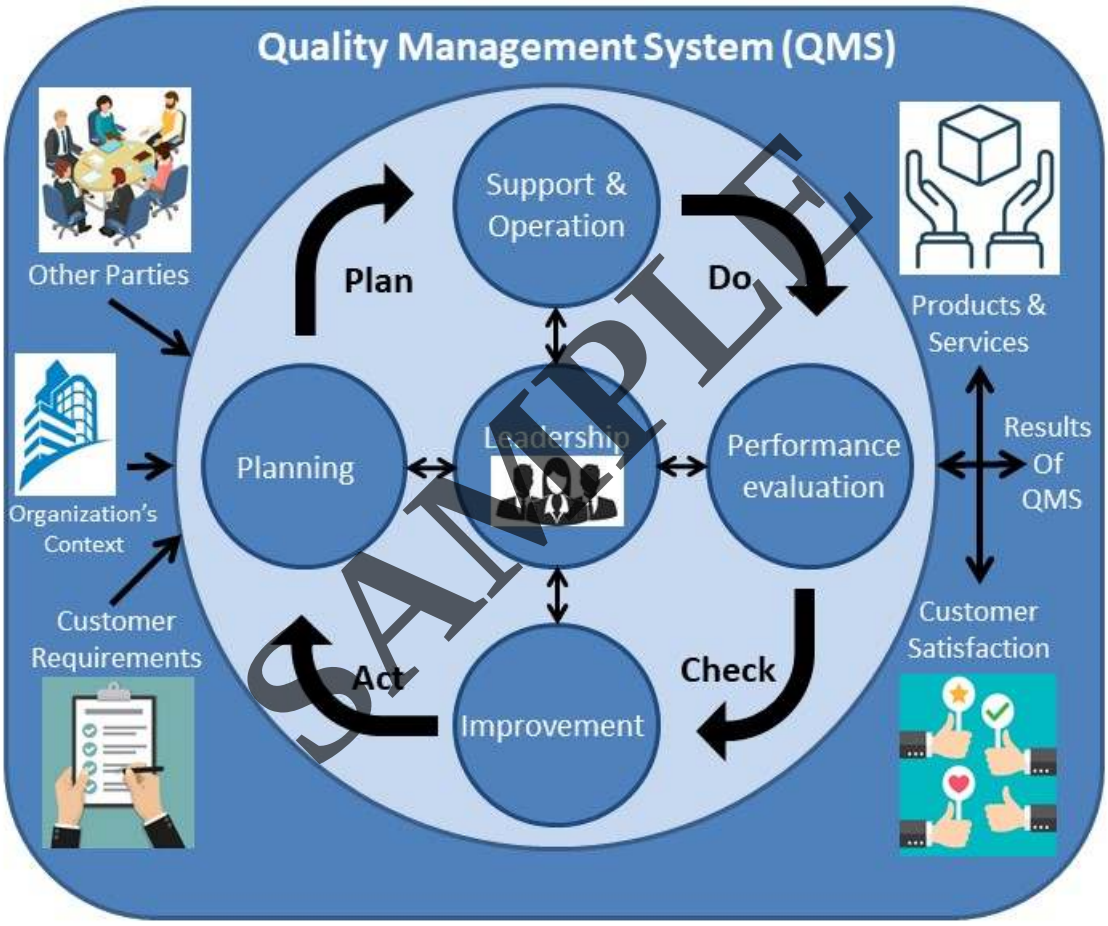
SEPT Evidence Product Checklist

For Standard ISO/IEC/IEEE 90003: 2018

Software engineering - Guidelines for the application of ISO 9001:2015 to computer software



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For Standard ISO/IEC/IEEE 90003:2018 - *Software engineering — Guidelines for the application of ISO 9001:2015 to computer software*

2018 Edition

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Change Page History

Date	Change	Reason
21-Feb-2009	First Version	Based on 9001:2000 and amendment for 2008 and linking to ISO/IEC 12207:2008
21-Apr-2015	Second Version	Revised to fit update of ISO/IEC/IEEE 12207
8-Feb-2019	Third Version	Total revision due to rewrite of ISO 9001:2015 and due to updates in ISO/IEC/IEEE 90003:2018 guidance text, ISO/IEC/IEEE 12207:2018 revision, and many other ISO/IEC JTC1/SC7 standards affecting guidance in ISO/IEC/IEEE 90003

Section 1

Introduction

Components of the Checklist

This checklist is composed of 9 sections:

- Section 1. Introduction
- Section 2. Composites of all suggested "ISO/IEC/IEEE 90003:2018 artifacts.
- Sections 3-8. Individual checklists for each type of artifact (policies &. procedures, plans, records, documents, audits and reviews)
- Section 9. About the author

Overview of the Standard ISO/IEC/IEEE 90003:2018

- ISO/IEC/IEEE 90003:2018 is harmonized with ISO 9001:2015
- ISO/IEC/IEEE 90003:2018 is a complete rewrite of the 2015 version based on the new structure and requirements defined in the rewrite of ISO 9001:2015,
- ISO/IEC/IEEE 90003:2018 provides guidelines for software development, operation or maintenance,
- ISO/IEC/IEEE 90003:2018 also points to other ISO/IEC JTC1/SC7 (Software and Systems Engineering committee of ISO) standards for further reading.

Relationship to other key Standards

ISO/IEC/IEEE 90003:2018 is a companion document and is harmonized with ISO 9001:2015.

Introduction to the SEPT Checklist for ISO/IEC/IEEE 90003

For 20 + years Software Engineering Process Technology (SEPT) has produced checklists for standards that address software issues. This is a checklist for ISO/IEC/IEEE 90003:2018, another checklist related to quality standards. The purpose of the checklist is to define clearly all the policy, procedure, plan, records, document, audits or reviews that the underlying standard calls out, either required or suggested. If an organization does a gap analysis between what they do (or planned to do) and what the checklist calls out they can establish a firm statement of work to be in compliance with ISO/IEC/IEEE 90003:2018 and ISO 9001:2015

ISO/IEC/IEEE 90003 will provide your organization with guidance and support to meet the requirements of ISO 9001:2015 for systems and software developed, operated or maintained by your organization. This standard can be used by any organization, regardless of size, type and activity. To document that an organization has met the requirements of ISO 9001:2015, the standard recommends that the organization produce and use certain quality artifacts (Procedure, Policy, Plan, Records, Document, Audits and

Review). However, what constitutes physical evidence (Artifacts) to meet the guidance outlined in ISO/IEC/IEEE 90003 is sometimes difficult to identify. To bridge this gap the author and SEPT experts have identified items of physical evidence called out in the standard based on their knowledge of the document and their experience in the quality field. Each item of physical evidence that was identified by these experts is listed in the checklist as; policy, procedure, plan, records, document, audits or reviews.

The SEPT checklists are constructed around a classification scheme of physical evidence comprised of policies, procedures, plans, records, documents, audits, and reviews. There must be an accompanying record of some type when an audit or review has been accomplished. This record would define the findings of the review or audit and any corrective action to be taken. For the sake of brevity this checklist does not call out a separate record for each review or audit. All procedures should be reviewed but the checklist does not call out a review for each procedure, unless the standard calls out the procedure review. In this checklist, "manuals, reports, scripts and specifications" are included in the document category. In the procedure category, guidelines are included when the subject standard references another standard for physical evidence. The checklist does not call out the requirements of the referenced standard.

The author has carefully reviewed the Standard ISO/IEC/IEEE 90003:2018 and defined the physical evidence required based upon this classification scheme. SEPT's engineering department has conducted a second review of the complete list and baseline standard to ensure that the documents' producers did not leave out a physical piece of evidence that a "reasonable person" would expect to find. If an artifact is called out more than one time, only the first reference is stipulated. If an artifact is required by ISO 9001:2015 it appears in the checklist without appended symbol. If an item is "suggested" by ISO 9001:2015 it appears with an appended asterisk (*). If an item is "suggested" by ISO/IEC/IEEE 90003 guidelines it appears in the checklist with an appended hash (#). In this way traceability of requirements and suggested items to both standards is possible.

Note: These notations are listed in the footnotes for each section.

There are occasional situations in which a procedure or document is not necessarily separate and could be contained within another document. For example, the "Design and Development Verification Plan" could be a part of the "Design and Development Plan". The author has called out these individual items separately to ensure that the organization does not overlook any facet of physical evidence. If the organization does not require a separate document, and an item can be a subset of another document or record, then this fact should be denoted in the detail section of the checklist for that item. This should be done in the form of a statement reflecting that the information for this document may be found in section XX of Document XYZ. If the organizational requirements do not call for this physical evidence for a project, this should also be denoted with a statement reflecting that this physical evidence is not required and why. The reasons for the evidence not being required should be clearly presented in this statement. Further details

on this step are provided in the Detail Steps section of the introduction. The size of these documents could vary from paragraphs to volumes depending upon the size and complexity of the project or business requirements.

General Principles of the Checklist for ISO/IEC/IEEE Standard 90003:2018

This checklist was prepared by analyzing each clause of the Standard for the key words that signify a:

- Policy
- Procedure (Including Guidelines)
- Plan
- Records
- Document (Including Manuals, Reports, Scripts and Specifications)
- Audit
- Review

This checklist specifies evidence that is unique. After reviewing the completed document, the second review was conducted from a common sense "reasonable person" approach.

The information was transferred into checklist tables, based on the type of product or evidence. Because software forms part of a "system", some system documents are identified that are necessary to define inputs to software development or are associated with acceptance of software against defined requirements. These are not specifically cited in the standard but are included for completeness. Related procedures and plans to develop these system level items are omitted in the checklist. In total, there are 790 artefacts identified by SEPT in the checklist.

Using the Checklist

When a company is planning to use ISO/IEC/IEEE 90003:2018 standard, the company should review the evidence checklist. If the company's present process does not address an ISO/IEC/IEEE 90003:2018 standard product, then the following question should be asked: "Is the evidence product required for the type of business of the organization?" If, in the view of the organization, the evidence is not required, the rationale should be documented and inserted in the checklist and quality manual. This rationale should pass the "reasonable person" rule. If the evidence is required, plans should be prepared to address the missing item(s).

Detail Steps

An organization should compare the proposed output of their organization against the checklist. In doing this, they will find one of five conditions that exist for each item

listed in the checklist. The following five conditions and the actions required by these conditions are listed in the table below.

Condition	Action Required
1. The title of the documented evidence specified by the checklist (document, plan, etc.) *agrees* with the title of the evidence being planned by the organization.	Record in checklist that the organization is compliant.
2. The title of the documented evidence specified by the checklist (document, etc.) *disagrees* with the title of the evidence planned by the organization but the content is the same.	Record in the checklist the evidence title the organization uses and record that the organization is compliant, and the evidence is the same although the title is different.
3. The title of the documented evidence specified by the checklist (document, etc.) is *combined* with another piece of evidence.	Record in the checklist the title of the evidence (document, etc.) in which this information is contained.
4. The title of the documented evidence specified by the checklist (document, etc.) *is not planned* by the organization because it is not required.	Record in the checklist that the evidence is not required and the rationale for this decision.
5. The title of the documented evidence called out by the checklis*t* (document, etc.*) is not planned* by the organization and *should be* planned by it.	Record in the checklist when this evidence will be planned and reference a plan for accomplishing the task.

Changes in this Version

This checklist for "ISO/IEC/IEE 90003" has been updated to reflect the new standard - "ISO/IEC/IEEE 90003:2018". This update has caused the old checklist to change about 45% and increase in size from 127 pages to over 290 pages.

Product Support

All reasonable questions concerning this checklist, or its use will be addressed by SEPT free of charge for 60 days from time of purchase, up to a maximum of 4 hours of consultation time.

Guarantees and Liability

Software Engineering Process Technology (SEPT) makes no guarantees implied or stated with respect to this checklist, and it is provided on an "*as is"* basis. SEPT will have no

liability for any indirect, incidental, special, or consequential damages or any loss of revenue or profits arising under, or with respect to the use of this document.

Section 2
ISO/IEC/IEEE 90003:2018 Evidence Products Checklist by Clause

ISO/IEC/IEEE 90003:2018 Clause Number and Name		**Policies** and Procedures	Plans	Records	Documents	**Audits** and Reviews
4	**Context of the organization**					
4.1	Understanding the organization and its context	• Employee Own Device Usage (Issues) Procedure# • **Employee Own Device Usage Policy#** • External and Internal Issues Monitoring Plan Procedure* • Safety, Security and Assurance of Data and Systems from External Attack (Issues) Procedure# • Software Change in Operational Use Risk (Issues) Procedure#	• External and Internal Issues Monitoring Plan*		• Strategic External and Internal Issues Document*	• External and Internal Issues Monitoring Plan Review* • External and Internal Issues Monitoring Review • Strategic External and Internal Issues Document Review*

* ISO 9001 Suggested item - # ISO/IEC/IEEE 90003 Suggested Item - QMS = Quality Management System

Section 2
ISO/IEC/IEEE 90003:2018 Evidence Products Checklist by Clause

ISO/IEC/IEEE 90003:2018 Clause Number and Name		**Policies** and Procedures	Plans	Records	Documents	**Audits** and Reviews
4.1	Understanding the organization and its context (Cont. 1)	• Software Delivery External Issues Procedure# • Software Product Usage in Legal and Operational Context (Issues) Procedure# • Strategic External and Internal Issues Document Procedure* • Third Party Networked Access Systems (Issues) Procedure# • **Third Party Networked Access Systems Policy#**				

* ISO 9001 Suggested item - # ISO/IEC/IEEE 90003 Suggested Item - QMS = Quality Management System

Section 2
ISO/IEC/IEEE 90003:2018 Evidence Products Checklist by Clause

ISO/IEC/IEEE 90003:2018 Clause Number and Name		**Policies** and Procedures	Plans	Records	Documents	**Audits** and Reviews
4.2	Understanding the needs and expectations of interested parties	• QMS Customer Requirements Document Procedure* • QMS Interested Parties Document Procedure* • QMS Interested Parties Requirements Document Procedure* • QMS Interested Parties Requirements Monitoring Plan Procedure* • QMS Statutory and Regulatory Requirements Document Procedure*	• QMS Interested Parties Requirements Monitoring Plan*		• QMS Customer Requirements Document* • QMS Interested Parties Document* • QMS Interested Parties Requirements Document* • QMS Statutory and Regulatory Requirements Document*	• Partner, Customer, Outsourcing Organizations, and Competitors Review# • QMS Customer Requirements Document Review* • QMS Customer Requirements Information Review • QMS Interested Parties Information Monitoring Review* • QMS Interested Parties Document Review* • QMS Interested Parties Information Review

* ISO 9001 Suggested item - # ISO/IEC/IEEE 90003 Suggested Item - QMS = Quality Management System