FINAL
DRAFT

INTERNATIONAL
STANDARD

**ISO/FDIS
45004**

ISO/TC **283**

Secretariat: **BSI**

Voting begins on:
2023-12-01

Voting terminates on:
2024-01-26

Occupational health and safety management — Guidelines on performance evaluation

Reference number
ISO/FDIS 45004:2023(E)

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 283, *Occupational health and safety management*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document is intended to help organizations to effectively monitor, measure, analyse and evaluate occupational health and safety (OH&S) performance.

OH&S performance evaluation includes the processes that the organization uses to assess the adequacy of activities that are expected to achieve intended results. OH&S performance is normally evaluated by using a combination of processes and sources of information such as incident investigations, inspections, audits, qualitative and quantitative indicators, culture surveys and interviews.

This document gives guidance on performance evaluation processes, including:

— selection and use of performance processes including indicators;

— monitoring and measuring to obtain data;

— analysing the data to allow performance of evaluation;

— unintended consequences;

— limitations, such as under- and over-reporting, and data distortion.

This document can be used by organizations of all types, regardless of whether they have implemented a formal OH&S management system (see ISO 45001 and ISO 45002).

This document provides examples which demonstrate how to evaluate performance to drive continual improvement and support the organization in achieving its intended results.

This document recommends a balanced approach based on selection of performance evaluation processes and indicators, with emphasis on proactive (leading) OH&S performance indicators. It recognizes that over-emphasis on past performance (lagging) indicators, such as incidence and frequency rates, can undermine efforts to improve OH&S performance.

As every organization is unique, and intended results vary, there is not a standardized set of performance evaluation processes or set of indicators that fulfil the needs of all organizations. Therefore, every organization has to identify performance evaluation processes and indicators to suit its needs.

Effective performance evaluation can help the organization to demonstrate continual improvement, and therefore may need to be adjusted when the organization's performance changes. Effectiveness is the result of selecting the appropriate performance evaluation processes and properly implementing them. When performance evaluation processes are used inappropriately (e.g. in a way that is perceived to blame individuals for system deficiencies), they can produce unintended consequences. The most common of these consequences are discussed in this document.

This document is designed to complement ISO 45001 by providing performance evaluation approaches that align with requirements of that standard. This document can be used independently, by any organization, to improve OH&S performance.

Occupational health and safety management — Guidelines on performance evaluation

1 Scope

This document gives guidance regarding how organizations can establish monitoring, measurement, analysis and evaluation processes, including the development of relevant indicators for the assessment of occupational health and safety (OH&S) performance. It enables organizations to determine if intended results are being achieved, including continual improvement of OH&S performance.

This document is applicable to all organizations regardless of type, industry sector, level of risk, size or location. It can be used independently or as part of OH&S management systems, including those based on ISO 45001:2018, or other standards or guidelines.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 45001:2018, *Occupational health and safety management systems — Requirements with guidance for use*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 45001:2018 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
measurement
process to determine a value

Note 1 to entry: Measurement can relate to managing activities, processes, products, services, systems or organizations.

[SOURCE: ISO 45001:2018, 3.31, modified — Note 1 to entry replaced.]

3.2
indicator
variable that can be measured or described, representing the status or a characteristic of operations, processes, management, and conditions or outcomes

Note 1 to entry: Indicators are generally measurable and can be quantitative or qualitative.

Note 2 to entry: Lagging indicators relate to past performance.

Note 3 to entry: Leading indicators relate to factors that can influence future performance.

Note 4 to entry: Some organizations use the term “metric” instead of “indicator”.

Note 5 to entry: Significant indicators used to direct decision-making by top management are sometimes referred to as “key performance indicators (KPIs)”.

4 Performance evaluation

4.1 General

Performance evaluation is a process or set of processes that compares performance achieved by an organization against intended results. The organization’s intended results can include continual improvement of OH&S performance, achievement of OH&S objectives, and fulfilment of legal requirements and other requirements.

The organization should take into account that there are many sources of information that can provide input to performance evaluation (see 5.3). The organization should consider using a variety of sources of information as inputs to achieve a more comprehensive assessment, as a single source used in isolation can lead to an incomplete or inaccurate assessment.

Clause A.3 provides examples of processes that can help achieve intended results.

4.2 Why performance evaluation is important

The intent of performance evaluation is to assist the organization in determining the extent to which intended results are being achieved.

For example, performance evaluation allows the organization to determine:

a) if top management is demonstrating support for OH&S;

b) which processes are achieving planned results and which are not;

c) the degree of variation in processes or activities that affect OH&S performance and the causes of those variations;

d) if there are opportunities or if there is a need for actions to improve processes.

Performance evaluation is essential to ensure effective management of OH&S performance and to contribute to the effectiveness of the organization’s decision-making process(es).

5 Performance evaluation process

5.1 General

When implementing the performance evaluation process, the organization should take into account:

a) its processes (e.g. purchasing, planning, manufacturing, service provision, logistics, training) relevant to its context and activities (e.g. working at height, permit to work, exposure assessment);

b) the effectiveness of OH&S management, including worker participation, hazard identification, assessment of risk and risk controls;

c) its conscious or unconscious assumptions about OH&S that influence organizational behaviour;

EXAMPLE It is a common erroneous assumption that incidents are always caused by unsafe behaviour by workers. Similarly, it is often erroneously assumed that a low incident rate always means the workplace is safe.

d) organizational culture that influences behaviours that affect OH&S (e.g. reporting OH&S incidents or issues is encouraged and supported, without fear of reprisal);

e) interdependencies within the system (e.g. the effectiveness of inspections can depend on the time available, training of inspectors and the willingness of workers to report issues to inspectors);

f) processes of the organization that can impact OH&S performance.

NOTE Examples of processes that can impact OH&S performance are provided in Clause A.1.

5.2 Elements of a performance evaluation process

The organization should undertake specific performance evaluation processes to determine if the intended results are being achieved. The organization should take into account the types of activities being undertaken when considering the frequency and nature of performance evaluation processes.

The organization should:

a) establish the intended results;

b) determine what should be done to achieve the intended results;

c) choose the performance evaluation processes, sources of information and tools (see 5.3);

d) determine the information needed (e.g. inspection results, evaluation outcomes, audit findings) and whether it is possible to obtain it (see 5.3);

e) monitor, measure, analyse and evaluate performance (see Clause 8);

f) take action based on evaluation of performance (see Clause 10);

g) review unintended consequences (see 6.5.4);

h) take action to address issues identified within the performance evaluation process and its results (see Clause 11).

5.3 Performance evaluation sources of information and tools

5.3.1 General

The organization should determine the most effective performance evaluation sources of information and tools to evaluate if intended results are being achieved. This activity should include consultation with workers or worker representatives.

The organization should consider OH&S processes such as training, risk assessments, contractor safety and management of change, or information acquired from incidents such as near misses, overexposure to airborne contaminants, injuries, chemical spills or illnesses. Further information on the selection and use of indicators is provided in Clause 6.

Subclauses 5.3.2 to 5.3.12 provide a list of the most common sources of information and tools; however, the list is not exhaustive. The organization should take into account that there are many sources of information that can provide input to performance evaluation (see 5.3). These sources of information may include non-OH&S business processes and activities.

The organization should identify additional sources of information or tools where appropriate due to the nature of work, type of OH&S hazards and exposures, and level of risk.

The organization should respect the confidentiality, protection of privacy and sensitive information of workers throughout the performance evaluation process.

5.3.2 Inspections

Inspections can provide organizations with relatively quick, efficient means for reviewing the status of OH&S risk control implementation, progress toward and achievement of objectives, and fulfilment of legal requirements and other requirements.

The organization can use inspections to:

a) observe and learn from workers how work is actually being done;

b) acquire both general and specific information (e.g. work conditions; if workers are using controls as intended; fulfilment of legal requirements and other requirements);

c) acquire information on more than one aspect of OH&S performance at one time (e.g. correct use of personal protective equipment (PPE); operation of ventilation systems and other controls; how workers interact and collaborate; safe use of machinery or equipment; opportunities for improvement);

d) gain insight into hazards and risks and why incidents happen, as well as to assess high-risk and non-routine work performances which were successful;

e) review information related to processes (e.g. procedures during equipment breakdowns).

The organization should consider if it is useful to implement regular inspections for specific OH&S objectives (e.g. daily checks of safety-critical equipment such as cranes, ventilation, chemical enclosures or safety devices on power presses).

5.3.3 Pre-activity and post-activity reviews

Pre-activity reviews (sometimes referred to as “pre-job reviews”, “pre-task reviews” or “dynamic risk assessments”) and post-activity reviews (sometimes called “post-job debriefs” or “after-action reviews”) can be a rich source of performance evaluation information. The organization should consider the use of pre- and post-activity reviews, to acquire information on aspects such as:

a) resource issues, including the need for more workers or workers with different skills, equipment repair, availability and condition of safety-critical items such as ventilation systems, air quality monitoring and machine guards;

b) competence gaps and the potential need for training;

c) gaps in the fulfilment of legal requirements and other requirements;

d) current working conditions compared with those anticipated when the job was planned;

e) effectiveness of hazard identification and assessment of risks, and identification of opportunities;

f) effectiveness of existing controls, procedures and processes;

g) the protection of privacy and personal data as reported.

The organization should ensure that workers involved in the task participate in pre- and post-activity reviews, and determine the necessary actions to be taken to ensure information is comprehensive and accurate.

5.3.4 Exposure assessments and occupational health surveillance

The organization should use information from exposure assessment monitoring and health surveillance programmes to help evaluate the effectiveness of processes and controls (e.g. ventilation, hearing protection) and determine the level of exposure before harm to workers occurs.

The organization should compare exposures against established OH&S criteria and determine if levels are exceeded.

The organization should use health surveillance programmes to identify signs or symptoms of ill health.

To understand OH&S performance, the organization should measure and monitor exposure to health hazards, such as:

— chemical (e.g. liquids, gases, other airborne contaminants);

— biological (e.g. toxins, viruses, bacteria, fungi, animal bites);

— physical (e.g. excessive heat or cold, noise, radiation, vibration);

— psychosocial (e.g. work overload, bullying, stress);

— ergonomic (e.g. repetitive movement, tasks requiring awkward postures, manual handling).

The organization should take into account that it can take months or years before negative effects of exposure result in symptoms of ill health. The organization should combine the data from health surveillance and exposure assessments. The organization can take into account additional information resulting from worker information including vulnerable groups (e.g. pregnant women, disabled workers) and surveys to evaluate the effectiveness of controls and identify opportunities for improvement.

The organization should protect the confidentiality of the personal health surveillance data.

5.3.5 Health and safety meetings

If appropriate to its size and the number of workers, the organization can implement health and safety meetings at different levels of the organization (e.g. corporate, facility, department, work team). The organization should consider using the results of safety meetings as part of the performance evaluation process, to analyse information from other activities and sources, such as injury and ill health rates, incident investigations, exposure assessment data, results of surveys or findings from inspections. The organization should take into account the objectives of meetings to determine their frequency and who participates.

5.3.6 Focus groups

The organization should consider the use of temporary focus groups to gain insight and improve understanding of specific concerns and topics of interest. A focus group can consist of a small number of people more closely related to the issue of concern or with knowledge of the subject, and the organization should consider this mechanism when it needs to acquire a deeper understanding of a particular issue.

The organization can use short-term focus groups for activities such as identifying opportunities to improve OH&S performance, how a task is performed, or to explore the underlying causes of process failures, such as why workers are reluctant to report an incident. The organization should ensure the focus group is facilitated in an unbiased way and that the workers involved feel comfortable to share information.

EXAMPLE Focus groups can be used when an organization does not understand the results of a culture survey and wants to learn why workers responded in a certain way.

5.3.7 Surveys

The organization should consider using surveys to acquire insight on aspects such as organizational culture, evaluation of OH&S performance related to internal and external issues, needs of interested parties, work environment, health and well-being, or perception of effectiveness of processes and controls.

Surveys can be integrated into existing employee surveys and performed at different levels of the organization and with relevant interested parties, depending on the subject of the survey. The organization should consider the use of anonymous surveys, when appropriate (e.g. for potentially