual OSH system and the companies in Germany through competitiveness in the capitalist economic system (Rothstein et al. 2020).

Economic incentives could trigger a 'bandwagon effect' and a 'habituation effect'. Nevertheless, economic incentives should not be given out as a matter of course, because otherwise they would grow into a natural outcome and hardly have any effect on the further development of OSH in the company.

▪ Disruptive factors in the measurement of the return on prevention

It is important to note that an isolated consideration of the financial output for prevention services is not possible. On the one hand, sick leave in companies can never be completely avoided and on the other hand, work-related stress, for example time pressure, is assessed differently by employers and workers. Accordingly, certain disruptive factors cannot be ruled out here and can lead to an unfavourable assessment of the return-on-prevention calculation.

Since an occupational health culture for the active prevention of occupational diseases and accidents cannot be measured and evaluated without interference, the approach of a holistic evaluation is becoming increasingly important. An example of this is the 'Integrative Workplace Health Management' applied in the AOK (health insurance fund),⁴⁸ where a contribution bonus is paid out that first serves as a subsidy for the establishment of a health management system and later assists in the further development of this system. Prerequisites for this system include management training and the reorganisation of working conditions. Empirical data for the management system can be collected with the help of figures on sick leave, absenteeism and accidents. By means of interviews and workshops, these figures and the developed system are checked for their quality and further developed. With this approach, however, non-monetary readable conditions, such as an increased awareness of workplace prevention, elude analysis.

Furthermore, an improvement in the interlinking of health insurance and statutory accident insurance is called for, and this is to be linked to the already existing and flexible contribution payments with their supplementary system within the statutory accident insurance. Output data of a company such as sickness rates and occupational diseases are to be better passed on from the health insurance fund to the statutory accident insurance fund and certain problems, such as long-term mental stress, are to be defined as occupational diseases. Even if the company's sphere of action and responsibility is limited here, preventive services and an adaptation of the working environment can minimise the danger of emerging psychosocial illnesses (Eichhorst and Linckh 2016).

4.4 Sanctions

An analysis of the interviews conducted shows that sanctions are considered by all interviewees to be an effective means of promoting compliance. The threat of sanctions can lead to companies intensifying their compliance efforts. The UVTs report that the mere possibility of sanctions leads to increased OSH-related behaviour among companies. The mere presence of sanctions acts as an incentive to address the necessary measures. The employers' representatives emphasise that they find a consultative approach useful in cooperative enterprises. The idea is not to impose sanctions immediately, as the enterprises are sometimes not to blame for certain circumstances. The lack of occupational physicians in Germany is cited as an example, which results in a lack of occupational physicians in the companies. In such cases, the focus could be on counselling rather than punishment. However, both social partners

⁴⁸ See: <https://www.aok.de/pk/hessen/>

emphasise that sanctions are necessary in cases of resistance to counselling, and also under aspects of justice (e.g. taking economic advantage by circumventing regulations).

The Suga-report provides the following statistics:

Table 4: Statistics on sanctions for 2021

Federal state OSH authorities – Enforcement measures in 2021	
Orders (which require the offender to undertake specific activities for the general improvement of health and safety at work)	7,985
Warnings	583
Notices of fines	2,563
Criminal charges	169
Accident insurance institutions – Enforcement measures in 2021 (UVT)	
Fines imposed on members	1,565
Fines imposed on insured persons	884
Orders according to § 19 para. 1 sentence 1 Social Code VII (in accordance with the accident prevention regulations)	12,298
Orders according to § 19 para. 1 sentence 2 Social Code VII (to avert particular risks and health hazards)	6,902
Complaints	1,151,946

Source: Bundesministerium für Arbeit und Soziales (BMAS) and Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA) 2022.

4.4.1 Sanctioning possibilities

The Federal states' Committee for Occupational Health, Safety and Technology (LASI) works with different catalogues of fines, which are continuously adapted. Although these catalogues are not legally binding, they serve as points of reference for the OSH authorities in their practice. For example, there are catalogues of fines that refer to the Workplace Ordinance, to youth employment protection and maternity protection, and to the Industrial Safety and Health Ordinance (Struck et al. 2022). In most cases, these catalogues of fines also show how certain fines are to be calculated by offering standard rates, which can then be increased by 75% each for additional persons affected, for example, as in LV 60 — which contains the catalogues of fines for working time, youth employment protection and maternity protection law (Länderausschuss für Arbeitsschutz und Sicherheitstechnik (LASI) 2020a). Nevertheless, the amount of the fines is influenced by other factors, such as how serious the infringement actually is, how large the company is and how many people in the company are actually affected by the relevant case (Struck et al. 2022). In the interviews, it was emphasised that the fines imposed on the UVTs often depend on the financial gain that a company has made by failing to comply with a requirement, for example, by not employing an OSH professional. However, it is emphasised on the part of the state authorities that judges often tend to reduce fines as they do not consider many cases to be particularly serious.

In terms of the classic sanctioning procedures, the UVTs have at their disposal the penalty payment (public law) and/or the fine (Law on Administrative Offences (OWiG)). Both options are based on different legal foundations and entail different procedural rules and process flows (Behrendsen et al.

2023). The coercive fine procedure can theoretically be used repeatedly until a certain order is implemented by the sanctioned company, whereas the fine procedure represents a dedicated sanctioning means that punishes a violation of an accident prevention regulation or an enforceable order (Behrendsen et al. 2023). For the UVTs, sanctions are closely linked to unannounced inspections. Especially in the case of unannounced inspections, for example at construction sites, regulatory offences are repeatedly punished (Merz 2023).

In all respects, the inspections carried out and all investigations relevant to the penalty payment threat must be adequately documented. The order, the threat of a periodic penalty payment and the determination of the periodic penalty payment are administrative acts pursuant to § 31 of the Tenth Book of the German Social Code X and are therefore open to appeal. In order to ensure legal certainty, but also to give the labour inspectors security in the complex administrative and legal structure, the labour inspectors have at their disposal corresponding aids for action and assistance with the procedure for imposing a periodic penalty payment (Behrendsen et al. 2023).

There are also procedural rules for the imposition of a fine that must be observed by the labour inspectors. For example, there are several opportunities (on the part of the person concerned) to comment on the allegations and to appeal, which in turn requires further examination steps on the part of the UVTs. The situational conditionality of certain violations of the orders makes sanctioning more difficult. As soon as a follow-up review takes place, the order is usually hardly useful due to a changed situation (Behrendsen et al. 2023).

The statutory UVTs are also able to make recourse claims under § 110 of the Social Code VII. If an insured event has been caused by intentional or grossly negligent actions on the part of the company, the company can be held responsible for the liability. On the one hand, this results in financial relief for the UVTs, but at the same time the company is sanctioned and possibly pressured to act in a compliant and fair manner.

▪ **Cooperation with other authorities and information sharing about fines imposed**

The labour inspectors of the federal states must maintain company and trade secrets in their monitoring activities and may only disclose the information obtained to the UVT in cases regulated by law, in the prosecution of unlawful acts or in the fulfilment of tasks regulated by law for the protection of insured persons or inform the corresponding competent authority for the protection of the environment. The cooperation of the state OSH authorities with other authorities is regulated for individual cases in accordance with § 23 (3) of the OSH Act and arises on an ad hoc basis in the event of concrete indications, for example, with the main customs offices, tax offices, social welfare institutions, pension insurance institutions, social insurance institutions and health insurance funds.

▪ **Cross-border collaboration**

Germany shares common external borders with eight EU Member States and Switzerland and can extend its collaboration with the European Labour Authority (ELA). According to the Act Implementing Council Framework Decision 2005/214/JHA of 24 February 2005 on the Application of the Principle of Mutual Recognition to Financial Penalties, enacted on 18 October 2010 (BGBl. I S 1408), it is possible to enforce financial penalties in administrative decisions on administrative offences across borders in the EU. These sanctions can be imposed on natural persons as well as on legal persons such as companies (Länderausschuss für Arbeitsschutz und Sicherheitstechnik (LASI) 2020b).

4.4.2 Corruption, regulatory resistance and under-reporting

The Senior Labour Inspectors Committee (SLIC) report's criticism of the sanctions imposed by the OSH authorities of the federal states and the UVTs mainly referred to the 'too small' fines imposed in the sanctioning process. On the one hand, this was due to the fact that the amount of the fines was not sufficient, and on the other hand, it could be seen that most grievances in the companies were settled with remarks and verbal admonishments without any actual sanctions being imposed. Furthermore, the report suspects a general reluctance on the part of the labour inspectors to impose sanctions. Here, the labour inspectors' own understanding of their role also seems to have a great influence (Geschäftsstelle des Länderausschusses für Arbeitsschutz und Sicherheitstechnik 2018).

This argumentative thrust is supported by statements on the part of the Authority for Occupational Safety and Technical Security in Mecklenburg-Western Pomerania when it does not classify sanctions as the 'primary objective' of the OSH authorities (Ministerium für Arbeit, Gesundheit und Soziales 2020). In addition, sanctions can be avoided, for example, if companies deliberately do not report occupational accidents. There are various motives for not reporting, such as trying to avoid damaging the image of a company or enterprise, or to avoid financial losses (Geschäftsstelle des Länderausschusses für Arbeitsschutz und Sicherheitstechnik 2018).

The findings of our field research suggest that resistance to regulation, and in particular under-reporting by labour inspectors, is largely due to the significant administrative burden involved in imposing sanctions. In most cases where few sanctions are imposed, this is not necessarily because labour inspectors are too lenient or inhibited about excessive fines. Rather, the proportionality of the effort involved in the follow-up itself is a crucial factor.

While there may be situations where labour inspectors are concerned not to overburden employers, testimony at both the state and federal level indicates that the main reason for the limited use of sanctions is the burdensome procedures and limited human resources. The fact that the fines imposed go to the federal state treasury and not to the authority organisation that issued the fine notice could also contribute to the dissatisfaction of labour inspectors, according to the results of the field research. Therefore, the approach of repeated monitoring would probably be chosen instead of one-off fines.

It emerges from the interviews that corruption is considered almost non-existent in German OSH. Nevertheless, it is acknowledged that the possibility of corruption exists, especially when companies are supervised by the same labour inspector over longer periods of time or structural entanglements prefer particular interests instead of being oriented towards general interests in OSH. Nevertheless, this is not seen as a relevant problem.

4.4.3 Amount of fines

The fines of €5,000 and €30,000 that have been in place since the beginning of 2021 represent legally doubled increases. With the advent of the new OSH Inspection Act, new — sector-related — fines have also been introduced at the same time. The meat industry, for example, should also be better controlled by increasing the fines. For example, in order to prevent the joint management of a meat company by several entrepreneurs or owners, the maximum fine was raised to €500,000. Other subordinate administrative offences can also be sanctioned with fines of €50,000 or €30,000 according to § 7 of the OSH Inspection Act (ArbSchKG) (Bundestag der Bundesrepublik Deutschland 2020). It will become clear in the upcoming annual reports whether the shift to higher fines will also create significant changes in the imposition of sanctions and penalties. However, there remains the challenge, identified in the interviews with country representatives, that sanctions are often mitigated when judges assess a particular case as not serious enough, especially when longer-term causalities are less obvious.

4.5 OSH strategy in Germany

The forthcoming section 4.5.1 introduces the GDA and specifically focuses in section 4.5.2 on delineating the parameters of the third period within its operational framework, spanning from 2021 to 2025. The GDA is a permanent platform of the federal and state government and UVTs that is anchored in the OSH Act and the Social Code VII. Originally stemming from European and international commitments, the GDA is now firmly established in the German OSH system. The aim of this alliance is to continuously modernise the OSH system in Germany in line with the changing world of work and to create incentives for companies to further strengthen the safety and health of their workers.

Furthermore, the subsequent section, denoted as 4.5.3, intricately unfolds the strategic landscape through an exploration of initiatives spearheaded by individual institutions and actors. This segment aims to offer a comprehensive overview of parallel endeavours that partially augment and intersect with the GDA's overarching goals.

4.5.1 The Joint German Occupational Safety Strategy (GDA)

The GDA was launched to improve OSH. A special feature of the German strategy is that it is embedded in the OSH Act, which called for joint work by the Federal Government, the federal states and the OSH

authorities to enable effective and uniform OSH and to raise awareness of and motivate companies to engage in OSH (Bundestag der Bundesrepublik Deutschland 1996).

The GDA thus sets itself the goal of creating a general awareness of safety and health at work in Germany, as well as developing OSH objectives together with its cooperation partners, implementing them in a uniform form and regularly evaluating its work (SIGUV GbR 2019). Special importance is attached to issues such as enabling long-term employment and lifelong learning. Through its commitment, social security systems should be relieved and companies are made more competitive and sustainable. In addition, it offers training and seminars for workers, their managers and OSH professionals, as well as high-profile campaigns for OSH. For SMEs in particular, the GDA offers targeted assistance, recommendations for action, psychosocial risk assessments and best-practice examples (Gutheil and Muster 2022).

The GDA is politically steered, further developed and evaluated by the National Conference on OSH (NAK). The NAK has been in existence since 2008 and is composed of equal representatives of the Federal Government, the federal states and the statutory UVTs. Representatives of the umbrella organisations of the social partners also participate in an advisory and supportive capacity. The NAK is also advised by the annual OSH Forum and also receives expert support from the office set up for this purpose at the BAuA (Gemeinsame Deutsche Arbeitsschutzstrategie (GDA) 2010). According to the OSH Act passed by the Federal Government, all institutions whose field of action lies within safety and health at work can turn to the NAK with proposals (Bundestag der Bundesrepublik Deutschland 1996).

In addition to the familiar bodies, the Federal Government has established the 'Committee for Safety and Health at Work' (ASGA), which advises the Federal Ministry of Labour and Social Affairs (BMAS) against the background of new GDA results on the new OSH Inspection Act of 2020, as well as also discussing priority topics together with the GDA (Bundesministerium für Arbeit und Soziales (BMAS) and Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA) 2022).

With the help of this close collaboration with the aforementioned cooperation partners, specific work programmes are developed that are geared to specific requirements of the respective GDA period and are implemented uniformly throughout the country (Lauenstein 2018).

4.5.2 Implementation of the strategy into labour inspection

- **Initial situation**

Although the legal basis exists for the standardisation of a joint advisory and monitoring strategy in accordance with the OSH Act and Social Code VII, the SLIC report went on to criticise the lack of a functioning model in practice that harmonises the diverse approaches and concepts of the Federal Government, the federal states and the statutory UVTs (Geschäftsstelle des Länderausschusses für Arbeitsschutz und Sicherheitstechnik 2018).

On the one hand, there was uncertainty among many of the actors involved as to whether a unified strategy in monitoring action would be a sensible measure at all. On the other hand, the implementation of an active strategy proved to be extremely challenging due to dwindling human resources. In addition, the lack of effectiveness of the knowledge and information flow with regard to the practical application of the work programmes and guidelines was criticised. Despite repeated audits of the guidelines by the NAK, it remained unclear how the labour inspectors actually applied the knowledge contained in the work programmes and guidelines in their daily work (Hägele 2019).

- **Third GDA period (2021-2025)**

The third GDA period responds to this criticism with the primary goal of more standardised and coordinated action by the Federal Government and the federal states. At the same time, new objectives, action points and criteria are defined for each period, which are intended to enable concerted and better coordinated action. Thus, the third GDA period responds to the deficits identified in previous years with a thematic focus on the safe handling of carcinogenic hazardous substances, mental stress and musculoskeletal strain with the help of risk assessment. In this period, the target group is defined primarily as micro-enterprises (up to nine workers), small enterprises (up to 49 workers) and medium-sized enterprises (up to 250, more likely 100 workers) (Gemeinsame Deutsche Arbeitsschutzstrategie (GDA) 2020).

In addition, the companies are informed, sensitised and educated about the handling of carcinogenic hazardous substances, mental stress and musculoskeletal strain as part of the risk assessment. The following three work programmes were set up for this purpose:

- The work programme 'Musculoskeletal Strain' (MSS/MSB) strengthens the prevention work on musculoskeletal strains and risks by using an integrated approach – through training, qualification, counselling and tips on behavioural prevention.
- The 'Psyche' work programme focuses more on mental health. Psychosocial risk factors and their impact on the mental health of workers must be properly addressed at workplace level. For this purpose, OSH players are to be trained to improve their knowledge and skills on the topic.
- The 'Safe handling of carcinogenic hazardous substances' (KEGS) work programme is aimed at companies that come into contact with one or more carcinogenic hazardous substances in their work. For this purpose, the companies are sensitised and (existing) prevention approaches are systematised.

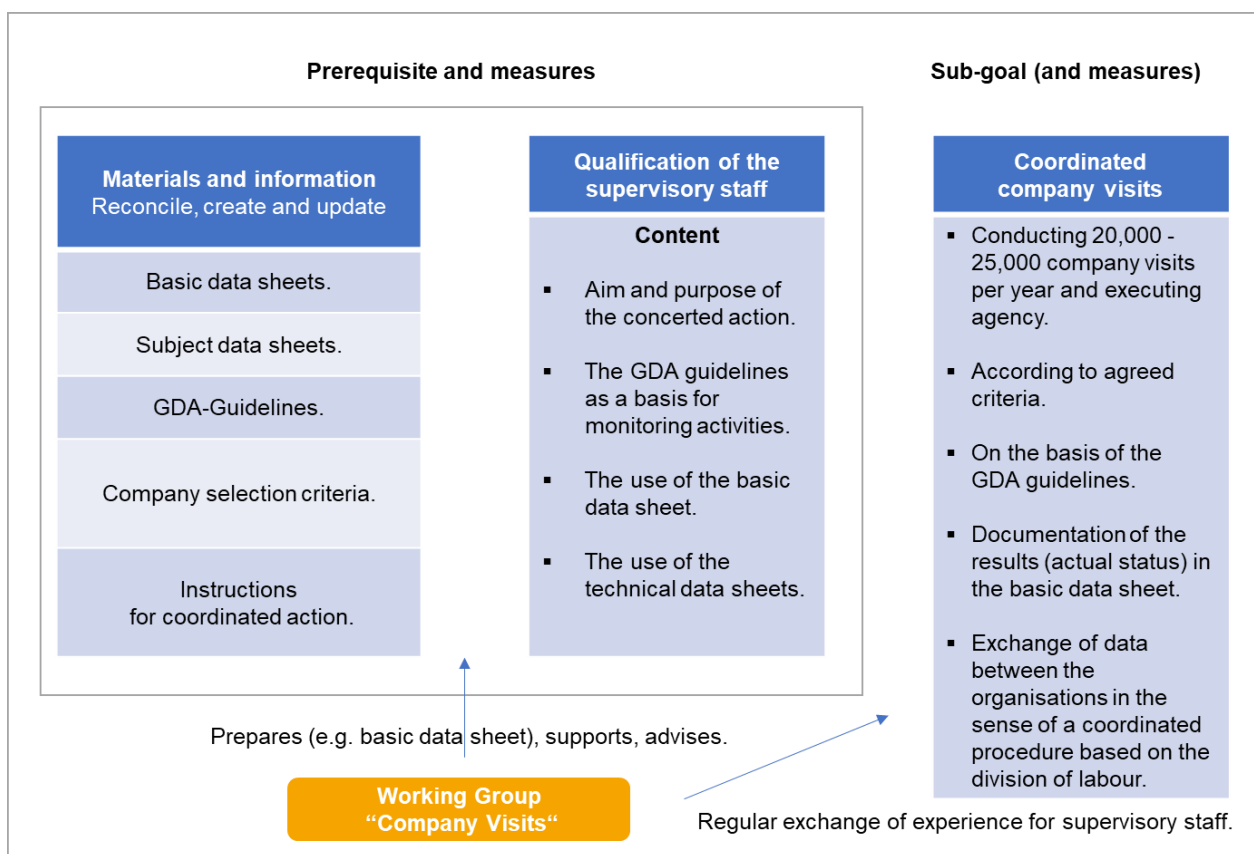
Risk assessment becomes the focus of attention during this period. The goal here is a comprehensive integration of appropriate risk assessments in the companies. In order to be able to successfully pursue this goal, the standards for monitoring and advising companies are also being renegotiated and redefined. The Working Group 'Company Visit' set up for this purpose consists of representatives of all institutions and is working on qualifications, training, instruments and measures to promote the development of a uniform model for monitoring and counselling activities (Gemeinsame Deutsche Arbeitsschutzstrategie (GDA) 2020).

- **Working Group 'Company Visit'**

The Working Group 'Company Visit' endeavours to promote and consolidate a standardised monitoring and advisory process (see Figure 6). On this basis, 200,000 company visits are to be carried out. Using a standardised 'basic data sheet' and corresponding 'specialised data sheets', the inspections are to be documented and exchanged between the institutions. The 150,000 companies are selected by the federal states and the UVTs based on agreed criteria that are optimised according to the risk. The remaining 50,000 inspections are selected at random. At least 10% of the companies are questioned within the framework of a risk assessment with the aid of the technical data sheets on the main topics of this GDA period; the remaining questions from the labour inspectors follow the basic data sheet.

The purpose of the company visits is to check the adequacy of the risk assessments. For this purpose, it is essential that the labour inspectors of the statutory UVTs, as well as the labour inspectors of the federal states, are adequately trained and qualified and informed about the relevant instruments and guidelines, so that standardised and coordinated company inspections are possible (Gemeinsame Deutsche Arbeitsschutzstrategie (GDA) 2020). More information on the individual criteria and benchmarks for the uniform company evaluation can be found in section 4.6.

Figure 6: Scheme of effects for achieving the sub-objective "Coordinated company visits"⁴⁹



4.5.3 Strategic initiatives of individual institutions/actors

Additionally to the third GDA period and the associated priority topics (see section 4.5.2), the BAuA would like to focus increasingly on research for the further development of OSH, based on the 'lesson learned' examples from the coronavirus pandemic (Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA) 2021). Furthermore, the DGUV and the Institute for Work and Health at the DGUV (IAG)⁵⁰ are working on behalf of the society for international cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit, GIZ)⁵¹ and with the financial support of the Federal Ministry for Economic Cooperation and Development (BMZ)⁵² to improve working conditions in the textile industry. This project is part of a programme for safe supply chains and has been working closely with the country of Pakistan since 2018. Together with the German Social Accident Insurance Institution for the energy, textile, electrical and media products sectors (BG ETEM) and the German Social Accident Insurance for raw materials and the chemical industry (BG RCI), qualifications and counselling sessions are offered, based on the 'Vision Zero' prevention strategy (Bundesministerium für Arbeit und Soziales (BMAS) and Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA) 2022).

▪ Vision Zero

Vision Zero in OSH is an internationally recognised approach to improving safety and health in the workplace. This vision strives to achieve the goal of reducing occupational accidents, occupational diseases and work-related fatalities to zero. Vision Zero is based on the belief that every occupational accident and illness can and should be prevented.

⁴⁹ According to Gemeinsame Deutsche Arbeitsschutzstrategie (GDA) 2020.

⁵⁰ See: <https://www.dguv.de/iag/index.jsp>

⁵¹ See: <https://www.giz.de/de/html/index.html>

⁵² See: <https://www.bmz.de/de>

Some of the UVTs, such as the BG RCI, participate in the global Vision Zero initiative with their prevention awards and distribute their awards according to these principles. In this way, they contribute to a considerable extent to a general improvement in working and safety conditions in everyday life (Berufsgenossenschaft Rohstoffe und chemische Industrie 2021).

The German Social Accident Insurance for Transport, Post-logistics and Telecommunications (BG Verkehr),⁵³ which is also linked to the Vision Zero mission, has developed a new bonus system with its managers and workers: the monthly bonus meeting. In this meeting, managers and workers meet and discuss possible improvements in prevention and occupational health management. This gives rise to a shared sense of responsibility and a certain mindfulness that is lived by everyone (Berufsgenossenschaft Verkehrswirtschaft, Post-Logistik, Telekommunikation 2022).

4.6 Data for prioritising the selection of companies

In the following sections different approaches of the federal state OSH authorities (see section 4.6.1) and the UVTs (see section 4.6.2) to company selection are presented, whereas section 4.6.3 introduces the obligation to exchange data from the inspection visits between the federal state OSH authorities and the UVTs. This obligation to exchange data is laid down in the OSH Inspection Act.

4.6.1 Company selection at federal state OSH authorities

Section 21 (1) of the OSH Act (ArbSchG) states that the federal state OSH authorities should base their selection of companies on the risk potential. In addition, the individual OSH authorities of the federal states also work with different procedures for the actual selection of establishments.

Although the risk potential is a central focus of the selection of establishments, in the interviews conducted the federal states emphasise that the day-to-day selection of establishments is not determined exclusively based on theoretical models, but often by experience. Due to the personnel resources and the existing time pressure, the labour inspectors would often determine the company selection according to an intuitive judgement. In the best case, this selection is also supported by statistical data.

As a common basis for action, the Federal Committee for Occupational Safety, Health and Technology (LASI) provides a concept for prioritising company inspections in its publication LV 1. The four-digit economic classification system (NACE) is used for the cross-national classification of establishments. The evaluation of the establishments themselves is carried out based on various criteria (e.g. accident trends) and is oriented towards four different categories:

- Mechanical impacts
- Material impacts
- Physical strain
- Psychological strain

The relevant companies are then assessed on the basis of the following four categories:

- 0: No significant risk
- 1: Low risk
- 2: Medium risk
- 3: High risk

Based on the resulting ratings, the inspectors can select the companies to be visited. It is quite possible that different risks within individual economic classes will be taken into account (Länderausschuss für Arbeitsschutz und Sicherheitstechnik (LASI) 2020b).

Nevertheless, the shortage of human and material resources on the part of the federal states regularly leads to a failure to achieve the agreed inspection quota (25% of net working time) of active and, above

⁵³ See: <https://www.bg-verkehr.de/>

all, risk-oriented factory inspections. For this reason, the federal state OSH authorities can usually only organise their inspections reactively according to complaints or accidents (Kunz 2020).

4.6.2 Company selection at the UVTs

The statutory mandate of the UVTs covers the various aspects of prevention, rehabilitation and compensation. For the UVTs, for example, it is also obvious to use the incidence of accidents and occupational diseases as a criterion for selecting companies (Arenz et al. 2023). Due to the different departments, a wealth of statistical data can also be compiled, which in turn makes it possible to determine specific key risk areas in the sectors and companies. This should enable targeted and more effective monitoring, focusing for example on working conditions where workers are exposed to a high risk (Schöpf et al. 2023). In the interviews, the use of risk-oriented algorithms that use data mining to select the establishments to be monitored is emphasised by the UVTs. The traditional method of selecting establishments, which is based on classic accident reports, is proving to be inefficient because the quality of the data is often insufficient and this information is not always updated carefully and in good time.

In some cases, the statutory UVTs set different priorities for the criteria and standards of the company selection.

The German Social Accident Insurance Institution for the foodstuffs and catering industry (BGN), for example, has developed a key figure (risk index (RI)) that can be used by labour inspectors to determine the selection of establishments more thoroughly: the developed risk index (RI) should not only serve as a key figure for comparison between the respective companies but should also be able to show the development of risks over time in an individual company (Epple and Kutschbach 2021).

For this purpose, six factors (see left column 'Subject area') were established, from which the RI can be calculated (see Table 5):

Table 5: Factors of the BGN RI based on Epple and Kutschbach 2021

Subject area		Data used in the calculation		Factor	
Company size	Number of workers		0-1	2	
DGUV regulation 2	Business sector		0	1	2
Accidents	Accident rate and accident costs standardised to workers		0-2		
Bonus system	Successful participation		0	1	
Occupational diseases	Occupational diseases indications quota standardised to the number of workers		0	1	
OSH organisation	Evaluation of the OSH organisation at each visit by the labour inspectors		0-2		
Risk Index	Sum of individual factors				0-10

Different calculation models were developed for the six factors. The inclusion of labour inspectors was also of particular importance in the creation of the RI, since an RI — if it is to be a good point of reference, according to Epple and Kutschbach — could not be calculated exclusively from the occurrence of accidents.

It is no news that due to the enormous number of (new) companies, a comprehensive (and also regular) monitoring activity is difficult to implement (Arenz et al. 2023). However, effective surveillance may (still) be possible if companies are selected on the basis of selected criteria and prioritisation criteria. In this

context, digital assistance systems for the selection of establishments are proving to be an innovative approach that is increasingly being disseminated and used.

Other UVTs follow alternative principles, such as scheduling company audits every three years for companies with up to 49 workers and every two years for companies with up to 149 workers. Companies are selected (reactively) based on accident events, specific occupational diseases, individual prevention cases, complaints or within the framework of initiatives arising from the programmes of the GDA.

AI systems support this selection process by, for example, being able to calculate the probability of certain workplace accidents occurring.

4.6.3 Data exchange between the federal states and UVTs

With the OSH Inspection Act, data communication between the federal states and the UVTs has also been established in law. From now on, there will be a mutual exchange of information on company inspections between the federal states and the UVTs. Thus, the specific information density that must be exchanged reciprocally is also laid down in law. The following list contains all the information that is exchanged between the federal states and the statutory UVTs:

- name and address of the company;
- address of the visited company site (if not identical with number 1);
- identification number;
- branch of business of the company;
- date of the visit;
- number of workers at the time of the visit;
- existence of a workers' representation;
- type of technical safety support;
- type of company medical care;
- assessment of the organisation of OSH, including instruction, occupational health precautions, first aid and other emergency measures;
- evaluation of risk assessment (including identification of hazards, determination of measures, review of implementation and effectiveness), and documentation; and
- administrative action in the form of findings, orders or fines.

The corresponding data are transferred to a corporate entity that is responsible for the appropriate distribution of these data to authorities or UVTs in accordance with data protection law.

It was pointed out in the interviews that there are actually two different data exchange processes: on the one hand, data exchange takes place between the UVTs and the federal states; on the other hand, the federal states pass on their data to the BAuA, as regulated by the OSH Inspection Act (Bundestag der Bundesrepublik Deutschland 2020).

The area of responsibility of the Federal Centre includes the analysis of the annual reports of the federal states, including the evaluation of the inspection rate. The results obtained are to be used to include them in the statistical report on the status of OSH and on the incidence of occupational accidents and diseases in the Federal Republic of Germany.

One part of the GDA's work in this regard involves the Cusa prevention tool, which is intended to facilitate the two-way exchange of data between federal state OSH authorities and UVTs. The data collected by the OSH authorities and the UVTs will be stored anonymously on a server and will be available there within a certain period of time for GDA evaluations and for mutual exchange. This innovative tool is also intended to avoid duplications of company visits by the UVT and federal state OSH authorities at the same company and to make existing information available, and the responsible inspector can see how the other actor has assessed the situation (SIGUV GbR 2019).

4.7 Company visits procedure

The following sections present the inspection methods and contents of the federal OSH authorities (section 4.7.1) and the UVTs (section 4.7.2). Section 4.7.3 presents the GDA's coordinated guidelines on risk assessment and the organisation of OSH as a common basis for ensuring that monitoring and assessment are carried out in sufficient depth and in accordance with certain minimum standards during the mandatory GDA company visits by the federal state OSH authorities and the UVTs. This will be specified with the basic data sheet and the specialist data sheet, as presented in section 4.7.4.

4.7.1 Inspection methods and contents of the federal states

The federal state OSH authorities generally carry out a 'system assessment' including a dedicated compliance audit. The compliance audit systematically examines whether the company complies with relevant OSH regulations as well as with its own obligations, and thus whether it acts in conformity with the regulations.

The system assessment is based on the following four inspection levels (Länderausschuss für Arbeitsschutz und Sicherheitstechnik (LASI) 2011):

- determining and verifying the existence of organisational regulations through interviews, questioning of company function owners (managers, representatives and OSH professionals);
- determining and checking the existence of organisational regulations by inspecting 'regulating' documents;
- recording and checking whether and how organisational regulations have been implemented; and
- recording and checking the level of OSH at workplaces (compliance audit).

The audit of the structural and procedural organisation is based on 15 organisational elements that were formulated by LASI and on which the federal states and the UVTs finally also agreed within the framework of the GDA system audit (see below).

In the case of partial inspections (e.g. in the context of complaints or visiting operating sites), mandatory core elements of the system assessment are waived by way of exception.

4.7.2 Inspection methods and contents of the UVTs

The UVTs distinguish between two types of company inspection. On the one hand, there is the 'inspection with system assessment' (BmSys) and, on the other hand, the 'inspection with evaluation of the company's OSH' (BmAP). The BmSys is intended to comprehensively examine the existence of the requirements in accordance with the OSH Act (ArbSchG) and DGUV Regulation 1, while the BmAP describes all inspections that do not carry out a complete system assessment (Ernst et al. 2023).

There is a wide variation in the assessment of OSH processes. They can be carried out actively or on an ad hoc basis and can cover the entire company or only parts of it, including individual workplaces. In some cases, follow-up inspections and inspections triggered by situations or special actions (investigations following occupational accidents or diseases or inspections following complaints) are also included.

4.7.3 Common basis for action

It is mandatory that the GDA's coordinated guidelines on risk assessment and the organisation of OSH are applied to the inspections with 'inspection with system assessment' (BmSys), so that monitoring and assessment is carried out in sufficient depth or in accordance with certain minimum standards (Ernst et al. 2023).

The GDA guidelines are of central importance as a common basis for action, in particular the guideline on risk assessment and the guideline on the organisation of OSH.

In addition, there are further guidelines provided by the GDA regarding monitoring action:

- Guideline SARS-CoV-2 epidemic;

- Guideline OSH in the case of cooperation between several employers within the framework of contracts for work and services;
- Guideline Counselling and monitoring of mental stress at the workplace;
- Guideline Planning and execution of construction projects;
- Guideline on minimising dust during construction work; and
- Guideline on risk assessment and documentation.

According to the guideline on risk assessment and documentation, the respective labour inspector is encouraged to address and control the risk assessment of the visited enterprise by, among other things, randomly checking the implementation of the risk assessment at individual steps of the respective workplaces.

In general, there are three scenarios that are pointed out in the guideline:

- The risk assessment has been carried out adequately.
- The risk assessment has not been carried out adequately.
- The risk assessment has not been carried out.
- Guideline for the organisation of OSH.

The guideline on the organisation of OSH covers two different scenarios. On the one hand, it serves as a guide for the labour inspector to help the company implement or improve its OSH organisation; on the other hand, the guideline addresses the level of consultation when the company wishes to implement the introduction or improvement of an OSH management system. Whereas in the first case the initiative for consultation comes from the statutory UVT or the federal state OSH authority, in the second case the company addresses an enquiry to the statutory UVT or the federal state OSH authority. The two procedures have completely different scopes of consultation, which cannot be discussed in detail here. The focus here will be on the first form of consultation and monitoring, that is, consultation and monitoring by the labour inspectors regarding the company's OSH organisation.

The monitoring and consultation of the OSH organisation focuses on the OSH structures, that is, the organisational structure, and the OSH-relevant processes of the organisation, that is, the process organisation. The guideline contains 15 features that define and record those legal obligations of the companies within the framework of the OSH organisation:

1. Responsibility and delegation of duties.
2. Monitoring of compliance with the assigned duties and control of the performance of the duties.
3. Fulfilment of the organisational obligations arising from the Act on Occupational Physicians, Safety Engineers and Other Specialists for occupational safety (OSH Expert Act, or ASiG) (Bundestag der Bundesrepublik Deutschland 1973).
4. Ensuring that managers, officials and workers with specific tasks have the necessary OSH qualifications.
5. Organising the implementation of the risk assessment.
6. Suitable regulations for the implementation and documentation of instructions.
7. How to deal with official requirements, e.g. approvals, permits, letters of inspection.
8. Handling legal provisions and technical and company regulations, especially in the event of changes to legal provisions.
9. Involvement of special function owners.
10. Communication of OSH.
11. Organisation of preventive occupational healthcare.
12. Regulations on planning and procurement.
13. Information and involvement of external companies.
14. Integration of temporary workers (e.g. temporary workers, trainees).
15. Organisation of emergency measures/first aid.

The 15 elements are used to define the main focus points of the advisory and monitoring activities of the UVTs and federal state OSH authorities. Points 1-6 represent the minimum standard of inspection, while the remaining points 7-15 are additional inspection criteria that can be monitored depending on the operation and situational conditions. All points are discussed in detail in the guideline by means of

exemplary questions and criteria and can be used by the respective labour inspector as supporting aids (Gemeinsame Deutsche Arbeitsschutzstrategie (GDA) 2017).

4.7.4 Documentation related to company visits

With the third GDA period, the steps to unify the monitoring and advisory strategy of federal state OSH authorities and UVTs will be further formalised and standardised. A matrix created for this purpose shows all the instruments, services and support (see list below) that have been/will be created for the three GDA work programmes. This is intended not only to create a standardised qualification and training basis, but also as an overview of support services for the labour inspectors themselves. These instruments and support services are subdivided according to the following categories and provide different offers for the work programmes accordingly:

- Development and implementation of accompanying processes.
- Development of guidelines for action.
- Support materials for monitoring and advising the companies.
- Support for the training of labour inspectors, if necessary, in coordination with the Qualification Working Group.
- Conclusion of cooperation agreements.
- Proposals for the sustainable continuation of instruments and support aids (online tools, guidelines, etc.).

- **Basic data sheet**

The basic data sheet contains the most important elements of the GDA guidelines and is intended to document and standardise the results of the company visits with system assessments. The sheet focuses on risk assessment and the organisation of OSH and is an important step towards standardising company assessments between the federal states and the UVTs.

The basic data sheet is divided into four sections that allow for chronological assessment:

1. General operating data
2. OSH organisation
3. Risk assessment
4. Overall result

- **Specialist data sheet**

In addition to the basic data forms, at least 10% of the companies are surveyed and evaluated within the framework of the Working Group 'Company Visit' with the help of the technical data forms on the three key topics of the third GDA period. For the labour inspectors, not only the technical data forms themselves are available, but also sophisticated tutorials, training and qualification modules ([case study DE6](#)),⁵⁴ information and operating sheets, and exchange forums.

With the help of the technical data sheets and the training modules, labour inspectors can follow a fixed procedure while carrying out the company visit. This is to ensure a uniform and formally equivalent operational assessment between federal state OSH authorities and UVTs. For example, the technical data sheet for the 'Psyche' work programme is a three-page document that deals with potentially critical manifestations of mental stress in the company, examines measures for key factors of mental stress, opens up the space to record suggestions for improvement and, finally, ends in a result that evaluates the risk assessment with mental stress as appropriate, not appropriate or not carried out. In a final step, it is possible to record which derived administrative measures are proposed by the labour inspector (verbal statement / advice; inspection letter / report; order / penalty payment; administrative offence procedure).

⁵⁴ The case study is available at: <https://osha.europa.eu/en/publications/germanys-programme-safe-handling-carcinogenic-hazardous-substances-kegs-supporting-occupational-safety-and-health-compliance-case-de6>

The trade unions point out in the interviews that the subject data sheet 'Psyche' is also an important step so that the labour inspector also controls the assessment of mental (work) stress. Since the subject area 'Psyche' is still often bypassed during inspections and thus also leads to 'under-reporting', the specialist data forms can possibly counteract this problem.

▪ **Working Group Evaluation**

The Working Group Evaluation (EGE) has dealt with the planning and implementation of the evaluation of the GDA, and a specialist evaluation unit was also set up for this purpose in 2019. The activities of the GDA evaluation take place at various levels:

- Coordinated company visits: Impact of the visits and uniformity of execution.
- Work programmes: Effects of the measures developed, user-friendliness and comprehensibility of the products created, and evaluation of the training courses offered.
- Process evaluation: Continuous improvement of internal processes of the GDA and its committees.
- Survey of companies and workers: Representative random samples at three-year intervals on the implementation of safety and health in companies, with a focus on basic organisational obligations and assessment of working conditions, supplemented by current key topics if necessary.

▪ **Challenges mentioned**

The interviews depict two prominent strands of criticism. On the one hand, the existing exchange of data between the federal states and the UVTs is criticised. Here, for example, questions are raised as to whether the density of information to date is sufficient, and which data are actually important for effective cooperation and should therefore be exchanged at all. Some representatives demand that data on the history of measures implemented internally should be relevant.

In addition, some representatives of the UVTs reproach the federal state OSH authorities for not yet being able to meet the new requirements for the joint exchange of data and for not being able to provide the required data. There is a general tendency across institutions to keep data to themselves and not to share them.

Regarding the practical selection of establishments, the UVTs have internal accident data at their disposal, which can be used by the labour inspectors to select establishments with a high accident burden. However, these data usually remain accessible to the federal state OSH authorities only to a very limited extent. In this context, further alignment processes will be necessary (Kunz 2023).

The second strand of criticism concerns the unification and standardisation of inspection criteria and procedures. Here it was repeatedly emphasised in the interviews that the federal states are tailored to system assessments with a focus on compliance in their inspections, while the statutory UVTs actually have no tradition in system assessment. This leads not only to pressure to adapt on the part of the UVTs but also to general incompatibility problems between the data and different IT systems. For this reason, the federal states emphasised that uniform assessment standards and assessment sheets would give labour inspectors a sense of security, while many representatives of the UVTs considered the GDA monitoring methods to be too formal and inefficient.

Contrary to the idea of promoting the consolidation of the monitoring results of the federal states and the UVTs and creating standardisation and uniformity in the inspection criteria and procedures, the UVTs emphasise that both institutions are assigned different statutory tasks according to the law and are therefore assigned complementary areas of responsibility. This complementarity, however, is precisely the strength of the German OSH system, which should be largely expanded, as demonstrated, for example, by the successful cooperation of the UVTs with the federal and state governments during the pandemic (Kunz 2023).

How the exchange of data will ultimately develop remains to be seen due to the new basis for action (OSH Inspection Act, BfSUGA) (see section 4.2). These lines of criticism will have to be re-evaluated after some time has elapsed.

4.8 Transferability

4.8.1 Advantages and disadvantages of the dual OSH system

Accordingly, different perspectives on the dual structure of the OSH system in Germany emerge from the interviews with the various OSH institutions. The Federal Government sees the highly differentiated expertise as a major advantage, which makes it possible to monitor and provide targeted advice on a sector-specific basis, while at the same time implementing uniform standards across the board. This position is confirmed by the UVTs, which point to the complementary structure of the system, which enables a targeted division of tasks. While certain areas tend to be covered by the state (e.g. working time regulations, maternity protection, environmental aspects), prevention and advice in particular are more the responsibility of the UVTs, although not exclusively.

However, this advantage is also seen by the statutory UVTs as a disadvantage, since the state side, with its strong focus on monitoring activities, is considered by the UVTs to be low in efficiency. There are also clear differences here when comparing the two sides' understanding of supervision: while strict compliance with legal requirements is less of a priority for the UVTs than for the state agencies, the UVTs' focus is more on prevention and reducing accident figures. While one side calls for a standardisation of labour inspection activities for reasons of increased efficiency and is increasingly striving for this within the framework of the GDA specifications, other voices from the UVTs are calling for the dual structure not to be abandoned and for centralisation to be sought, but for both sides to be strengthened in their expertise and specificity. The different institutional and legal frameworks of the federal states and the UVTs can complement each other and thus lead to a holistic approach.

4.8.2 Transferability to EU Member States

In the interviews, the federal states referred retrospectively to the development and success of the GDA-ORGcheck.⁵⁵ This tool offers SMEs the opportunity to carry out a self-check on OSH organisation using various check modules (e.g. responsibilities and tasks / risk assessments / legal provisions, etc.). This tool has been used by many companies and therefore has a transfer potential to other European countries.

The employers' representation emphasises that sector-specific monitoring/supervision is a central element for effective and, above all, competent labour inspection activity. Here, too, there is a transfer potential to other EU countries in that qualification, competence and other training modules further specify the labour inspection activity in certain areas.

⁵⁵ See: <https://www.gda-orgcheck.de/daten/gda/index.htm>

5 Prevention services and supporting compliance: Results of desk and fieldwork research

This section focuses on prevention services and their performance regarding compliance in the German OSH system.

Section 5.1 systematically elucidates the comprehensive spectrum of prevention services within the domain of German OSH. This section meticulously outlines the roles assumed by various actors, delineates their respective tasks and expounds upon the legal foundations that underpin their operational frameworks. Furthermore, this section delves into innovative models for enhancement, exemplified by the 'alternative, demand-oriented supervision plus' and the 'centre model'.

Addressing the exigencies posed by a lack of data regarding the nature and coverage of supervision, section 5.2 critically engages with the challenges inherent in data scarcity. Subsequently, section 5.2.1 meticulously catalogues key reports containing data on prevention services, facilitating the identification and formulation of existing data needs (see section 5.2.2).

The imperative matter of enhancing accessibility to hard-to-reach enterprises takes centre stage in section 5.3. Within this context, diverse approaches (e.g. the 'pilot function') supported by various OSH actors and institutions are exemplified through multiple case studies, underscoring the nuanced strategies employed to overcome existing barriers.

Section 5.4 scrutinises the effectiveness of OSH within enterprises, contextualised within the framework of DGUV Regulation 2. Anticipating structural shifts necessitated by a scarcity of occupational physicians and the ensuing integration of new professions, this section deliberates on forthcoming structural changes to meet the evolving needs and objectives of enterprises.

The intricate web of synergies among different OSH players is methodically examined in section 5.5, shedding light on the interplay and collaborative dynamics within the system.

Section 5.6 undertakes the task of identifying diverse success factors inherent to the dual system, specifically in the realm of prevention services, while contemplating their potential transferability to other EU countries.

Concluding this comprehensive exploration, section 5.7 engages in a nuanced discussion surrounding the pivotal role of prevention services in Germany. These services, designed to promote the integration of safety and health within organisational structures, thereby engendering compliance within companies, form the focal point of this conclusive section.

5.1 Models

In this section, the German model of prevention services (see section 1.3) is presented. Firstly, an overview is given of the prevention services provided by the UVTs along with an introduction to safety-related and OSH support in accordance with DGUV Regulation 2. This is followed by a presentation of the OSH support provided by the UVTs in accordance with § 19 of the OSH Expert Act (ASiG) and § 24 of the Social Code VII. Examples for both OSH services are provided.

The provision of prevention services in Germany is carried out by various players:

- Internal prevention services: OSH health personnel employed in the companies.
- External prevention services:
 - external freelance/self-employed occupational safety specialists ('Fachkraft für Arbeitssicherheit' (Sifa)) and occupational physicians;
 - external service companies employing occupational physicians and/or occupational safety specialists (Sifa);
 - OSH services coordinated by the UVTs (see section 5.1.3); and
 - OSH services provided by the UVTs (see section 5.1.4).
- Via the catalogue of prevention services offered by the UVTs (see section 5.1.1).

While the internal and private-sector external services meet the requirements of Directive 89/391/EEC, the external services organised by the UVTs and the prevention services provided by the UVTs go beyond this. They represent a speciality in the German OSH system.

The prevention services in Germany therefore differ in terms of their main task: in accordance with the OSH Expert Act (ASiG) and DGUV Regulation 2, the internal and external prevention services consist of occupational medical services and, above all, safety-related support for companies. The catalogue of UVT prevention services (see Table 1) includes additional prevention services whose overarching strategic objective is to use all suitable means to prevent accidents at work, occupational diseases and work-related health risks (Deutsche Gesetzliche Unfallversicherung (DGUV) 2019).

This report emphasises the special features of the German OSH system and focuses on the prevention services provided by the UVTs and external services (private sector and UVTs).

5.1.1 Prevention services of the UVTs

In section 4, the services provided by the UVTs focusing on monitoring practices were presented. Here the focus will be put on the services provided in the specific area of 'prevention' (see section 1.3) that are described in the 'Catalogue of prevention services' (Deutsche Gesetzliche Unfallversicherung (DGUV) 2019):

- Through information, communication and prevention campaigns, prevention concepts are presented at events and systematic needs-oriented elaboration, updating and distribution of OSH information is generated as practical guides such as the 'Kommmitmensch'⁵⁶ and 'Think of me! Your back!'⁵⁷ campaigns.
- As part of research and development and the implementation of pilot projects⁵⁸ (e.g. AB+, centre model, etc.), the DGUV and UVTs investigate (sector-specific) safety and health issues and test new concepts.
- Consultancy on request is carried out independently of investigation or monitoring services and pursues, among other things, the goal of being perceived by companies as an expert advisory body. In contrast to the incident-related counselling while monitoring, counselling on request is carried out on the initiative of the companies themselves.
- Another important prevention service provided by the UVTs is in the area of training and includes training to become an occupational safety specialist and the training of employers, managers and safety officers. The aim is to create a systematic and sustainable development of competences for the effective performance of tasks in the field of safety and health at workplace level. The development is systematic, to have an OSH player at every company level, and sustainable, as the training is geared towards situations of action and transfer.
- The certification and testing of work equipment, processes, organisations and persons contributes to supporting compliance with safety and health requirements.
- The occupational medical and safety support services offer support in the implementation of the OSH Act for companies and provide tools for the implementation of competent support. In this way and by providing comprehensive, economic and high-quality occupational medical and safety support to member companies, prevention services ensure and/or promote the implementation of OSH minimum standards at workplace level.

In several interviews with representatives of the UVTs, counselling and training were described as more effective means than admonishments and various examples of good practice in the interplay of various prevention services were mentioned: in particular, research into new forms of work, new work equipment, high-risk manufacturing and work processes (e.g. production of electric cars, welding work) has found its way into the regulations in the past and supported employers in increasing compliance.

⁵⁶ See: https://www.dguv.de/de/praevention/kampagnen/praev_kampagnen/ausblick/index.jsp

⁵⁷ See: https://www.dguv.de/de/praevention/kampagnen/praev_kampagnen/dein_ruecken/index.jsp

⁵⁸ See: https://www.dguv.de/en/research/current_research/index.jsp

In this context, the sectoral rules of the individual UVT should also be mentioned, which concretise the general set of rules in a sector- and practice-oriented manner with examples of OSH prevention measures.

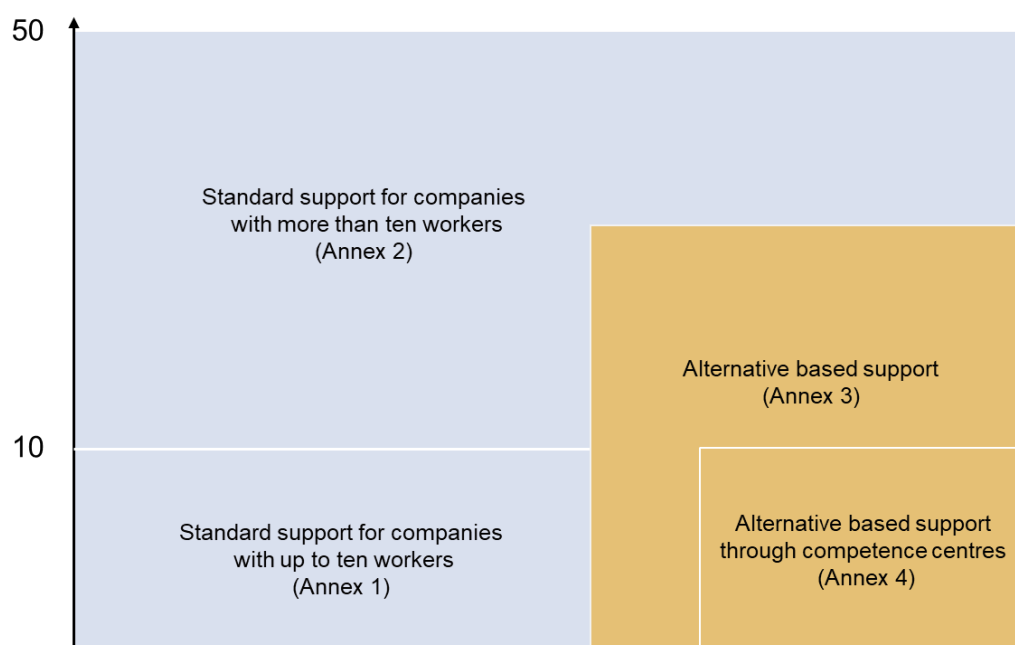
5.1.2 Support by occupational physicians and OSH professionals in accordance with DGUV Regulation 2

To support and implement OSH management at company level, employers are obliged to call in company or external experts (persons or services companies) in order to receive their support and advice. Furthermore, preventive medical surveillance (occupational health screening) must be ensured, which is obligatory in Germany under the ArbmedVV⁵⁹ (Bundestag der Bundesrepublik Deutschland 18.12.2008).

At this point, it is important to present the company medical and safety-related prevention services in accordance with DGUV Regulation 2.

DGUV Regulation 2 specifies the obligations of the employer to appoint OSH professionals and occupational physicians, as set out in the OSH Expert Act (ASiG). It also defines the terms of technical safety and occupational medical expertise. In retrospect, despite the adoption of the OSH Expert Act (ASiG) in 1973, there were initially no specifications for the OSH support of companies with up to 100 workers. The first pilot project to establish OSH support showed that the training of employers was the most effective. With these findings and based on the Framework Directive 89/391/EEC, various pilot projects were developed, which led to a revision of the regulations and resulted in both *standard supervision* (in the sense of OSH support) for companies with more than 10 workers and *alternative supervision* (in the sense of OSH support) for companies with up to 10 workers. A revision of the DGUV between 2009 and 2011 led to DGUV Regulation 2. This new regulation included four annexes, each one presenting a specific 'model' of support (see Figure 7 and the presentations of the annexes below). It is a binding requirement for all UVTs, supplemented by their respective specifications.

Figure 7: The four supervision (in the sense of OSH support) models after DGUV Regulation 2⁶⁰



⁵⁹ See: <https://www.gesetze-im-internet.de/arbmedvv/>

⁶⁰ According to Deutsche Gesetzliche Unfallversicherung e.V. (DGUV) 2018.

Standard supervision in enterprises with 10 or fewer employees – Annex 1: It applies to companies with up to 10 workers and the scope of the OSH support to be provided consists of the performance of basic supervision and occasion-related supervision, which can be combined. The basic supervision includes the support of the company in the preparation and updating of the risk assessment by an occupational safety specialist or by an occupational physician. Occasion-related supervision must be provided in the event of fundamental changes in the work system. The model shows significant points for how work can be organised in a certain way (DGUV Deutsche Gesetzliche Unfallversicherung Spitzenverband 2019). In addition to the occupational safety specialist and the occupational physician, other persons with special event-related expertise (e.g. for psychosocial risk) may also be involved in an advisory capacity in individual cases (DGUV Deutsche Gesetzliche Unfallversicherung Spitzenverband 2012).

Standard supervision in enterprises with more than 10 employees – Annex 2: This contains the overall OSH supervision consisting of the basic supervision and the company-specific supervision for companies with more than 10 workers. The basic supervision essentially comprises support in the risk assessment, in the prevention of behavioural and situational factors, in the creation of an appropriate OSH organisation, and in post-event investigations (for instance in case of occupational accidents). Company-specific supervision is aimed at specific company requirements, for example, regarding special or high-risk activities, occupational healthcare, further development of health management, fundamental changes in the work system or in the organisation/management of safety and health, adaptation to external developments such as regulations, and company actions and programmes. The employer shall determine and allocate the tasks of the occupational physicians and OSH professionals in accordance with the operational requirements with the involvement of the workers' representatives and agree with them in writing. In this context, the allocation of the calculated times to occupational physicians and OSH professionals for basic supervision shall be at least 20%, but not less than 0.2 hours per year per employee, for each service provider. This stipulation applies exclusively to Annex 2. The extent of company-specific supervision is determined by the employer on the basis of the company's requirements (DGUV Deutsche Gesetzliche Unfallversicherung Spitzenverband 2012).

Alternative, demand-based supervision in enterprises up to 50 [or 30⁶¹] employees – Annex 3: In this model, employers are informed about health and safety issues in the company and motivated to implement the necessary measures. This is supplemented by further training measures. It is up to the employer to decide whether external support is necessary and to what extent. In addition to OSH professionals and occupational physicians, persons with special event-related expertise (e.g. occupational hygienists) can also be called in (DGUV Deutsche Gesetzliche Unfallversicherung Spitzenverband 2012).

Alternative, demand-based supervision by competence centres in enterprises with 10 or fewer employees – Annex 4: In enterprises with 10 workers or fewer (Annex 4), the employers are supported in demand-based support by competence centres. Competence centres can be online portals and information collections or commissioned service providers. They provide small enterprises with up to 10 workers with targeted information about OSH matters and motivational measures (e.g. seminars on the influence of OSH on economic aspects, responsibility of the employer, OSH as a management task). For five BGs, Annex 4 is omitted entirely (DGUV Deutsche Gesetzliche Unfallversicherung Spitzenverband 2012).

Since Annex 2 of DGUV Regulation 2 represented the most far-reaching innovation in relation to supervision when it was introduced, it was also the focus of the evaluation of the regulation. This is discussed further in section 5.4.

Occupational medical and safety support can be provided by:

- internal occupational safety professionals and occupational physicians;
- external occupational safety professionals and occupational physicians;
- private sector external services; or

⁶¹ The demarcation of the two systems regarding the number of workers is in the hands of the UVTs, but the majority of them are up to 10 workers in the case of Annex 4 and up to 50 workers in the case of Annex 3.

- an external service (ASD) operated by the UVT.

In the interviews, reference was made to projects, studies and data analyses carried out by the BAuA, which show that the probability of companies implementing legally prescribed instruments such as risk assessment is higher if companies have safety and occupational medical support. However, it should be noted that, according to interview responses, safety and occupational medical support only applies to half of all companies in which 80% of the German workforce are employed.

5.1.3 Examples of safety and occupational health services coordinated by the UVTs in accordance with § 19 of the OSH Expert Act (ASiG)

The German Social Accident Insurance Institution for the foodstuffs and catering industry (BGN)⁶² and the Municipal Social Accident Insurance of the federal state of Bavaria (KUVB)⁶³ offer their own safety and occupational health service (ASD) (chargeable service). The ASD performs the tasks in accordance with § 3 and/or § 6 of the Act on Occupational Physicians, Safety Engineers and other professionals for Occupational Safety (OSH Expert Act) (see section 5.1); it usually commissions other suitable persons or institutions to do this.

The ASD*BGN⁶⁴ is intended for all companies insured by the BGN in standard supervision. In the interviews, it was reported that the BGN is informed about the registration of a company and sends a so-called 'starter package' to the company, in which the requirements for safety-related and occupational medical care are explained. The employer has the choice of either appointing someone or participating in a qualification for alternative supervision (in the sense of support). If there is no response after six weeks, a second request is sent, and after four months a call is made. If neither an appointment nor a qualification for 'Alternative, demand-based supervision' has been made at that point, the company will automatically (and at a cost) be cared for through ASD*BGN after six months. ASD service providers are only paid if there is a risk assessment. For small companies according to Annex 4, there is the offer to send occupational physicians and safety technicians directly to the companies and to have the invoice settled by the BGN via the apportionment.

The special feature of the KUVB is that all insured companies are automatically affiliated to the ASD and thus fulfil their obligation under the Occupational Safety Act (Kommunale Unfallversicherung Bayern 2021).

5.1.4 Example of safety and occupational health services provided by the UVTs in accordance with § 24 of the Social Code VII

The German Social Accident Insurance for raw materials and the chemical industry (BG RCI)⁶⁵ offers SMEs counselling as part of the 'Alternative, demand-based supervision' (entrepreneur model according to Annex 3). The special feature is that the companies are advised exclusively by occupational safety professionals and occupational physicians permanently employed by the BG RCI.

In an interview with a representative of the BG RCI, it became clear that the dovetailing of qualification and counselling is a success factor, as the employer establishes a direct relationship with their contact person in the seminar and the processes started in the seminar can be continued in the counselling phase. The BG RCI's SMEs advisory service can be contacted at any time.

As a result of the shortage of occupational physicians identified by the BAuA in 2013, the DGUV developed new approaches. Within the framework of DGUV Regulation 2, various initiatives were identified to make it easier for prevention services to provide better support to hard-to-reach companies. They are the result of research, development and trials of prevention activities, which are also an explicit area of the prevention services provided by UVTs. In the interests of this research project, the following pilot projects must be emphasised.

⁶² See: <https://www.bgn.de/>

⁶³ See: <https://kuvb.de/aktuelles/>

⁶⁴ See: <https://www.bgn.de/asd-bgn>

⁶⁵ See: <https://www.bgrci.de/>

▪ Demand-based supervision Plus (AB+)

'Alternative, demand-based supervision Plus (AB+)' ([case study D3](#))⁶⁶ is a pilot project carried out by the DGUV, BG RCI, BGHM, the Public Sector Accident Insurance of the federal state of Schleswig-Holstein (UK Nord)⁶⁷ and of the federal state of Hesse (UKH),⁶⁸ the FSU Jena and systemkonzept. The aim of the project is to utilise the approaches from demand-based supervision according to DGUV Regulation 2 Annex 3 for medium-sized companies with 30-70 workers (for the UK Nord and Hesse: up to 250 workers). The focus is on: the direct involvement of those responsible (employers and managers); the targeted use of demand-based support by occupational safety professionals and occupational physicians and other actors; the efficient and effective use of resources, some of which are scarce (especially occupational physicians); and the targeted and controlled provision of support by other professions (Hamacher 2022).

▪ Centre model (*Zentrumsmodell*)

The 'centre model' was a project carried out from 2018 to 2020 by the DGUV, the German Social Accident Insurance Institution for the health and welfare services (BGW),⁶⁹ BGHM and BGHW in the rural region of East Westphalia-Lippe with the aim to offer MSEs (up to 50 workers) a regional service for safety-related and occupational medical care. The reason for and driver of the project was the insufficient safety and occupational healthcare identified in various studies, especially with regard to the risk assessment in MSEs (Geschäftsstelle der Nationalen Arbeitsschutzkonferenz 2017b, 2017a; Wetzstein and Rahnfeld 2017). In addition, there is a shortage of occupational physicians, which, according to the DGUV, means that the need for occupational medical care resulting from DGUV Regulation 2 cannot be ensured (Schäfer et al. 2021).

The pilot project investigated to what extent the operational support of MSEs can be improved and the resources of service providers (e.g. through short travel times) for OSH services can be used in a more targeted manner. Based on the experience of the UVTs with their own occupational medical and safety services (ASD) and competence centres, a support network for MSEs was developed, through which companies could arrange for a service provider previously certified by the DGUV (Bell et al. 2021).

During the interviews, it was reported that in the evaluation report of the 'centre model' it was mentioned that it could not be rolled out nationwide due to the high effort involved. The mediation and the regional contacts of the service providers to the enterprises were assessed as positive. The legal framework conditions and the many routes from the contact point to the UVT and from the UVT to the companies and back, as well as the involvement of the service providers, were evidence of a high organisational and implementation effort.

5.2 Data related to prevention services (type, scope, effectiveness)

The following section (see 5.2.1) undertakes a systematic cataloguing of key reports that contain crucial data on prevention services in Germany, with the aim of enhancing our understanding of the prevailing landscape. In addition, section 5.2.2 is devoted to articulating existing data needs, thereby contributing to a nuanced understanding of information gaps and needs in this field of research.

5.2.1 Overview based on the current identified documentation

In this section are listed and briefly described the information and data related to the type, scope and effectiveness identified/found in the literature research:

- 'Company-related and external influencing variables on the activities and effectiveness of occupational safety professionals - Results of the Sifa longitudinal study and the GDA company survey 2011' ('Betriebliche und überbetriebliche Einflussgrößen auf die Tätigkeit und Wirksamkeit von Fachkräften für Arbeitssicherheit – Ergebnisse der Sifa-Langzeitstudie und der GDA-Betriebsbefragung 2011'). The subject of this one-off report commissioned by the BAuA

⁶⁶ Case DE3 is available at: <https://osha.europa.eu/en/publications/germanys-alternative-demand-based-supervision-project-ab-supporting-occupational-safety-and-health-compliance-case-de3>

⁶⁷ See: https://www.schleswig-holstein.de/DE/landesregierung/ministerien-behoerden/STAUk/STAUk_node.html

⁶⁸ See: <https://www.ukh.de/startseite>

⁶⁹ See: <https://www.bgw-online.de/>

was the compilation of an overview of the activities and effectiveness of occupational safety specialists (Sifa) by combining the results of several research studies on safety-related support. Recommendations for action included: further developing and offering suitable supervision/supporting models; and ensuring appropriate support from occupational safety specialists and occupational physicians and supporting them and the companies in setting appropriate focal points and priorities for their activities. Regarding safety and occupational health support, it became clear that 41.8% of companies in general and 33.1% of small companies in Germany did not avail of such support. Of the companies with safety-related support in accordance with DGUV Regulation 2 Annexes 1 and 2 (see section 5.1), 31.8% had appointed an internal occupational safety specialist, while the others were supported by a freelance occupational safety specialist or an external prevention service (Hamacher et al. 2015).

- 'Demand for occupational safety professionals in Germany' ('Bedarf an Fachkräften für Arbeitssicherheit in Deutschland'). Currently required and available resources of occupational safety specialists are compared quantitatively and analysed in relation to safety-related support requirements. The results show that there is currently no quantitative capacity gap, nor will there be one in the period up to 2027. However, the changing requirements for occupational safety specialists may become a qualitative problem as training courses and further trainings only provide limited preparation for changing working conditions and emerging risks. In order to continue to ensure the effectiveness of safety-related support in accordance with the OSH Expert Act (ASiG), targeted skills development and further development of the ASiG OSH support system are required (see section 5.4) (Barth et al. 2017).
- 'GDA company and employee survey' ('GDA-Betriebs- und Beschäftigtenbefragung'). The basic evaluation of the company survey from 2015 and 2011 included a set of questions on the external and institutional OSH system and on company OSH support. It was asked whether an occupational safety specialist or an occupational physician was appointed, whether the alternative, demand-based supervision model was used or whether risk assessments were carried out at the workplace. For 2015, only 44.7% of the 6,101 companies surveyed stated that they had appointed occupational safety specialists, and 56.5% of them stated that they had appointed an external provider (Geschäftsstelle der Nationalen Arbeitsschutzkonferenz 2017b).
- 'GDA impact project' ('GDA -Wirkungsprojekt'). The evaluation report of the NAK provided more specific information on the impact of GDA activities on OSH, for instance, the number of inspections of companies by labour inspectorates and prevention services of the federal state OSH authorities and the UVTs. In this context, a first and second survey (2018) was carried out in 116 companies specialising predominantly in logistics, trade and services. With regard to the activities of the prevention services, the training of managers was recognised as having a major impact on the quality of OSH at work (Geschäftsstelle der Nationalen Arbeitsschutzkonferenz 2018).
- The Initiative Health and Work (iga)⁷⁰ publishes the report on the state of knowledge of systematic reviews on 'Effectiveness and benefits of work-related health promotion and prevention' every six years. The most recent iga report is Report No. 40 of 2019 and includes the compilation of scientific evidence from 2012 to 2018. With 100 reviews mentioned from all over the world, a considerable increase in subject-specific research was identified. In view of the number of studies, countries, sectors and occupations included in the reviews, it can be assumed that the results are highly transferable overall. This may not apply to small companies, for which only a few study results could be included. Of the six studies analysed, only one was unable to demonstrate the economic benefits and success of workplace-related health promotion and prevention (Barthelmes et al. 2019).

⁷⁰ See: <https://www.iga-info.de/>

- 'First prevention report of the National Prevention Conference' ('Erster Präventionsbericht der Nationalen Präventionskonferenz') (NPK).⁷¹ The NPK's sponsors (The National Association of Statutory Health Insurance Funds (GKV-Spitzenverband),⁷² DGUV, Social Accident Insurance of the Agriculture, Forestry and Horticulture Sector (SVLFG),⁷³ and German Pension Insurance Union (Deutsche Rentenversicherung Bund)⁷⁴) provide an initial stocktaking of the activities carried out in 2017 to implement the prevention strategy and the accumulated experiences of the players involved (Federal Government, federal states, municipalities, statutory social insurance and private health insurance, employers, social partners, service providers, etc.). In addition, an overview is given of the actions initiated on the basis of the Prevention Act and a positive assessment is made of their effectiveness. These actions and activities are designed to strengthen health resources and to reduce the risk factors sustainably for the development of lifestyle-related diseases, for example caused by unhealthy diet, lack of exercise, chronic stress, smoking and excessive alcohol consumption. Among other things, the report referred to various data from the Federal Statistical Office, such as the increasing expenditure on prevention and health protection by public budgets, employers and private households (Die Nationale Präventionskonferenz 2019).
- 'Final report on the umbrella evaluation of the Joint German OSH Strategy' ('Abschlussbericht zur Dachevaluation der Gemeinsamen Deutschen Arbeitsschutzstrategie'). This umbrella evaluation on the second strategy period of the GDA deals with the question of the effectiveness and efficiency of the core elements of the GDA. The evaluation focused on labour inspection activities, but conclusions could also be drawn for prevention services. Also, the systematic cooperation with other organisations (e.g. health insurance companies, professional associations) established links to other areas of health and safety beyond the work context. The common understanding with regard to terminology and procedures led to a pooling of the resources of the individual players (e.g. prevention specialists from health insurance funds in consultation with the UVTs) (Hägele 2019).
- The 'Map of Supporters' ('Landkarte der Unterstützenden') is primarily an information document intended for labour inspectors and other prevention specialists on the support services in the field of health promotion and prevention provided by the sponsors of the NPK (accident, pension insurance providers, health and long-term care insurance funds). The document provides an overview of the fields of action (assessment of working conditions, workplace health promotion, workplace integration management, medical services for prevention) defined in Germany in accordance with Social Code V § 20d para. 3 (nationally uniform, cross-agency framework recommendations). It serves as a basis for the design of the 'pilot function' of the labour inspectors (see section 5.3) (Deutsche Gesetzliche Unfallversicherung (DGUV) 2020b).
- A German OSH journal published the article 'Betriebsärztlicher Betreuungsbedarf in Deutschland' (Occupational health care needs in Germany). The article was commissioned by the DGUV and focuses on the needs and capacities of occupational physicians and how coverage can be ensured in the different supervision models (described above). The results show that the need for occupational medical care resulting from DGUV Regulation 2 cannot be met with current capacities. The total volume of consulting hours amounts to more than 15 million hours per year. On the other hand, there are approximately 3,500 persons working as occupational physicians, who can provide approximately 4.8 million hours/year (Schäfer et al. 2021). These findings confirm the results of the BAuA from 2013 (Barth et al. 2013). Approaches to dealing with the shortage of occupational physicians are discussed in section 5.4.

⁷¹ See: <https://www.npk-info.de/die-npk>

⁷² See: <https://www.gkv-spitzenverband.de/>

⁷³ See: <https://www.svlfg.de/>

⁷⁴ See: https://www.deutsche-rentenversicherung.de/Bund/DE/Home/home_node.html

- 'Safety and health at work' ('Sicherheit und Gesundheit bei der Arbeit'). The BMAS accident prevention report, published annually, provides a comprehensive overview of the status of developments, activities and research projects carried out in the field of OSH in Germany. In addition to data on occupational accidents and diseases, information is provided on the personnel (e.g. costs and resources of prevention) and activities of federal state OSH inspectorates and the UVTs. In the report, the German Medical Association estimates that there were 9,100 occupational physicians in 2021 and that the number of recognised medical specialists has increased by 70% in the decade 2009 to 2019 (Bundesministerium für Arbeit und Soziales (BMAS) and Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA) 2022). These figures are presented in section 5.4.
- All statutory UVTs report on their activities and related data every year. The Yearbook of the German Social Accident Insurance Institution for the foodstuffs and catering industry (BGN) serves in this report as an example for all other German UVTs. The BGN Prevention Yearbook states the number of associated companies, operating sites, insured persons and full-time workers. In addition, the data related to occupational and commuting accidents and occupational diseases are presented. The figures for the bakery trade, beverage industry, showmen and meat industry are shown separately (Berufsgenossenschaft Nahrungsmittel und Gastgewerbe 2022).
- 'Managing psychosocial risks in European micro and small enterprises'. Qualitative evidence from ESENER 3 (EU-OSHA, 2022b) Country Report (Germany). This report presents the main findings of a study on the management of psychosocial risks in European workplaces. It is based on qualitative findings from interviews with MSEs from various European countries, all of which participated in ESENER 3. It presents the drivers that motivate the enterprises to manage health, safety and psychosocial risks through statistical graphs (Gutheil and Muster 2022).
- 'Analysis of findings from ESENER 3 on cover and contribution of prevention services to supporting OSH in establishments in Europe': a study conducted by EU-OSHA with more than 45,000 respondents from 33 countries focusing on, among others, psychosocial risk management and OSH management in general (EU-OSHA 2023).

No research or collected data explicitly on compliance in OSH were found in the desk research. Formulated needs are mentioned in section 5.2.2.

The evaluation of the interviews conducted allowed to identify a current DGUV research project that is investigating the question of which prevention service fulfils which function of compliance.

The DGUV has its own area for evaluation in the Institute for Work and Health (IAG). The DGUV's prevention services are evaluated there, such as the 'Kommmitmensch' campaign (Grellert et al. 2021) or the campaign 'Think of me! Your back' (Hessenmöller et al. 2017), or the evaluation of DGUV Regulation 2 (Wetzstein und Rahnfeld 2017, S. 23). One piece of information from the interviews is that the DGUV commissions the evaluations and thus the data collection itself and thus acts as intrinsically motivated (to improve itself). The same applies to the internal evaluations of the German UVTs. The object of the evaluations of the IAG is to check the achievement of the objectives of the measures, for example the implementation of OSH, based on indicators.

However, all OSH/compliance research has in common the problem of how to assess effectiveness, given so many parameters. There is a desire for a common indicator for the state of OSH in the company, against which many different survey initiatives can be measured uniformly.

5.2.2 Lack of data

The report 'Analysis of findings from ESENER 3 on cover and contribution of prevention services to supporting OSH in establishments in Europe', commissioned by EU-OSHA, has reinforced the need to collect more data on the effectiveness of prevention services, which this research project also demonstrates. In practice, these services face a variety of challenges, such as changes in the structure and organisation of work and labour markets, as well as policy changes that determine what constitutes the support they provide and how it is resourced. In order to provide balance and deliver professionalism

in OSH in the future, research questions related to the development of new, sustainable and transferable ways for prevention services to contribute to ensuring compliance need to be answered (EU-OSHA, 2023).

The GDA umbrella evaluation of the second period of the GDA also provided data on the labour inspectors' perception of the procedure of the prevention services: two-thirds of the labour inspectors consider both the division of OSH execution of labour inspectors and prevention services and compliance with the guidelines or agreed principles to be important. These values are higher than those for the mutual exchange of information, but conversely show that one-third did not consider the procedure and the guidelines to be important (Hägele 2019).

In the accident prevention report on safety and health at work 2022 of the BMAS, a concrete need for research on AI is formulated, as a large number and variety of overlaps in content with the world of work and machine safety are emerging in the medium and long term. This was also prompted by the European Commission's proposal for a regulation on AI of 21 April 2021. It relates to the placing on the market, commissioning and use of AI systems in the EU. There is insufficient knowledge available on this (Bundesministerium für Arbeit und Soziales (BMAS) and Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA) 2022).

The following is a list of identified needs that should be addressed through surveys and data for more information or knowledge, mentioned by the interviewees:

- Gather data about the needs in terms of OSH, especially among MSEs, from the companies' point of view and not from the perspective of the 'prescribers'.
- Collect data for new and emerging OSH risks such as those that may arise in new environments such as AI or machine learning.
- The recording of social resources and the transfer processes of the various players in OSH. In everyday life, there is also a social component/resource in the transfer processes between prevention service providers and workers. This includes everything that keeps a company/institution or even a transfer process alive in the first place. These social resources are often given too little consideration when carrying out and reflecting on OSH tasks (of the occupational safety specialists), despite their influence on all levels of the company organisation.
- Gather data or more information about what companies do and what measures they do implement in order to identify the discrepancy between what is recognised and should be done and what then happens really at workplace level (implementation gap between planned and implemented OSH).

Data are becoming increasingly important due to digitalisation and the necessary database for machine learning/AI. At the same time, there is a general lack of basic data on the activity and perceptions of occupational safety specialists, occupational physicians and labour inspectors.

The results of the most recent occupational safety specialist (Sifa) longitudinal study on activity and effectiveness (Trimpop et al. 2012) show that the topic of mental health has tended to be neglected to date. A new survey could provide concrete answers on this, as well as on the definitive number of occupational physicians still practising, as there are very heterogeneous data on this in the past due to different counting methods in the studies (Schäfer et al. 2021).

5.3 Dealing with hard-to-reach companies

In-house OSH structures can vary greatly from company to company. Smaller companies are more likely to have a lower commitment to OSH than larger companies. There are many reasons for this. In general, fewer resources are available and this results in a lower level of OSH knowledge, more informal and situational solutions to prevent hazards (less systematic and structured approach to managing OSH), and more reactive approaches. Health and safety inspections could contribute to the implementation of health and safety measures among small companies (Klein et al. 2022).

According to the GDA, the diffusion of modern OSH concepts and the implementation of current legislation is stagnating. There is hardly any cooperation between OSH players on site and their work is very heterogeneous in terms of effectiveness (Georg and Guhlemann 2019).

One proposal for improving OSH among small companies is to strengthen visits of labour inspectors in order to regularly supervise/support enterprises with fewer than 10 workers. The advice given to MSEs should be more clearly related to the operational benefit and be sharpened with regard to possible safety and occupational health deficiencies (Hamacher et al. 2015), particularly in view of the fact that SMEs and MSEs are more frequently supported by external prevention services (Wetzstein and Rahnfeld 2017).

In this regard, the following needs and demands on the prevention services (targeting MSEs) were identified by the interviewees:

- Better approaches need to be developed to overcome the challenges related to the development and implementation of OSH management among SMEs. By doing this, safety and health at work in SMEs will improve.
- Develop the digitalisation of communication (online platforms, tele-applications) of prevention services (working with SMEs). This is seen as urgently needed to save (already limited) resources.
- Increase awareness among SMEs so that they can independently identify their OSH needs and feel responsible for the continuous improvement of working conditions.
- Address and give greater attention to new and emerging sectors or forms of services, e.g. the platform economy with the idea to create and ensure better working conditions at an early stage.
- Better target SMEs in campaigns (and policy discussions) to promote OSH; most of the time campaigns are too strongly focused on (already resource-rich) large companies instead of SMEs with less capacity.
- Increase the number of staff and/or OSH specialists working in the prevention services. This would help to promote and improve prevention.
- The deployment times (calculated minimum time for OSH support) for companies with up to 20 workers are too short to adequately deal with their working conditions and thus to have an impact.
- Translate training materials into several languages so that more workers can access them.
- Use images to make guidance more accessible to people regardless of language and culture.
- Support for SMEs from the BGs (German Social Accident Insurance for the corresponding sectors) not equal to the BGs labour inspection.

The importance of digitalisation of prevention services for better capacity to act was emphasised several times.

The interviewees stated that for SMEs, information services on OSH should best be offered online, such as a digital consultation hour on a specific subject area. SMEs prefer to look for the information relevant to themselves before using the classic information sources or regularly reading every newsletter on safety and health, as they lack the resources to do so.

Despite the circumstances described, the UVTs want to ensure that OSH support is provided in companies that are difficult to reach. Several approaches adopted by various actors are listed below, some of which have already been mentioned. All of them explicitly address the improvement of the accessibility of enterprises by prevention services.

5.3.1 Approaches of the UVTs

The model of the KUVB (see section 5.1) is exemplary for the efforts of the UVTs to ensure safety and occupational healthcare for SMEs and more specifically MSEs. The special feature is that all insured companies are automatically supported (for a fee) by the safety and occupational health service (ASD) and thus do not have to arrange for OSH support themselves (Kommunale Unfallversicherung Bayern 2021).

According to information collected from the interviewees, the BGHM⁷⁵ sends a letter to its new member companies for self-disclosure about the status of OSH in the company, with an obligation to return the information. A digital mailbox can then be used to communicate the information requested and thus ensure that the working conditions are assessed regarding safety and health.

5.3.2 Centre model (*Zentrumsmodell*)

As described in section 5.1.4, the centre model aims at facilitating access to OSH support (via a so-called support network) especially to MSEs with up to 50 workers that have not previously been supported (within the meaning of the OSH Expert Act (ASiG)) (see section 5.1.2) and are considered difficult to reach. To this end, central coordination and contact points were set up via the DGUV and the participating UVTs, which acquired the service providers in a quality-assured manner, recorded the support needs of the companies, provided support in the selection of a service provider and established contact with the latter. An attempt was made to reduce the travelling time of occupational safety professionals and, above all, occupational physicians in the rural region by coordinating the assignments and thus to be able to use their time more effectively. As an additional incentive to participate in the support network, the costs for the first three consultation hours were covered by the UVT. The UVT also provided advice on the different supervision models according to DGUV Regulation 2.

The evaluation of the project (Bell et al. 2021) identified not only questions posed about future funding but also some starting points (listed below) for adapting the content for a support network to be implemented at a later date, which is aimed in particular at hard-to-reach enterprises:

- The majority of the companies only asked for safety-related advice. Occupational health expertise was requested much less frequently and the expertise of other professions was not asked for at all. This is where the consultation process needs to be optimised.
- In most cases, the companies that requested supervision according to Annex 2 of DGUV Regulation 2 also only requested the three hours for basic supervision (corresponding to Annex 1 and paid for by the UVTs), although their supervision needs according to Annex 2 are much more extensive. The financial incentive did not lead to an increase in the position value of safety and occupational healthcare beyond the first steps, so that no long-term developments in the state of safety and health in the companies could be determined. In the future, the UVTs should provide more information and training on the legal requirements for MSEs in accordance with DGUV Regulation 2.
- The main services included in the support offered were: the risk assessment including the instruction of workers; the testing of work equipment; management of fire protection; and emergency measures and first aid. The subject area of OSH management was less in demand, so the sustainability of the counselling was questioned.
- The quality-assured acquisition of service providers ensured high quality when it comes to structure but not automatically a high-quality process. In the future, it would be important to reduce the interfaces and make the processes less time-consuming, for example, by reducing the documentation that has to be carried out in the care network and digitalising process steps.
- Recommendation for the creation of new regional networks of prevention experts of the UVTs, including the provision of comprehensive information by prevention staff who can point out the offer in the context of their counselling of companies.
- To implement the support network, which has so far only been tested regionally, in a larger area, the possibility of integrating already existing UVT support systems into the future support network was brought into play. In addition, there is the approach of developing a concept for addressing MSEs, adapted to their needs and a further communication strategy (Bell et al. 2021).

⁷⁵ See: <https://www.bghm.de/home>

5.3.3 INQA Initiative New Quality of Work

As Germany's contribution to the Lisbon Strategy for improving the quality of work, INQA⁷⁶ is an initiative of the Federal Government. It is an alliance of organisations and institutions active in the field of shaping the world of work. The labour inspectorates of the federal states are also involved in the initiative. At the beginning, the focus was on certain sectors, with many SMEs such as construction, long-term care, healthcare and so on, and on certain topics such as stress and lifelong learning. Currently, INQA is focusing on demographic change in the world of work and the promotion of an employee-oriented corporate culture (Geschäftsstelle der Nationalen Arbeitsschutzkonferenz c/o Bundesanstalt für Arbeitsschutz und Arbeitsmedizin 2019).

5.3.4 'Pilot function' (Lotsenfunktion) and 'Map of Supporters'

The concept of the 'pilot function' is an extension of the role of the UVTs' labour inspectors. In the course of monitoring and advising on OSH in accordance with § 17 of the Social Code VII, they are the main contact persons for prevention issues and can act as an interface to external social service providers such as statutory health and pension insurance, the Federal Employment Agency, and the integration and inclusion offices. They also form an internal UVT interface with the rehabilitation and compensation sector (Post 2022a, 2022b). Companies that are difficult to reach for OSH are to be addressed and referred by this expansion of the prevention service on the one hand, and on the other hand by the one-stop counselling service tailored to their operative needs.

In order to empower labour inspectors and other prevention professionals, the 'Map of Supporters' and a 'Guide to Cooperation between Social Service Providers' were developed, which contain an initial orientation on the social service providers active in Germany on various topics in the field of safety and health (Deutsche Gesetzliche Unfallversicherung (DGUV) 2020b; Ahlers et al. 2022) (see section 5.5).

5.3.5 Medium-sized enterprise Offensive (Offensive Mittelstand): Focus action on safety and health at work – 'OSH for non-occupational safety professionals'

The Offensive Mittelstand⁷⁷ (OM) ([case study DE5](#)⁷⁸) is an alliance of federal ministries, business associations, trade and professional associations, guilds, chambers of crafts, trade unions, the German Social Accidents Insurers, health insurance companies, the Federal Employment Agency, the German Pension Insurance Fund, research institutes and service providers that has been in existence since 2006. Its aim is to support SMEs to improve the quality of work and corporate culture. In order to improve OSH and increase awareness about health and safety issues at work among SMEs, OM developed the 'Safety and Health at Work' initiative. It mainly consists of placing the topic of OSH in SMEs with the help of their network of advisors (Clauß et al. 2022).

OM and its OSH initiatives were mentioned several times in the interviews. The interviewees stressed the importance of the network because it is made up by 200,000 consultants from various disciplines and professions who are employed by the various OM partners mentioned above, such as OSH consultants, tax consultants, management consultants, consultants from the Chamber of Crafts and so on. They also stressed the potential of the network in terms of synergies and capacity to reach and be in contact with SMEs. The OM itself calls for even more dialogue between the consultants themselves and other OSH players and openness to pragmatic solutions instead of just referring to the law: one approach to reaching the target group of SMEs is to proceed along the creation process of the companies' values and to mainstream OSH among the topics or issues of the companies' corporate strategies, management and corporate culture. The Supply Chain Due Diligence Act,⁷⁹ which came into force in 2023, will further advance this approach.

⁷⁶ See: <https://www.inqa.de/DE/startseite/startseite.html>

⁷⁷ See: <https://www.offensive-mittelstand.de/>

⁷⁸ Case DE5 is available at: <https://osha.europa.eu/en/publications/occupational-safety-and-health-osh-non-osh-professionals-germany-supporting-occupational-safety-and-health-compliance-case-de5>

⁷⁹ See: http://www.bgbl.de/xaver/bgbl/start.xav?startbk=Bundesanzeiger_BGBl&jumpTo=bgbl121s2959.pdf

5.3.6 Podcast 'Wandelwerker'⁸⁰

The 'Wandelwerker' podcast is run by a private prevention service provider. It is considered as 'Germany's first OSH podcast' and is primarily aimed at safety engineers, other occupational safety specialists and managers, and also workers. Two episodes are published per week on topics such as increasing interest and mobilising on OSH-related issues, developing a safety culture, working on one's own safety mindset, effective instruction and so on. It also includes interviews with experts and the presentation of best practice examples. According to its own information, 'Wandelwerker' has over 16,000 listeners. It is a medium for long-term use and interested parties can select and listen to all episodes separately at any time. The content provided can trigger the implementation of OSH measures and increase awareness about OSH-related issues in companies. In this way, the podcast can be decisive for the further development of a safety culture or for the implementation of preventive and protective measures in MSEs (Gemeinsame Deutsche Arbeitsschutzstrategie (GDA) 2022).

5.4 Increasing the effectiveness of prevention services

In order to achieve a high level of effectiveness when it comes to the provision of safety-related and occupational medical care services in companies, the necessary professions (in terms of competences) required in order to meet a company's needs must be active in sufficient numbers (in terms of resources) and in suitable structures.

DGUV Regulation 2 has regulated safety and occupational medical care services in since 2011 (see section 5.1) and thus largely provides the legal framework (structure). The distribution of deployment times⁸¹ between Sifa (occupational safety specialist) and the occupational physician as well as the authorisation of other professions, such as natural scientists, occupational hygienists and occupational scientists, occupational and organisational psychologists, or health scientists, has also been regulated — but differently depending on the facility, as Table 66 shows.

Table 6: Hours of operation of the OSH specialist and occupational physician, according to DGUV Regulation 2

	Annex 1	Annex 2	Annex 3	Annex 4
Deployment times regulations	-	Basic supervision: minimum 20% or 0.2 hrs/worker/year for BA	-	-
Licensing of other professions	Only for occasion- related supervision	Not so far but considered in the context of the revision of DGUV Regulation 2	Only for occasion- related supervision	Only for occasion- related supervision on a case-by-case basis

Difficulties reported from practice and evaluated and identified weak points (see section 5.2.1) reinforced the need to revise Annex 2 of DGUV Regulation 2. For this reason, a working group consisting of representatives of the UVTs, social partners, the BMAS, the social ministries of the federal states and the professional associations was created in the DGUV's Organisation of Safety and Health Division.

The first draft proposal (for introducing changes) elaborated by the working group in 2019/2020 is still the subject of controversial discussion in the self-governing bodies of the DGUV, particularly with regard to dealing with the shortage of occupational health resources (Kunz 2022).

⁸⁰ See: <http://www.wandelwerker.com/>

⁸¹ The deployment time equals the time allotted for the occupational safety specialists.

The interviews also provided information on the current discussion on the revision of DGUV Regulation 2. The feedback gathered is presented as key statements briefly below:

- The revision was necessary due to the result of the evaluation of the Institute of Work and Health at the IAG.
- There is an existing and structurally foreseeable shortage of occupational physicians in Germany.
- There are calls for the specialist involvement of other professions, e.g. occupational psychologists on the subject of mental stress.
- The debate has been influenced by the strong medical lobby, which also represents occupational physicians.
- From the workers' point of view, employers and occupational physicians are slowing down the involvement of other professions, such as occupational and organisational psychologists or occupational hygienists and ergonomists.
- Representatives of insured persons and trade unions refused to remove the minimum percentage of working hours for occupational physicians, so the clause of 20% occupational physicians remains in place.
- The new DGUV Regulation 2 should be implementable in companies (resources for the required safety-related and occupational healthcare should be available).
- The many players and the pandemic that has occurred in the meantime made decision-making a long process.
- Not only should monothematic consultations be carried out depending on the profession, but an interdisciplinary approach is considered effective.
- The minimum proportion for occupational physicians has been reduced from 40% to 20%.
- The health competence of all those involved is to be strengthened.
- After years of discussion, a compromise solution was reached (namely the involvement of other professions), which is considered by some to be only an interim step because it does not solve the problem of the shortage of occupational physicians.
- The new version of DGUV Regulation 2 is to come into force presumably on 1 January 2025.

The revision features the following changes:

- DGUV Regulation 2 will be accompanied by a new DGUV Rule to improve comprehensibility and applicability.
- Better definition of basic supervision (see section 5.1.2.).
- SMEs with fewer than 20 workers (previously fewer than 10) do not require a fixed standard rate for occupational physicians in standard supervision (applies to many companies, which therefore fall into standard supervision according to Annex 1) (see section 5.1.2.).
- Occupational safety specialists are given more competences (although not enough).
- Opening up to new professions that can be trained as occupational safety specialists. This includes natural scientists, occupational and organisational psychologists, occupational hygienists and ergonomists. The services provided by an occupational safety specialist can thus be broadened in terms of expertise and also cover possible cases that would otherwise have to be dealt with by an occupational physician.
- Company-specific support no longer has to be provided only by occupational physicians and specialists. The possibility of opening up to other professions still exists. In order to generally introduce the discipline of psychology into safety-related and occupational medical care, an amendment to the OSH Expert Act (ASiG) is necessary, which the Federal Ministry of Labour and Social Affairs (BMAS) is not currently endeavouring to do.

5.4.1 Lack of resources in occupational medicine

The DGUV (Schäfer et al. 2021) states that the demand in the field of occupational medicine is already not covered by the available resources and will not be covered in the future; see also section 5.2.1. It calls for a revision of DGUV Regulation 2 to match the scope required by the regulation with the available capacities (e.g. by bundling of the services). This follows the approach to the occupational healthcare gap proposed in the BAuA study 'Demand for occupational safety professionals in Germany' in which doctors practising occupational medicine focus on those tasks for which medical or occupational medical expertise is indispensable and delegate those tasks that can also be taken over completely, partially or under supervision/support by other professions (Barth et al. 2013).

The Task Force Occupational Medicine of the German Medical Association developed a concept for the 'Evaluation and Monitoring of Occupational Health Care' (Task Force Arbeitsmedizin 2021). The initial situation in 2021 was as follows:

- The number of registered professionals in occupational medicine remained constant between 2002 and 2019.
- The average age distribution was constantly above 65 years between 2011 and 2017.
- The number of participants in the academies for occupational medicine is on the rise. This can be attributed to, among other things, the amendment of the further training regulations for occupational physicians introduced in 2018, as other specialties important for occupational medicine are also recognised in addition to internal and general medicine.
- The recognition of medical specialists increased by 70% from 2009 to 2019 (Task Force Arbeitsmedizin 2021).

Since the evaluation does not consider any data on the exercise (still active) and the extent of the activity (full/part-time), no statement can yet be made on the occupational health resources available. However, the Task Force on Occupational Medicine is striving for more comprehensive monitoring, in which these data must also be included.

Uncertainty about the number and resources of occupational physicians was also mentioned in many interviews. The representatives of the (German) Social Accident Insurances (BGs) and the IAG clearly stated that, according to the evaluations and their own research, there are definitely too few to meet the demand. The German Social Accident Insurance Institution for the foodstuffs and catering industry, for example, specifically offers occupational physicians if a company cannot reach one and also points out that there is a shortage of safety engineers and occupational safety specialists.

It is not beneficial to attribute more services to occupational physicians because, on the one hand, there is a shortage of them and, on the other hand, tasks can be delegated. Occupational safety professionals have a broad portfolio and can, for example, also carry out risk assessments addressing psychosocial risks. The evaluation of the centre model (see section 5.3) also concluded that companies predominantly request OSH professionals and not occupational physicians as would have been expected.

In addition to the use of drones with image transmission during inspections or the monitoring activities of labour inspectors (UVT), the interviews also referred to telemedicine as a way to alleviate the shortage of occupational physicians, which saves resources simply by eliminating travel when occupational medicine is needed or OSH committee meetings that used to take place on site. Telemedical approaches are perceived by both the German Medical Association and the BG as a good option for addressing the lack of resources in the field of occupational medicine (Verband für Sicherheit, Gesundheit und Umweltschutz bei der Arbeit 2022; Task Force Arbeitsmedizin 2021). At the German Social Accident Insurance Institution for the administrative and management sector (VBG), a pilot project was conducted in 2019 to examine the role that telemedicine can play in the context of occupational healthcare for member companies. The result was that telemedicine represents an important addition to the range of services, in particular to ensure occupational healthcare for SMEs. Fields of application are primarily in the area of counselling (e.g. in the context of preventive care, maternity protection, stays abroad and general questions about the workplace) (Verband für Sicherheit, Gesundheit und Umweltschutz bei der Arbeit 2022). In the interview, the BGN, ASD*BGN and an external service also

reported on a tele-workplace safety project in which not only company medical but also technical safety support was provided by video ([case study DE1](#)⁸²).

The Task Force on Occupational Medicine of the German Medical Association calls for quality requirements for telework medicine to be defined, for example, by means of an occupational medicine rule, and monitoring of providers to ensure that occupational physicians who provide preventive occupational medicine know the workplaces and participate in the risk assessment. Both of these will continue to require at least a partial presence in the workplace (Task Force Arbeitsmedizin 2021).

The Task Force on Occupational Medicine also proposes a 'consistent and quality-assured application of the entrepreneurial model' or the establishment of cross-sectoral, regional centres for the provision of OSH support for MSEs (Task Force Arbeitsmedizin 2021).

The resulting increased use of alternative supervision in accordance with DGUV Regulation 2 Annex 3 would be resource-saving regarding occupational medicine, since here, in contrast to the standard supervision in accordance with Annex 2, no structural performance of safety specialists (Sifa) and occupational physician is required and the involvement of occupational medical expertise for the employer is only necessary regarding occupational medical core competence. Persons with special event-related expertise can be involved in specific specialist topics, for example, questions of occupational psychology.

5.4.2 Integration of other professions into OSH

The BAuA study on the need for OSH professionals already concluded in 2017 that the employer has less and less influence on the design of working conditions and thus on the safety and health of workers due to the changes in the world of work. Even then, the question arose as to how safety and occupational healthcare must change so that workers develop their health competence in such a way that they can shape their working conditions preventively and increasingly on their own responsibility compared to before (Barth et al. 2017).

According to § 7 of the Occupational Safety Act, only engineers, technicians or master craftsmen can be appointed as OSH professionals (Bundestag der Bundesrepublik Deutschland 1973).

With regard to the tasks in the area of safety and health at work that already have to be dealt with today and will have to be dealt with in the future, for example, mental and physical stress, digitalisation, and blurring of boundaries between private and professional life, the question arises, however, as to whether this purely technical focus is still in keeping with the times or whether the competences of other professions such as natural scientists, occupational hygienists and occupational scientists, occupational and organisational psychologists, or health scientists should not also be included (Barth et al. 2017; Kunz 2019).

Several interviewees, especially representatives of the BGs, negated the question above and welcomed the new regulations of DGUV Regulation 2 on the involvement of new professions. Other professions have also been used by the UVTs in the past, for which the state had to give its approval.

The study on the impact of OSH structures in the digitalised world of work points out that the integration of other professions into OSH could be associated with challenges. A larger number of actors per company could lead to a greater need in terms of coordination efforts, which would be at the expense of resources that are already too scarce. In addition, the individual competences of the actors and not their profession should be decisive for the composition of 'support teams' (Georg and Guhlemann 2019).

The evaluation of the interviews confirmed this view by pointing out that not only professional groups with a degree should be included, but that all of them must complete the training to become occupational safety professionals. In this context, several years of experience in company practice could be a prerequisite for each profession to ensure appropriate OSH expertise and to support in a company-specific way. More emphasis should be placed on the competences of the actors and not only on their titles. Managers should be more involved and workers should be empowered to promote the interaction of the actors. Effective and efficient cooperation management should therefore not focus purely on the coordination of the actors but should strive for a structural performance for a comprehensive work design

⁸² Case DE1 is available at: <https://osha.europa.eu/en/publications/germanys-tele-osh-approach-ensuring-consulting-supporting-occupational-safety-and-health-compliance-case-de1>

based on the company's needs and goals. To determine the actual operational need for safety and occupational healthcare, instruments are needed to underpin the calculation of deployment times in accordance with DGUV Regulation 2. The aim should be not only to determine the scope of supervision in hours but also to derive the necessary competences for the supervision provided (Barth et al. 2017).

The concrete need for OSH support in the enterprise depends on numerous factors. For example, if the company has a well-developed prevention culture and a high level of health competence, then the amount of supervision required is reduced. It should therefore be systematically determined which drivers bring about a reduction in the need for supervision and which tend to have influences that increase the need. In doing so, drivers in future trends of change should also be sought (Barth et al. 2017).

5.4.3 Alternative, demand-based supervision Plus (AB+)

As described in section 5.1, this pilot project ([case study DE3](#))⁸³ is intended to expand safety-related support for companies with up to 70 workers. External support management makes it easier for companies to access the know-how of experts. If the existing safety or occupational healthcare is not sufficient to cover the company's needs, other professions are involved in the consultation. In one interview, the support manager as a hub between the actors (OSH specialists, employers, managers) was described as a viable path. In general, this type of supervision conserves resources and thus ensures its quality.

5.4.4 Necessary structural changes

The need to address the problem of the shortage of occupational physicians, which is worsening due to the demographic development in Germany, is becoming more and more urgent. According to calculations, there is an annual shortage of between five and 10 million hours of work by occupational physicians throughout Germany. This makes it difficult for SMEs and more specifically for MSEs to comply with DGUV Regulation 2. The shortage of occupational physicians is not expected to ease in the foreseeable future.

The answers from the interviews confirm the difficulties of the companies to cover the occupational medical care. The structural framework conditions put SMEs that want to be compliant in an unsolvable situation if the resource of occupational physicians is not available. As a result, SMEs are forced to contract private-sector service providers who do not fulfil their mandate with sufficient quality.

From the side of the workers' representation and an inter-company service, the demand was expressed to provide incentives for training as occupational physicians, for example through better remuneration.

On the one hand, the elimination of the mandatory minimum deployment times for occupational safety specialists and occupational physicians of 20% and 40% of the basic deployment times respectively is discussed as a starting point, while on the other hand, the concentration on only 'genuine' medical activities is cited. In this context, however, the concern is also expressed that there is a risk of a withdrawal from preventive occupational medical care and thus a loss of the contribution of occupational physicians to behaviour-oriented prevention and even a loss of importance of occupational medicine.

A major step forward towards more needs-based OSH support is the opening up of this role to experts from other professions, for example from the natural sciences, ergonomics, occupational and organisational psychology, and so on, provided that they acquire the necessary company-specific training. This would allow them to work regularly as occupational safety specialists in accordance with the Occupational Safety Act (Kunz 2022).

The revised regulation is not expected to come into force until 2024/2025 at the earliest.

5.4.5 BGHM: Systemic methods in company counselling

At the German Social Accident Insurance Institution for the woodworking and metalworking industries (BGHM)⁸⁴, systemic approaches to counselling are to be pursued in addition to the classic approaches.

⁸³ Case DE3 is available at: <https://osha.europa.eu/en/publications/germanys-alternative-demand-based-supervision-project-ab-supporting-occupational-safety-and-health-compliance-case-de3>

⁸⁴ See: <https://www.bghm.de/home>

In this context, a training series was launched in 2022 in cooperation with the German Social Accident Insurance Institution for the administrative and management sector (VBG)⁸⁵. The subject of the training is the examination of possible applications of the systemic approach within the framework of advisory activities in the company. The training series is to be continued in the current and the coming year; in addition to the BGHM and the VBG, the German Social Accident Insurance Institution for the health and welfare services BGW⁸⁶ will then also participate.

5.5 Synergies: Service providers and other actors

This section investigates the network of synergies among various OSH players, unveiling the collaborative dynamics inherent in the system. Specifically, it briefly explores the synergies emerging between the labour inspectors and prevention services within the UVTs, the synergistic relationships between the UVTs and social partners, collaborative efforts between the UVTs and external prevention services, and the synergies cultivated through multidisciplinary and inter-institutional programmes or actions.

5.5.1 Synergies between labour inspectors and prevention services of the UVT

A central component of the GDA is the mutual exchange of information on the planning, execution and results of company visits between the prevention services and labour inspectors and is an indispensable prerequisite for fulfilling the legally stipulated mandate of a coordinated approach to consultation and monitoring. According to the GDA evaluation, however, almost half of the labour inspectors of the UVTs attach little importance to the mutual exchange of information (Hägele 2019).

In the evaluation of the GDA's approach, the GDA providers recommend their own 'cooperation strategy' based on their positive experience of cooperation with third parties. In addition to other starting points, for example, the early involvement of social partners and other cooperation partners in the implementation of OSH objectives and the timely exchange of expertise, experience and needs, as well as the development of additional cooperation partners, play an important role. In this context, it is important to point out that the role and significance of the GDA has not been clarified by consensus and that it has only been partially integrated into the structures and concepts of the prevention services, which repeatedly leads to points of friction and disputes (Hägele 2019).

In our interviews, the PPMS was mentioned as an example of possible synergy (see section 4.2.3 and [case study DE2](#)⁸⁷), which provides labour inspectors with information on which prevention services have already been used by the companies. Between the prevention services of the UVT and the UVT's labour inspectors there are both short informal contacts with the organisation and close cooperation. Joint action has the advantage that even small companies can make use of the UVT's resources according to their needs and thus more company visits are possible. The labour inspector initially acts as a generalist on site and channels the subsequent prevention services according to the UVT's catalogue (see section 5.1.1).

5.5.2 Synergies between the UVTs and social partners

The representative employee survey 'DGB Good Work Index' (DGB-Index Gute Arbeit) (Confederation of German Trade Unions (DGB)⁸⁸ conducted annually on behalf of DGB has been collecting data on the quality of working conditions from the perspective of workers since 2007. The regular reporting provides indications of levels of stress among different groups of workers and of changes in working conditions (Bundesministerium für Arbeit und Soziales (BMAS) and Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA) 2022).

The Works Council Modernisation Act has created an expanded legal framework that gives works councils more opportunities to have a say in the design of workplaces and thus make a decisive

⁸⁵ See: https://www.vbg.de/DE/0_Home/home_node.html

⁸⁶ See: <https://www.bgw-online.de/>

⁸⁷ Case DE2 is available at: <https://osha.europa.eu/en/publications/prevention-process-management-system-ppms-germany-supporting-occupational-safety-and-health-compliance-case-de2>

⁸⁸ See: <https://www.dgb.de/>

contribution to OSH. It is in the interest of the education work of the DGB that works councils and staff councils acquire comprehensive expertise in order to be able to implement solutions and strategies for good and healthy working conditions in a sustainable manner (Bundesministerium für Arbeit und Soziales (BMAS) and Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA) 2022).

According to the interviews, the synergies between both the UVTs and the federal state OSH authorities with the social partners are low, also due to their different mandates. Employers' representatives, in contrast to the trade unions, hardly recognise any potential for synergy development. The trade unions, on the other hand, were able to report examples of proven cooperation in joint work programmes, such as in the area of qualification and in the creation of qualification modules for the prevention of musculoskeletal disorders.

UVTs also have equal representation in their general meetings and boards, so that the interests of both workers and employers are equally considered.

5.5.3 Synergies between the UVTs and external prevention services

In the interviews, the International Congress for OSH 'A+A' and the associated trade fair were mentioned as a good networking opportunity between the external prevention services and the UVTs. Other loose contacts exist at working level and via committees (e.g. the specialist committees for advising the BAuA⁸⁹). As a concrete example of networking with inter-company occupational health services in the implementation of COVID-19 vaccinations, the BGN also refers companies to large inter-company services via its OSH support programme ASD*BGN. The ASD*BGN also provides quality assurance through mandatory training, coordination meetings, provision of practical tools, seminars and campaigns. A recurring pattern is that data exchange between the actors of the ASD of the BG and the OSH authority does not take place due to the different legal circles and data protection. While the ASD provides safety-related and occupational medical support to the companies in accordance with the Occupational Safety Act, the event-related advice to the UVTs is located in the Social Code VII.

5.5.4 Synergies through multidisciplinary and institutional programmes or actions

▪ The 'Map of Supporters'

In 2020, the DGUV collected information related to the provision of services in the field of health promotion and prevention provided by selected social service providers (the National Association of Statutory Health Insurance Funds, German Pension Insurance Union, Integration Office of the Federal Employment Agency) with the idea to put it at the disposal of labour inspectors and other prevention specialists. The 'Map of Supporters' is intended to strengthen the basic understanding of cooperation between social service providers within the framework of the UVT national prevention strategy (Deutsche Gesetzliche Unfallversicherung (DGUV) 2020a).

▪ The Offensive Mittelstand (OM)

As described in section 5.3, the SME OM is an alliance that focuses on interlinking the various actors to support SMEs. This is achieved through the joint development of ideas and the integration of expert opinions in expert groups with representatives of the various OSH actors (Clauß et al. 2022). In the interviews, the desire for better cooperation between the OSH actors was expressed, especially because there are so many of them and they could all contribute their know-how. The example of OM shows that 22,000 advisors visit SMEs and can bring in the OSH concerns of other associations, cooperatives or social insurances and mediate between the actors if necessary.

▪ The Initiative Health and Work

Since 2002, the BKK Dachverband e. V., the Deutsche Gesetzliche Unfallversicherung e. V., the AOK-Bundesverband and the Verband der Ersatzkassen e. V. have been cooperating in the Initiative Health and Work (Gesundheit und Arbeit) (iga) to foster health promotion and prevention in companies. The initiative carries out several projects on topics like 'Effectiveness of prevention and workplace health

⁸⁹ See: https://www.baua.de/DE/Die-BAuA/Aufgaben/Geschaeftsfuehrung-von-Ausschuessen/Geschaeftsfuehrung-von-Ausschuessen_node.html

promotion', 'Designing healthy work', 'Cooperation and networking', and 'Work in change' (Die Träger der Nationalen Präventionskonferenz 2019). The 'pilot function' described in section 5.3 is also part of the initiative, as well as the development of a website on cooperation between social service providers. This website is intended to present the benefits of cooperation and support prevention specialists and advisors in workplace health promotion and workplace health management in their pilot function. The aforementioned support services are intended to contribute to making labour inspectors and other prevention specialists capable of acting in their pilot function and thus to sustainably strengthening the position of the statutory UVTs as the first point of contact for safety and health at work. This will benefit the companies and thus the workers (Post 2022b).

- **Roadmap on Carcinogens**

Another GDA-supporting initiative and example of collaboration between institutions at EU level is the 'Roadmap on Carcinogens (RoC 2.0)'. This voluntary action programme of government agencies and social partners for the development and exchange of best practices is intended to contribute to reducing the risks of occupational exposure to carcinogenic hazardous substances. Until 2024, 12 projects have been launched in four thematic areas (Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA) 2021).

- **Healthy working in Thuringia**

Between 2016 and 2022, the German Society for Occupational and Environmental Medicine and a statutory health insurance company jointly implemented the project 'Healthy working in Thuringia' to improve workplace health management. The main result is that networking should go beyond the workplace and focus on all relevant actors in workplace prevention and health promotion as well as at the interfaces to curative care and rehabilitation. The cooperation of doctors working in curative medicine with occupational physicians plays an important role in this. This requires a common basis and acceptance of the respective tasks. This can be improved through, among other things, jointly usable training tools and suitable event formats (Drexler et al. 2022).

- **Agreement on protection against ultraviolet radiation**

Another example of cross-actor cooperation is the social partner agreement on protection against ultraviolet (UV) radiation. It was concluded by the Central Association of the German Construction Industry (ZDB)⁹⁰ together with other construction associations and the Industrial Union for Construction, Agriculture and the Environment (IG BAU).⁹¹ It recommends that workers at risk undergo regular UV screening. In addition, the social partner agreement forms the basis for a regular and broad-based information campaign by the employers' associations in the construction industry, IG BAU and BG BAU to raise awareness of UV protection among workers. Furthermore, it was agreed that UV screening would be included in the examination standard of the occupational medical examinations of the BG BAU's occupational medical service. In this way, a large number of workers in the construction industry can be informed annually about the risk of skin cancer and examined for diseases (Bundesministerium für Arbeit und Soziales (BMAS) and Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA) 2022).

- **Hessian Chambers of Skilled Crafts initiative on OSH**

The Working Group of the Hessian Chambers of Skilled Crafts offers an advisory service whose main task is to advise Hessian skilled crafts enterprises on issues of OSH and health promotion. With the aim of revising the risk assessment in line with the needs of the skilled crafts, several exemplary assessments were carried out in a model company with a technical advisor from the regional guild association. Parallel to the implementation, a document package was prepared and made available to the companies in which it met with acceptance. The advisory centre was involved through the representative of the Hessian skilled crafts in the advisory board for OSH of the Hessian Ministry for Social Affairs and Integration on questions of OSH and health promotion in the skilled crafts. Since 2021, the Advisory Service has permanently taken on the task of representing Hessian craft enterprises in the

⁹⁰ See: <https://www.zdb.de/>

⁹¹ See: <https://igbau.de/>

Advisory Council for OSH (employer side) (Bundesministerium für Arbeit und Soziales (BMAS) and Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA) 2022).

▪ **Cooperation customs administration and the state offices for health and social affairs**

Cooperation between the customs administration and the state offices for health and social affairs is stipulated in both the OSH Act and the Act to Combat Illegal Employment. As part of the cooperation, information from customs on combating illegal employment and on serious deficiencies in OSH is transmitted to the respective Land Office for Health and Social Affairs. In 2019, a total of 22 pieces of information were exchanged, and 25 joint inspections and 12 mutual assistance measures were carried out (Ministerium für Wirtschaft, Arbeit und Gesundheit 2019).

▪ **Federal Framework Recommendation of the NPK**

According to the Federal Framework Recommendation of the NPK of 2018, indirect support at inter-company level in the form of networks is recommended, especially for MSEs, in order to reach more companies with workplace prevention services. These networks are groups of representatives of companies and their organisations as well as regional actors who agree on goals and tasks as well as rules of cooperation.

The statutory health, accident and pension insurance institutions support the formation of inter-company networks for prevention, health, safety and participation promotion as well as the integration of these tasks into existing company networks and cooperate in these networks. To develop synergy effects, the following are of importance:

- bringing together the different data sources available to the network partners;
- the coordination of common procedures, concepts and quality criteria;
- the creation of transparency about the respective services of the social insurance institutions; and
- the mediation of support services that go beyond their own area of responsibility.

The form of mutual cooperation between the providers and with other responsible parties is regulated in the federal states' framework agreements in accordance with § 20f of the Social Code V on the implementation of the national prevention strategy. OSH authorities of the federal states can refer companies to the support options of the social insurance institutions in work-related prevention, health, safety and participation promotion (Die Nationale Präventionskonferenz 2019).

One of the main conclusions of the ESENER Country Report Germany of 2019 'Managing psychosocial risks in European micro and small enterprises' is that companies with the greatest progress had received external support, for example through ISO certification initiatives (Gutheil and Muster 2022). This can be seen as evidence of a synergy with a desired compliance effect between companies and providers of certification processes.

5.6 Success factors of the UVTs' prevention services and possible transferability to other EU countries

The structure of the various prevention services and the implementation of prevention services are very complex due to the long history of their development and the bureaucratic structural framework in Germany (see section 1.3).

In general, an exchange of experience between the countries would be desirable, up to kind of a 'Joint European OSH Strategy' with uniform standards and EU-wide responsibility. Germany is well positioned with the GDA, but has to face up to the discussion about standards again and again. The best way to do this is as a joint learning process with all EU countries.

One external service mentioned that in Germany and Austria fixed times are set for safety-related and occupational medical care, so there is a need for harmonisation compared to the rest of Europe in order to create a fair actual situation. The statement is not based on collected research data, but on our own assessment.

In the interviews, various advantages of the dual system regarding prevention services were named:

- The UVTs' strong connection to the industry (and their tailored sector specific approach) is often interpreted as an advantage.
- One advantage is that the UVTs offer everything from a single source: compensation, accident investigation, rehabilitation, testing, and certification and further expertise. This creates a social safety net for employees and ensures the competitiveness of companies.
- One of the achievements of the UVT over the last 150 years is the basic compensation of accidents and occupational diseases. This compensation means that there are no claims for damages against employers, which can lead to financial hardship.
- The combination of monitoring and counselling/qualification is important here. This link leads to the fact that problems are also accompanied to the end and through the prevention mandate of the UVTs: there is the possibility not only to complain about the mistakes but also to provide support in finding solutions and to sanction in case of non-compliance. Conversely, there was a case where a federal state announced a focus inspection campaign and the companies then contacted the UVTs out of concern to adjust their OSH accordingly.
- The prevention services provided by UVTs are interlinked (integrated in a kind of pack) and this contributes to the promotion of a corporate culture in which companies know what to do and who to turn to if they are at a loss.
- In the coronavirus pandemic, the dual system proved to be quick to react and competent, for example by providing assistance to companies that maintained their ability to act (e.g. that they were not closed).
- Although the BAuA is part of the system, it has the opportunity to view the individual components of the dual system and their interaction from above.
- Through the interaction between the prevention services 'research' and 'regulations and rules', the state of the art is considered in the standardisation of work equipment, so that only safe and healthy work equipment is approved.
- In our interviews, the possibility for companies to make specialised enquiries to various institutes, such as the Institute for Occupational Medical Prevention or the Institute for OSH, was mentioned several times.
- The disadvantage in Germany is that each UVT must work with the 16 different federal states and the state view is very inconsistent. Each federal state works with one UK and the nine BGs. The federal states point to the dependence of the UVTs on the social partners and volunteers. In return, the UVTs see a political dependency of the federal states on the respective ministries.
- The large number of stakeholders can lead to a 'clash of competences', resulting in disagreements about who is responsible and how to proceed.

Many of the points mentioned are not transferable to other EU countries but can serve as inspiration for targeted changes.

5.7 Role of the prevention services

The following suggestions were found in literature and interviews to ensure the relevance and usefulness of prevention services in Germany.

An improvement in the performance of tasks by the prevention services and labour inspectorates, both in qualitative and quantitative terms, is explicitly part of the GDA objectives and is implemented in practice in particular through the activities in objective level 1 and also those in objective level 2 — even if the latter cannot be quantified (Hägele 2019).

For holistic risk assessments, OSH players in SMEs would like more support from experts, especially from the BGs. They have the problem that the BGs are often not wanted to be seen in companies because they have the reputation of being 'controlettis' — and some labour inspectors might still act in this way in companies. The BGs regret that company managements make it difficult for their OSH players to cooperate with the BG and emphasise that more support services for companies are

indispensable, especially to ensure a high level of prevention in digitalisation (Georg and Guhlemann 2019).

In contrast to this, one external service defined its role in the interview in such a way that it does not see itself as an extension of the UVT but should advise locally and not 'explain the world to the companies with a raised forefinger'. In his opinion there should be a clear understanding of the role that the inter-company services advise and the UVTs impose sanctions.

According to interviews, compliance is achieved through company- and sector-specific references to the health and company benefits of the rules and not through the (mere) invocation of the rules. Prevention services have the potential to support MSEs/SMEs in their references/concerns. The importance of safety and health should not only be ensured by the mere compliance with legal requirements, which stands next to the operational processes and is carried out by their experts, but go one step further: it should become an integrated approach in the operational organisation, which thinks along with the business processes (and thus increases the attractiveness as an employer and thus the recruitment and retention of skilled workers).

6 Presentation of the case studies

In this section summaries of the six case studies, which were identified and developed in the research project that this report is based on, are presented. The case studies are published as stand-alone products and are available on EU-OSHA's website.

DE2	Prevention-Process-Management-System (PPMS) ⁹²	Labour Inspection
The PPMS is a digital software developed by the BGN. The system is based on an Oracle database and supports the monitoring and counselling activities of BGN labour inspectors. The software can also be operated as an app, enabling mobile and flexible working for the labour inspectors. Information already stored about the companies, such as accident history, various measurement logs, participation in bonus procedures or training initiatives carried out, can be called up and added to regardless of time and place. The software also makes the storage and archiving of new information and data (e.g. in the form of photo and video documentation) more efficient and more sustainable thanks to the reduction in paper consumption. 'Geocoding' links all companies and their data in the PPMS with locations, so that the labour inspectors are shown their own area of responsibility and the selection of companies is made easier by automated filters, such as the risk index. Labour inspectors in the field, for example, can use the app to spontaneously select and visit companies.		

DE4	KuG 2 (Approach concept for MSEs) ⁹³	Labour Inspection
In the project 'Microenterprises and Risk Assessment 2 (Kleinstbetriebe und Gefährdungsbeurteilung 2 (KuG 2))' — carried out between 2021 and 2022 — the focus was on assessing the success of monitoring activities in MSEs when the relevant enterprises are requested in advance to carry out a risk assessment. In KuG 2, MSEs were to be contacted in advance with a specified letter and requested to submit their risk assessment. Here, it was first determined that establishments that did not respond to the letter would be actively visited. The project was divided and carried out in two steps. The core project consisted of sending out the letter plus the subsequent company visits, while in a second step an 'MSE risk assessment' checklist was produced to serve as a practical and supporting tool to help in the process of carrying out and implementing the risk assessment. The checklist was tested in the companies.		

⁹² Case DE2 is available at: <https://osha.europa.eu/en/publications/prevention-process-management-system-ppms-germany-supporting-occupational-safety-and-health-compliance-case-de2>

⁹³ Case DE4 is available at: <https://osha.europa.eu/en/publications/initiative-micro-enterprises-and-risk-assessment-kug-2-germany-supporting-occupational-safety-and-health-compliance-case-de4>

DE6	Qualification Modules (third GDA-Period) ⁹⁴	Labour Inspection
The third period (2021-2025) of the GDA focuses on coordinated cooperation between the Federal Government, the federal states and the statutory UVTs to successfully implement the strategic goal of 'Making work safe and healthy – prevention through risk assessment'. In terms of content, this period focuses on three key central areas: 'Musculoskeletal Strain' (MSB), 'Psychological Strain' (Psyche) and 'Carcinogenic Hazardous Substances' (KEGS). A coordinated approach to inspection activities should ensure that a larger number of companies carry out appropriate risk assessments and establish an effective OSH organisation. For this purpose, special basic data sheets and technical data sheets were developed, which are available to the inspectorates in addition to qualification and training modules. These trainings are intended to contribute to increasing the quality and efficiency of inspections within the framework of the GDA and thus to achieving the desired goals in the field of OSH by the GDA.		

DE1	Tele-OSH ⁹⁵	Prevention Services
There are still major deficits in OSH support (in accordance with DGUV Regulation 2) for SMEs and more specifically MSEs in terms of quality, comprehensive support and the effects achieved. Tele-OSH is intended to use video consultations to help overcome the challenge of ensuring OSH services in particular. Tele-OSH was launched as a pilot project by the BGN and the BGN's OSH Service (ASD*BGN). This gives their contractual partners the opportunity to benefit from their offer to be supported via video consultations. The video support hours are considered as a supplement to on-site counselling. Following the positive feedback received from the companies benefiting from this initiative and the encouraging experience gained, Tele-OSH will continue to be offered. Further Tele-OSH approaches are seen by both the German Medical Association and the UVTs as a perspective for overcoming the lack of resources in the field of occupational medicine (VBG 2022b; Task Force Arbeitsmedizin 2021).		

DE3	Alternative Betreuung Plus (AB+) ⁹⁶	Prevention Services
AB+ (Alternative Betreuung Plus) is a pilot project carried out by the DGUV, BG RCI, BGHM, UK Nord and UKH, the FSU Jena and systemkonzept set up with the aim of making the approaches of alternative, demand-based supervision in accordance with DGUV Regulation 2 Annex 3 also available for medium-sized companies with 30-70 workers (UK: up to 250 workers). This project focuses on the involvement of key actors at company level like employers and managers; the inclusion of provision of demand-based support from professionals like safety experts and occupational physicians and other OSH players; and the efficient and effective use of the sometimes-limited resources (especially the occupational physicians) as well as an OSH support management including other professions.		

⁹⁴ Case DE6 is available at: <https://osha.europa.eu/en/publications/germanys-programme-safe-handling-carcinogenic-hazardous-substances-kegs-supporting-occupational-safety-and-health-compliance-case-de6>

⁹⁵ Case DE1 is available at: <https://osha.europa.eu/en/publications/germanys-tele-osh-approach-ensuring-consulting-supporting-occupational-safety-and-health-compliance-case-de1>

⁹⁶ Case DE3 is available at: <https://osha.europa.eu/en/publications/germanys-alternative-demand-based-supervision-project-ab-supporting-occupational-safety-and-health-compliance-case-de3>

DE5	OSH for non-occupational safety professionals ⁹⁷	Prevention Services
The 'Offensive Mittelstand', or OM, is an independent platform of intermediary organisations active at the federal level (social partners, social insurance companies and chambers, central research institutes, federal ministries, professional and trade associations — for example, of tax advisors, management consultants, energy consultants, occupational safety professionals, occupational physicians). SMEs should be sensitised to OSH. Existing advisory contacts can build a bridge between companies and OSH. For example, tax consultants are trustworthy contacts for SMEs and have access to internal information such as absenteeism, accidents, damage to work equipment and so on. This enables them to recognise problems in the area of OSH. The OM offers consultants an online qualification in 'OSH for non-OSH professionals' so that they can connect companies or employees in need of OSH advice with OSH professionals.		

⁹⁷ Case DE5 is available at: <https://osha.europa.eu/en/publications/occupational-safety-and-health-osh-non-osh-professionals-germany-supporting-occupational-safety-and-health-compliance-case-de5>

7 Discussion of the results

7.1 Labour inspection and compliance

7.1.1 *On the role of labour inspectors and their influence on compliance*

The role of labour inspectors was discussed in detail earlier in the report. The role of the labour inspectors of the federal states differs from the role of the labour inspectors of the UVTs mainly in its legal basis, distribution of tasks and focus.

Even if the personnel resources of the labour inspectors are limited, supervisory/monitoring action makes a clear contribution to OSH-compliant behaviour (Arenz et al. 2023). If there is insufficient motivation in the visited companies to comply with the OSH obligations independently, this can be induced extrinsically by the inspection.

On the part of the federal states, 'supporting compliance' is understood as a central *raison d'être* of enforcement activities in general. The mere possibility of control already has the effect that companies increasingly deal with the issue of compliance. The influence of labour inspection on the OSH-related actions of the company is essential here, even if many companies would establish effective OSH without direct monitoring. But simply gaining an external perspective through labour inspection could have a major influence on the way OSH is handled in the company. The term 'supervision/monitoring' implies not only control but also the function of triggering and initiating processes. This could take the form of orders and penalties, for example, while the actual implementation of measures always remained the responsibility of the company.

From the perspective of the statutory UVTs, monitoring action also has an enormous influence on compliance with regulations and directives, since company inspections increasingly stimulate the drawing up of risk assessments and promote company discussion of the OSH organisation. The influence is particularly evident in companies where there is personal contact between employers, workers and labour inspectors. In the interviews it was noted that the UVTs sometimes adopt an appreciative and systemic advisory approach that strongly encourages the involvement of employers and workers as experts in their own companies. Ultimately, monitoring serves as a 'door opener' for further prevention services by the UVTs that go beyond mere compliance with regulations.

Nevertheless, both sides consider the effectiveness and efficiency in compliance auditing to be problematic. On the one hand, there are hardly any scientific studies on the real efficiency and effectiveness of the existing procedures, and on the other hand, the lack of human resources is a major problem for the implementation of an effective compliance audit.

7.1.2 *Developments in monitoring action*

Regarding monitoring activities, there are new developments that are changing the activity itself, but also the understanding of monitoring activities. On one hand, digitalisation is advancing, so that the basic principles are also taking on digital forms. Especially at the UVTs, labour inspection activities are increasingly supported by the use of digital assistance systems.

Digital assistance systems support labour inspectors by making the selection of operations more efficient based on risk-oriented key figures. The use of AI makes it possible to combine different data as a basis for selecting companies to be inspected. At the same time, the documentation of companies is digitalised and geocoded depending on the UVT and company archives are thus also accessible in the field.

With an increase in flexible work locations, new approaches to action and methodologies must be considered on the part of the OSH authorities. Monitoring action was of necessity confronted with such approaches during the COVID-19 pandemic. The offer of organisational checks, checklists and other assistance by the OSH authorities can be cited here. In particular, the experience with obligatory self-reporting (on OSH organisation and risk assessment) by the companies themselves and subsequent company inspections (e.g. in the absence of these submissions) emphasises an understanding of monitoring according to which self-responsible cooperation with the OSH authorities must be sought or maintained by the companies.

The emphasis on autonomous action by the companies proves to be a central concept of modern OSH management. The number of companies to be inspected cannot be covered in any way by the labour inspectors. It is precisely for this reason that the promotion of health competence and abilities and the willingness to help shape working conditions and health competence is of central importance. During the pandemic phase, there was also an increased interest in the topic of OSH. On the one hand, the increased self-motivation of the companies was visible, which was shown by, among other things, the increased demand for support material for the implementation of the new regulations, and on the other hand by the increased number of complaints submitted by the workers.

The monitoring activities of the federal state OSH authorities were also confronted with new structural challenges due to the extension of the OSH Act by the OSH Inspection Act (ArbSchKG). The introduction of a minimum inspection quota of 5% is obligatory for the federal states from 2026, and further increases in the quota are possible from the year after that.

7.1.3 Joint German OSH Strategy (Gemeinsame Deutsche Arbeitsschutzstrategie (GDA))

The current phase of the GDA is the third GDA period, designed as a continuation of the previous strategies. It focuses on the handling of carcinogenic hazardous substances, the protection of mental health (Psyche) and the prevention of musculoskeletal disorders. Methodologically, the focus is on the company assessment, which systematically includes the OSH organisation as well as the risk assessment. The uniform assessment system — inspection with system assessment — is based on the guideline on risk assessment and documentation and the guideline on the organisation of OSH. In the current GDA period (2021-2025), 200,000 surveys are planned in accordance with the GDA guidelines. To establish common standards in assessment, labour inspectors are trained with common qualification modules.

To ensure a coordinated system between the federal states and the UVTs, the OSH Inspection Act also legally anchored data communication between the two sides. This also includes the specific information density that must be fulfilled in the exchange.

7.1.4 Sanctions

The mere existence and potentiality of sanctions can be enough to have an impact on the compliance of companies. Financial sanctions must be set high enough to be able to function as a deterrent instrument of the OSH authorities.

In general, however, it has been shown that it is not too high fines that are the trigger for 'resistance to regulation' on the part of labour inspectors, but rather the bureaucratic effort involved in imposing fines — especially in relation to the available resources. The labour inspectors of the federal states and UVTs prefer further monitoring or advisory appointments to bring the companies to compliance, rather than taking the documentary and procedural route of sanctions (with an uncertain outcome). Corruption is not recorded as a prominent problem in German OSH. The possibility of corruption nevertheless exists in places, for example, where a company is visited and monitored by the same person over longer periods of time.

Overall, it becomes clear that sanctions play a significant role in ensuring compliance. They act as a 'negative' incentive to encourage compliance with labour regulations. Nevertheless, it is emphasised that an appropriate relationship is required in which sanctions are used sensibly, but at the same time there is room for consultation and finding solutions. However, it remains vague what constitutes an 'appropriate ratio'. Due to their different roles and tasks, the assessment on the part of the federal states and the UVTs differs.

7.2 Prevention services and compliance

7.2.1 Data on the nature, scope and effectiveness of prevention services

In Germany, there are currently only marginal approaches to researching the effectiveness of prevention services, but no explicit research on compliance. The common problem of OSH and compliance research is that there is no measurable indicator of the state of OSH in companies. Many of the research

projects mentioned are already outdated and would have to be repeated with the addition of compliance aspects, for example, on activity and effectiveness.

7.2.2 Model of the prevention services

The German model of prevention services consists of the UVTs, which offer 10 different prevention services, and private-sector service providers, who provide safety and occupational medical care based on DGUV Regulation 2, as well as the company actors (Sifa, occupational physicians). Drivers for the further development of prevention services are new support approaches such as AB+ ([case study DE3](#))⁹⁸ (see section 5.1.4) and the centre model (see sections 5.1.4 and 5.3), which have emerged due to the inadequate support of SMEs and the lack of occupational physicians.

7.2.3 Success factors of the German prevention services system

In Germany, prevention services are provided by the various UVTs on a sector-specific basis and the combination of monitoring and counselling is provided from a single source. In addition, the departmental research of the many different OSH players, such as the BAuA (subordinate to the BMAS) or the institutes of the DGUV (e.g. Institut für Arbeit und Gesundheit der Deutschen Gesetzlichen Unfallversicherung (IAG), Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung (IFA), provides a great deal of scientific expertise, which is used by the UVTs to further develop their own prevention services (see section 5.1.1) and is thus also made available to companies.

7.2.4 Dealing with hard-to-reach companies

To better meet the needs of hard-to-reach enterprises such as SMEs (and more specifically MSEs), prevention services should digitalise their communication in the future and take greater account of the working conditions of new service forms such as the platform economy. In addition to the provision of language- and culture-specific qualification materials and practical and tailored guidelines by the UVTs, SMEs should also be sensitised in such a way that they recognise their OSH needs and feel concerned and involved.

7.2.5 Role of the prevention services

From the interviews it appears that compliance is achieved through company and sector-specific references to the health and company benefits of the rules rather than by invoking the rules. Prevention services have the potential to support SMEs in their concerns. The importance of safety and health should not only be ensured by mere compliance with legal regulations but should become an integrated approach in the company organisation that thinks along with the company processes.

7.2.6 Increasing the effectiveness of prevention services

The regulations should be adapted in such a way that support can be provided in line with company requirements and needs. It would be helpful to open up to further competences in order to meet the challenges of a changing world of work, to develop new approaches to overcoming the shortage of occupational physicians, and to improve the coordination in the provision of support on the part of both the UVTs and the companies (nodal point). Other possible starting points were mentioned in the interviews: resource-saving telemedicine; better remuneration for occupational physicians to increase job attractiveness; integration of other professions; and quality-assured application of the entrepreneurial model or the establishment of cross-sector, regional centres that offer safety-related and occupational medical care.

7.2.7 Synergies

There is loose cooperation between labour inspectorates and the prevention services of the UVTs in some cases, but also close cooperation in others, for example, via data exchange systems such as the

⁹⁸ Case DE3 is available at: <https://osha.europa.eu/en/publications/germanys-alternative-demand-based-supervision-project-ab-supporting-occupational-safety-and-health-compliance-case-de3>

PPMS.⁹⁹ Cooperation between trade unions and UVTs has also proven successful. Synergies can also be seen in company networks such as the OM.

7.3 Ways to support OSH compliance

7.3.1 Legal requirements

The main driver for companies' involvement in OSH and prevention measures and the implementation of new tools in everyday work is the fulfilment of legal duties, which was particularly important during the pandemic. However, despite legal requirements and initiatives, psychosocial health management, for example, is rarely the focus of inspections and preventive action in the company (Gutheil and Muster 2022). Here, the other conducive incentive systems play a decisive role, which for example bring psychosocial risks to the fore in premium procedures and new pioneering initiatives and push OSH more from the outside.

7.3.2 Attitude of managers/workers

The German Social Accident Insurance Institution for the energy, textile, electrical and media products and the Social Accident Insurance for raw materials and the chemical industry (BG ETEM and BGRCI) consider the basic attitudes of managers and workers to be particularly important when it comes to establishing a compliance-oriented safety culture in OSH (Berufsgenossenschaft Rohstoffe und chemische Industrie 2017; Berufsgenossenschaft Energie, Textil, Elektro, Medienerzeugnisse 2020). These attitudes should already be in place before participation in certain incentive systems, as there is often a tendency to continue with tried and tested ways and completely new approaches are difficult to establish. Once a certain basic attitude towards occupational safety is established within a company, new workers will also follow this motto.

7.3.3 Contribution of workers

One of the most important factors that is conducive to compliance and over which managers have a significant influence is the motivation of their workers. Appreciation and praise as well as active and regular involvement of the workers in OSH-related issues play a key role here. For example, idea workshops or the monthly award meetings of the German Social Accident Insurance for the Commercial Transport, Postal Logistics and Telecommunication (BG Verkehr) for the implementation of new occupational safety measures that could be awarded, or the joint selection of new work equipment, promote so-called nudging and shape awareness and attentiveness among each other (Berufsgenossenschaft Rohstoffe und chemische Industrie 2017; Berufsgenossenschaft Verkehrswirtschaft, Post-Logistik, Telekommunikation 2022).

7.3.4 Education and qualification

In addition, managers should invest in knowledge, skilled personnel and in-service training, such as regular seminars and briefings, and provide certain areas with the appropriate skilled personnel, as this also has a positive effect on a common safety culture and knowledge is not lost to the company (Berufsgenossenschaft Rohstoffe und chemische Industrie 2017; Berufsgenossenschaft Verkehrswirtschaft, Post-Logistik, Telekommunikation 2023).

⁹⁹ The case study is available at: <https://osha.europa.eu/en/publications/prevention-process-management-system-ppms-germany-supporting-occupational-safety-and-health-compliance-case-de2>

8 Conclusions and policy pointers

The answers to research questions (that guided the research project) that emerged from the literature and field research carried out reveal a number of aspects that are already being debated or addressed at national level, some of which are even being taken up programmatically at scientific or policy level, but which represent strategic challenges and issues that need to be further investigated and addressed — also at EU level.

8.1 Conclusions related to labour inspection

8.1.1 Digitalisation of inspection

The rapid digitalisation of the world of work in recent years has brought about profound changes. Companies are increasingly relying on flexible working models, making traditional monitoring and control methods less effective. In addition to the increasing flexibility of work locations and difficult-to-access work environments such as home offices, a lack of human resources is becoming apparent with regard to both the federal state labour inspectors and the labour inspectors of the UVTs, as well as on the part of the prevention services regarding occupational physicians.

This lack of qualified professionals is a cause for concern, as it affects the effectiveness and efficiency of monitoring and prevention action in the work environment. Both the federal state OSH authorities and the statutory UVTs are faced with the challenge of managing their monitoring and advisory tasks with limited human resources now and in the future, as the shortage of skilled workers is also reflected in the recruitment of new labour inspectors.

As digitalisation continues, more new ways of working and working environments will emerge. Therefore, it is important to improve knowledge on how these changes (will) affect OSH. For this reason, the digitalisation of monitoring and advisory services is considered a key area that should increasingly become the focus of upcoming research projects.

In addition, systematic and innovative adaptation processes in digital monitoring action are necessary. The modernisation of monitoring and advisory processes and the use of AI can make monitoring and advisory activities more effective.

This can be done, for example, through modified databases that support the exchange of data between the various OSH institutions or through increased use of AI in application systems. With the help of algorithms and AI technologies that can access different data sources, the selection of operations can be supported in the best possible way. The calculation of certain risk indexes is automated and indicates to the labour inspectors exactly which companies should be visited and where they are in the area of responsibility by means of geocoding. At the same time, the simplified data collection and reporting will make more efficient and sustainable use of limited resources. Further developments are needed in prevention extrapolation.

8.1.2 Monitor minimum standards for inspections across Germany and discuss across the EU

The coordination of the contents of an inspection with system assessment (via the GDA guidelines on the organisation of OSH and on risk assessment) has created an important basis for action by the labour inspectors of the federal states and the UVTs. The use of a common basic data sheet (and, if necessary, specialised sheets) not only leads to a more uniform data collection but also to a shared understanding (and interpretations) of the terminology used and the minimum standards. This form of inspection is explicitly linked to the compliance audit.

Common minimum standards could also lead to improved data collection at EU level. To this end, the EU Member States would have to discuss whether they have the same understanding of 'compliance' or whether there can be an EU-wide agreement on this. Based on this understanding, it would be possible to react more quickly to new developments (e.g. new forms of work) by asking the question: Are these basic requirements for compliance changing in any way?

8.1.3 Qualification and training of labour inspectors (federal states and UVTs)

In the context of the GDA, the labour inspectors of the federal state OSH authorities and the statutory UVTs are required to pursue a coherent strategy for evaluating companies via the system assessment (Gemeinsame Deutsche Arbeitsschutzstrategie (GDA) 2010). In addition to the agreed basic principles in the form of GDA guidelines, further qualification and training modules were drawn up as part of the third GDA period. These modules serve, among other things, the purpose of supporting standardised system assessments by labour inspectors.

These modules contain tutorials, basic and specialised data sheets, checklists, specific instructions for action, information sheets or even text modules for announcement letters. The uniform and dedicated monitoring of risk assessment and OSH organisation as part of the system assessment is intended to increase compliance in the companies.

Similar measures are also conceivable at EU level when it comes to the introduction and development of standardised qualification modules for the inspectors of EU Member States. In addition to the common standards of training programmes already published by the European Commission, further practical qualification and learning modules could be developed.

8.1.4 Data exchange/understanding across jurisdiction/institutions

The exchange of data within Germany between the OSH authorities of the federal states and the UVTs is based on new principles of action. Accordingly, empirical findings are still lacking for further recommendations in this context.

The need for policy discussion arises from the data protection obstacles that have been identified in the transfer of data across authorities or national borders. This problem cannot be dealt with singularly from the perspective of OSH as it goes beyond strict OSH policy area.

8.2 Conclusions related to prevention services

8.2.1 Digital tools for operational support (OSH Expert Act (ASiG))

The demand in the field of occupational medicine cannot be met with today's available resources, nor will it be in the future. SMEs can benefit from digitalised communication, as this increases the ability of prevention services to act.

To counter the lack of occupational health resources and to reach a larger number of companies, the use of digital tools for OSH supervision/support is recommended. Within the legal framework, video consultation can be seen as a supplement to OSH supervision for SMEs that do not have their own on-site staff. OSH professionals working on a company-external basis benefit from the reduction in travel times and can attend to a larger number of companies. The companies benefit from the more precise use of valuable presence time, the lower costs and better availability of the OSH professionals.

8.2.2 Address and advise MSEs

MSEs in particular face particular difficulties when it comes to the management of OSH. In addition to the scarcity of resources in the companies, a lack of expertise and legal ambiguities also present the companies themselves with difficulties in implementing OSH. The labour inspectors also have great difficulty in reaching MSEs.

New approaches must be explored and evaluated. The operational benefits of safety and health at work must become evident and be linked to other business objectives. Campaigns and training materials must be better tailored towards the MSE target group (e.g. comprehensibility, practical relevance, linguistic plurality).

8.2.3 Interaction of different prevention services

The challenges arising from the various processes of change (work, climate, society/demography) require a coordinated approach to prevention (e.g. new forms of work, new work equipment, high-risk manufacturing and work processes). This requires the interaction of research, the consideration of new (occupational) scientific findings in the regulations, the qualification of company-external and in-house OSH actors and workers, and the practical preparation of OSH requirements in companies in the form of guidelines, practical tools and resources.

An interesting approach to be considered is to involve other persons involved in workplace counselling (e.g. tax advisors) who act as multipliers for the topic of OSH. Another interesting initiative could be to expand the role of the labour inspector (UVT) to include a pilot function that also advises on prevention services outside the OSH area (e.g. on medical treatment, rehabilitation services and pensions).

The concept of the 'pilot function' is an extension of the role of the labour inspector (UVT). In the course of monitoring and advising on OSH in accordance with § 17 of the Social Code VII, they are the main contact persons for prevention issues and can act as an interface to external social service providers such as statutory health and pension insurance, the Federal Employment Agency, and the integration and inclusion offices.

8.2.4 Procedure oriented towards operational needs – inter-professional/expanding

In view of the tasks to be tackled in the field of OSH in the future, such as digitalisation, blurring of boundaries between private and work life, mental and physical strain, and so on, the legally prescribed OSH supervision/support should not be geared purely to technical concerns/professions (engineers, technicians or master craftsmen) and occupational physicians, as has been the case up to now.

In order to take better account of the health and safety of workers, it is beneficial to use the know-how of different disciplines in connection with a risk assessment. Professions such as natural sciences, industrial hygiene and occupational sciences, occupational and organisational psychology, or health sciences can address the concerns of companies in a needs-oriented and more specialised manner. Transfer processes between the different actors create additional synergies.

8.3 Conclusions related to inspection and prevention services

8.3.1 Research on in-house and external OSH providers

Research reveals a lack of basic data on the activity and perceptions of OSH professionals, occupational physicians and labour inspectors. However, this data is necessary for active change campaigns and more effective resource allocation of current monitoring and advisory activities.

Further research is needed in the coming years to determine the setting of research priorities at national level, ultimately enabling better coordination of specific and evidence-based research activities and more efficient allocation of resources.

This will require the further accumulation of national reports as well as uniform evaluation systems to further complement the current way of handling data and form the basis for deriving targeted OSH programmes. Only through this iterative process can sustainable research on the effectiveness of OSH programmes be ensured and a broader data basis for policy recommendations be created.

8.3.2 Qualification of company actors – organisational and health competence

The changing nature of work means that employers and managers have less and less influence on the shaping of working conditions and thus on the safety and health of workers.

As a result, shaping the skills and health competences of all workplace actors is becoming more important. They must develop a deeper understanding of their health and safety at work to be able to independently assess and shape working conditions or to be able to identify design needs. In this way, they actively contribute to compliance with standards and the development of a culture of prevention.

8.3.3 Countering image problems and barriers to implementation of OSH

The field of OSH is currently not sufficiently valued in many companies and has a pronounced image problem. There is a perception that OSH is seen either as a bureaucratic burden or a cost factor, rather than as an indispensable part of a healthy and productive working environment. This negative perception can make the implementation of OSH measures difficult and reduce the motivation of companies to actively engage in the health and safety of their workers.

Additional research programmes on implementation gaps, barriers to action and motivation problems in OSH are crucial to develop effective strategies for improving active OSH in companies. Various aspects should be considered:

The economic impact of OSH measures on productivity, employee satisfaction and sickness costs can be further substantiated by scientific studies so that companies can be convinced of the long-term profitability. This is a method advocated by the employers' representation.

There must be further research into the development of more incentive systems for compliant fair practices. The goal must be to develop innovative incentive schemes that generate positive and sustainable behavioural change among companies.

Effectively used and authentically written advertising campaigns can contribute to improving the image of OSH. Here, studies from advertising and consumer psychology on the effectiveness of advertising campaigns need to be compiled to possibly improve the image of OSH, influence public perception and encourage companies to consider OSH as a valuable investment.

In addition, social partners can be more involved to promote and implement OSH-related measures.

8.4 Outlook on comparative EU research projects

After an intensive study of the German OSH system within the framework of the present project, as well as the analysis of innovative developments in labour inspectorates and prevention services, it is now necessary to compile the results obtained with the research work of the sister projects from other EU countries.

In this way, not only can comparisons be made between European countries, but in particular transfer potentials of innovative developments can be examined and analysed. Finally, the transfer and exchange of innovative developments, such as digital assistance systems, between European countries is quite possible and should be actively pursued.

While the GDA, for example, is recognised as a distinctive feature of the dual OSH system in Germany, it can also serve as a model for managing various OSH players. The GDA can be used as a reference point when developing a coherent national OSH strategy, despite existing differences between the players. Its multifaceted approach and collaborative framework provide valuable insights for other countries grappling with the challenge of harmonising diverse OSH players. The GDA's ability to navigate through varied interests and integrate different perspectives underscores its potential to contribute to the formulation of effective and inclusive OSH policies on a broader scale.

Only through the exchange of best practices, joint research projects and EU initiatives to promote innovation in OSH can a harmonised working environment be sought between EU Member States in which new technologies and (proven) solutions are shared and implemented across borders.

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