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| Online Store Team |
| Quality Management Plan |
| Version 1.3 |

**Revision History**

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| Version | Date | Author | Content |
| 1.0 | 10/28/2011 | Hien Nguyen | Create Document |
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# Introduction:

This Quality Management (QA) Plan defines the activities to be performed in providing independent visibility into the quality of processes being used and products being built for the Online Store project. QA primary activities to be performed include:

* Providing objective evaluation of processes and products against applicable standards and requirements
* Identifying non-conformances
* Providing timely quality status feedback to stakeholders
* Ensuring noncompliance issues are addressed.

This Plan is applicable to all project personnel performing the QA function.

# Quality Management Plan:

## Scope:

This QA plan covers the activities, such as review, inspection and quality measurement described in our tailored RUP. The work products to be reviewed and inspected are primary documents and source code that should be released to stakeholders until end of project. The process to be audited is our tailored RUP.

## Role & Responsibility:

|  |  |  |
| --- | --- | --- |
| No | Role | Responsibility |
| 1 | Quality Manager | Responsible for Quality management |
| 2 | Project Manager | Responsible for gathering meeting from QA manager and control meeting |
| 3 | Customer/Mentors | Responsible for Approval |
| 4 | Support Manager | Responsible for support such as: configuration, writer minute. |
| 5 | QA Team Member | Responsible implement task of Quality Manager |

Table : Role & Responsibility in QA management

## QA Activities:

QA provides objective evaluation of processes and associated work products. Project QA activities ensure that:

* Products built meet the appropriate standards and requirements
* Processes are performed as documented
* Nonconformance found are identified and the appropriate corrective action is taken
* QA results are reported to the appropriate managers and personnel
* QA effectiveness is measured.

This table describes QA function and procedure of QA Plan

|  |  |  |
| --- | --- | --- |
| No | QA Functions | Procedures |
| 1 | Plan project QA | QA Planning |
| 2 | Audit product conformance | QA Product Inspection |
| 3 | Audit process effectiveness | QA Process Audit |
| 4 | Measure QA effectiveness | QA Measurement |

Table : QA function and procedure of QA Plan

### QA Planning:

QA planning procedure defines how project QA will be implemented consistent with customer and project requirements.

This Table describes overview about QA planning process:

|  |  |  |
| --- | --- | --- |
| Input | QA Planning Task | Output |
| * Contract documentation * QA policy, requirements * QA procedures * QA historical data * QA Plan template and support forms. * Other Objective | * Identify QA requirements * Define project QA procedures * Develop QA schedule * Estimate QA effort * Define resources (tools, training ) * Document plans * Submit QA plan for review * Maintain plan | * QA schedule * QA effort estimate * Tailored QA procedures * QA resource needs. |

Table : Summary QA planning process

And then will be describe Workflow for planning task process:



Figure : QA Planning Workflow

Table discuss about Artifact for each step:

|  |  |  |
| --- | --- | --- |
| Step | Description | Artifact |
| 1 | **Identify QA requirements:**  The quality manager reviews contract documentation (Statement of Work, etc.) to identify requirements that impact QA (e.g., standards, deliverables, activities, reviews). QA also reviews QA policy requirements and procedures. | Key Requirement impact QA |
| 2 | **Define project QA procedures:**  The quality manager identifies tailoring needed for QA standards, considering contract requirements, product type, size, and complexity. The quality manager develops additional QA procedures where needed. | Key Requirement impact QA approval |
| 3 | **Develop QA schedule:**  The quality manager reviews project master and development schedules to identify project activities, review milestones, and product/document delivery points. The quality manager uses the *Microsoft project* **to** record planned QA activities and dates. The QA Schedule includes tasks for QA planning, reviews, inspections, audits, QA deliverables, measurements, and status tracking and reporting. | QA Schedule |
| 4 | **Estimate QA effort:**  The quality manager estimates and records overall QA effort in hours. The quality manager uses QA historical data or estimation tool, if available, to estimate effort. The quality manager allocates effort to monthly increments based on scheduled activities. | QA Effort |
| 5 | **Define resources (tools, training):**  The quality manager identifies tools to be used to support the QA function including word processors, spreadsheets, data bases, presentation software, and other tools (e.g., code auditors). The quality manager identifies QA training needs including QA process. | Training Document |
| 6 | **Document plans:**  The quality manager uses the QA Plan template to assist in documenting planning results including schedule, effort, resource data and tailoring information and procedures, if applicable. QA follows the CM Configuration Identification procedure for document naming conventions. | Name of Documents and location saved. |
| 7 | **Submit QA plan for review:**  The quality manager distributes the QA Plan to peers for review. The quality manager incorporates agreed-to comments | QA plan approval |
| 8 | **Maintain plan:**  The quality manager updates the QA Plan when re-planning is needed. The quality manager distributes the updated QA Plan to project management and task managers for review. The quality manager maintains change history and traceability. | QA plan update and report for project manager |

Table : QA Planning artifact for each step

### QA Product Inspection:

QA product review & inspection procedure ensures products developed and produced conform to defined requirements and standards.

|  |  |  |
| --- | --- | --- |
| Input | QA Product Inspection task | Output |
| * QA Plan, schedule * Product * Audit criteria and audit checklist template. | * Identify product to be audited * Prepare for the audit * Perform inspection * Document inspection findings * Report modification results * Update inspection logs * Maintain inspection results | * QA checklists and results * Inspection report * Review list * Updated inspection logs. |

Table : QA product inspection product

Then is workflow of product inspection:



Figure : QA product inspection workflow

Table Discuss about Artifact of each step,

|  |  |  |
| --- | --- | --- |
| Step | Description | Artifact |
| 1 | **Identify product to be audited:**  The quality manager identifies the product to be inspected from the QA schedule. Products to be inspected include plans and work products (e.g., requirements, design, code, test, completed product). | Work product need to inspection |
| 2 | **Prepare for the audit:**  The quality manager coordinates product inspection to be performed with the producer or owner to ensure the product is available and the appropriate support is available. The quality manager defines the inspection criteria for the product being audited to include checks for product completeness, compliance, consistency, and traceability.   * **Completeness** – Product is complete and includes the appropriate level of detail * **Compliance** – Product meets applicable standards and requirements * **Consistency** – Product is internally and externally consistent * **Traceability** – Product fulfills its allocated requirements.   The quality manager develops the product inspection checklist to assist with developing the checklist. The quality manager gathers the support documents needed to support the inspection (e.g., contract documentation, standards). | Inspection Criteria ( QA checklist ) |
| 3 | **Perform inspection:**  Developers inspect the product to the criteria defined in the checklist, and record their review: **Yes** (Product meets the defined criteria), **No** (Product is noncompliant to the defined criteria). | Result of inspection |
| 4 | **Document inspection findings:**  The quality manager records inspection findings on the audit checklist. The quality manager adds notes and comments, as appropriate the quality manager documents product defects found, if applicable. | Result of inspection collect in checklist document. |
| 5 | **Report modification results:**  The author of the reviewed work product produces a modification report. The quality manager distributes report to the participants. | Inspection Report |
| 6 | **Update inspection logs:**  The quality manager records inspection results in the inspection log. Data recorded include item inspected, inspection date, inspection type, inspection status, number of defects unsolved, number of defects solved | Inspection Log updated document |
| 7 | ***Maintain inspection results:***  The quality manager keeps records of QA inspections (checklists, reports, nonconformance data, and correspondence) and updates inspection logs as corrective actions are addressed and completed. | Updated Inspection Log document |

Table : QA product inspection artifact

### QA Process Audit:

QA process audits procedure ensures that processes used effectively produce quality products.

|  |  |  |
| --- | --- | --- |
| Input | QA process audit task | Output |
| * QA Plan, schedule * Process documents * Audit criteria and audit checklist template. | * Identify process to be audited * Prepare for the audit * Perform audit * Document audit findings * Report audit results * Update QA status logs * Maintain audit results | * QA checklists and results * Audit report * Nonconformance as applicable * Updated QA status logs. |

Table : QA Process audit process

Then is workflow of process audit



Figure : QA process audit workflow

Table Discuss about Artifact of each step,

|  |  |  |
| --- | --- | --- |
| Step | Description | Artifact |
| 1 | **Identify product to be audited:**  The quality manager identifies the process to be audited from the QA schedule. Processes to be audited include product management, project management, and CM processes… | Work product need to audit |
| 2 | **Prepare for the audit:**  The quality manager coordinates process audit to be performed with affected groups by providing the appropriate notification. The quality manager defines the audit criteria for the process being audited to include checks for process completeness, compliance, timeliness, expectedness, and integrity.   * **Completeness** – Process tasks are completed as defined in documentation * **Compliance** – Process is performed in accordance with documentation * **Timeliness** – Process is performed when scheduled and when ready * **Expectedness** – Process outputs and results are as expected * **Integrity** – Process inputs are defined and are correct revisions/versions. | QA checklist |
| 3 | **Perform audit:**  The quality manager evaluates the process to the criteria defined in the checklist to determine process acceptability: **Yes** (Process meets the defined criteria), **No** (Process is noncompliant to the defined criteria), **N/A** (The specific audit criteria does not apply to this process). | Result of audit |
| 4 | **Document audit findings:**  The quality manager records process audit findings on the audit checklist indicating “Yes, No, N/A” status. The quality manager adds notes and comments, as appropriate. QA documents process nonconformance found, if applicable. | Result of audit collect in checklist document and nonconformance result |
| 5 | **Report audit results:**  The quality manager produces an audit report that includes the audit checklist, nonconformance data, and identifies nonconformance needing corrective action. QA distributes report to the affected groups and task managers. | Audit Report |
| 6 | **Update QA status logs:**  The quality manager records audit results in the QA audit log. Data recorded include item audited, audit date, audit type (product, process), audit status (accepted/unaccepted), number of nonconformance opened, number of nonconformance closed. | Updated QA status logs. |
| 7 | ***Maintain audit results:***  The quality manager keeps records of QA process audits (checklists, reports, nonconformance data, and correspondence) and updates status logs as corrective actions are addressed and completed. | Updated QA status logs. |

Table : QA process audit artifact for each step

### QA Measurement:

QA measurement procedure defines how project QA analyzes and reviews its effectiveness

|  |  |  |
| --- | --- | --- |
| Input | QA measurement | Output |
| * QA Plan, schedule * Inspection log * Audit status data * QA progress status data * QA effort status data. | * Analyze audit nonconformance status * Analyze QA progress (schedule) status * Analyze QA effort status * Record QA measurement results * Report QA measurement results | * Audit status trends * Audit status distributions * QA progress variances & trends * QA effort variances & trends * Corrective action & improvement requests |

Table : QA measurement process

Workflow of QA Measurement,



Figure : QA measurement Workflow

Table discusses about artifact each step:

|  |  |  |
| --- | --- | --- |
| Step | Description | Artifact |
| 1 | **Analyze audit nonconformance status:**  The quality manager reviews audit nonconformance closure status. The quality manager assesses current “total opened” to “total closed” nonconformance status, compares current closure status to previous months, and determines nonconformance trend (negative or positive). The quality manager identifies reasons for the audit nonconformance trend.  The quality manager reviews process audit nonconformance distributions by rank ordering nonconformance by functional areas (e.g., project management, CM, product management…) and process audit criteria to identify the functional areas and process audit criteria that have the most audit nonconformance. The quality manager reviews product audit nonconformance distributions by rank ordering nonconformance by product types (e.g., test plan, design, code) and product audit criteria to identify the product types and audit criteria that have the most product audit nonconformance. | Reason nonconformance of process & product |
| 2 | **Analyze QA progress (schedule) status**  The quality manager reviews QA progress (schedule) status. The quality manager assesses current status (total QA activities planned to total actual QA activities performed), compares current variance to previous months, and determines QA progress trend (negative or positive). The quality manager identifies reasons for QA progress variance and trend. | QA report about progress |
| 3 | **Analyze QA effort status**  The quality manager reviews QA effort status. The quality manager assesses current status (total hours planned to total actual QA hours expended), compares current variance to previous months, and determines QA effort trend (negative or positive). The quality manager identifies reasons for QA effort variance and trend. | QA report effort |
| 4 | **Record QA measurement results**  The quality manager documents QA measurement data including:   * Nonconformance, QA effort and progress trends (positive/negative) * Nonconformance key contributors * Trend/variance reasons. | QA report measurement |
| 5 | **Report QA measurement results**  QA reports QA measurement results to management (task, project, senior, and organization QA) and includes positive trends and opportunity areas for improvements. | Updated QA report measurement |

Table : QA measurement artifact for each step