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Obvladovanje premoženja - Upravljanje sistemov - Smernice za uporabo ISO 55001

Asset management - Management systems - Guidelines for the application of ISO 55001

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Gestion d'actifs - Systèmes de management - Lignes directrices relatives à l'application de l'ISO 55001

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Gestion d'actifs — Systèmes de management — Lignes directrices relatives à l'application de l'ISO 55001

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112 Foreword

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

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

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

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

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

134 The committee responsible for this document is Technical Committee ISO/TC 251, *Asset management*.

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

137 The factors that directed this revision were the following:

- 138 — to address the ISO 55000 “fundamentals” (value, alignment, leadership and assurance) in each
139 clause, whenever applicable, stating the contribution of the requirements specified in ISO 55001 to
140 achieving the fundamentals;
- 141 — to clarify the application of the requirements of ISO 55001 to the domains of managing assets
142 identified in ISO 55000 (see Figure 1 in ISO 55000), i.e. to the asset portfolio, to the asset
143 management system and to asset management, stating the adequacy of the requirements to each
144 domain, whenever applicable;
- 145 — to provide linkages between clauses, by stating the relevant interconnections (e.g. “see 6.2.1”);
- 146 — to add annexes on cross cutting concepts, present in the main text of this document, providing a
147 combined guidance for specific themes in asset management that were identified as being
148 addressed in several clauses.

149 References to ISO 55000:2014 and ISO 55001:2014 do not mention the reference year (i.e. “see ISO
150 55000, 3.2.6”).

151 Introduction

152 0.1 General

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

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

158 This document provides guidance for use by:

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

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

164 0.2 Assets, asset management and the asset management system

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

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

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

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

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

182 The asset management system includes:

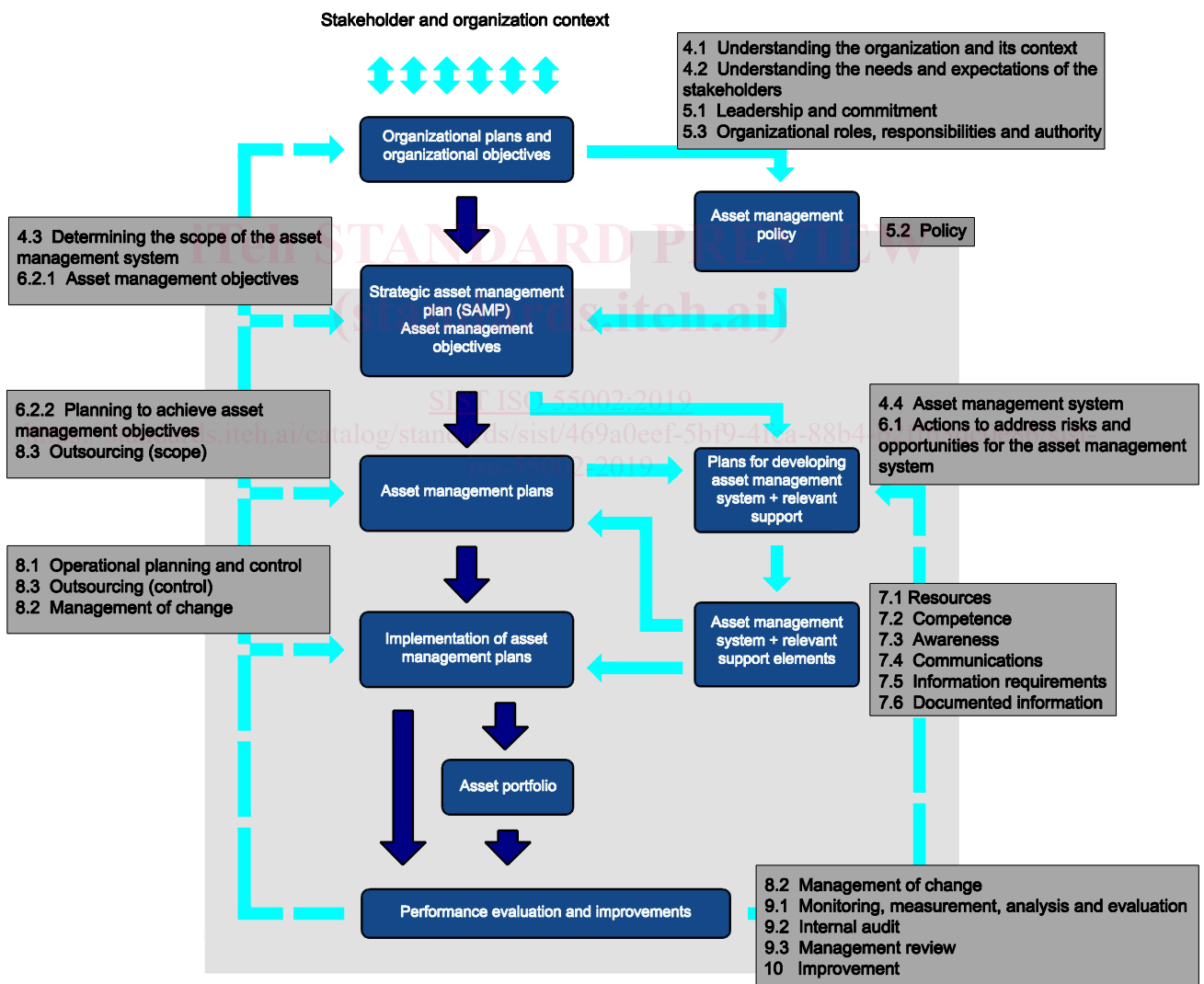
- 183 a) the asset management policy (see 5.2);
- 184 b) the asset management objectives (see 6.2);
- 185 c) the strategic asset management plan (SAMP);
- 186 d) the asset management plan(s) (see 6.2.2);

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- 187 e) how it relates to or interfaces with other relevant policies and processes and management systems.
- 188 The following planning processes are important for the effectiveness of the asset management system:
- 189 — supporting activities (see Clause 7);
- 190 — operational planning and control (see Clause 8), including the processes and procedures employed
- 191 to manage assets throughout their life cycle;
- 192 — performance evaluation (see Clause 9);
- 193 — improvement activities (see Clause 10).

194 Figure 1 shows the relationship between the key elements of an asset management system, together

195 with the related clauses in ISO 55001.



- 196
- 197 NOTE 1 Only the primary connections are shown to avoid over-complexity.
- 198 NOTE 2 This does not aim to repeat the distinction between asset management and an asset management
- 199 system: it is a connections view showing directions of influence.
- 200 NOTE 3 The grey highlighted box designates the boundary of the asset management system.

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

202 **0.3 Structure of this document**

203 This document provides guidance on the implementation of the requirements for an asset management
 204 system specified in ISO 55001. By doing so this document follows a similar structure and sequence of
 205 clauses and sub-clauses as in ISO 55001 (the subclauses in Clause 10 are not in strict alignment). In
 206 addition, this document also addresses a number of subjects that are relevant for effective
 207 implementation of asset management, but are not related to one specific (sub)clause of SO 55001.
 208 These subjects are addressed in a number of annexes to this document.

209 Annexes A to H provide information on:

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

218 **0.4 Language applied in this document**

219 In this document, the following verbal forms are used:

- 220 — “shall” indicates a requirement;
- 221 — “should” indicates a recommendation;
- 222 — “may” indicates a permission;
- 223 — “can” indicates a possibility or a capability.

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

225 **Asset management — Management systems — Guidelines for** 226 **the application of ISO 55001**

227 **1 Scope**

228 This document provides guidance for the application of an asset management system, in
229 accordance with the requirements of ISO 55001.

230 This document can be applied to all types of assets and by all types and sizes of organizations.

231 NOTE 1 This document is intended to be used for managing physical assets in particular, but it can also be
232 applied to other asset types.

233 NOTE 2 This document does not provide financial, accounting or technical guidance for managing specific
234 asset types, however, in Annex E information is provided on the relationship between the financial and non-
235 financial functions asset management.

236 NOTE 3 For the purposes of ISO 55000, ISO 55001 and this document, the term “asset management
237 system” is used to refer to a management system for asset management.

238 **2 Normative references**

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

243 [https://standards.iteh.ai/catalog/standards/sist/469a0eef-5bf9-4fea-88b4-b2ff63dc0e86/sist-](https://standards.iteh.ai/catalog/standards/sist/469a0eef-5bf9-4fea-88b4-b2ff63dc0e86/sist-ISO-55000:2014)
243 ISO 55000:2014, *Asset management — Overview, principles and terminology*

244 ISO 55001:2014, *Asset management — Management systems — Requirements*

245 **3 Terms and definitions**

246 For the purposes of this document, the terms and definitions given in ISO 55000:2014 apply.

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

249 — ISO Online browsing platform: available at <http://www.iso.org/obp>

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

251 **4 Context of the organization**

252 **4.1 Understanding the organization and its context**

253 **4.1.1 General**

254 When establishing or reviewing an asset management system, it is important to ensure that its
255 design and scope are consistent and aligned with the external and internal context of the
256 organization.

ISO/DIS 55002:2017(E)257 **4.1.2 External context**

258 The organization's external context can include, but is not limited to, the following:

- 259 a) the social and cultural, political, legal, regulatory, financial, technological, economic, competitive
260 and natural environment factors, whether international, national, regional or local;
- 261 b) key drivers and trends in factors that are identified as potentially having an impact on the
262 objectives of the organization;
- 263 c) relationships with, and perceptions and values of, external stakeholders.

264 **4.1.3 Internal context**

265 The organization's internal context can include, but is not limited to, the following:

- 266 a) governance requirements;
- 267 b) organizational structure, roles, accountabilities and authorities;
- 268 c) policies, objectives, and the strategies that are in place to achieve them;
- 269 d) capabilities, understood in terms of resources and knowledge (e.g. capital, time, people, systems
270 and technologies);
- 271 e) information systems, information flows and decision-making processes (both formal and
272 informal);
- 273 f) relationships with, and perceptions and values of, internal stakeholders;
- 274 g) the organization's culture;
- 275 h) standards, guidelines and models adopted by the organization;
- 276 i) the form and extent of contractual relationships;
- 277 j) the organization's risk management plans including tolerance limits, risk attitude and capacity;
- 278 k) asset management practices and other management systems, plans, process(es) and
279 procedure(s);
- 280 l) integrity and performance of the assets and asset systems;
- 281 m) the size and complexity of the organization;
- 282 n) the size, complexity and criticality of the assets;
- 283 o) feedback from the investigation of previous asset and asset system failures, incidents, accidents
284 and emergencies;
- 285 p) assessments of the ability of the asset management system to achieve the intended outcomes of
286 the organizational objectives;
- 287 q) feedback from previous self-assessments, internal audits, third party and certification reviews.

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288 At the strategic level, tools such as Strengths, Weaknesses, Opportunities and Threats analysis
 289 (SWOT) and Political, Economic, Social, Technological, Legal, Environmental analysis (PESTLE) can
 290 be used. A more simple approach can be useful for organizations dependent on the size and
 291 complexity of their operations, such as brainstorming and asking “what if” questions.

292 The processes and outputs of processes used for evaluating the organization's context can be
 293 considered necessary for the effectiveness of the asset management system, and therefore
 294 constitute documented information (see ISO 55001, 7.6.1). The triggers and review frequency for
 295 conducting these processes should also be defined in documented information. Details of the need
 296 for this documented information are addressed in 7.5, 7.6 and Clause 9.

297 4.2 Understanding the needs and expectations of stakeholders**298 4.2.1 General**

299 The organization should identify and review the stakeholders that are relevant to the asset
 300 management system, asset management and the assets, and the needs and expectations of these
 301 stakeholders. The identification and review of the stakeholders' needs and expectations will enable
 302 the identification of the value the stakeholders may receive from the organization's assets (see
 303 Annex C for a discussion on the concept value in asset management).

304 4.2.2 Internal Stakeholders

305 Internal stakeholders can include the following:

- 306 a) employees of the organization;
- 307 b) groups within the organization, i.e. functional groups (e.g. engineering, finance, accounting,
 308 maintenance, operations, purchasing, receiving, logistics) or other groups (e.g. safety
 309 representatives);
- 310 c) shareholders, management consortiums, owners.

311 4.2.3 External stakeholders

312 External stakeholders can include the following:

- 313 a) customers, users, suppliers, service providers and contractors;
- 314 b) non-governmental organizations, including civil society organizations, consumer organizations
 315 and the media with an interest in issues related to asset management;
- 316 c) government organizations, government agencies, regulatory authorities, and politicians at all
 317 levels of government;
- 318 d) investors or taxpayers;
- 319 e) local communities;
- 320 f) those in society interested in social, financial, environmental or other forms of sustainability;
- 321 g) financial institutions, rating agencies, brokers and insurers;
- 322 h) employee representatives.