

SVENSK STANDARD

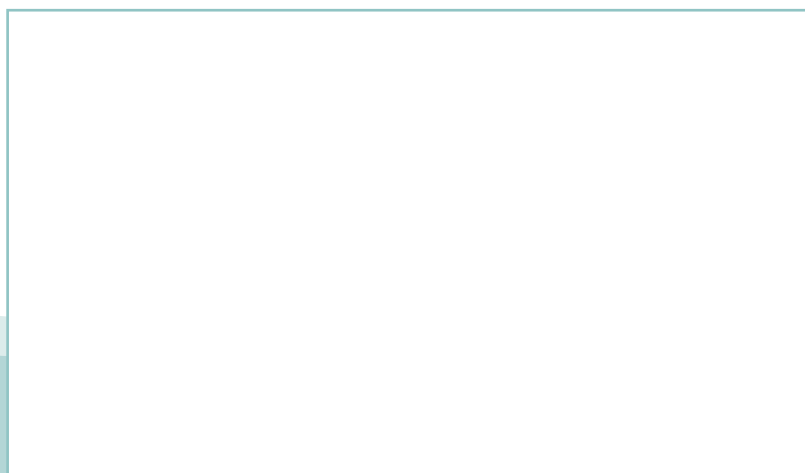
SS-ISO 55002:2018

Fastställt/Approved: 2018-11-27
Utgåva/Edition: 2
Språk/Language: engelska/English
ICS: 03.100.01; 04.160



Ledningssystem för tillgångar – Vägledning för uppfyllande av ISO 55001 (ISO 55002:2018, IDT)

Asset management – Management systems – Guidelines for the application of ISO 55001 (ISO 55002:2018, IDT)



Standarder får världen att fungera

SIS (Swedish Standards Institute) är en fristående ideell förening med medlemmar från både privat och offentlig sektor. Vi är en del av det europeiska och globala nätverk som utarbetar internationella standarder. Standarder är dokumenterad kunskap utvecklad av framstående aktörer inom industri, näringsliv och samhälle och befrämjar handel över gränser, bidrar till att processer och produkter blir säkrare samt effektiviserar din verksamhet.

Delta och påverka

Som medlem i SIS har du möjlighet att påverka framtida standarder inom ditt område på nationell, europeisk och global nivå. Du får samtidigt tillgång till tidig information om utvecklingen inom din bransch.

Ta del av det färdiga arbetet

Vi erbjuder våra kunder allt som rör standarder och deras tillämpning. Hos oss kan du köpa alla publikationer du behöver – allt från enskilda standarder, tekniska rapporter och standardpaket till handböcker och onlinetjänster. Genom vår webbtjänst e-nav får du tillgång till ett lättnavigerat bibliotek där alla standarder som är aktuella för ditt företag finns tillgängliga. Standarder och handböcker är källor till kunskap. Vi säljer dem.

Utveckla din kompetens och lyckas bättre i ditt arbete

Hos SIS kan du gå öppna eller företagsinterna utbildningar kring innehåll och tillämpning av standarder. Genom vår närhet till den internationella utvecklingen och ISO får du rätt kunskap i rätt tid, direkt från källan. Med vår kunskap om standarders möjligheter hjälper vi våra kunder att skapa verklig nytta och lönsamhet i sina verksamheter.

Vill du veta mer om SIS eller hur standarder kan effektivisera din verksamhet är du välkommen in på www.sis.se eller ta kontakt med oss på tel 08-555 523 00.



Standards make the world go round

SIS (Swedish Standards Institute) is an independent non-profit organisation with members from both the private and public sectors. We are part of the European and global network that draws up international standards. Standards consist of documented knowledge developed by prominent actors within the industry, business world and society. They promote cross-border trade, they help to make processes and products safer and they streamline your organisation.

Take part and have influence

As a member of SIS you will have the possibility to participate in standardization activities on national, European and global level. The membership in SIS will give you the opportunity to influence future standards and gain access to early stage information about developments within your field.

Get to know the finished work

We offer our customers everything in connection with standards and their application. You can purchase all the publications you need from us - everything from individual standards, technical reports and standard packages through to manuals and online services. Our web service e-nav gives you access to an easy-to-navigate library where all standards that are relevant to your company are available. Standards and manuals are sources of knowledge. We sell them.

Increase understanding and improve perception

With SIS you can undergo either shared or in-house training in the content and application of standards. Thanks to our proximity to international development and ISO you receive the right knowledge at the right time, direct from the source. With our knowledge about the potential of standards, we assist our customers in creating tangible benefit and profitability in their organisations.

If you want to know more about SIS, or how standards can streamline your organisation, please visit www.sis.se or contact us on phone +46 (0)8-555 523 00



Den internationella standarden ISO 55002:2018 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av ISO 55002:2018.

Denna standard ersätter SS-ISO 55002:2014, utgåva 1 och SS-ISO 55002:2014, utgåva 1

The International Standard ISO 55002:2018 has the status of a Swedish Standard. This document contains the official English version of ISO 55002:2018.

This standard supersedes the SS-ISO 55002:2014, edition 1 and SS-ISO 55002:2014, edition 1

© Copyright/Upphovsrätten till denna produkt tillhör SIS, Swedish Standards Institute, Stockholm, Sverige. Användningen av denna produkt regleras av slutanvändarlicensen som återfinns i denna produkt, se standardens sista sidor.

© Copyright SIS, Swedish Standards Institute, Stockholm, Sweden. All rights reserved. The use of this product is governed by the end-user licence for this product. You will find the licence in the end of this document.

Upplysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00. Standarder kan beställas hos SIS som även lämnar allmänna upplysningar om svensk och utländsk standard.

Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS, who can also provide general information about Swedish and foreign standards.

Denna standard är framtagen av kommittén för Asset management, SIS/TK 552.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på www.sis.se - där hittar du mer information.

Contents

Page

Foreword	vii
Introduction	viii
1 Scope	12
2 Normative references	12
3 Terms and definitions	12
4 Context of the organization	12
4.1 Understanding the organization and its context.....	12
4.1.1 General.....	12
4.1.2 External context.....	12
4.1.3 Internal context.....	13
4.2 Understanding the needs and expectations of stakeholders.....	14
4.2.1 General.....	14
4.2.2 Internal stakeholders	14
4.2.3 External stakeholders	14
4.2.4 Stakeholder needs and expectations	14
4.2.5 Communication with stakeholders	15
4.3 Determining the scope of the asset management system.....	15
4.4 Asset management system	16
4.4.1 General.....	16
4.4.2 Strategic asset management plan	17
5 Leadership	18
5.1 Leadership and commitment	18
5.1.1 General.....	18
5.1.2 Responsibilities.....	18
5.1.3 Commitment.....	19
5.2 Policy.....	20
5.3 Organizational roles, responsibilities and authorities	20
6 Planning	21
6.1 Actions to address risks and opportunities for the asset management system	21
6.1.1 Purpose and content of planning	21
6.1.2 Risks and opportunities	22
6.2 Asset management objectives and planning to achieve them.....	22
6.2.1 Asset management objectives	22
6.2.2 Planning to achieve asset management objectives.....	23
7 Support	25
7.1 Resources.....	25
7.1.1 General.....	25
7.1.2 Asset portfolio	26
7.1.3 Asset management system.....	26
7.1.4 Asset management	26
7.2 Competence.....	27
7.2.1 General.....	27
7.2.2 Asset portfolio	28
7.2.3 Asset management system.....	28
7.2.4 Asset management	28
7.3 Awareness.....	28
7.3.1 General.....	28
7.3.2 Asset portfolio	29
7.3.3 Asset management system.....	29
7.3.4 Asset management	29
7.4 Communication	29
7.4.1 General.....	29

7.4.2	What to communicate	30
7.4.3	When to communicate	30
7.4.4	With whom to communicate	30
7.4.5	How to communicate.....	30
7.5	Information requirements	31
7.5.1	General.....	31
7.5.2	Asset portfolio	32
7.5.3	Asset management system.....	32
7.5.4	Asset management	33
7.6	Documented information	33
7.6.1	General.....	33
7.6.2	Creating and updating.....	33
7.6.3	Control of documented information	33
8	Operation	33
8.1	Operational planning and control	33
8.1.1	General.....	33
8.1.2	Operational objectives and decision-making criteria.....	34
8.1.3	Operational planning and control processes	34
8.2	Management of change	34
8.3	Outsourcing.....	35
9	Performance evaluation.....	36
9.1	Monitoring, measurement, analysis and evaluation.....	36
9.1.1	General.....	36
9.1.2	Performance monitoring.....	37
9.1.3	Evaluation of the performance of the asset portfolio and asset management processes	40
9.2	Internal audit.....	40
9.3	Management review	41
10	Improvement	42
10.1	General.....	42
10.2	Nonconformity and corrective action	43
10.2.1	General.....	43
10.2.2	Investigation of asset-related nonconformities	44
10.2.3	Investigation of asset management system nonconformities.....	44
10.2.4	Investigation of asset management nonconformities	44
10.2.5	Processes for implementing corrective actions	44
10.3	Preventive action	44
10.3.1	General.....	44
10.3.2	Preventive actions for asset portfolio.....	45
10.3.3	Preventive actions for asset management system	45
10.3.4	Preventive actions for asset management.....	45
10.4	Continual improvement.....	45
10.4.1	General.....	45
10.4.2	Continual improvement for asset portfolio	46
10.4.3	Continual improvement for asset management system.....	46
10.4.4	Continual improvement for asset management	46
Annex A (informative) Consideration of “value” in asset management		47
Annex B (informative) Scope of an asset management system		52
Annex C (informative) Strategic asset management plan (SAMP)		62
Annex D (informative) Asset management decision making.....		67
Annex E (informative) Risk management in the context of ISO 55001		71
Annex F (informative) Relationship between financial and non-financial functions in asset management		74

SS-ISO 55002:2018 (E)

Annex G (informative) Scalability — ISO 55001 for small businesses	78
Annex H (informative) Information on asset management activities	80
Bibliography	82

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 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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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 251, *Asset management*.

This second edition cancels and replaces the first edition (ISO 55002:2014), which has been technically revised to improve the guidance on the development and application of an asset management system.

The following changes have been made:

- the ISO 55000 “fundamentals” (value, alignment, leadership and assurance) have been addressed in each clause, whenever applicable, stating the contribution of the requirements specified in ISO 55001 to achieving the fundamentals;
- the application of the requirements of ISO 55001 to the domains of asset management identified in ISO 55000 (see ISO 55000:2014, Figure 1) have been clarified, i.e. to the asset portfolio, to the asset management system and to asset management, stating the adequacy of the requirements to each domain, whenever applicable;
- linkages between clauses have been provided, by stating the relevant interconnections (e.g. “see [6.2.1](#)”);
- annexes have been added on cross cutting concepts, present in the main text of this document to provide a combined guidance for specific themes in asset management that were identified as being addressed in several clauses.

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

0.1 General

This document provides guidance for the application of a management system for asset management, referred to as an “asset management system”, in accordance with the requirements of ISO 55001.

This document provides explanatory text intended to clarify the requirements specified in ISO 55001 and provides examples to support implementation of these requirements. It does not provide guidance for managing specific asset types.

This document provides guidance for use by:

- a) those involved in the establishment, implementation, operation, maintenance and improvement of an asset management system;
- b) those involved in delivering asset management activities, including service providers.

General information on asset management, and information on the terminology applicable to this document, is provided in ISO 55000.

0.2 Assets, asset management and the asset management system

An asset is something that has potential or actual value to an organization. Asset management enables an organization to realize value from assets in the achievement of its organizational objectives. An asset management system is used by the organization to direct, coordinate and control asset management activities.

NOTE An asset management system can be established by any organization, which can be a sole-trader, company, corporation, firm, enterprise, authority, partnership, charity or institution, or part or combination thereof, whether incorporated or not, public or private. The organization, for example, can be an asset owner, custodian, operator, service provider, subsidiary, alliance or joint venture.

The asset management system, asset management and the asset portfolio should be aligned to, and support delivery of, the organizational objectives and the organizational plan.

Organizational objectives are generally developed as part of the organization’s strategic level planning activities and are given in documented information within an organizational plan. The organizational objectives form a key part of the context of the asset management system and are the starting point for establishing the asset management objectives.

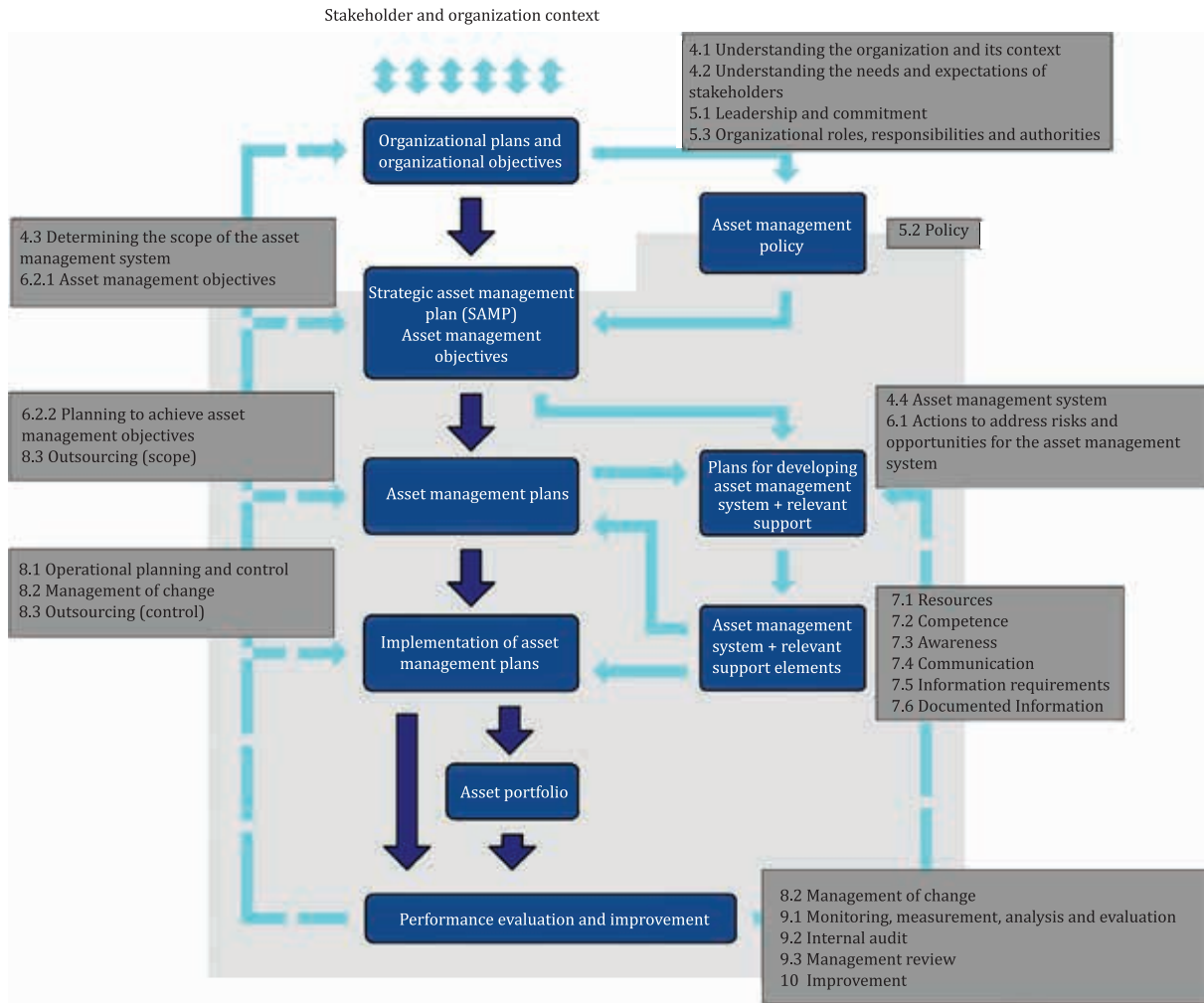
Understanding the context of the organization enables the organization to design, implement and maintain its asset management system, asset management and the assets, in alignment with the purpose of the organization, its objectives and its stakeholder needs and requirements.

The asset management system includes:

- a) the asset management policy (see [5.2](#));
- b) the asset management objectives (see [6.2](#));
- c) the strategic asset management plan (SAMP);
- d) the asset management plan(s) (see [6.2.2](#));
- e) supporting activities (see [Clause 7](#));
- f) operational planning and control (see [Clause 8](#)), including the processes and procedures employed to manage assets in the asset portfolio throughout their life cycle;
- g) performance evaluation (see [Clause 9](#));
- h) improvement activities (see [Clause 10](#));

- i) guidance on how it relates to or interfaces with other relevant policies and processes and management systems.

Figure 1 shows the relationship between the key elements of an asset management system, together with the related clauses in ISO 55001.



NOTE 1 Only the primary connections are shown to avoid over-complexity.

NOTE 2 This does not aim to repeat the distinction between asset management and an asset management system: it is a connections view showing directions of influence.

NOTE 3 The grey highlighted box designates the boundary of the asset management system.

Figure 1 — Relationship between key elements of an asset management system

0.3 Structure of this document

This document provides guidance on the implementation of the requirements for an asset management system specified in ISO 55001. By doing so, this document follows a similar structure and sequence of clauses and subclauses as in ISO 55001 (the subclauses in Clause 6 and Clause 10 are not in strict alignment). Throughout this document distinction is made, where relevant, between assets and asset portfolio, asset management and the asset management system. In ISO 55000:2014, 2.4.3, the relationship between these three concepts is clarified. An asset management system is used by the organization to direct, coordinate and control asset management activities to realize value from its assets for the organization and for its stakeholders. When applying ISO 55001, it is relevant to be aware of this relationship. An organization should, for example, distinguish between monitoring and

SS-ISO 55002:2018 (E)

evaluating the performance of its asset portfolio, its asset management and its asset management system and the use of results of these different types of monitoring and evaluation in the processes for continual improvement at various levels. Where relevant, this document details how an organization should distinguish between assets and asset portfolio, asset management and the asset management system to ensure that the application of ISO 55001 promotes realization of value from its asset portfolio.

In addition, this document also addresses several subjects that are relevant for the effective implementation of asset management, but that are not related to one specific (sub)clause of ISO 55001.

Asset management is the coordinated activity of an organization to realize value from assets (see the definition in ISO 55000:2014, 3.3.1) and although the requirements in ISO 55001 cover the overall approach of comprehensive asset management, there are elements that are linked to several clauses. As special care should be given to the alignment of these cross-cutting elements, these subjects are addressed in annexes to this document.

In the design and improvement of the asset management system and execution of asset management, four pathways are of key importance:

- the line of sight from context of the organization to asset management policy to the SAMP to asset management plans to operation;
- objectives, derived from the organizational objectives to strategic asset management objectives, to asset management objectives; these are often translated into a hierarchy of key performance indicators;
- decision-making criteria and decision-making processes;
- risk management is developed at all levels, from the top level in the organization (down) to daily operations; the risk management framework is aligned with the design and improvement of the asset management system and the risk management process with the asset management execution.

The concurrence of these four elements is one of the key aspects of asset management. In particular, the alignment of decision making and setting of objectives is not straightforward. These are developed together and can need several iterations before they are fully aligned and mature.

To support this overall alignment, [Annexes A to H](#) provide information on:

- a) the concept of value as a fundamental in asset management ([Annex A](#));
- b) defining the scope of an asset management system ([Annex B](#));
- c) the objectives and structure of the SAMP ([Annex C](#));
- d) the principles behind asset management decision making ([Annex D](#));
- e) addressing risk management in asset management ([Annex E](#));
- f) the relationship between the financial and non-financial functions in asset management ([Annex F](#));
- g) scalability of asset management systems for varying organization sizes and complexity ([Annex G](#));
- h) information on asset management activities ([Annex H](#)).

0.4 Language applied in this document

In this document, the following verbal forms are used:

- “shall” indicates a requirement;
- “should” indicates a recommendation;
- “may” indicates a permission;

— “can” indicates a possibility or a capability.

Information marked as “NOTE” is for guidance in understanding or clarifying the associated text.