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Project, programme and portfolio management — Guidance on project management

Management des projets, programmes et portefeuilles — Lignes directrices sur le management de projet

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1 Foreword

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

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

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

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

19 For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and
20 expressions related to conformity assessment, as well as information about ISO's adherence to the World
21 Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see
22 www.iso.org/iso/foreword.html.

23 This document was prepared by Technical Committee ISO/TC 258, *Project, Programme and Portfolio*
24 *Management*.

25 This first edition cancels and replaces ISO 21500:2012, which has been technically revised. The
26 significant changes compared to the previous edition are:

- 27 a) expanded the concept of project management to include project-related oversight and direction
28 activities of the sponsoring organization;
- 29 b) included that projects can deliver outcomes and enable the realisation of benefits;
- 30 c) considered the organizational context of projects;
- 31 d) included descriptions of additional project roles and responsibilities;
- 32 e) included topics such as creating a project environment that is conducive to success, project life cycles,
33 decision points and gates, additional project practices, such as benefits management and change
34 control to reflect current practices in project management;
- 35 f) included pre- and post- project activities;
- 36 g) described the guidelines for selecting, defining and establishing delivery approaches; and
- 37 h) changed the format from process-based to practices and narrative-based (see Annex A for detail).

38 Any feedback or questions on this document should be directed to the user's national standards body. A
39 complete listing of these bodies can be found at www.iso.org/members.html.

40 **Introduction**

41 This document provides guidance on concepts and practices for project management that are important
42 for and have an impact on a project's successful delivery.

43 The target readership for this document includes, but is not limited to:

- 44 a) executive and senior management, to provide a better understanding of project management and to
45 help them give appropriate support and guidance to project managers and those individuals working
46 on projects;
- 47 b) project managers and project team members to have a common basis upon which to understand,
48 conduct, compare, evaluate and communicate their project practices;
- 49 c) individuals involved in the governance, direction, assurance, audit, and management of projects, such
50 as project sponsors, project boards, auditors, and project managers; and
- 51 d) developers of national or organizational project management standards, processes and methods.

52 In addition, this document can also be useful to individuals involved in supporting:

- 53 — the governance, direction and management of portfolios and programmes;
- 54 — project teams, programme and project offices or similar organizational structures;
- 55 — academic study of project, programme and portfolio management; and
- 56 — functions related to the management of projects, such as finance, accounting, human resource
57 management, procurement and legal.

58

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59 **Project, programme and portfolio management: Guidance on project management**

60 **1 Scope**

61 This document provides guidance on project management and can be used by any organization, including
62 public, private, and charitable, as well as any type of project, regardless of purpose, delivery methods, life
63 cycle model used, complexity, size, cost or duration.

64 NOTE Delivery method can be any method suited to the type of outputs, such as predictive, incremental,
65 iterative, including agile approaches.

66 This document provides high-level descriptions of activities that are considered to form good practice in
67 project management. This document does not provide guidance on the management of programmes or
68 portfolios. Topics relating to general management are addressed only within the context of project
69 management.

70 **2 Normative references**

71 There are no normative references in this document.

72 **3 Terms and definitions**

73 For the purposes of this document, the following terms and definitions apply.

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

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

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

77 **3.1**

78 **baseline**

79 reference basis for comparison against which performance is monitored and controlled

80 [SOURCE: ISO/TR 21506:2018, 3.5]

81 **3.2**

82 **benefit**

83 created advantage, value or other positive effect

84 [SOURCE: ISO/TR 21506:2018, 3.6]

85 **3.3**

86 **change request**

87 documentation that defines a proposed alteration to a project (0)

88 [SOURCE: ISO/TR 21506:2018, 3.10]

89 **3.4**

90 **configuration management**

91 application of procedures to control, correlate and maintain documentation, specifications and physical
92 attributes

93 [SOURCE: ISO/TR 21506:2018, 3.12]

94 **3.5**
95 **control**
96 comparison of actual performance with planned performance, analysing variances and taking
97 appropriate corrective or preventive action as needed

98 [SOURCE: ISO/TR 21506:2018, 3.13]

99 **3.6**
100 **corrective action**
101 direction and activity for modifying the performance of work to bring performance in line with a plan

102 [SOURCE: ISO/TR 21506:2018, 3.15]

103 **3.7**
104 **critical path**
105 sequence of activities that determine the earliest possible completion date for a project (0) or phase

106 [SOURCE: ISO/TR 21506:2018, 3.18]

107 **3.8**
108 **deliverable**
109 unique and verifiable element that is required to be produced by a project (0)

110 [SOURCE: ISO/TR 21506:2018, 3.19, modified — "element that is required to be produced by a project"
111 has replaced "tangible or intangible outcome of a planned activity"]

112 **3.9**
113 **issue**
114 any event that arises during a project (0) requiring resolution for the project (0) to proceed

115 **3.10**
116 **outcome**
117 change resulting from the use of the output (0) from a project (0)

118 **3.11**
119 **output**
120 aggregated tangible or intangible deliverables that form the project (0) result

121 **3.12**
122 **portfolio**
123 collection of portfolio components (0) grouped together to facilitate their management to meet strategic
124 objectives

125 [SOURCE: ISO/TR 21506:2018, 3.42]

126 **3.13**
127 **portfolio component**
128 project (0), programme (0), portfolio (0) or other related work

129 [SOURCE: ISO/TR 21506:2018, 3.43]

130 **3.14**
131 **preventive action**
132 action to eliminate the cause of a potential nonconformity or other potential undesirable situation

133 Note 1 to entry: Preventive action is taken to prevent occurrence whereas corrective action is taken to
 134 prevent recurrence.

135 [SOURCE: ISO 9000:2015, 3.12.1, modified — The original Note 1 to entry has been deleted.]

136 **3.15**

137 **programme**

138 group of programme components (0) managed in a coordinated way to realize benefits (0)

139 [SOURCE: ISO/TR 21506:2018, 3.50]

140 **3.16**

141 **programme component**

142 project (0), programme (0) or other related work

143 [SOURCE: ISO/TR 21506:2018, 3.52]

144 **3.17**

145 **project**

146 temporary endeavour to achieve one or more defined objectives

147 [SOURCE: ISO/TR 21506:2018, 3.59, modified — "to achieve one or more defined objectives" has
 148 replaced "created to produce agreed deliverables".]

149 **3.18**

150 **project governance**

151 principles, policies and procedures by which a project (0) is authorized and directed to accomplish agreed
 152 deliverables (0)

153 [SOURCE: ISO/TR 21506:2018, 3.60]

154 **3.19**

155 **project life cycle**

156 defined set of phases from the start to the end of a project (0)

157 **3.20**

158 **project management**

159 coordinated activities to direct and control the accomplishment of agreed objectives

160 [SOURCE: ISO/TR 21506:2018, 3.61, modified — "objectives" has replaced "deliverables".]

161 **3.21**

162 **project scope**

163 authorized work to accomplish agreed deliverables (0)

164 [SOURCE: ISO/TR 21506:2018, 3.65]

165 **3.22**

166 **sponsor**

167 person responsible for obtaining the resources and executive decisions to enable success

168 [SOURCE: ISO/TR 21506:2018, 3.78]

169 **3.23**

170 **stakeholder**

171 person, group or organization that has interests in, or can affect, be affected by, or perceive itself to be
172 affected by, any aspect of a project (0), programme (0) or portfolio (0)

173 [SOURCE: ISO/TR 21506:2018, 3.79]

174 **3.24**

175 **work breakdown structure**

176 decomposition of the defined scope of the project (0) or programme (0) into progressively lower levels
177 consisting of elements of work

178 [SOURCE: ISO/TR 21506:2018, 3.87]

179 **3.25**

180 **work package**

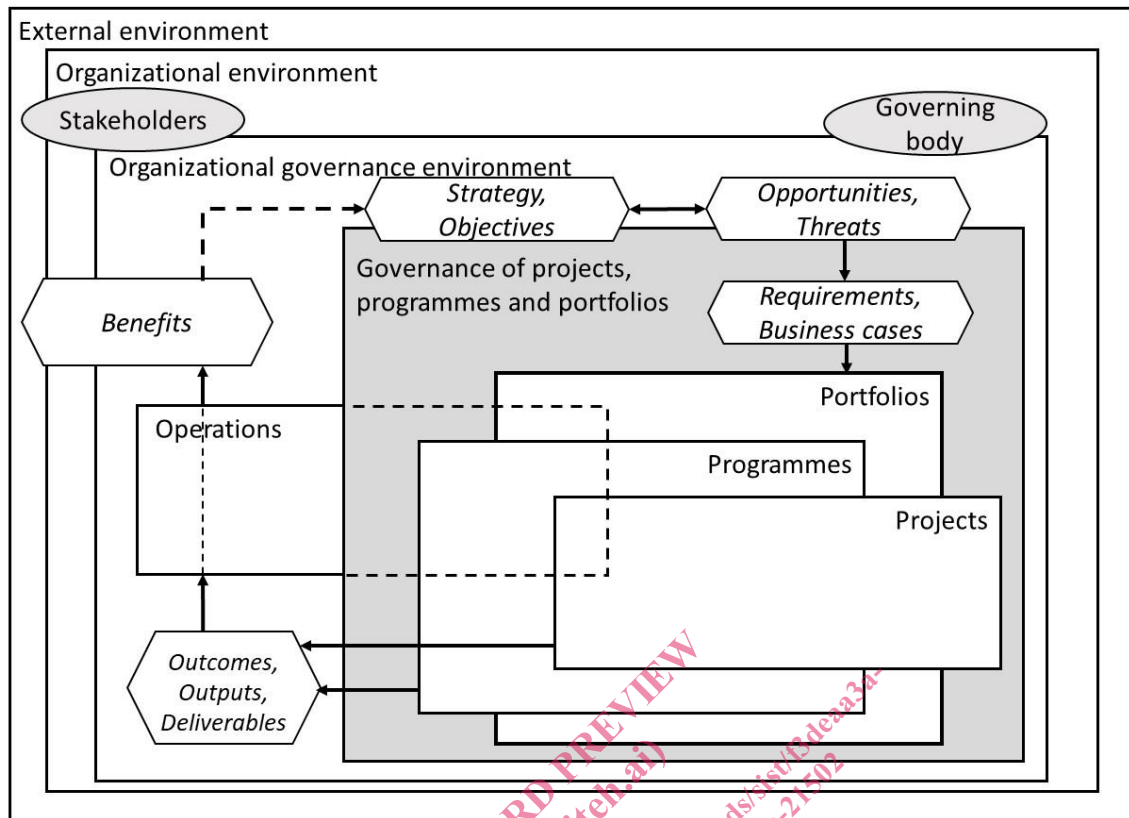
181 group of activities that have a defined scope, deliverable (0), timescale and cost

182 **4 Project management concepts**

183 **4.1 Overview**

184 **4.1.1 General**

185 Clause 4 describes the concepts relating to project management which are drawn on when undertaking
186 the practices described in Clauses 6 and 7. Figure 1 shows the context and environment within which a
187 project exists. A project can be standalone or part of a programme or portfolio within an organization
188 (see 4.2.5), any of which can cross organizational boundaries. The organizational strategy can be used to
189 identify opportunities, threats with the consideration of weakness and strengths, which should be
190 documented and evaluated. Selected opportunities and threats can be further developed and justified in
191 a business case, or other similar document, which can result in one or more projects being initiated. The
192 outputs from projects, appropriately handled, are expected to deliver outcomes, which should realize
193 benefits for the sponsoring organizations or stakeholders.



194

195 NOTE The dashed lines of the Operations box indicate that operations stretch into projects, programmes
 196 and portfolios (refer to “other work”).

197 **Figure 1 — An example of project management within the context of the governance and**
 198 **management of programmes and portfolios**

199 4.1.2 Projects

200 Organizations undertake work to achieve specific objectives. Generally, this work can be categorized
 201 as either operations or projects. Operations and projects differ in that:

- 202 a) projects are performed by teams, which can include contractors, and are focused on maintaining or
 203 adding value or capability, either within the sponsoring organization or for a customer; and
- 204 b) operations are performed through on-going activities and can be focused on sustaining the
 205 organization such as through the delivery of repeatable products and services.

206 A project’s objective can be fulfilled by any combination of deliverables, outputs, outcomes and benefits,
 207 depending on the project’s context (see 4.2) and direction provided through governance (see 4.3). A
 208 project’s objective should contribute to outcomes and realization of benefits for stakeholders, including
 209 the sponsoring organization, other internal and external organization stakeholders, customers, and their
 210 stakeholders. Although many projects have similar features, each project is unique. Differences among
 211 projects can occur in factors, such as, but not limited to:

- 212 — objectives;
- 213 — context;
- 214 — outcomes desired;
- 215 — outputs provided;