

BS 45002-2:2019



BSI Standards Publication

Occupational health and safety management systems – General guidelines for the application of ISO 45001

Part 2: Risks and opportunities

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Summary of pages

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Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 28 February 2019. It was prepared by Technical Committee HS/1, *Occupational health and safety management*. A list of organizations represented on this committee can be obtained on request to its secretary.

Use of this document

As a guide, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification or a code of practice and claims of compliance cannot be made to it.

Presentational conventions

The guidance in this standard is presented in roman (i.e. upright) type. Any recommendations are expressed in sentences in which the principal auxiliary verb is “should”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

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0 Introduction

Understanding risks and opportunities is vital to improving how well an organization manages health and safety.

Managing health and safety is not simply looking at what the organization does and identifying risks from, for example, working on a roof or handling chemicals. An effective occupational health and safety (OH&S) management system uses risk-based thinking at every stage.

Risk-based thinking is not complex. A person automatically makes risk-based decisions.

- a) When making a hot drink, we automatically hold the kettle by its handle to avoid burning ourselves and choose a cup suitable for containing boiling water.
- b) When crossing the road, we look for a gap in traffic or decide to use a crossing.

There are different types of risks and opportunities to consider, including:

- 1) OH&S risks to workers (what can hurt a worker?; what can make them ill?);
 - 2) risks to the management system (what might stop the system from working well?, e.g. systems not working together, technical breakdowns, lack of trained staff);
 - 3) opportunities to improve OH&S performance (what can make your workplace safer or your working practices healthier?, e.g. getting rid of faulty equipment or making sure workers take regular breaks during their working day); and
 - 4) opportunities to improve the management system (what can make all of the parts of the organization's system work better together?, e.g. better communication about what to do and how to do it or what has changed, sharing knowledge and getting all workers involved).
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1 Scope

This British Standard provides guidance on the identification and management of risks and opportunities in an OH&S management system.

This British Standard can assist organizations in meeting the relevant requirements of [BS ISO 45001](#), *Occupational health and safety management systems*. It does not add to, subtract from, or in any way modify the requirements of [BS ISO 45001](#), nor does it prescribe mandatory approaches to implementation.

The British Standard is suitable for use by any organization regardless of type, size or maturity.

2 Normative references

There are no normative references in this document.

NOTE Organizations can use this document without direct reference to [BS ISO 45001](#), however, organizations that wish to claim conformity to [BS ISO 45001](#) need to refer directly to [BS ISO 45001](#) when using this document.

3 Terms and definitions

COMMENTARY ON CLAUSE 3

There are a number of terms defined in [BS ISO 45001](#), including commonly used terms. However, when using [BS ISO 45001](#) it is important to take note of these technical definitions to ensure there is no misunderstanding in its application. For example, small businesses do not always realize that the term "organization" refers to small businesses as well as larger companies (or public bodies, charities, etc).

Organization can also be used to describe one part of a business, e.g. one department or one site – if that is the extent of the OH&S management system. Similarly, the term “top management” refers to whoever directs or controls the organization – the top level decision maker(s). In practical terms, top management can mean a small business owner, the executive board or, in a non-hierarchical structure, everyone involved in taking high level decisions.

The definition of “worker” is also worth noting. In [BS ISO 45001](#) worker is all-inclusive and refers to everyone working under the control of the organization, including business owners, executive boards, senior managers, interns, volunteers, all employees and contractors.

All of the terms and definitions within [BS ISO 45001](#) can be found on the ISO Online Browsing Platform: <http://iso.org/obp>. [Last viewed 18 February 2019.]

3.1 hazard

source with a potential to cause injury and ill health

[SOURCE: ISO 45001:2018, modified]

NOTE Hazards can also include sources with the potential to cause harm or hazardous situations, or circumstances with the potential for exposure leading to injury and ill health.

3.2 risk

effect of uncertainty

NOTE 1 An effect is a deviation from the expected, positive or negative.

NOTE 2 Uncertainty is the state, even partial, of deficiency of information related to, understanding or knowledge of, an event, its consequence, or likelihood.

[SOURCE: ISO 45001:2018, modified]

3.3 OH&S opportunity

circumstance or set of circumstances that can lead to improvement of OH&S performance

3.4 OH&S risk

combination of the likelihood of occurrence of a work-related hazardous event(s) or exposure(s) and the severity of injury and ill health that can be caused by the event(s) or exposure(s)

4 Context of the organization

The risks and opportunities to be considered by the organization depend on the type of organization, what it does and where this is done. This is the context of the organization. For example, if the organization makes cars in a large factory on the edge of a big city, the risks to its workers' health and safety are very different to those faced by the workers in a small café in a quiet village.

Context doesn't stay the same – organizations grow, and activities change (for example, new manufacturing lines or technology are introduced). The workforce itself changes over time. Any sort of change to the organization has an impact on its risks and opportunities.

Context also includes factors beyond the organization's control, for example, if there is an extreme weather event (heatwave, snowstorm, flood), the organization's risks and opportunities can change. Similarly, if the world economy crashes, the law changes, or the political landscape shifts, the organization's risks and opportunities can change.

Context also includes people and other organizations which can be affected by the organization's OH&S management system – or who can affect it. These are the organization's interested parties.

The organization should always consider what its interested parties need and expect, as well as any associated risks and opportunities.

For example:

- a) Regulators: there are risks to the organization's workers if it doesn't comply with health and safety law and there are also risks to the organization itself if law-breaking leads to prosecution or closing the business.
- b) Supply chain: the organization's OH&S management system is at risk if contracted workers are unaware and fail to follow health and safety rules. A contractor expects its workers to be protected, but the contractor might also bring additional risks to the workplace because of the activities being carried out, lack of health and safety training or lack of understanding of how they are affecting other workers. On the other hand, there is also opportunity to share good practice and knowledge.
- c) Shareholders: there are risks if shareholders or the organization's owners do not support the management system by investing enough money or leading by example. Alternatively, if shareholders or the owners invest time and effort, there are opportunities to improve both health and safety and the management system.

5 Leadership and worker participation

Managing risks and opportunities starts with top management.

Those at the top of the organization are vital to the success of the management system and to improving health and safety in the workplace.

If top management takes a view that the OH&S management system is the health and safety manager's problem, there is a risk to the workforce, and the management system is unlikely to be effective. If, for example, the board of a company is driven purely by profit and takes no interest in health and safety there is a risk that not only will OH&S performance be misreported but workers are being put at on-going risk. A management system cannot be effective in this environment.

Alternatively, if top management embeds OH&S into its overall business management and sees it as a core part of being successful, there is an opportunity to create a positive OH&S culture with an engaged workforce, and continuously improve workers' health and safety.

The same is true for a small company owned by a single person. If the owner takes an interest and encourages the workers to talk about health and safety and help improve it, the management system is going to work better and the risk of injury or ill health is lowered.

A positive OH&S culture comes from leaders encouraging workers to get involved in shaping and running the management system and being seen to take ideas and improvements on board.

The workers closest to the risks have the most to lose, and gain, from the OH&S management system, and also have the best knowledge of the hazards faced every day. Making sure workers at all levels can raise issues, suggest improvements and manage health and safety avoids the risk of a worker making decisions about OH&S risks that they don't understand and which don't personally affect them. This would undermine the whole management system.

6 Planning

6.1 Actions to address risks and opportunities

It is important to think widely about the types of risks and opportunities that can affect the organization's OH&S management system and take the time to understand them.

These include:

- a) hazards to workers (anything with the potential to cause injury or ill health) and the related OH&S risks (likelihood of being affected by the hazard and the potential severity of the impact);
- b) OH&S opportunities (things that can lead to improving OH&S performance); and
- c) risks to the OH&S management system itself and opportunities to improve it.

Not all risks and opportunities are equally important: prioritize and focus efforts on those that have the greatest impact.

The starting point should be to think about what can harm people. This means both safety and health. There can be many things in a workplace that have the potential to harm people – these are the hazards. The hazard becomes a big risk if it is:

- 1) likely to happen; and
- 2) the harm to a person (or people) could be serious.

These are the hazards and risks that need the most attention.

It's worth noting that safety risks typically involve distinct events (incidents), whereas the effects of health risks can be instant or emerge over time, following exposure to a hazard.

Hazards depend on what an organization does and how it does it and can range from slips, trips and falls, to life-threatening health conditions.

To identify hazards, take a logical, step-by-step approach – don't forget to think about occasional activities, such as cleaning or maintenance, planned or unplanned change (permanent or temporary) or possible emergency situations (fire, explosions, attacks) which can lead to different hazards and risks.

It can be useful to think about the different types of hazard, such as:

- physical (e.g. working at height, or in small spaces or extreme temperatures, fatigue);
- chemical (e.g. exposure to things like harmful liquids or fumes);
- biological (e.g. organic hazards like viruses, insects, bacteria);
- psychological (e.g. stress, harassment, overwork);
- mechanical (e.g. sharp objects, moving parts, machinery and tools);
- electrical (e.g. faulty electrical equipment, contact with an electrical conductor); and
- natural (e.g. floods, heatwaves, storms, earthquakes).

Identifying and understanding the hazards can be helped by, for example:

- a) looking around the workplace;
- b) talking to workers;
- c) reading information from suppliers; and
- d) considering past incidents and ill-health records.

Once hazards have been identified and understood, the risks need to be assessed and prioritized.

The risk is higher if it:

- 1) is likely to happen; and/or
- 2) can have a serious effect.

How high the risk is will be influenced by what controls an organization already has in place (e.g. machine guards, good ventilation and lighting, whistleblowing processes, training, regular health checks).

The organization should try to eliminate hazards where it can or otherwise reduce risks as far as possible, but within reason (this is often referred to as “as low as reasonably practicable” or ALARP). This is usually done using a process called “the hierarchy of controls” (see [Clause 8](#)).

As well as assessing risks, an organization should think about opportunities such as making changes to the work environment, working conditions and how work is organized. When planning for opportunities, an organization should consider what can make the biggest impact and when might be a good time to act. One of the most important opportunities is when change is happening in the organization or its activities and there is a chance to build OH&S considerations into that change, rather than dealing with issues that arise after the change has been made.

An organization should also consider risks and opportunities which are not directly associated with harm to people, but instead affect the effectiveness of the OH&S management system itself.

For example:

- an organization might need to coordinate plans with its neighbours; delays or difficulties in working with neighbours can affect the OH&S management system;
- a transient, frequently changing workforce, with variable levels of experience can mean that training and communications need to be adjusted to make sure people are still competent; and
- an organization introducing new products, services or activities might lack the knowledge and competence to address the possible hazards and risks which in turn affects how well the OH&S management system works.

Another vital part of risk management is being aware of and meeting legal, regulatory and other requirements (such as those from a parent company or contract). There are different legal requirements for different types and sizes of business, so it is important that top management stays up to date with any changes and communicates these requirements to workers, as necessary.

NOTE The HSE provides further information on hazard identification, risk assessment and legal requirements, see <http://www.hse.gov.uk/risk/identify-the-hazards.htm> [Last viewed 18 February 2019].

6.2 OH&S objectives and planning to achieve them

OH&S objectives should reflect the priority risks and opportunities that have been identified. It is important when setting these objectives that a practical approach is taken, to ensure that the objectives are manageable and achievable whilst still providing a challenge. Knowing who is responsible for each objective and the timeframes for achieving them is critical, as is securing the commitment and resource needed from top management. Engaging with workers and communicating the objectives throughout the organization are also key to success.

7 Support

To manage OH&S risk effectively the organization needs to have enough time, money, people and, when necessary, equipment.

The OH&S management system is at risk if a lack of funding means that the protective measures identified or changes to ways of working can't be put in place. However, it is not necessary to spend days discussing how to reduce the number of paper cuts or spend a fortune on a complex health monitoring system if an organization's business is low risk and exposure to serious hazards is rare.

Workers are typically the most important resource when it comes to managing risks and opportunities for both people and the management system. Giving workers time to think about and act on risks and opportunities is a good starting point in managing OH&S risk.

It is also essential that competence is addressed. There are different types of competence to consider, such as competence to:

- a) perform specific duties safely and without putting others at risk;
- b) identify hazards, understand their risks and manage those risks effectively; and
- c) plan for, respond to and manage emergency situations.

Competence requirements don't stay the same, nor do individual or organizational competence. It's important to make sure these are reviewed regularly and actions taken to address any gaps.

It is important to avoid over-complicating paperwork and producing too many written processes and procedures. The organization should only document what is needed to make sure the OH&S management system works, and its legal requirements and other requirements are met.

The way the organization communicates to its workers and other people should be appropriate to who needs to be informed, otherwise there is a risk that people who are affected might not be aware of potential changes. For example, a software development company might find that using an online platform to communicate is most appropriate, whilst mechanics might find conversation and a summary on the noticeboard is more effective.

8 Operation

8.1 Operational planning and control

Once risks have been identified and prioritized, the organization needs to control them as well as it can. To do this a system has been developed called the "hierarchy of controls": the idea is that the top action is the best, but if this is not possible, the ones that follow should be used. Sometimes using more than one is the most effective and practical solution.

The hierarchy of controls is:

- a) elimination (remove the hazard completely);
- b) substitution (use something less dangerous, e.g. using scaffolding instead of ladders);
- c) engineering controls (practical changes to reduce the risk, e.g. machine guards or reorganizing how work is done);
- d) administrative controls (raise awareness and knowledge, e.g. signs, instructions, training); and
- e) personal protective equipment (wear protection to limit exposure, e.g. masks, ear defenders).

The most appropriate controls for the organization's risks might change over time, e.g. as new materials or technology becomes available.

8.2 Emergency preparedness and response

Organizations should be aware of potential emergencies, and have a plan to deal with them. The likelihood of a particular type of emergency should be considered, as well as how serious it could be. Emergencies don't always happen exactly as anticipated, therefore the organization should ensure that it carry out on-the-spot risk assessment and be able to adapt its response as the situation develops. The ability to respond to a changing emergency situation can be tested through desk-based scenarios and live drills, however care should be taken to vary drills and test scenarios to avoid complacency or the assumption that everything will work and the situation will be identical in a real life emergency.

9 Performance evaluation

9.1 Monitoring, measurement, analysis and performance evaluation

Performance evaluation is about answering two questions:

- a) is the management system (and its processes) working properly?
- b) are the controls you've put in place preventing injury and ill-health?

Risk is an important factor in answering both questions. Considering risks can help the organization decide what needs to be measured and what needs to be monitored. There are lots of things that could be measured within a management system, therefore it is important to focus on what matters, such as:

- 1) are legal requirements being met, including any that have recently changed?
- 2) are other requirements being met, such as those agreed with your supply chain or parent company?
- 3) is OH&S performance getting better, or getting worse?
- 4) are OH&S objectives being met?

The organization should ensure that controls to prevent injury and ill health are monitored and are working effectively.

The organization should prioritize its largest OH&S risks. For example, if the organization has activities controlled by formal permit to work systems or specific procedures, it is important to check that these are being correctly applied. Similarly, fire risk controls can be measured by making sure there is periodic inspection of emergency escape routes to check they are clear and accessible, and measuring how long it takes to leave the building during fire drills.

9.2 Internal audits

Internal audits of the OH&S management system should cover the entire system over time. All processes described in the OH&S management system should be included at some point, as should all locations. The audit should focus on areas of greater risk, for example, in an organization with relatively low-risk office-based activities and higher risk factory or site activities, the factory or site activities should have greater focus.

In regard to OH&S risks and opportunities, internal audits provide the opportunity to test whether:

- a) risk assessments are up to date and periodically reviewed;
- b) workers carrying out an activity understand how the risk is assessed and are using the right controls;
- c) workers have the necessary competence;
- d) assessment of changing risks is taking place; and
- e) opportunities to eliminate hazards and reduce risks are being identified and acted upon.

It is important that top management evaluates the overall performance of the OH&S management system, rather than concentrating on specific parts of it. The various measuring, monitoring and audit activities should help determine if:

- 1) the organization understands its OH&S risks, and has put appropriate controls in place;
- 2) workers understand the risks that can affect them and are applying the agreed controls;
- 3) any risk controls need to change, or if there is an opportunity to eliminate a hazard or reduce risk even more; and
- 4) the organization is complying with its legal requirements and other requirements in the way it manages OH&S.

10 Improvement

Ways to improve the organization's OH&S performance, or the OH&S management system should become clear through evaluating how well the system is working. Although some improvements can involve complex planning and take time to implement, quick and simple changes in the way work is carried out can also make a positive difference.

Improvements can include:

- a) assessing risks more often;
- b) sharing best practice by joining professional bodies or attending networking events;
- c) improving organizational and individual knowledge; and
- d) changing the way something is done (for example, making sure more than one person checks that safety measures are in place before an activity).

Bibliography

Standards publications

For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

[BS ISO 45001:2018](#), *Occupational health and safety management systems – Requirements with guidance for use*

Further reading

[BS 45002-0](#), *Occupational health and safety management systems – General guidelines for the application of ISO 45001*

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