TECHNICAL SPECIFICATION

ISO/TS 24179

First edition
2020-07

Human resource management — Occupational health and safety metrics

Management des ressources humaines — Métriques de santé et sécurité au travail

Reference number
ISO/TS 24179:2020(E)

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Published in Switzerland

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Foreword

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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 documents 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).

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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 260, *Human resource 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

ISO 30414 provides guidelines on the following core areas of human capital reporting:

— compliance and ethics;

— costs;

— diversity;

— leadership;

— organizational culture;

— organizational health, safety and well-being;

— productivity;

— recruitment, mobility and turnover;

— skills and capabilities;

— succession planning;

— workforce availability.

This document deals specifically with the cluster of metrics in the organizational health, safety and well-being area as documented in ISO 30414:2018, 4.7.7. It expands on this information and adds context.

This document describes the following components of this cluster of metrics:

— description;

— purpose;

— formula;

— how to use;

— intended user(s);

— contextual factors;

— predictive factors.

Human resource management — Occupational health and safety metrics

1 Scope

This document describes the elements of organizational health, safety and well-being. This document provides the formula for comparable measures for internal and external reporting.

This document also highlights issues that need to be considered when interpreting the compliance data, especially when deciding on the appropriate intervention internally and when reporting these to external stakeholders (e.g. regulators, investors).

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 30400, *Human resource management — Vocabulary*

ISO 30414, *Human resource management — Guidelines for internal and external human capital reporting*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 30400 and ISO 30414 apply.

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

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

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

4 Overview

This document uses the definition of workforce given in ISO 30400:2016, 10.1. All reporting and metrics should include a breakdown of workforce into categories as defined by the organization, for example permanent employees, casual workers, contingent workers and outsourced workers. Tables of workforce categories should be as detailed as the organization deems fit. As a minimum, metrics should cover the aggregated results for each technical specification. The more detailed the breakdown of each metric, the better the opportunity for analysis and intervention. For example, the following categories, as they apply to each organization, give organizations the detail required to investigate and pinpoint areas for improvement or areas that are performing well. Intervention strategies at the root cause can then be developed.

Breakdowns of data include:

— department or cost centre hierarchy;

— location;

— product line;

— function;

— type of incident;

— incident sub-set;

— worker category;

— time of day;

— status of the individual's occupational health and safety training at the time of the incident.

For simplicity, the following examples and definitions detail the high-level workforce.

Each organization should document the worker categories that make up the workforce pertinent to its activity and ensure these categories are reviewed and updated regularly. For example, worker categories could include employees and casual workers for a period, then additional contractors or outsourced labour might be required. This would require the addition of these worker categories to the definition, metric and reporting. All occupational health and safety incidences should be recorded. To assist in this process, all organizations should develop a recording and management process and procedure to capture and manage all occupational health and safety incidents. Depending on the size of the organization, this procedure could use simple spreadsheet software. Larger organizations might require more sophisticated technology solutions.

The metrics within organizational health, safety and well-being, as documented in ISO 30414, are:

1) lost time for work-related injuries, accidents and disease (additionally recommended for external reporting by large organizations);

2) number of occupational accidents [recommended for internal and external reporting by large organizations and small and medium-sized enterprises (SMEs)];

3) number of people killed (fatality, death or mortality rate) due to work accidents (recommended for internal and external reporting by large organizations and SMEs);

4) percentage of employees who have participated in training on health and safety at work (recommended for internal reporting by large organizations and SMEs).

5 Lost time for work-related injuries, accidents and disease

5.1 General

ISO 30414:2018, 4.7.7, describes the time lost for work-related injuries, accidents and disease in organizations as, “an occurrence that resulted in a fatality, permanent disability or time lost from work of one day/shift or more.”

5.2 Purpose

ISO 30414:2018, 4.7.7.1, highlights the purpose of this metric.

5.3 Formula

The calculation of the amount of working time lost due to work-related injuries, accidents and disease at work should align with the financial year, the annual budgeting cycle or both. The point in time for calculation is at the end of each measurement period, for example the end of month one, the end of quarter two or end-of-year totals.

Once established, the reporting should include a comparison of previous periods with the current period and of past years with the current year. Three-to-five years is a typical comparison period. This measurement period will allow trends to be established and further allow an organization to better manage expectations and outcomes by establishing targets for future comparison.

If for any reason an organization decides on another measurement point, utilization of the preferred measurement point should be consistent and articulated.

Total lost time due to work-related injuries, accidents and disease at work is calculated by adding all lost time that meets the criteria as defined in 5.1 over the measurement period.

Table 1 highlights the breakdown of lost time for a six-month period and offers a comparison with the three previous years. Depending on the size and complexity of the organization, this table can be further expanded to include subsets of each category.

Table 1 — Six-month analysis and comparison of lost hours due to work-related injuries, accidents and disease

Values in hours

Lost time type	Six months to 2020-06-30	Comparative 2019 as at 2019-06-30	Comparative 2018 as at 2018-06-30	Comparative 2017 as at 2017-06-30
Work-related injuries	90	85	85	80
Accidents	87	87	80	70
Disease	100	90	85	80
Total	277	262	250	230

Lost time due to work-related injuries, accidents and disease may also be represented as a percentage of expected total hours of work for the nominated period. If percentage reporting is preferred a similar table representing percentage of hours lost should be developed in line with Table 1.

The time lost due to work-related injuries, accidents and disease as a percentage of expected or scheduled working time is given by Formula (1).

$$A = B/C \times 100 \quad (1)$$

where

A is the percentage of time lost due to work-related injuries, accidents and disease;

B is the amount of working time lost due to work-related injuries, accidents and disease at work in a given time period;

C is the total amount of expected or scheduled working time in a given time period.

NOTE The working time can be expressed in either hours or days.

Additionally, organizations might decide to demonstrate the success of preventative programs, for example the number of hours worked since the last injury, accident or disease detection. The same principles as explained in Table 1 apply.

5.4 Contextual factors

Many factors can have a significant impact on the measurement outcome. There might be instances when results are less than expected or indicate a deteriorating situation; further investigation can find positive indicators of improvement.

The following should be considered in the context of supporting the metric results:

— full-time equivalent (FTE) count at each measurement point, i.e. has the FTE grown or shrunk enough to change the perspective and meaning of the metric results?

— current activities the organization is undertaking

  — increased production or product expansion;

  — reorganizations;

  — current activities in educating the workforce;

— cultural shifts, both positive and negative;

— generational perspectives;

— social change or awareness leading to increases in reporting;

— industry expectation;

— economic factors

  — downturns;

  — upturns.

5.5 Predictive factors

When forecasting potential improvements or deterioration in the current situation, organizations can look to future known and anticipated events and consider:

— planned organization structural or workforce changes;

— upcoming work, function or product changes;

— acquisitions;

— economic factors

  — downturns;

  — upturns;

— workforce awareness and education;

— political, social, environmental and legislative dynamics;

— industry sector impacts.

6 Number of occupational accidents

6.1 General

ISO 30414:2018, 4.7.7.2, defines the number of occupational accidents.

6.2 Purpose

Organizations should monitor work or occupational accidents because they lead to a range of negative impacts, including:

— productivity losses;

— lost business opportunities;

— additional salary of a replacement employee or overtime costs;

— expenses reimbursed to the injured employee;

— repair, rental or replacement costs;

— changes to insurance premiums;

— legal costs.

6.3 Formula

The calculation of the occupational accidents at work should align with the financial year, the annual budgeting cycle or both. The point in time for calculation is at the end of each measurement period, for example the end of month one, the end of quarter two or end-of-year totals.

Once established, the reporting should include a comparison of previous periods with the current period and of past years with the current year. Three-to-five years is a typical comparison period. This measurement period will allow trends to be established and further allow an organization to better manage expectations and outcomes by establishing targets for future comparison.

If for any reason an organization decides on another measurement point, utilization of the preferred measurement point should be consistent and articulated.

The total number of occupational accidents at work is calculated by adding all occupational accidents that meet the criteria as defined in 6.1 over the measurement period.

Table 2 highlights the breakdown of occupational accidents at work for a six-month period and offers a comparison with the three previous years. Depending on the size and complexity of the organization, the table can be further expanded to include subsets of each category.

Table 2 — Six-month analysis and comparison of occupational accidents at work

Values in hours

Occupational accident	Six months to 2020-06-30	Comparative 2019 as at 2019-06-30	Comparative 2018 as at 2018-06-30	Comparative 2017 as at 2017-06-30
Strains and sprains	15	20	20	35
Amputations	15	20	20	30
Breaks	10	15	15	20
Total	50	60	55	85

The total number of occupational accidents at work can also be represented as a percentage of average headcount for the measurement period. If percentage reporting is preferred, a similar table representing occupational accidents at work should be developed in line with Table 2.

The number of occupational accidents at work as a percentage of total workforce is given by Formula (2).

$$A = B/C \times 100 \quad (2)$$

where

A is the percentage of the workforce suffering occupational accidents at work;

B is the number of occupational accidents at work;

C is the average headcount for the measurement period.

Additionally, organizations might decide to demonstrate the success of preventative programs, for example the number of hours worked since the last occupational accident at work. The same principles as explained in Table 2 apply.

6.4 Contextual factors

Many factors can have a significant impact on the measurement outcome. There might be instances when results are less than expected or indicate a deteriorating situation; further investigation can find positive indicators of improvement.

The following should be considered in the context of supporting the metric results:

- FTE count at each measurement point, i.e. has the FTE grown or shrunk enough to change the perspective and meaning of the metric results?
- current activities the organization is undertaking
  - increased production or product expansion;
  - reorganizations;
  - current activities in educating the workforce;
- cultural shifts, both positive and negative;
- generational perspectives;
- social change or awareness leading to increases in reporting;
- industry expectation;
- economic factors
  - downturns;

— upturns.

7 Number of people killed due to work accidents

7.1 General

The number of people killed due to work accidents should be represented as a percentage of total workforce as well as the actual number of individuals deceased in the measurement period. Percentages alone often desensitize individuals from the impact of such figures.

7.2 Purpose

ISO 30414:2018, 4.7.7.3, describes the purpose of this metric.

7.3 Formula

The calculation of the number of people killed due to work accidents should align with the financial year, the annual budgeting cycle or both. The point in time for calculation is at the end of each measurement period, for example the end of month one, the end of quarter two or end-of-year totals.

Once established, the reporting should include a comparison of previous periods with the current period and of past years with the current year. Three-to-five years is a typical comparison period. This measurement period will allow trends to be established and further allow an organization to better manage expectations and outcomes by establishing targets for future comparison. Table 3 highlights the number of deaths over the comparison period.

Table 3 — Number of people killed due to work accidents

	Six months to 2020-06-30	Comparative 2019 as at 2019-06-30	Comparative 2018 as at 2018-06-30	Comparative 2017 as at 2017-06-30
Fatalities	5	7	10	7

The number of people killed due to work accidents as a percentage of total workforce is given by Formula (3).

$$A = B/C \times 100 \tag{3}$$

where

A is the percentage of the workforce killed due to work accidents;

B is the total number of people killed due to work accidents;

C is the average headcount for the measurement period.

Additionally, organizations might decide to demonstrate the success of preventative programs, for example the number of hours or days worked since the last accidental death at work. The same principles as explained in Table 3 will apply.

If for any reason an organization decides on another measurement point, utilization of the preferred measurement point should be consistent and articulated.

The total number of people killed due to work accidents is calculated by adding all deaths that meet the criteria as defined in 7.1 over the measurement period.

7.4 Contextual factors

Many factors can have a significant impact on the measurement outcome.

The following should be considered in the context of supporting the metric results:

— headcount at each measurement point, i.e. has the headcount grown or shrunk enough to change the perspective and meaning of the metric results?

— current activities the organization is undertaking

  — increased production or product expansion;

  — reorganizations;

  — current activities in educating the workforce;

— cultural shifts, both positive and negative;

— generational perspectives;

— social change or awareness leading to increases in reporting;

— industry expectation;

— economic factors

  — downturns;

  — upturns.

7.5 Predictive factors

When forecasting potential improvements or deterioration in the current situation, organizations can look to future known and anticipated events and consider:

— planned organization structural or workforce changes;

— upcoming work, function or product changes;

— acquisitions;

— economic factors

  — downturns;

  — upturns;

— workforce awareness and education;

— political, social, environmental and legislative dynamics;

— industry sector impacts.

8 Percentage of workers who have participated in training on health and safety at work

8.1 General

This metric measures the percentage of workers who have undergone training on health and safety at work.