



**SLOVENSKI STANDARD**  
**SIST EN 17948:2025**

**01-januar-2025**

---

**Vodenje vzdrževanja in funkcije**

Maintenance management and functions

Instandhaltungsfunktion und -management

Fonction maintenance et management de la maintenance

**Ta slovenski standard je istoveten z: EN 17948:2024**

---

**ICS:**

03.080.10 Vzdrževalne storitve. Maintenance services.  
Upravljanje objektov Facilities management

**SIST EN 17948:2025**

**en,fr,de**



EUROPEAN STANDARD

EN 17948

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2024

ICS 03.080.10

English Version

## Maintenance management and functions

Management de la maintenance et fonctions

Instandhaltungsmanagement und -funktionen

This European Standard was approved by CEN on 30 September 2024.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

(<https://standards.iteh.ai>)  
Document Preview

[SIST EN 17948:2025](https://standards.iteh.ai/catalog/standards/sist/844bf75c-2d99-46e0-99fc-1aa9ae83002e/sist-en-17948-2025)

<https://standards.iteh.ai/catalog/standards/sist/844bf75c-2d99-46e0-99fc-1aa9ae83002e/sist-en-17948-2025>



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

| <b>Contents</b>  | <b>Page</b> |
|--|-------------|
| European foreword.....   | 3           |
| Introduction .....   | 4           |
| 1 Scope.....   | 5           |
| 2 Normative references.....  | 5           |
| 3 Terms and definitions .....  | 5           |
| 4 Maintenance framework .....  | 9           |
| 4.1 Maintenance contributions and challenges.....  | 9           |
| 4.2 Maintenance types.....   | 10          |
| 4.3 Maintenance process .....  | 11          |
| 4.4 Maintenance requirements during the life cycle of physical asset.....                | 12          |
| 4.5 Influencing factors.....   | 12          |
| 5 Maintenance management.....  | 13          |
| 5.1 Maintenance objectives .....   | 13          |
| 5.2 Maintenance policy and strategy.....   | 14          |
| 5.2.1 Maintenance approaches acting on the items .....                                   | 14          |
| 5.2.2 Maintenance policy.....  | 14          |
| 5.2.3 Maintenance strategy .....   | 14          |
| 5.2.4 Maintenance level.....   | 15          |
| 5.2.5 Maintenance echelon.....   | 16          |
| 5.3 Maintenance management process .....   | 17          |
| 5.4 Maintenance organization and maintenance functions.....                              | 17          |
| 5.5 Interaction of maintenance with the other functions of organizations .....           | 19          |
| 5.5.1 General.....   | 19          |
| 5.5.2 Interactions between maintenance and the other functions of the organization ..... | 19          |
| Annex A (informative) Standards for maintenance (CEN/TC 319 Maintenance) .....           | 22          |
| A.1 General.....   | 22          |
| A.2 The values of maintenance .....  | 22          |
| A.3 Map of CEN/TC 319 standards for maintenance.....                                     | 22          |
| A.3.1 General.....   | 22          |
| A.3.2 Common basis .....   | 23          |
| A.3.3 Management.....  | 23          |
| A.3.4 Methodologies.....   | 23          |
| A.3.5 Resources.....   | 24          |
| A.3.6 Main users of maintenance standards.....   | 24          |
| Annex B (informative) Levels of maintenance — Examples.....                              | 25          |
| Bibliography.....  | 31          |

## European foreword

This document (EN 17948:2024) has been prepared by Technical Committee CEN/TC 319 “Maintenance”, the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2025, and conflicting national standards shall be withdrawn at the latest by May 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

**iTeh Standards**  
**(<https://standards.iteh.ai>)**  
**Document Preview**

[SIST EN 17948:2025](#)

<https://standards.iteh.ai/catalog/standards/sist/844bf75c-2d99-46e0-99fc-1aa9ae83002e/sist-en-17948-2025>

## EN 17948:2024 (E)

### Introduction

This document is part of a set of maintenance standards produced by CEN/TC 319 where it holds a central place because it introduces maintenance, its organization and management and establishes close links with the other standards of CEN/TC 319. Annex A presents the framework and an overview of the available CEN/TC 319 maintenance standards divided into four groups: Common basis, Management, Methodologies, and Resources. This document belongs to the Management group.

Maintenance is a set of activities that requires effective management able to anticipate, react quickly to events, and adapt to business changes. It has an essential role in controlling plant safety and occupational and environmental risks as well as ensuring the competitiveness and the durability of organisations and companies.

Therefore, the importance of effective maintenance management is major, and this document gives guidelines for maintenance managers to develop a process contributing to the success factors defined by the managing board. It is based on the existing European standards, and particularly those which describe the role of maintenance within asset management, the maintenance processes and their inter-relationships, the maintenance of buildings and infrastructures, maintenance key performance indicators, maintenance support processes such as documentation, contracts, qualification of maintenance personnel, etc.

This document is intended to help maintenance managers develop the maintenance management process in its various aspects (maintenance policy, maintenance objectives, maintenance strategy, internal/outsourced activities, organization of functions, job profiles and responsibilities, budgets, supervision of maintenance activities, communication, and continuous improvement).

Annex A presents a summary of other standards for maintenance which have been prepared by CEN/TC 319

Annex B describes examples of levels of maintenance.

[SIST EN 17948:2025](https://standards.iteh.ai/catalog/standards/sist/844bf75c-2d99-46e0-99fc-1aa9ae83002e/sist-en-17948-2025)

<https://standards.iteh.ai/catalog/standards/sist/844bf75c-2d99-46e0-99fc-1aa9ae83002e/sist-en-17948-2025>

## 1 Scope

This document specifies the main content of maintenance management and the main activities for which maintenance management is responsible.

This document is applicable to maintenance managers and asset managers in the industry sector and for infrastructure and buildings in order to achieve the success factors of the organization.

## 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.

EN 13306:2017, *Maintenance - Maintenance terminology*

EN 17007:2017, *Maintenance process and associated indicators*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions 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

#### **item**

part, component, device, subsystem, functional unit, equipment or system that can be individually described and considered

Note 1 to entry: A number of items e.g. a population of items, or a sample, may itself be considered as an item.

Note 2 to entry: An item may consist of hardware, software or both.

Note 3 to entry: Software consists of programs, procedures, rules, documentation, and data of an information processing system.

[SOURCE: EN 13306:2017, definition 3.1]

### 3.2

#### **physical asset**

item that has potential or actual value to an organization

Note 1 to entry: Examples of physical assets are components, machines, plants, buildings, infrastructures, etc.

[SOURCE: EN 13306:2017, definition 3.2]

**EN 17948:2024 (E)**

**3.3 maintenance**  
 combination of all technical, administrative and managerial actions during the life cycle of an item intended to retain it in, or restore it to, a state in which it can perform the required function

Note 1 to entry: Technical maintenance actions include observation and analyses of the item state (e.g. inspection, monitoring, testing, diagnosis, prognosis, etc.) and active maintenance actions (e.g. repair, refurbishment).

Note 2 to entry: See also the definitions of improvement and modification.

[SOURCE: EN 13306:2017, definition 2.1]

**3.4 maintenance management**  
 all activities of the management that determine the maintenance requirements, objectives, strategies and responsibilities, and implementation of them by such means as maintenance planning, maintenance control, and the improvement of maintenance activities and economics

[SOURCE: EN 13306:2017, definition 2.2]

**3.5 process**  
 set of interrelated or interacting activities that use inputs to deliver an intended result

[SOURCE: EN ISO 9000:2015, definition 3.4.1, modified]

**3.6 maintenance function**  
 role and responsibility entrusted to entities within an organization for achieving maintenance objectives

**3.7 maintenance policy**  
 general approach to the provision of maintenance and maintenance support based on the objectives and policies of owners, users and customers

Note 1 to entry: The maintenance policy entails establishing the direction (method, programme, budget, etc.) based on the goals and objectives set by the company's Management.

The management focus in the policy statement can be:

- availability and useful life of the item;
- safety of the items and individuals, product quality, environmental protection;
- optimization of maintenance costs, etc.

In particular, the maintenance policy give guidance to maintenance strategy that leads to choices being made between:

- planning corrective and/or preventive, predetermined or condition-based maintenance;
- internal or external service provision.

[SOURCE: EN 17007:2017, definition 3.8]



**3.8****maintenance strategy**

management method used in order to achieve the maintenance objectives

EXAMPLE Outsourcing of maintenance, allocation of resources, etc.

[SOURCE: EN 13306:2017, definition 2.4]

**3.9****life cycle**

series of stages through which an item goes, from its conception to disposal

EXAMPLE A typical system life cycle consists of acquisition, operation, maintenance, modernization, decommissioning and/or disposal.

Note 1 to entry: The stages identified will vary with the application.

[SOURCE: EN 13306:2017, definition 4.18]

**3.10****sustainable development**

development that meets the needs of the present without compromising the ability of future generations to meet their own needs

[SOURCE: UN Brundtland Commission report, 1987]

**3.11****indenture level**

level of sub-division within an item hierarchy

EXAMPLE System, subsystem and component.

https:// Note 1 to entry: From the maintenance perspective, the indenture level depends on the complexity of the item's construction, the accessibility to sub-items, skill level of maintenance personnel, test equipment facilities, safety considerations, etc.

[SOURCE: EN 13306:2017, definition 3.7]

**3.12****line of maintenance****maintenance echelon**

position in an organization where specified levels of maintenance are to be carried out on an item

EXAMPLE Field (first line maintenance), workshop (second line maintenance) and manufacturer (third line maintenance).

Note 1 to entry: The lines of maintenance are characterized by the skill required of the personnel, the facilities available, the location, the complexity of the maintenance task, etc.

[SOURCE: EN 13306:2017, definition 10.3]

**EN 17948:2024 (E)****3.13****maintenance level**

maintenance task categorization by complexity

## EXAMPLES

- Level 1 is characterized by simple actions carried out with minimal training.
- Level 2 is characterized by basic actions which have to be carried out by qualified personnel using detailed procedures.
- Level 3 is characterized by complex actions carried out by qualified technical personnel using detailed procedures.
- Level 4 is characterized by actions which imply the know-how of a technique or a technology and carried out by specialized technical personnel.
- Level 5 is characterized by actions which imply a knowledge held by the manufacturer or a specialized company with industrial logistic support equipment.

Note 1 to entry: The maintenance level may be related to the indenture level.

[SOURCE: EN 13306:2017, definition 7.18]

**3.14****competence**

proven ability to use knowledge, skills, and personal, social and/or methodological abilities, in work or study situations and in professional and personal development

Note 1 to entry: Competence is described in terms of responsibility and autonomy.

[SOURCE: EN 15628:2014, definition 3.1]

**3.15****indicator**

quantitative or qualitative measure of a characteristic or a set of characteristics of a phenomenon or performance of activities, according to defined criteria or a given formula or questionnaire

Note 1 to entry: The indicator is a tool for development and implementation of a strategy for monitoring progress towards the goals outlined in the strategy.

[SOURCE: EN 15341:2019+A1:2022, definition 3.3]

**3.16****scorecard**

set of associated, consistent, and complementary indicators providing synthetic and global information

Note 1 to entry: It is a tool for the development and implementation of a strategy and for monitoring progress towards the goals outlined in the strategy.

**3.17****maintenance objectives**

targets assigned and accepted for the maintenance activities

Note 1 to entry: These targets may include for example availability, cost reduction, product quality, environment preservation, safety, useful life, asset value preservation.

[SOURCE: EN 13306:2017, definition 2.3]

**3.18****intrinsic reliability****inherent reliability**

reliability of an item determined by design and manufacture under expected conditions of operation assuming that no preventive maintenance task is carried out, excepting routine maintenance

[SOURCE: EN 13306:2017, definition 4.2, modified, note to entry deleted]

**3.19****operational reliability**

actual reliability of an item considering operating modes, operating conditions and possible preventive maintenance actions carried out

[SOURCE: EN 13306:2017, definition 4.4]

**4 Maintenance framework****4.1 Maintenance contributions and challenges**

Maintenance is a shield to defend against undesirable events and, as such, maintenance implements defensive tasks and contributes to risk management and dependability as indicated in EN 60300-3-1.

Maintenance is also a crucial way to optimize the performance of an organization and, as such, it strongly contributes to Asset Management, introduced in the ISO 55000 standard, aiming to translate into decisions and actions the strategic objectives of companies and organisations. This is achieved by acting on the processes of design, acquisition and sale, renovation, production, and maintenance. Maintenance is indeed an essential area to ensure efficient and profitable management of assets. Coordinated with the other processes, maintenance optimizes the value created and plays a key role in asset management (see EN 16646:2014 and EN 17485:2021).

Maintenance is as well a basic pillar of sustainable development. There are four intertwined dimensions to sustainable development: society, environment, culture and economy. In 2015, the United Nations adopted its Agenda 2030 with 17 sustainable development goals. Designing a physical asset by planning and facilitating its maintenance and then constantly maintaining it in good condition during its life cycle is to ensure a longer life. This therefore helps to reduce raw materials and energy to rebuild it, which is a benefit for the environment and for economic efficiency. It is also giving work locally because maintenance is a set of local activities, which is social benefit. Three characteristics of sustainable development are thus met by maintenance.

Maintenance brings together many technical, administrative and managerial professions and which is directly concerned by the rise of digitization. In the context of “enabling technologies” there will be considerable developments, both in the techniques of fault diagnosis and prognosis and in the implementation of new maintenance strategies.