

Quality Management_100_Quality Checklist Procedure

Last updated 05/15/2017

Audience:
Project Team, Process Owners, Project Management Office

Frequency:
As Required

This procedure provides detailed information to define quality checklists for all CWS-NS processes to measure against. All CWS-NS internal process documentation, as well as observation of the process and procedure execution, will have acceptance criteria defined in both the governing Plan and in the quality checklists that will be developed for each process.

Overview

A checklist is a list of items required, things to be done, or points to be considered, used as a reminder. It is used as a reference point for expected quality standards when reviewing products or auditing processes. It can also be referred to as a type of informational job aid used to reduce failure by compensating for potential limits of human memory and attention. Quality doesn't just happen, it's a product of proper project management. Using a quality checklist helps to ensure quality is planned into the CWS-NS project.

A checklist will be developed for each Process Audit that is performed and each product Review that is conducted. The checklist will help keep us "honest" by reminding us to validate and verify that best practices are followed, that standards and guidelines are adhered to, and that all content and quality that is expected is delivered or executed.

Quality Checklists are tools that will be utilized by the QA team to facilitate product (i.e., document or deliverable) reviews as well as product and process audits. The checklists will be developed by Quality Assurance in conjunction with the project schedule, which identifies the delivery dates for all project products (i.e., documents, artifacts, and deliverables).

Part I: Defining Business Measurements

Step	Description
1.	Define the quality standards and criteria for all process areas, including specific policies, plans, standards, and best practices against which products and processes will be measured. After you have defined the quality standards for all process areas to measure against, you can begin to identify the types of quality measurement techniques to be undertaken. Quality checklists should be developed for each CWS-NS internal product and process, which will be used as a compliance checklist for service team products and processes.
2.	Working with Subject Matter Experts (SMEs), identify specific tolerances or thresholds for each identified quality measurement and metric.
3.	Develop Quality Checklists for each CWDS product and process (both internal and vendor), which will be used as a compliance checklist for products and processes. Based on the

Step	Description
	<p>quality standards defined, Quality Assurance will meet with the process owner to determine the quality criteria with which to measure against, including:</p> <ul style="list-style-type: none"> • Quality Standards • Products and Processes to review as inputs • Checklist Criteria
4.	<p>When developing the quality checklists, Quality Assurance will consider the following General Checklist Items:</p> <ol style="list-style-type: none"> 1. Is the content of the deliverable consistent with the required items as defined in the approved Deliverable Expectation Document (DED) or Statement of Work (SOW)? 2. Does the document/deliverable meet general requirements (for example, statement of work) for all deliverables? 3. Does the document/deliverable meet all requirements (for example, statement of work) specific to this deliverable? 4. Was the document/deliverable developed per the appropriate or required standards (for example, Institute of Electrical and Electronics Engineers standards)? 5. If appropriate, is the deliverable content consistent with current CWS-NS documents and in compliance with the CWS-NS Document Management Plan? 6. Is the document/deliverable content logically organized to enhance readability? 7. Is the document/deliverable content accurate and factual? 8. Is the document/deliverable written concisely, unambiguously, and “to-the-point” (for example, no superfluous information or marketing narrative)? 9. Is the document/deliverable comprehensive and complete in its coverage of the topic (for example, it is not missing any expected or required content)? 10. Is the document/deliverable written to the appropriate level of detail for the type of document it is (for example, a plan versus a procedural document)? 11. Are terminologies and acronyms defined and used consistently throughout the document/deliverable? 12. Is the document/deliverable content internally consistent (for example, no conflicting or contradictory information between document sections)? 13. Is the document/deliverable content externally consistent (for example, no conflicting or contradictory information between different documents)? 14. Does the document/deliverable include appropriate figures (for example, graphs and diagrams) and tables to explain complex concepts and increase overall readability? 15. Is the document/deliverable written with “one voice” (that is, does not appear to be written by multiple authors and in multiple writing styles)? 16. Was the document written per the OSI Writing Styles and Guidelines? 17. Is the document/deliverable free of distractions (for example, grammatical, formatting, or other cosmetic errors) that hinder readability and comprehension?

Part II: Quality Checklist Questions

The following table identifies the criteria (plans, standards and best practices) as well as possible checklist questions to be answered for each identified assessment area. The actual Quality Checklists will be developed by Quality Assurance as per the project schedule, which identifies the SDLC tasks and planned delivery dates of products, including plans and process documentation.

Assessment Area	Comments
<p style="text-align: center;">Release Integrity</p>	<p>Includes an assessment of Release and the Product Increment planning and execution. The Product Backlog for each team in the next PI or release is evaluated to ensure that scope and goals are defined and understood. The effectiveness of the release planning process and communication of release goals is reviewed. MS Project Schedule and Pivotal Tracker are evaluated for alignment with major milestones.</p> <p>Criteria: Agile best practices; IEEE standards for technical processes and procedures</p> <p><u>Checklist Questions for Release Integrity:</u></p> <p><u>PLANNING:</u></p> <ol style="list-style-type: none"> 1. How effective are the Release Planning or PI Planning Meetings? Are they attended by all critical staff? Are roles and responsibilities clearly defined? Are the known MVPs defined by the end of planning? 2. Do all teams in the next PI or release have a sprint backlog that is estimated and flushed out? 3. Are stories correctly labeled to identify them for the next PI or release? 4. Are the MS Project milestones and Pivotal Tracker in alignment with release milestones? 5. Were sprint 0 activities executed? Were they successful? 6. Does the project timeline include Release and Iteration planning ceremonies? 7. Is there a testing strategy or approach documented for the release? <p><u>EXECUTION:</u></p> <ol style="list-style-type: none"> 8. Is velocity steadily increasing or decreasing for each team? Do you understand why velocity was decreased for a period of time? 9. Is volatility stabilizing? 10. Will the project meet the overall project scope and timeframe for the Release? 11. Are teams following the testing strategy? 12. Is there clear project reporting of how efforts are progressing towards the definition of done at the iteration and release levels? Is the scrum meeting achieving the goals? <p><u>QUALITY:</u></p> <ol style="list-style-type: none"> 13. Are the teams following the testing approach? 14. Were any emergent requirements identified? 15. Will the PI or Release deliver value to the user? 16. How are impediments or dependencies identified? 17. How are risks and issues identified? How are the release level risks and issues escalated to the project? 18. Is technical debt being managed appropriately? 19. Are there clear acceptance criteria defined? Is there a "Definition of Done" defined for the sprint and for the release?
<p style="text-align: center;">Engineering Practices</p>	<p>Includes an assessment of basic engineering practices in alignment of best practices and standards, including environments, code review, automated unit/system/acceptance test coverage, coding standards, environments, and continuous integration/build.</p>

Assessment Area	Comments
	<p>Criteria: IEEE standards for technical processes and procedures</p> <p><u>Checklist Questions for Engineering Practices:</u></p> <ol style="list-style-type: none"> 1. What is the percentage of test coverage with automated testing for unit, system, integration, UAT and performance testing? 2. Are coding standards defined and adhered to? 3. Are environments configured and operational? Are they stable? 4. Is the continuous integration and build process effective? How much of the CI and build is still manual? 5. Are automated testing tools used? 6. What tools are used for code review? Is peer analysis identifying any issues? 7. Are high level architectural models documented and accepted? 8. Has an adequate amount of resources for test environments been planned? 9. Is there a known, followed and evolving architecture framework in place? 10. Is requirements traceability managed effectively? 11. Are test scripts written in synchronization of the user stories? Are the principles of test driven development followed? Are automated tests being written in parallel of story development? 12. Is there any manual intervention that is needed for what could be accomplished by automated testing? 13. Do software engineering standards exist and are they followed? 14. Does product defect tracking occur? 15. Are formal code reviews or equivalent conducted? 16. Are formal quality assurance procedures followed consistently?
<p>Agile Processes</p>	<p>Includes an assessment of project dynamics, adherence to scrum rules and practices, and understanding of the project goals and objectives, and working tested code that meets functional requirements at the end of each sprint.</p> <p>Criteria: Agile best practices; IEEE standards for technical processes and procedures</p> <p><u>Checklist Questions for Agile Processes:</u></p> <ol style="list-style-type: none"> 1. Does everyone understand their role? Is team enthusiasm high? 2. Is the team following basic scrum practices and rules? Are basic scrum ceremonies held consistently? 3. Are teams producing working code each sprint? 4. Is the build and release process well defined? 5. Is the testing process well defined? 6. Do Management Plans exist? Do they assist the teams to get information and implement it for their team as needed? 7. Is the "Definition of Done" clearly documented and understood by both vendor and state staff? 8. Is the project team co-located with instant access to the Service Manager/Product Owner? 9. Have team members been trained in agile? 10. Is there an agile coach that is engaged? 11. Does the scrum team hold a 15 minute daily stand up meeting to report updates on what they plan to do today and report impediments? 12. Are all team members attending the 15-minute daily stand up meeting and providing updates as to the work that was completed on the previous day? 13. Does the project provide project status reporting that provides transparency to the project's progress related to scope, schedule and cost? 14. Are retrospective sessions completed with each team at the end of each sprint? Are they effective?

Assessment Area	Comments
	<p>15. Are lessons learned from the retrospectives documented and communicated as process improvements within the team? Are these turned into user stories in the next sprint?</p> <p>16. Are the business features prioritized by the product owner? Is the PO effective at clarifying requirements to the development team?</p> <p>17. Has the product backlog been developed and prioritized at the Release level? Product level?</p> <p>18. Does the PO formally approve/sign-off on products delivered?</p> <p>19. Are high-level key activities, milestones, dates and estimated work effort loaded into a scheduling tool?</p> <p>20. Is the scheduling tool adequate in reporting work efforts (Planned and actual) of both scrum and non-scrum teams?</p>
<p>Governance</p>	<p>Includes an assessment of whether decision making is occurring at the right level of the organization, if team members feel empowered to address risks and issues, and if the team understands what needs to be escalated and to whom.</p> <p>Criteria: CWS-NS Governance Plan; PMBOK and CA-PMF</p> <p><u>Checklist Questions for Governance:</u></p> <ol style="list-style-type: none"> 1. Are team members escalating risks and issues as needed to the Service Manager or Product Owner? How are risks and issues escalated to the Risk and Issue Forum or the ELT? 2. Is the ELT responsive to the team's needs? 3. Are teams self-initiating and self-organizing? 4. Is the service manager or product owner empowered to get things done for the team at the lowest level possible? 5. Are project level decisions logged? 6. Is the right information getting to the decision makers? 7. Are there written escalation policies for issues and risks? Is the policy followed? 8. Is there regular stakeholder involvement in major project decisions, issue resolution and risk mitigation? 9. Does the Service Manager/Product Owner have decision making authority? 10. Does the scrum master remove impediments from the development team and the project team? 11. Does the Product Owner provide clarification when needed to the development team on customer or business needs?
<p>People and Teams</p>	<p>Includes the tracking of State resources by fiscal year and vendor resources by month (planned versus actual), as well as calculates the vacancy rate and turnover rate. Assess satisfaction with vendor teams.</p> <p>Criteria: Latest approved SPR or BCP, PMBOK and CA-PMF</p> <p><u>Checklist Questions for People and Teams:</u></p> <ol style="list-style-type: none"> 1. Are all State PYs accounted for in the current fiscal year? 2. What is the status of the vacancies (vacancy rate) and the planned hiring? 3. Are all Consultant positions that are funded accounted for? 4. Is the turnover rate on the project average or is there need for concern? Any remediation planned for higher turnover rates? 5. Is the Product Owner and Development Team Lead managing the vendor team effectively? Are any corrective action measures applied? 6. Is there a formal staffing plan and is it being followed? 7. Do project team members feel comfortable opening impediments? 8. Does the project have the right number and the right type of resources? 9. Are resources trained appropriately for their jobs? 10. Is there a formal on-boarding or off-boarding process? Is it followed?

Assessment Area	Comments
<p>Go Live Readiness</p>	<p>Includes an assessment of implementation readiness for the next release of functionality to the users, specifically training, county readiness, go live readiness and organizational change management.</p> <p>Criteria: SAFe, Implementation Plan, Readiness Checklists, County Surveys, Agile best practices; IEEE standards for technical processes and procedures</p> <p><u>Checklist Questions on Go-Live Readiness:</u></p> <ol style="list-style-type: none"> 1. Is there a go/no go decision planned? 2. Are the appropriate people involved in the readiness decision? 3. What is the criteria for go/no go based upon? 4. Are the counties ready for the release? Has a readiness checklist been developed? 5. Are the right decision makers determining county readiness or go live readiness? 6. Is OCM and training ready to roll out to the bureau? 7. Are onsite implementation staff planned and scheduled? 8. Has a roll-back plan been identified? 9. Is there a formal problem ticketing process and problem resolution process defined?
<p>Customer Value</p>	<p>Includes an assessment of surveying internal and external stakeholders to gauge their satisfaction with the level of communication that is provided regarding the upcoming release, the value of the functionality that is planned and the perceived quality of the product.</p> <p>Criteria: County Surveys, PMBOK and CA-PMF</p> <p><u>Checklist Questions for Customer Value:</u></p> <ol style="list-style-type: none"> 1. Are customers getting to see the releases and provide feedback? Are they involved early and often enough? 2. Have the customers felt engaged in the process from the beginning? 3. Is the Product Owner responding to the feedback by modifying the product backlog? 4. Is there perceived value in the product and services delivered? How is this value quantified? 5. Do stakeholders know what is planned for future releases? 6. Is the business value that is being delivered linked to the project objectives? 7. Does the project reporting describe the business value to be delivered? 8. Are demonstrations to stakeholders and users of working product occurring at the end of each iteration? 9. Do all user stories have a business value associated with it? 10. How well is the Product Owner reflecting the business needs and priorities of the stakeholders?
<p>Technical Debt Management</p>	<p>Includes an assessment of the accumulation of issues with the code or the hardware, escapee tracking, tracking the quality of the product and code and tracking the integration into third party or external systems.</p> <p>Criteria: Agile best practices; IEEE standards for technical processes and procedures</p> <p><u>Checklist Questions for Technical Debt Management:</u></p> <ol style="list-style-type: none"> 1. How is the technical debt measured? 2. What is the current technical debt? 3. Are teams identifying new debt – when we take a shortcut or decide about strategy, is that documented? 4. Are the teams managing existing debt – are there plans to address low or medium bugs and issues?

Assessment Area	Comments
	<ol style="list-style-type: none"> 5. How are the teams managing debt from third party products or external systems for which they have no control? 6. Is the project using an automated tool or measure to track technical debt? Are teams transparent with the results? 7. What mechanisms are used to assess the quality of the product? 8. When technical debt is accumulated, is the Product Owner doing an adequate job of re-prioritizing the work to account for the additional effort needed to clear the debt?
<p style="text-align: center;">Project Management</p>	<p>Includes the tracking of how the project is being managed and all project management related processes.</p> <p>Criteria: Project Management Plan and ancillary PM Plans; PMBOK and CA-PMF</p> <p><u>Checklist Questions for Project Management:</u></p> <ol style="list-style-type: none"> 1. Are key specification documents (e.g. contracts, requirement specifications and/or contract deliverables) and software products under formal configuration control, with items to be controlled and specific staff roles and responsibilities for configuration management identified in a configuration management plan? 2. Are issues/problems and their resolution (including assignment of specific staff responsible for issue resolution and specific deadlines for completion of resolution activities), formally tracked? 3. Is formal continuous risk management performed, including development of a written risk management plan, identification, analysis, mitigation and escalation of risks including the resolution of impediments? 4. Do project team members feel comfortable about identifying candidate risks and issues? 5. Are risks resolved at the appropriate level? Are risks and issues escalated appropriately? 6. Does the management team review risks and mitigation progress at least weekly? 7. Are changes managed effectively? Are the right people involved in reviewing and approving changes? 8. How is scope managed and tracked? Is there a clear definition for a scope change related to requirements? 9. How are requirements traced back to initial project objectives? Are requirements traceable to design and test cases? 10. Is project management reactive or proactive? Are they embedded in the service teams?

Part III: Sample Quality Checklist for Requirements Management

The following is a sample quality checklist for a Quality Product Review or Quality Process Audit of the CWS-NS requirements management plan, which will illustrate the need to specify quality criteria clearly and concisely:

Requirements Management		
Standards	Items to Review	Example Checklist
<ul style="list-style-type: none"> Department of Finance Oversight Framework PMBOK and CA-PMF IEE 830 – Standard for Software Requirements Specifications 	<ul style="list-style-type: none"> Requirements FSR or SPR RFP and SOW Project artifacts which are tied to requirements (Requirements Management Plan, traceability, test scripts, design documentation. Etc.) 	<ul style="list-style-type: none"> Does the Plan conform to standards? Is there adequate stakeholder participation for the vetting of requirements definition, changes and management? How are requirements tied to user stories and epics? Was the product backlog formally reviewed by both the State and the CWDS stakeholder prior to initiating the design phase? Do user stories exist for all critical components and areas, including technical, business, interfaces, and performance, security and conversion requirements? Do the requirements meet the standards of correctness, completeness, consistency, accuracy, and readability? How are new requirements or changes to requirements identified? How are these validated by user groups and subject matter experts? Is there requirements traceability process in place? Is there a defined process for both forward and backward traceability? Are requirements management tracking tools and procedures in place? Does an effective change control process exist for approving modifications to the requirements? Can the requirements be traced the appropriate components of the solution, as well as test scripts? Does the traceability documentation describe the tool and/or mechanism to be used to capture traceability throughout the life cycle?