# City of Portland

## Technology Oversight Committee Quality Assurance Guidelines

## 1 About this document

This document defines the Quality Assurance (QA) services and deliverables required by the City of Portland Technology Oversight Committee of selected quality assurance vendors to support its role to provide oversight to selected city project. These guidelines will enable all quality assurance vendors to provide services in a and Planning[1] and State of New Mexico Department of Information Technology[2] as well as other examples of QA services on projects within the city like the Public Safety Systems Revitalization Program[3]. See Section 5 - Reference Materials for more information.

For the purposes of this document "Contractor" refers to the firm on selected and under contract to provide quality assurance services to the Technology Oversight Committee.

This document is posted online at: http://www.portlandonline.com/omf/index.cfm?c=56407

## 2 Authority

As directed by council resolution 36844 the City of Portland Office of Management and Finance(OMF) is responsible for creating an independent citizen oversight committee for specific City of Portland technology projects. The Bureau of Technology Services Administrative Rule BTS-1.07 Technology Project Oversight defines

*City's business practices. The City will adopt an approach to these projects that applies project management, citizen oversight and quality assurance. One component of project oversight will be addressed through ongoing review from an independent citizen Technology Oversight Committee (TOC). One component of quality assurance will be addressed by having projects contract for services*

*with a qualified, external quality assurance firm."*

## 3 Introduction to the QA Guidelines

### 3.1 Purpose

The purpose of the QA guidelines is to establish common, repeatable standards for the delivery of QA services and deliverables for all QA efforts done on behalf of the Technology Oversight Committee.

### 3.2 Quality Assurance Approach

To ensure that the appropriate quality management and risk management activities are conducted these guidelines are based on the Project Management Institute's (PMI) Standard as described in the Project Management Body of Knowledge (PMBOK), Fourth Edition, 2008. This includes activities of Quality Assurance and Quality Management that determine the quality policy, objectives, and responsibilities, and implements For the purpose of this document, the term "quality standards" shall refer to both Project "process" and "product" quality standards. "Process" quality standards shall cover organizational influences, management support, decision drivers, project management, schedule, resourcing, experience, and others. "Product" quality standards shall cover product content, design, development, deployment, environment, technology,

#### 3.2.1 Definitions

**Quality Assurance**

"Quality Assurance" means the project is adhering to project management disciplines, planned and performed according to its project plans and that such adherence can be verified by an independent

### Quality Management

"Quality Management" is defined as "a subset of project management that includes the process required to assure that the Project shall satisfy the needs for which it was undertaken." Quality Management consists of activities in quality planning, quality assurance, and quality control

### Verification

"Verification" means the project is adhering to project management disciplines, planned and performed according to its project plans and that such adherence can be verified by an independent examination of

### Independent

"Independent" means autonomous and impartial verification and validation assessment of a project's adherence to project management plans and compliance with business requirements. These independent assessments are performed by an entity that is not responsible for developing the product or performing the

## 3.3 Overview of Contractor Tasks, Deliverables and Processes

The QA Contractor shall perform the following tasks:

1. Develop Quality Assurance Management Plan
2. Conduct Initial Review and Assessment
3. Provide Monthly Reviews and Reports
4. Post implementation Assessment Report

By virtue of the Contractor successfully completing these tasks the Technology Oversight Committee is able to provide oversight to help ensure the City of Portland that the project team and Contractors are applying best practices in project and quality management. This includes the delivery of products that meet business requirements for the project in respect to schedule, cost, scope, functionality, security, and other relevant

### 3.3.1 Develop Quality Assurance Management Plan

The Contractor is responsible for developing a QA Management Plan for the task order that defines the deliverables, timelines, frequency, and Contractor personnel assigned for the duration of the task order. Following the acceptance of the QA Management Plan by the city the next report will usually be the Initial Assessment Report provided by the Contactor. The Contractor should specify in the QA Management Plan a list of inputs from the City that is needed to perform quality assurance. This would include but is not limited to; all project documentation, formal solicitations (RFP) and contracts as well as access to key staff such as

### 3.3.2 Initial Review and Assessment

The Contractor is responsible for conducting an initial review of project risks and activities to produce an initial assessment of the project. The initial assessment should include:

- A Risk Management assessment by which the Contractor evaluates the effectiveness of the risk management strategy and planning for the project. This includes specific assessment of the Risk
- A Verification of Project Deliverables by which the Contractor evaluates if deliverables are appropriately scoped and detailed with respective to the current phase, included but not limited to: Project Management Plan, Project Requirement, Project Budget, Project Schedule and Project Communications. This includes specific assessment of the Project Deliverables metrics and criteria documented in Section 6 of
- A Project Management assessment that evaluates the projects organization, roles and responsibilities and management oversight to ensure the project has engaged all stakeholders at the appropriate level and is provided clear authority, managerial support and business ownership. This includes specific assessment of
- A Verification of Product Deliverables by which the Contractor verifies if product deliverables are of acceptable quality and delivered on agreed upon schedule and cost. This includes specific assessment of the Product Deliverables metrics and criteria documented in Section 6 of this document.

### 3.3.3 Provide Monthly Reviews and Reports

The Contractor shall provide monthly reports to the Technology Oversight Committee. These reports will appraise the current status of the project and track issues, trends and recommendations. The monthly reports shall reflect the current phase of the project and should be tailored to the project respective of risk, The Contractor should include the baseline established in the initial assessment deliverable and track the progress of the metrics at each monthly report. This report shall also include an executive summary of project progress and a forward looking calendar of significant deadlines, decisions and milestones that need Monthly reports shall be delivered to the Technology Oversight Committee following the format established in Section 6 which includes a written report and a presentation of report information. Reports shall be submitted to the City Project Manager, Bureau Director, CTO and CAO 10 business days prior to the monthly meeting to provide review and feedback. The final version shall be provided to the Technology

### 3.3.4 Post Implementation Assessment Report

Ninety days following the completion of the project the Contractor should provide a post implementation report. This report will assess if the business and technical objectives were achieved based on project scope and acceptance criteria. The Contractor shall validate if prior established project outcome metric and

# 4 Reporting Schedule

Unless specified otherwise in the task order the Contractor will follow a monthly cycle for reporting QA status. Monthly reports shall be delivered to the Technology Oversight Committee following the format established in Section 6 which includes a written report and a presentation of report information. Reports shall be submitted to the City Project Manager, Bureau Director, CTO and CAO 10 business days prior to the monthly meeting to provide review and feedback. The final version shall be provided to the Technology Oversight Committee no less
Week 1-2 Contractor conducts interview, verifies and drafts assessment and reports.
Week 3 - Draft report and presentation distributed for review by City staff.
Week 4 - Contractor delivers report and presentation to the Technology Oversight Committee.

# 5 Reference Materials

These documents provided accepted best practice and guided the formation of the Quality Assurance Guidelines for the Technology Oversight Committee.

A Guide to the Project Management Body of Knowledge (PMBOK Guide) Fourth Edition, 2008 Project Management Institute. http://www.pmi.org/en/PMBOK-Guide-and-Standards/Standards-Library-of-PMI-Global-

1 http://www.oregon.gov/DAS/EISPD/ITIP/IT_Investment_Oversight.shtml
2 www.doit.state.nm.us/docs/project_oversight/proj_mgmt_templates/QAIVVGuidelines.doc
3 https://www.portlandonline.com/omf/index.cfm?c=44868

# 6 Initial Review and Monthly Quality Assurance Templates and Metrics

For each assessment area defined in section 3.3.2 Initial Review and Assessment a rating should be provided to describe the Contractors evaluation of that aspect of the project. Reports delivered to the TOC should include both written reports and a formal presentation of findings. Reports should contain but are not limited to the

- Executive Summary of report findings
- Detailed project area assessments using the format provided below.
- A summary of all project assessment areas ratings metrics ratings that have changed since the last
- The status of prior recommendations

As defined in section 3.3.2 Initial Review and Assessment these should include but are not limited to:

- Risk Assessment
- Verification of Project Deliverables
- Project Management Assessment
- Product Deliverables Assessment

Assessment areas shall be evaluated using a series of metrics that contribute to the overall rating for the area. Rating and Metrics associated with an Assessment area shall be rated using the following Green, Yellow, Red

**GREEN** - All scope, budget, schedule or quality assurance issues are manageable by the project team and are being resolved in an appropriate timeframe (30 days for short term projects and 60 days for long term projects).

**YELLOW** - All scope, budget, schedule or quality assurance issues are manageable but one or more require escalation to the projects steering committee for management intervention and resolution following the timeframe for escalated issue resolution (45 days for short term projects and 60 days for long term projects).

**RED** – Scope, budget, schedule or quality assurance issues have been escalated to project governance but intervention and resolution have not yet occurred resulting in significant risk to scope schedule or budget. Issues at this level are likely to require intervention from Bureau leadership, CTO/CAO or the Technology Oversight

**The following worksheets of this workbook contains the Quality Assurance Reporting Template.**

| Project Title | SAN LCR Project | 8/29/2012 |
|---|---|---|
| **Quality Assurance Executive Summary** | | |
| **Authored by:** | *Clifford Smith, PMP*<br>*Case Associates, Inc.* | |
| **Overall Rating** | *Green* | |
| **Overall Trend** | *Steady* | *The prior report was a 4.7 score.* |
| **Overall Score** | *Calculated* | **4.8** |
| Risk Management | *Carried from worksheet* | 4.7 |
| Project Deliverables | *Carried from worksheet* | 4.9 |
| Project Management | *Carried from worksheet* | 4.8 |
| Product Deliverables | *Carried from worksheet* | 5.0 |
| **Reporting Summary** | *The score increased slightly fro the prior report. This is due to the team's effective reaction to the recent project delays.*<br>*The team reset the schedule to account for the recent delays from the "connectivity issue."*<br>*The team is now progressing well against the new schedule.* | |
| **Changes since last report** | *The overall score, as well as three of the individual sheets increased slightly. This is primarily due to the fact that the project has an updated schedule and has been progressing well against it.* | |
| **Current Recommendations** | *For the next report, the Project Manager should update the schedule for the Tier 3 Array Migration hardware.* | |
| **Status of Prior Recommendations** | *The Project Manager updated the schedule, accounting for recent delays caused by the "connectivity issue."* | |
| **Individuals Interviewed/Dates** | *Carolyn Glass, Sponsor 8/28/12*<br>*Emily Rice, Project Manager 8/28/12*<br>*Pablo Chauvin, Team Member, 8/30/12* | |
| **Documents Reviewed/Dates** | *The following documents were reviewed in preparation for this report:*<br><br>*Minutes 082312 (SAN Project Weekly Meeting)SAN LCR TPB VSP Host Migration Schedule v20120822*<br>*Minutes 082312 (SAN Project Weekly Meeting)SAN LCR TPB VSP Host Migration Schedule v20120827*<br>*The project's Risk Management Matrix*<br>*PM WBS SAN 083112 (PM-level Schedule)*<br>*SAN_Bureau Update August 2012 (TOC Presentation)*<br>*SAN Project Team weekly meeting Agenda 082312*<br>*SAN Team weekly meeting Agenda 083012*<br>*TOC Update Prior month (7/25/12)* | |
| **Meetings Attended/Dates** | *SAN Team meeting 8/28/12, 9/4/12*<br>*SAN Vendor/VAR meeting 8/23/12, 8/30/12*<br>*TOC Presentation 8/7/12* | |

| Assessment Area | Risk Management - R | 8/29/2012 |
|---|---|---|
| Description | *A Risk Management assessment by which the Contractor evaluates the effectiveness of the risk management strategy and planning for the project.* | |
| Overall Rating | *Green* | |
| Overall Trend | *Steady* | *The prior report was a 4.3 score.* |
| Overall Score | *Calculated* | **4.7** |
| Reporting Summary | *The score increased this month. This is largely due to the availability of an updated schedule and that the team is progressing well with tasks in that schedule.*<br><br>*The project is executing according to the new schedule. The main risk remaining is any delays caused by purchasing, delivery or other problems with the purchases for FY '12-13. By the next month's report, the project will know if they have any such risk.* | |
| Recommendations | *By the next report, the project should schedule the activities for the TIER 3 Array Migrations.* | |

| Metric | Green 5 points | Yellow 3 points | Red 1 points | NA 0 points | Score | Trend ⇧ ⇔ ⇩ | Reporting Summary |
|---|---|---|---|---|---|---|---|
| R1 - Does a Risk Management Plan exist for the project? | **YES** | **In Progress** | **NO** | | **5** | ⇔ | **Risk Management Plan is approved.** |
| R2- As risks are encountered are they being confronted in a timely manner to determine a proper response strategy? | **YES** | **Partially** | **NO** | | **5** | ⇧ | **The team plans for risks.**<br>**The team addresses risk triggers with effective and coordinated action.** |
| R3- Is the project experiencing variances from schedule baselines? Have significant milestones been missed? If so how frequently? | **NO** | **Minor** | **YES** | | **4** | ⇧ | **The project addressed the connectivity issue that caused the delays. The schedule is updated with new dates.** |
| R4- Is the project experiencing variances from budget baselines? Are significant cost overruns occurring? Have significant milestones been missed? If so how frequently? | **NO** | **Minor** | **YES** | | **5** | ⇧ | **The project was extended due to the connectivity issue. However, this will have no significant effect on the project budget.** |
| R5 – Are stakeholders engaged and aligned on project roles, authority and outcomes? | **YES** | **Partially** | **NO** | | **5** | ⇔ | |
| R6 – Do business and technology leadership have shared expectations for urgency and priority? | **YES** | **Partially** | **NO** | | **0** | | **Project is for technical infrastructure upgrade. No changes for Business processes. Though the project is important, do not expect business leaders to share urgency.** |
| R7 – Are there risks with the solution provider's team or approach? | **NO** | **Minor** | **YES** | | **4** | ⇔ | **Structured, the VAR, historically delivers late, with incomplete shipments. Risk factors apply to FY12-13 procurements.** |
| R8- Are the projects human resources appropriately skilled and prepared for the project? | **YES** | **In Progress** | **NO** | | **5** | ⇔ | **Project leadership is experienced.**<br>**Project oversight is engaged.**<br>**Primary vendor and QA vendor engaged.**<br>**Project team is skilled for tasks.**<br>**Tasks are identified in the schedules.** |
| R9 – Are technology risks being addressed and planned for? | **YES** | **Partially** | **NO** | | **5** | ⇔ | **Technical risks are identified in the Charter, and carried forward to the Risk Matrix as appropriate. The team is actively identifying and addressing project risks.** |
| R10 – Are factors external to the project negatively influencing the project team's ability to succeed? | **NO** | **Minor** | **YES** | | **4** | ⇔ | **Vendor identified factors that may delay delivery and increase costs. These factors could affect the FY12-13 procurements,** |

| Assessment Area | Project Deliverables - PR | 8/29/2012 |
|---|---|---|
| Description | *A Verification of Project Deliverables by which the Contractor evaluators if deliverables are appropriately scoped and detailed with respective to the current phase, included but not limited to: Project Management Plan, Change Management, Project Budget, Project Schedule and Project Communications.* | |
| Overall Rating | *Green* | |
| Overall Trend | *Steady* | *The prior report was a 4.7 score.* |
| Overall Score | *Calculated* | **4.9** |
| Reporting Summary | *The schedule is now current and reflects the delays caused by the connectivity issue (now resolved). The schedule is reasonable and the team is progressing well.*<br>*Final dates for the Tier 3 Array Migration will wait for confirmation of a delivery date fort the hardware. Purchasing is currently processing the Purchase Order.* | |
| Recommendations | *By the next report, the project should schedule the activities for the TIER 3 Array Migrations.* | |

| Metric | Green 5 points | Yellow 3 points | Red 1 points | NA 0 points | Score | Trend ⇧ ⇔ ⇩ | Reporting Summary |
|---|---|---|---|---|---|---|---|
| PR1 – Does the project have a clearly defined business case with clear objectives and criteria for success and performance metrics? | YES | In Progress | NO | | 5 | ⇔ | **CIP ProdSvc SAN Storage document.** |
| PR2- Have all business, functional and technical requirements been clearly documented and prioritized by stakeholders? | YES | In Progress | NO | | 5 | ⇔ | **Adequate growth for business use of the SAN is projected in the Business Case.** |
| PR3- Does the project have a realistic timeline based on a work breakdown structure analysis of required activities? | YES | In Progress | NO | | 5 | ⇧ | **The schedule is now up to date. The PM-level schedule has a realistic timeline based on informed analysis from the technicians doing the work.** |
| PR4 – Does the project have a realistic budget? Are adequate financial resources available to accomplish the projects goals? | YES | Partially | NO | | 5 | ⇔ | **The budget documents show almost all FY11-12 funds expended. FY12-13 budget is available for spends after July 1, 2012.**<br>**Detailed plans include all expected spends.** |
| PR5 – Does the project plan contain all tasks required to successfully deliver the project? | YES | Partially | NO | | 5 | ⇔ | **The PM-level schedule is detailed enough for this project. The technical staff use a more detailed, and differently-organized schedule that generally agrees with the PM-level.** |
| PR6 – Are estimates of schedule and cost realistic and include contingency to mitigate disruption? | YES | Partially | NO | | 5 | ⇧ | **The schedule is up to date and includes contingency to account for minor delays.** |
| PR7- Does the project have a formal Change Management Plan? Are changes to scope following these processes? | YES | In Progress | NO | | 4 | ⇔ | **BTS has a standard Change Management plan, including forms.**<br>**No changes of scope have yet been identified.** |
| PR8 – Are communications on the project happening in a timely manner to the right audiences? | YES | Partially | NO | | 5 | ⇔ | **Communication is appropriate for this project.** |
| PR9 – Is the Project Manager actively managing schedule and tasks? Is the project plan up to date and accurately reflect project scope? | YES | Partially | NO | | 5 | ⇔ | **The Project Manager regularly manages the schedule.** |
| PR10 – Is the Project Manager taking appropriate action in response to the occurrence of issues and risks? | YES | Partially | NO | | 5 | ⇔ | **The Project Manager is actively addressing Issues and Risks.** |

⇔

| Assessment Area | Project Management - PM | 8/29/2012 |
|---|---|---|
| Description | *The Project Management assessment area evaluates the projects organization, roles and responsibilities and management oversight to ensure the project has engaged all stakeholders at the appropriate level and is provided clear authority, managerial support and business ownership.* | |
| Overall Rating | *Green* | |
| Overall Trend | *Improving* | *The prior report was a 4.6 score.* |
| Overall Score | *Calculated* | **4.8** |
| Reporting Summary | *The score increased from the prior report. This is due to the team's effective reaction to the project delays.* | |
| Recommendations | *The Project Manager should update the schedule when information is available for the Tier 3 Array Migration hardware delivery.* | |

| Metric | Green 5 points | Yellow 3 points | Red 1 points | NA 0 points | Score | Trend ⇧ ⇔ ⇩ | Reporting Summary |
|---|---|---|---|---|---|---|---|
| PM1 – Does the project have an experienced project manager and executive sponsor assigned to the project? | YES | In Progress | NO | | 5 | ⇔ | **Both the Project Manager and Sponsor are experienced.** |
| PM2-Are all project roles and responsibilities clearly defined and assigned? | YES | Partially | NO | | 5 | ⇧ | **Team members, including vendors, are working well.** |
| PM3- Is the City effectively leveraging its contractual authority to resolve issues with vendors and subcontractors? | YES | Partially | NO | | 4 | ⇔ | |
| PM4 – Are the Project Manager, Sponsor and Steering Committee heeding project warning signs and effectively managing risk? | YES | Partially | NO | | 5 | ⇧ | **The Project Manager is addressing risks appropriately.** |
| PM5 – Is the project experiencing negative impacts due to unresolved issues? | NO | Minor | YES | | 5 | ⇔ | |
| PM6 – Are business units and end users involved and participating as stakeholder in the project outcomes? | YES | Partially | NO | | 0 | | **Often in an infrastructure project, business involvement is minimal.** |
| PM7 – Is the City properly prepared for the organizational and cultural changes that the project will affect? | YES | Partially | NO | | 0 | | **This project will not cause organizational or cultural change.** |
| PM8 – Has turnover occurred on key roles such as the PM, Sponsor, Steering Committee or leads? If so, are transitions being managed properly? | NO | Minor | YES | | 5 | ⇔ | **No turnover yet identified.** |
| PM9 – Are accepted industry best practices for project management being followed? | YES | Partially | NO | | 4 | ⇔ | **The project is a short-term infrastructure project. The project is following reasonable practices for such a project.** |
| PM10 – Does the project team have confidence that the project goals are obtainable given the project scope, budget and timeline? | YES | Partially | NO | | 5 | ⇔ | **The project team is confident in that the project goals are achievable within scope and timeline. Project Management is confident that the project is achievable within the budget.** |

| Assessment Area | Product Deliverables - PD | 8/29/2012 |
|---|---|---|
| Description | *A Verification of Product Deliverables by which the Contractor verifies if product deliverables are of acceptable quality and delivered on agreed upon schedule and cost.* | |
| Overall Rating | *Green* | |
| Overall Trend | *Steady* | *The prior report was a 5.0 score.* |
| Overall Score | *Calculated* | **5.0** |
| Reporting Summary | *No ratings changed since the prior report.* | |
| Recommendations | | |

| Metric | Green 5 points | Yellow 3 points | Red 1 points | NA 0 points | Score | Trend ⇧ ⇔ ⇩ | Reporting Summary |
|---|---|---|---|---|---|---|---|
| PD1 - Does the project have clear criteria for testing and acceptance? | YES | In Progress | NO | | 5 | ⇔ | **The task orders are detailed and specific.** |
| PD2- Is the vendor performing according to contract terms? Are they responsive to issues? | YES | Partially | NO | | 5 | ⇔ | **Deliverables have all been on time and complete.** |
| PD3 - Are the vendor's methodologies and work processes compatible with the City standards and best practices? | YES | Partially | NO | | 5 | ⇔ | **The VAR adapts to the City standards.<br>Hitachi has standards that fit well with the City.<br>Weekly face-to-face meetings with the VAR and Hitachi have been productive.** |
| PD4 - Is the vendor showing discipline and diligence to reduce the impacts of change to the project and agreed upon scopes of work? | YES | Partially | NO | | 0 | | **No evidence to use as a basis.** |
| PD5 - Are the vendors demonstrating best practice quality assurance processes and controls in the development of deliverables? | YES | Partially | NO | | 5 | ⇔ | **The City and Hitachi have strong interaction while defining deliverables.** |
| PD6 - Are deliverables being provided that meet the business need and are fit for use? | YES | Partially | NO | | 5 | ⇔ | **Delivered hardware and technical services have been complete and accurate.<br>Documentation has been helpful.<br>This will be a more critical metric when the vendor starts delivering professional services.** |
| PD7 – Are deliverables provided of quality that meets or exceeds City requirements? | YES | Partially | NO | | 5 | ⇔ | **Deliverables meet expectations.<br>Hitachi practices and methods are helpful.** |
| PD8 - Is proper training, knowledge transfer and documentation accompanying all vendor deliverables? | YES | In Progress | NO | | 5 | ⇔ | **Hitachi training began.<br>(The City has high expectations for this formalized software training for the SAN staff.)** |
| PD9 –Is staff turnover occurring on the vendor's project teams? Are contractual processes being followed for the reassignment of vendor staff to the project? Is proper knowledge transfer occurring? | NO | Minor | YES | | 5 | ⇔ | **No turnover reported.** |
| PD10 – Does the project manager have confidence that the vendor is able and committed to deliver the project on schedule with required scope? | YES | Partially | NO | | 5 | ⇔ | **The City and the vendors have regular face-to-face meetings. These meetings are building the PM's confidence.** |