

SOFTWARE QUALITY & SYSTEMS ENGINEERING PROGRAM

Quality Assurance Checklist

The following checklist is intended to provide system owners, project managers, and other information systems development and maintenance professionals with guidance in identifying and planning quality assurance (QA) activities. The checklist reflects recognized QA activities to be performed throughout the information system product and project lifecycle.

Quality assurance is generally characterized as the verification that project work products (including documentation) are meeting standards during the initiation, development, and operation phases of the product lifecycle.

The objectives of QA are summarized as the following:

- Provide management with the data necessary to be informed about product quality.
- Verify that project work products conform to documented requirements and standards.

Note: The degree to which QA activities are applied may vary with the nature, scope, size and complexity of a project.

| Quality Assurance Checklist | SEM Reference | Comments |
|---|---|----------|
| <input type="checkbox"/> Personnel are assigned responsibility for project quality. | Chapter 3.0 Develop Quality Assurance Plan | |
| <input type="checkbox"/> QA activities comply with a written organizational policy. | Chapter 3.0 Develop Quality Assurance Plan | |
| <input type="checkbox"/> Adequate resources and funding are provided for performing QA activities. | Chapter 3.0 Develop Quality Assurance Plan | |
| <input type="checkbox"/> QA representatives are trained to perform their activities. | | |
| <input type="checkbox"/> The project team receives orientation on QA roles, responsibilities, authority, and values. | Chapter 3.0 Develop Quality Assurance Plan | |
| <input type="checkbox"/> A lifecycle methodology is identified and used. | Chapter 2.0 Lifecycle Model Adapting the Lifecycle Development Methodologies | |
| <input type="checkbox"/> A project QA plan is prepared according to a documented procedure. | Chapter 3.0 Develop Quality Assurance Plan | |
| <input type="checkbox"/> QA activities are performed according to the QA plan. | Chapter 3.0 Develop Quality Assurance Plan | |
| <input type="checkbox"/> QA participates in the preparation and review of the project plan, standards, and procedures. | Chapter 3.0 Develop Quality Assurance Plan ISA Process Guide Stage Exit Process Guide SWT Guide | |
| <input type="checkbox"/> Structured walkthroughs or peer reviews are conducted on work products for every stage of the project. | Chapter 3.0 Develop Quality Assurance Plan SWT Guide | |

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|---|---|----------|
| <input type="checkbox"/> A report of each structured walkthrough's findings (i.e., defects) is maintained. | Chapter 3.0 Develop Quality Assurance Plan SWT Guide | |
| <input type="checkbox"/> In-Stage Assessments (independent reviews) of work products and deliverables are performed for each stage of the project life cycle. | Chapter 3.0 Develop Quality Assurance Plan ISA Guide | |
| <input type="checkbox"/> Quality representatives audit software work products to ensure compliance with standards and procedures and to facilitate the early detection of problems which could affect the quality of the product. | Chapter 3.0 Develop Quality Assurance Plan ISA Process Guide Stage Exit Process Guide SQT Guide | |
| <input type="checkbox"/> Quality representatives periodically report their results to the project team. | Chapter 3.0 Develop Quality Assurance Plan ISA Process Guide Stage Exit process Guide | |
| <input type="checkbox"/> Deviations in activities and work products are identified, documented, and controlled according to a documented procedure. | Chapter 2.0 Lifecycle Model Project Sizes Adapting the Lifecycle Chapter 3.0 Develop Quality Assurance Plan ISA Process Guide Stage Exit Process Guide | |
| <input type="checkbox"/> Quality representatives conduct reviews of their activities and findings with the customer's quality personnel, as appropriate. | Chapter 3.0 Develop Quality Assurance Plan ISA Process Guide Stage Exit Process Guide SWT Process Guide | |

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|--|---|----------|
| <input type="checkbox"/> Measurements are created and used to determine the cost and schedule status of the quality activities. | Chapter 3.0 Develop Quality Assurance Plan | |
| <input type="checkbox"/> Quality activities are reviewed with the project manager/leader both periodically and as needed. | Chapter 3.0 Develop Quality Assurance Plan ISA Process Guide Stage Exit process Guide | |
| <input type="checkbox"/> Quality activities are reviewed with senior management on a periodic basis. | Chapter 3.0 Develop Quality Assurance Plan ISA Process Guide Stage Exit process Guide | |
| <input type="checkbox"/> Experts independent of the quality representatives periodically review the activities and work products of the project's quality representatives. | Chapter 3.0 Develop Quality Assurance Plan ISA Process Guide Stage Exit process Guide SWT Process Guide | |
| <input type="checkbox"/> Adherence of products and activities to the applicable standards and procedures is verified objectively. | Chapter 3.0 Develop Quality Assurance Plan ISA Process Guide Stage Exit process Guide SWT Guide | |
| <input type="checkbox"/> Affected groups and individuals are informed of quality activities and results. | Chapter 3.0 Develop Quality Assurance Plan ISA Process Guide Stage Exit process Guide | |
| <input type="checkbox"/> Non-compliance issues that cannot be resolved within the project are addressed by senior management. | Chapter 3.0 Develop Quality Assurance Plan ISA Process Guide Stage Exit process Guide | |

REFERENCES

The following standards can be referenced for additional information on Quality Assurance practices and procedures.

Systems Engineering Methodology

Software Engineering Institute's Software Capability Maturity Model (SEI CMM)

Quality Assurance is a Key Process Area in Level 2 of the Model.

Institute of Electrical and Electronic Engineers (IEEE)

The IEEE Guide to Software Reviews and Audits.

Organization for Standardization (ISO)

ISO 9001.