Replace italicized blue text with correct data.
Turn off italics. Change color to Automatic
DELETE dollar signs. Delete all instructions in red text.

QUALITY PLAN

$ SYSTEM NAME $

$ Date Created $

Revision History (Template)

Use this Revision History for revisions to the Quality Plan Template. Complete the table below as indicated. Delete these instructions when the document is complete.

Document Version	Revision Date	Originator	Revision Description
1.0	xx-xx20xx	Flo Samuels	Initial Release.
1.1	xx-xx20xx	Flo Samuels	Reasons for Revisions.
1.2	xx-xx20xx	Flo Samuels	Reasons for Revisions.
1.3	xx-xx20xx	Flo Samuels	Reasons for Revisions.
1.4	xx-xx20xx	Flo Samuels	Reasons for Revisions.
1.5	xx-xx20xx	Flo Samuels	Reasons for Revisions.
1.6	xx-xx20xx	Flo Samuels	Reasons for Revisions.
1.7	xx-xx20xx	Flo Samuels	Reasons for Revisions.
1.8	xx-xx20xx	Flo Samuels	Reasons for Revisions.

Revision History (Quality Plan)

*Completed by **Product Manager**. Complete a line for each project or each change to a project or to the Plan. For multiple Customer Representatives, complete the Customer Representative table in section 16 of this plan and reference the table wherever Customer Representative information is required.*

Project	Product or Project Manager	Development Manager	Customer Representative	QA Representative	Date Revised	Changes	Version No.
$ Project Name $	*$ Name $*	*$ Name $*	*$ Name $*	*$ Name $*	*$ Date $*	*$ Section number(s) $*	*$ Version $*

Table of Contents

The Product Manager completes the Product Manager sections of the plan then works with the Development Manager and the QA Representative for completion of their respective sections. The Development Manager takes responsibility for review and updating of the plan when the project moves to the Design Stage. The plan is saved at server\SQAPlans\SystemName. The Product Manager must contact the SCM Representative to have a system sub-directory established.

Retain references to completed projects. In the appropriate sections, copy the base paragraph(s) and replace the variable information indicated by dollar signs with the correct information for the project. Change the font color to 'auto' and remove the dollar signs and italics. Retain brown text provided for assistance for subsequent projects. Do not delete any sections of this template. If you feel that a section does not apply, mark it "Project Name, Not Applicable."

Review this document periodically for updates. For projects, review and update it at every stage end. The time between reviews must be no greater than six months. If the review indicates that no updates are necessary, enter in the revision log that the review occurred with no updates necessary. Increment the version number.

1. The Quality Plan

The Quality Plan is an agreement reached during project startup between the product and development or project manager, the customer representative, and the QA representative that describes the way quality will be managed. Risks to the quality of the delivered application are identified as are controls for those risks as required by the customer representative. Through the Quality Plan, the customer representative and the entire team is aware of the processes required to deliver a quality system. The Quality Plan is enforced until the system is retired from service.

The Quality Plan for this system is saved at **server\SQAPlans*SystemName*.**

2. Quality Agreement

By approving this Quality Plan, the Product Manager, the Development or Project Manager, and the Customer Representative, identified in the table on page 1, agree that the quality strategy described in this Quality Plan will be followed by the entire team. The assigned QS representative, identified in the table on page 1, agrees that this Quality Plan addresses the quality requirements of the Customer Representative, and that he/she will assist the Product, Development or Project Manager in the fulfillment of this Quality Agreement.

3. Amending the Quality Plan

The Quality Plan is amended to reflect each new system-related project. The Plan is reviewed at each Stage End and updated as necessary to reflect additional understanding of the work to be accomplished in subsequent stages and when the system is in production. Any amendment to the Quality Plan, not related to start up of a new project, must be approved by all parties at a Status Meeting before being incorporated into this plan.

4. Risks to Quality

*Completed by **QA** after the Risk Management Plan is completed. The **QA Representative** reviews the Risk Management Plan to identify risks that will specifically affect quality. Attach the Risk Management Plan to this document during the Quality Plan Review process.*

An example of a quality risk might be Project A must be completed before Project B can be tested. If Project A does not proceed on time, the risk to quality is that the time pressures could affect time available for testing.

PROJECT NAME	REFERENCE RISKS IN RISK MANAGEMENT PLAN
$ Project Name $	*$ Risks # X, Y, Z $*

5. Customer Representative

5.1. Acceptance Criteria (*from Use Cases and Requirements*)

*Completed by **Product** or **Project Manager**. Reference the name and location (path) of the Use Case and Requirements documents, in the Requirements Management software system and project directories, that will provide acceptance and functionality criteria for testing the system.*

PROJECT NAME	USE CASES	REQUIREMENTS

5.2. Service Goals

*Completed by **Development Manager**. Each project has its own table. Copy and paste a table, ensuring that the project tables are in chronological order. Customer service level is team response time to fix defects, and turn-around time for service or change requests.*

PROJECT NAME:	
SERVICE TYPE	**SERVICE LEVEL**
Fix Defects Severity 1	
Fix Defects Severity 2	
Fix Defects Severity 3	
Fix Defects Severity 4	
Complete Minor Service/Change Requests	

6. Quality Tools

*Completed by **QA**. Identify any special software tools that support SQA and describe their use, e.g. McCabeIQ will be used for path, branch and code testing, TestComplete for regression and build testing, the Defect Management software system for the capture/analysis of defect data, etc.*

PROJECT NAME	SOFTWARE TOOL	USE

7. Quality Standards and Checklists

*Completed by **QA**. Identify the **standards and checklists** that will be **used for** developing test plans and scripts, testing, and reviewing or inspecting project deliverables such as requirements, the software development plan, the project schedule, design, architecture, etc.*

The CMM process-related standards in **server\Standards\SQA\Documents**.

- Software Quality Assurance Procedure
- Quality and Product Release Standard
- Test Plan Template

Checklists relating to CMM and development processes in **server\SQA\Checklists**.

Design and Development Standards in **server\Standards\Design (or Development)**

Design and Development Standards referenced in the Project Notes Web site, url projectnotes

(Other standards and checklists not mentioned above.)

8. Quality Control of Major Deliverables/Work Products

*Completed by **QA** and **Product, Project** and **Development Managers** jointly.*

Quality Inspections and/or Reviews are required for major deliverables/work products. Reviews verify that you are building the right system. Inspections verify that you are building the system right.

This section contains two lifecycle tables: a project development table and a production support table. For legacy products, go to section 8.2

8.1. Project Lifecycle Table

The following project lifecycle table lists the major work products by stage and the types of quality control activities to be performed for each work product. Some projects may not produce all of the indicated work products or may eliminate some or all reviews. These exceptions are listed in the **Project Exceptions Table** below. The **Project** table will contain entries based on the following rules:

- work product(s) listed in the **Lifecycle Table** that will **not** be produced for a project.
- work product(s) that were to be reviewed **and** inspected and the review is being deleted.

NOTE: If a work product has only an inspection and the work product will be produced, the inspection **cannot** be deleted.

PROJECT EXCEPTIONS TABLE

PROJECT NAME	STAGE	WORK PRODUCT	WHAT IS DELETED?

Project Lifecycle Stage	Major Work Product	Review	Walkthrough	Inspection
Requirements	Use Cases			✓
	Requirements Specifications			✓
	Risk Management Plan			✓
	Quality Plan			✓
	SCM Plan			✓
Project Planning/Design	Software Development Plan			✓
	MS Project Schedule			✓
	Data and Process Models		✓	
	Work Process and Object Model	✓		
	Prototype/GUI Development	✓		
	Logical Design	✓		
	Physical Design	✓		✓
	Technical Architecture (Review by IT)	✓		
	Development and Test Environments	✓		

Project Lifecycle Stage	Major Work Product	Review	Walkthrough	Inspection
	Test Plan		✓	✓
	Test Cases		✓	✓
Coding	Code		✓	✓
	Test Scripts	✓		✓
	Technical Documentation			✓
Build/Release	System Test			✓

8.2. Production Support Lifecycle Table

The following production support major enhancement project lifecycle table lists the major work products by stage and the types of quality control activities to be performed for each work product. Some enhancement projects may not produce all of the indicated work products. These exceptions are listed in the **Project Exceptions Table** below. The **Project** table will contain entries of work product(s) listed in the **Lifecycle Table** that will **not** be produced for a project.

NOTE: If a work product will be produced, the inspection **cannot** be deleted.

PROJECT EXCEPTIONS TABLE

PROJECT NAME	STAGE	WORK PRODUCT	WHAT IS DELETED?

Production Development Lifecycle Stage	Major Deliverable/Work Product	Review	Walkthrough	Inspection
Production Development Request	Service Request/Requirement			✓
Production Development Request Analysis	System Specification/ Alternative Solutions			✓
Production Development Code and Test	Logical/Physical Design Document			✓
	Code			✓
	Test Plan & Cases			✓
Production Development Implementation	Cutover Script			✓
	User Guide		✓	✓

9. Expected Defect Detection Rates

Completed by QA. Copy the table for each project. Ensure the new project table follows previous project tables in this section. Use the defect rates of similar past projects to estimate the defect rates for this project.

The purpose is to estimate the number of **major** defects to be removed by stage and by the project or production team as a whole. The expected defect detection rates become the goals of the QC

activities. The objective should be to remove as many defects as is ***reasonably*** possible before product delivery, and to remove as many of these defects as ***early*** as possible.

The development manager will use these quality goals as a benchmark against which the actual defect counts will be measured. A variance of plus or minus 20% (the quality tolerance) from these goals is cause for concern that the product quality is at risk, i.e. defects are not being detected.

The standards are as follows:

Project Name:		
Stage	**Industry Expected Defect Rate**	**R&D Expected Defect Rate**
Requirements	One (1) defect per page	*$ Estimated defects per page $*
Design/Project Planning	One (1) defect per page	*$ Estimated defects per page $*
Coding	Five (5) defects per KLOC	*$ Estimated defects per KLOC $*
User Documentation	One (1) defect per page	*$ Estimated defects per page $*
Build/Test/Release	Five (5) defects per KLOC	*$ Estimated defects per KLOC $*

10. Quality Control of Application Development Process

Stage-End Assessments: Each stage-end status report will include a process quality assessment of the activities and work products of that stage. These reviews provide management with quality-related information that is used to help make the decision to proceed with the next stage, order the rework of products from the current stage, or cancel the project or production activity. Any discovered process defects are referred to the Software Engineering Process Group for analysis and process adjustment, as necessary.

Each stage-end process quality assessment utilizes a checklist based on the Key Process Area Key Practice requirements of Level 2 of the SEI CMM and requires objective verification of supporting work products. The key process areas are Requirements Management, Software Project Planning, Software Project Tracking and Oversight, Software Quality Assurance, and Software Configuration Management.

All major defects and non-compliance issues are discussed with the product, development, or project manager for correction and follow-up as prescribed in Appendix A of this Plan. Failure to meet corrective action completion dates is addressed in the Escalation section of Appendix A.

11. Quality Indicators

The Product, Project, and Development managers will utilize the quality indicators in the Quality and Product Release Standards document as a feedback mechanism to help ensure the quality of the delivered product.

12. Test Strategy

Copy this entire section, including the section title, for each project and complete as directed. ***When pasting the section in, be sure that the copied section is in the correct chronological order relative to other projects.***

12.1. *$ Project Name $*

This section describes the scope, levels, objectives, and completion criteria for testing activities and identifies the resources required to support testing activities.

Following section completed by ***Product Manager****.*

Scope: The testers/analysts, to be identified in the Test Plan, will be involved in testing one or more of the following:

- *$ Applications to be developed/modified, by project name $*
- *$ Other applications to be tested, by project name $*
- *$ Operating Systems, Hardware and Software Configurations to be tested, by project name $*

Exclusions: *$ Functions or areas not being tested, by project name $*

Levels and Objectives:

The objectives and participants for each level of testing are addressed in the Quality and Product Release Standards or the project Test Plan.

*Following section completed by **Product Manager***

Testing Progression (promotion) criteria:

The criteria for progressing to the next level of testing are: *(For example, "For Project X, the system can progress to acceptance testing when 95% of the system tests have been completed and the 5% remaining are accepted as being non-critical.)*

*Following section completed by **QA.***

Resources:

Based on Scope and Objectives, the staff and equipment resource requirements are: *Indicate resource needs. Additional resource requirements may be identified during later test planning and/or design activities.*

The projected completion date for the Test Plan is: *$ date $*

13. Quality Training

*Completed by **QA.***

The training required to meet the needs of this quality plan includes:

Indicate project name and identify the training activities necessary to accomplish the activities described in the quality plan, e.g. test tool training, and inspection reviewer training.

PROJECT NAME	REQUIRED TRAINING

14. Quality Milestones

Completed by the Product and Development Managers at end of Requirements Stage.

The following quality milestones are included in the project or production MS Project development schedule:

- Use Cases Pass Inspection
- Requirements Pass Inspections
- Risk Management Plan Passes Inspection
- Quality/SCM/Risk Plan Approved by Customers/Development
- Design Documents Pass Inspection

- Project Plans Pass Inspection
- Test Plan Passes Inspection
- Code Passes Inspection
- Tech / User Documentation Pass~~es~~ Inspection
- Development Integration Test Successful
- QS Integration Test Successful
- QS System Test Successful

($ Other: Indicate project name and other milestones. $)

15. Reviews

*The **Product Manager** enters names in the tables below to indicate role responsibilities then submits the plan to QA for inspection. After QA certifies the Quality Plan, the Product Manager then circulates the plan to the parties named below for review and approval. Review and approval are accomplished by e-mail. E-mails are stored in the project's SQA directory. Enter date when approval e-mail is received.*

Certification of Completion to Quality Standards	QA Representative	Date

Approval of Plan

TITLE	**NAME**	**DATE**
Product Manager		
Project Manager		
Development Manager		
Customer Representative		
Other Software Manager		
IT Team Manager		
Quality Assurance Manager		
Affected Group Manager(s)		

Executive Review

TITLE	**NAME**	**DATE**
VP Product Development OR		
VP Production Development		
VP Quality Systems		

16. Customer Representative Table

Project Emphasis: does any part of the project specifically apply to this person?

Department	Name	Title	Extension	Project Emphasis (if any)

Appendix A

SQA Escalation Form

Notice of SQA Non-Compliance

Project: **Date of Notice:**

Project Manager: **Stage:**

Work Product: **Version:**

QS Representative: **Status:**

In accordance with Section XXX of the SQA Procedure, this is to inform you that this Notice of SQA Non-Compliance has been filed. If satisfactory resolution to this Notice is received within 5 days of date of issuance, this Notice will be closed with no further action required. If the Assigned QS Representative does not receive such evidence within 5 days, he/she will request a meeting with the Project Manager to discuss resolution. Failure to achieve satisfactory resolution within 10 days will result in escalation of this Notice to senior management.

Escalation Level: ☐ Initial (0) ☐ First Level (1) ☐ Second Level (2)

Reason:

☐ Deviation from R&D Policy ☐ Deviation from Quality Plan ☐ Other (explain)

Description of Deviation(s):

Status:

☐ Open ☐ Pending ☐ Closed

Meetings Held:

Certification of Resolution: _____, **QS Representative**

Date:_____

Additional Comments:

Attachments:

Escalation Steps

Step 1: Initial Non-compliance

1. QS Representative (QS Rep) learns of a non-compliance with R&D's policies or the project's quality plan.
2. QS Rep issues a notice of non-compliance to product, project, or development manager for resolution. (This template, Appendix A.)
3. If evidence of satisfactory resolution is received within 5 days of notice date,
   - QS Rep documents resolution in closure section of notice and stores notice in the project SQA directory.
   - QS Rep distributes copies to all involved parties.
4. If acceptable response is not received within 5 days of notice date, QS Rep requests a meeting with non-complying manager, scheduled within next 5 days, to discuss and negotiate acceptable resolution to notice.
5. Results of meeting are documented. If necessary, manager prepares action plan for resolution. Action plan must be accomplished within 10 days.
6. If problem is resolved at meeting or after 10 day period,
   - QS Rep documents resolution in closure section of notice and stores notice in project directory.
   - QS Rep distributes copies to all involved parties.
7. If problem is not resolved at meeting or within 10 days after meeting, it moves to next level.

Step 2: First Level Escalation

1. Status of non-resolution is entered on notice and notice is forwarded to QS or QA Manager dependent on nature of non-compliance. Copy is sent to non-complying manager.
2. QS or QA Manager requests a meeting with QS Rep, non-complying manager, and manager's superior scheduled within next 10 days, to discuss and negotiate acceptable resolution to notice.
3. Steps 5, 6, and 7 of ***Initial Non-Compliance*** are followed.

Step 3: Second Level Escalation

1. Status of non-resolution is entered on notice and notice is forwarded to QS Director. Copy is sent to non-complying manager.
2. QS Director requests a meeting with QS Rep, QS or QA Manager, non-complying manager, and manager's superior scheduled within next 10 days, to discuss and negotiate acceptable resolution to notice.
3. Steps 5, 6, and 7 of ***Initial Non-Compliance*** are followed.

Step 4: Third Level Escalation

1. Status of non-resolution is entered on notice and notice is forwarded to Vice President, Product Development or Vice President, Production Development, dependent on nature of non-compliance. Copy is sent to non-complying manager.
2. QS Director requests a meeting with QS Rep, QS or QA Manager, non-complying manager, manager's superior, and appropriate Vice President, scheduled within next 10 days, to discuss and negotiate acceptable resolution to notice.
3. Results of meeting are documented. If necessary, manager prepares action plan for resolution. Action plan must be accomplished within 10 days. It is assumed that escalation to the Chief Technical Officer will not occur.
4. If problem is resolved at meeting or after the 10 day period,
   - QS Rep documents resolution in closure section of notice and stores notice in project directory.
   - QS Rep distributes copies to all involved parties.