Initial Project Risk Assessment (Revised)
IT QA Services for OEM Frame Relay Project

State of Oregon, Military Department, Office of Emergency Management (OEM)

Prepared for
State of Oregon
October 30th 2015 v1.2

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Introduction

Initial Project Risk Assessment

IT QA Services for OEM Frame Relay Project

State of Oregon, Military Department, Office of Emergency Management (OEM)

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This report provides the State of Oregon with Gartner's **Initial Risk Assessment** of the OEM Frame Relay Project.

- Gartner's risk assessment of the Frame Relay Project considers project management controls and performance against industry standards and best practices with the objective of providing the State with a holistic, comprehensive risk profile for the project.

- In 2014 Gartner conducted a risk assessment of the OEM NG9-1-1 project. Since that time the scope of the project was revised to focus solely on the State's Frame Relay infrastructure. Per the State's request, Gartner has used the previous risk assessment as a basis for conducting an assessment of the Frame Relay project as currently defined.

- The recommendations in the report are intended to help OEM mitigate identified risks, facilitating the project being best placed to deliver its intended outcomes.

- In addition to providing mitigation recommendations, this risk assessment serves as input to the upcoming quality planning activities that will establish a baseline Quality Management Plan (QMP) for the Frame Relay Project.

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Introduction
Assessment Categories and Quality Standards

■ Gartner's overall quality assurance approach considers a range of different quality standards within each of the thirteen (13) Quality Assessment categories noted below.

■ Based on the Frame Replay project's position in the project lifecycle (procurement, pre-implementation) the first six (6) Quality Assessment categories have been considered as most appropriate for this initial risk assessment. As the project continues to progress through the project lifecycle additional categories and quality standards should be considered for ongoing quality control and quality assurance activities.

- **Business Mission and Goal**
- **Decision Drivers**
- **Project Management**
- **Project Parameters**
- **Project Team**
- **Organization Management**
- Customer / User
- Specification and Design
- Development Process
- Development Environment
- Technology
- Deployment
- Maintenance

Project Management			
Quality Standard	**Low Risk Cue**	**Medium Risk Cue**	**High Risk Cues**
Definition of the Project	Project is well defined with a scope that is manageable by this organization	Project is well defined but unlikely to be handled by this organization	Project is not well defined or carries conflicting objectives in the scope
Project Objectives	Verifiable project objectives, reasonable objectives	Some project objectives, measures may be questionable	No established project objectives or objectives are not measurable
Leadership	Project has a sponsor	Project has a sponsor reasonable for project but unable to spend enough time to direct effectively	Project has no sponsor or project manager concept is not in use
PM Approach	Product and process planning controls in place	Planning and controls need enhancement	Weak or nonexistent planning and controls
PM Communication	Clearly communicated goals and status between the team and rest of organization	Communications some of the information some of the time	Rarely communicates clearly to the team or to others who need to be informed of team status

■ A complete summary of the Quality Standards used for this assessment can be found in Appendix A.

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Rating Methodology

- In an effort to highlight potential risks to the project, Gartner uses a "red light/yellow light/green light" reporting strategy relative to the current phase of the project:

  "Green Light" (Acceptable to Excellent, i.e., "Low Risk"): The approach meets or exceeds established project management standards. To receive this ranking, the approach must present no significant risks to the project.

  "Yellow Light" (Caution, i.e., "Medium Risk"): The approach is not clearly defined, and/or presents a risk to the project. Recommendations for risk areas assigned this rating are important to ensure optimal project operation.

  "Red Light" (Risk Alert , i.e., "High Risk"): The approach presents serious risks to the project and requires immediate attention. Recommendations for risk areas assigned this rating are essential for mitigating project risk

  Not Applicable: The risk area does not apply to the review period.

Recommendations

- Recommendations for improvement and risk mitigation are provided for areas assessed as "Yellow" or "Red" in the specific findings section of this presentation.

HIGH RISK

MED RISK

LOW RISK
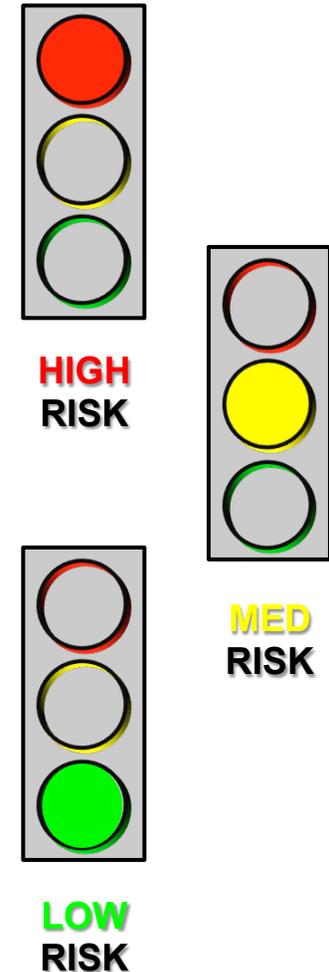
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Introduction
Discovery via Project Documentation Review

Gartner reviewed the following Project Artifacts as provided by the State in support of the risk assessment:

Document Name or Purpose	File Name	Version
Implementation Criteria for Frame Relay Project	Criteria_for_PSAP_Installations_2015_07_29.pdf	07/29/2015
Site Survey Criteria for Frame Relay Project	Criteria_for_PSAP_Site_Visits_2015_07_29.pdf	07/29/2015
Executive Steering Committee Agendas	ESC_Agenda_08_13_2015x.pdf ESC_Agenda_10_09_2015.pdf	08/13/2015 10/09/2015
Executive Sponsor Meeting Agenda	OEM_Frame_Relay_Project_Sponsor_Meeting_Agenda_09_25_2015x.pdf	09/25/2015
Project Schedule (All PSAPs)	Frame_Relay_Replacement_Schedule(All_PSAPs)_2015_09_02.xlsx	09/02/2015
Project Schedule Frame Relay Project	OEM_Frame Relay_Replacement_Project_Schedule_2015_09_22.pdf	09/22/2015
Project Schedule Milestone Timeline Project Schedule	OEM_Frame_Relay_Replacement_Milestone_Timeline_15_09_01.pdf OEM_Frame_Relay_Replacement_Project_Schedule_2015_10_08.mpp	09/15/2015 10/08/2015
Budget / Cost Tracking Tool	OEM_Frame_Relay_Cost_Tracking_2015_08_29.pdf	08/29/2015
Project Charter Change Requests for Frame Relay Project	OEM_Frame_Relay_Project_Charter_Change_Request_FRRP_01.pdf OEM_Frame_Relay_Project_Charter_Change_Request_FRRP_02.pdf	V01 10/06/2015
Frame Relay Project Charter	OEM_Frame_Relay_Project_Charter_v1.0.pdf	v1.0
Frame Replay Project Plan	OEM_Frame_Relay_Replacement_Project_Plan_2015_05_04.pdf	v0.1 05/04/2015
Status Reports	OEM_Frame_Relay_Replacement_Status_Report_15_06_01.pdf OEM_Frame_Relay_Replacement_Status_Report_15_07_01.pdf OEM_Frame_Relay_Replacement_Status_Report_15_08_01.pdf OEM_Frame_Relay_Replacement_Status_Report_15_10_06.pdf OEM_Frame_Relay_Replacement_Status_Report_15_09_01x.pdf	Various
Issues and Risks Register	Project_Issue_Risk_Log_2015_09_25.xls	09/25/2015
OEM Frame Relay RFP	OEM_Frame_Relay_Replacement_RFP_Final.pdf	06/03/2015
RFP Evaluator Sheet	DASPS-1146-15 Evaluator Sheet.xls	06/03/2015
RFP Evaluator Sheet (Interview)	DASPS-1146-15 Evaluator Sheet.Interview.xls	06/03/2015

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Introduction
Discovery Conducted via Individual and Group Interviews

Gartner engaged with the following participants to support the risk assessment, through direct interaction in workshops / interviews and via participation in meetings as observers:

Program Team and Participants

- Mark Tennyson, OEM

- Pat Lustig, OEM

- Frank Kuchta, OEM

Additionally,

- Darren Wellington, DAS OSCIO

- Jennifer Bjerke, DAS OSCIO

Gartner's interviews focused on the readiness of the organization to support near term planned activities as well as clarifying observations made during the review of provided project documentation.

Executive Summary

Initial Project Risk Assessment

IT QA Services for OEM Frame Relay Project

State of Oregon, Military Department, Office of Emergency Management (OEM)

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Executive Summary
Overall IT QA Assessment of Frame Relay Project (October 2015)

The Frame Relay project is perceived to be operating at a low level of risk.

OEM has made a significant number of improvements, mitigating the major risks identified in Gartner's Initial Risk Assessment from 2014.

■ *Indications of Improvement*

➢ Project governance has been established and appears to be working effectively.

➢ Key project management controls have been documented and are being applied appropriately (planning, basic scheduling, budget management, risks/issues management, reporting and communications).

➢ The project management team is staffed with appropriate skills and experience.

➢ The project management team has addressed the major risks and recommended identified during the risks assessment conducted on the OEM NG9-1-1 project in 2014.

■ *Key Risk Areas Requiring Attention*

➢ Additional project controls should be implemented before the vendor implementation begins (such as scope management, staffing/resource management, benefits management)

➢ Defined scope should be migrated from the RFP to a central repository that can maintained more easily.

➢ Additional structured, detailed schedule planning is recommended.

OVERALL PROJECT RISK RATING

HIGH	MED	LOW

LOW RISK

The Frame Relay Project has been rated across 24 Quality Standards:

❑ There were **0 Red** areas identified

❑ There were **1 Yellow** area identified

❑ There were **23 Green** areas identified

RATING GUIDE

Red = Strong Alert, i.e., High Risk

Yellow = Use Caution, i.e., Medium Risk

Green = Acceptable to Excellent, i.e., Low Risk

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Executive Summary
Overall IT QA Assessment of Frame Relay Project (October 2015)

NG9-1-1 PROJECT

(2014 Assessment Rating)

HIGH   MED   LOW

HIGH-MEDIUM RISK

The OEM NG9-1-1 was rated across 26 Quality Standards in 2014:

- ❏ There were **13 Red** areas identified
- ❏ There were **10 Yellow** areas identified
- ❏ There were **1 Green** areas identified
- ❏ *There were **2 areas** not applicable*

RATING GUIDE

Red = Strong Alert, i.e., High Risk

Yellow = Use Caution, i.e., Medium Risk

Green = Acceptable to Excellent, i.e., Low Risk

FRAME RELAY PROJECT

(2015 Assessment Rating)

HIGH   MED   LOW

LOW RISK

The Frame Relay Project has been rated across the same 26 Standards:

- ❏ There were **0 Red** areas identified
- ❏ There were **1 Yellow** area identified
- ❏ There were **23 Green** areas identified
- ❏ *There were **2 areas** not applicable*

RATING GUIDE

Red = Strong Alert, i.e., High Risk

Yellow = Use Caution, i.e., Medium Risk

Green = Acceptable to Excellent, i.e., Low Risk

Positive Trend

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Executive Summary
IT QA Assessment Key Findings and Recommendations

PROJECT MANAGEMENT CONTROLS – *Observations*

Essential project management controls have been implemented by the OEM project team and appear to be managed effectively and proactively.	➢ For example: schedule planning and control, project reporting communications management, budget control, risks and issues monitoring and management.
A project management plan (PMP) has been developed and approved. It contains the basic set of control plans and processes expected for the current stage of the project lifecycle.	➢ Gartner has observed the documented plans and processes being implemented practically which is a positive indication that that the project is being managed effectively.
The project's governance plan, team organization, roles and responsibilities and the project's communication plan are all documented within the PMP and have been implemented.	➢ Project status reporting has been established and appear to contain an appropriate level of detail. ➢ Executives are engaged on a regular basis but also brought together to discuss any important escalations or deviations that need to be addressed quickly (e.g. October's exceptional meeting of the ESC to discuss the RFP schedule)

PROJECT MANAGEMENT CONTROLS – *Recommendations*

✧ Establish additional PM control processes and accompanying tools ahead of the Frame Relay Vendor being selected, including but not limited to:
  ✧ Scope (Requirements) Management Plan and Scope Management tools (e.g. a requirements traceability matrix)
  ✧ Change Request Form and Change Control Register to support the change control process identified in the Project Plan.
✧ Plan to integrate the selected Frame Relay Vendor's PM approach into OEM's at the beginning of the implementation phase, including but not limited to:
  ✧ Scope (Requirements) Management, Project Communications and Status Reporting, Change Control, Schedule Management and Control, Deliverables Tracking, Deliverables Acceptance, Requirements Traceability, Risks and Issues, Assumptions and Dependencies Management.
✧ Consider developing a more detailed set of activities in the project schedule, together with accompanying dependency relationships and a means of integrating a minimal set of key milestones from the to-be selected Vendor's schedule.
✧ Establish project tolerances with the project's sponsors and Executive Steering Committee, such as: Scope, Schedule and Budget tolerances and thresholds
✧ Consider requiring the vendor to employ a Deliverables Tracking project control, where by the vendor maintains a central list of all deliverables, their status and forecast / actual delivery due dates.

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IT QA Assessment
Category: Business Mission & Goals

Initial Project Risk Assessment

IT QA Services for OEM Frame Relay Project

State of Oregon, Military Department, Office of Emergency Management (OEM)

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BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1028,1220 and 12207 including:**
  - ❑ The project 's scope is clearly defined.
  - ❑ The project deliverables are clearly defined and discussed with the management team and key stakeholders.
  - ❑ Impacted business units are involved in the definition of the project's scope and requirements.
  - ❑ Impacted business unites are involved in the acquisition, supply, development, operation and maintenance stages of the project.
  - ❑ Impacted business units have a forum within which they are able to gain a detailed understanding of what the project intends to deliver and how the solution / end product will meet their needs and/or impact their business.

LOW RISK

FINDINGS & OBSERVATIONS

- The user community has been involved in the project to date and engagement is continuing on a regular basis.

- A project charter exists that defines objectives and outcomes and this is being kept up to date to reflect any variances in objectives, scope, approach, etc.

- Requirements are documented within the RFP however a formal requirements repository that clearly articulates and delineates all requirements does not exist. This poses a minor to moderate risk of not being able to manage requirements effectively during the implementation.

- No formal means of documenting potentially conflicting requirements or potential impacts to operations or technology across the PSAPs, OEM or other exists. High level impacts have been identified in the Project Plan but a means of elaborating / further identifying and managing these impacts is needed for the implementation.

RECOMMENDATIONS

- ✧ Please refer to the recommendations in the upcoming category – 08: Definition of the Project.

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BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1028,1220 and 12207 including:**
    - The project 's scope is clearly defined.
    - The project deliverables are clearly defined and discussed with the management team and key stakeholders.
    - Impacted business units are involved in the definition of the project's scope and requirements.
    - Impacted business unites are involved in the acquisition, supply, development, operation and maintenance stages of the project.
    - Impacted business units have a forum within which they are able to gain a detailed understanding of what the project intends to deliver and how the solution / end product will meet their needs and/or impact their business.

LOW RISK

FINDINGS & OBSERVATIONS

- No significant risks have been identified at this stage.

- OEM, ETS and DAS have been collaborating on the project to date with a good mix of representation from administration, process and technical functions to help set the strategy, direction and scope of the project.

- ETS and DAS provided standards and guidance during the development of the requirements.

- A project charter exists that defines objectives and outcomes and this is being kept up to date to reflect any variances in objectives, scope, approach, etc.

- The State intends to procure a solution that provides a complete service, where the Vendor provides all implementation activities and end to end support. The provider organization is therefore the Vendor whom will be suitably skilled and capable, suitable to deliver and support the solution, per the requirements of the RFP.

RECOMMENDATIONS

- ✧ Please refer to the recommendations in the upcoming category – 08: Definition of the Project.

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BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1028,1220, 12207 and PMBOK (5th Edition) including:**
  - The project has a documented communications plan in place that addresses external project stakeholders, in this case customer (public).
  - The project provides routine updates and news related to the project either on the Web, through e-mail or with a project newsletter.
  - The customer (public) is involved directly, or indirectly via suitable representatives, in the identification of the needs / drivers for the project and requirements.
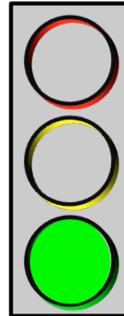
LOW RISK

FINDINGS & OBSERVATIONS

- No significant risks have been identified at this stage.
- The project's communications plan includes communication activities related specifically for the public.
- OEM has a public facing communications plan for the public, which includes emails out and a public facing website.
- The technical changes are wholly invisible to the public, the service to the public will remain the same. No changes will be realized by the public.
- The public are able to find updates about the project on the external website.

RECOMMENDATIONS

- ✧ Consider reviewing and revising, as necessary, the project communications plan on a regular basis as part of the ongoing project management control processes, such as stakeholder engagement and communications planning processes.

BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1028,1220 and 12207 including:**
  - Impacted business units are involved in the definition of the project's scope and requirements.
  - Impacted business unites are involved in the acquisition, supply, development, operation and maintenance stages of the project.
  - Impacted business units have a forum within which they are able to gain a detailed understanding of what the project intends to deliver and how the solution / end product will meet their needs and/or impact their business.
  - The project has (or will) ensure that any business process changes will be identified and addressed within the project's lifecycle.
  - The project has (or will) ensure that any and all training necessary will be provided.
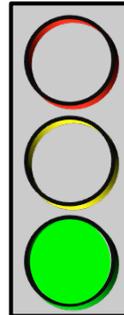
LOW RISK

FINDINGS & OBSERVATIONS

- No risks identified within this quality standard.

- No workflow is expected to be impacted based on the scope and objectives of the project. Should any changes be identified during the project the OEM project manager has the necessary project controls to deal with such an event.

RECOMMENDATIONS

✧ None.

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Risk Assessment
Assessment Category | Business Mission & Goals

ID	Risk Description	Potential Impacts (Schedule, Scope, Budget, Quality)	Risk Response (Avoid, Transfer, Mitigate, Accept)	Severity (H/M/L)
-	Please refer to the risks identified at the end of the **Project Management Section** regarding **Scope Management and Tools**. Slide 29 – 30.	N/A	N/A	-

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IT QA Assessment
Category: Decision Drivers

Initial Project Risk Assessment

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BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 12207 including:**
  - Open communication is the norm.
  - The project has a transparent decision making process in place and is using it.
  - Documented governance policies and procedures are in place.
  - An executive steering committee has been established and is actively supporting project activities.
  - A stakeholder communication process is in place and being effectively used by the project management team to address and manage political influences.

LOW RISK

FINDINGS & OBSERVATIONS

- No significant risks have been identified at this stage.
- The Governor and current LFO Fiscal Officers are reportedly supportive of the project. Both are represented in the project's governance plan through OMD, DAS and LFO reporting lines.
- A project governance structure and communications plan exists and is being managed effectively by the OEM project team.
- OEM has conducted a level of stakeholder analysis to validate the stakeholder landscape, identifying key personnel, their influence and interests. The output of this has been used as an input to the project's plan, communications plan and project charter.

RECOMMENDATIONS

- ✧ Continue to hold regular meetings with the Executive Steering Committee and maintain open communication with LFO and DAS before and after session in order to facilitate open, transparent communication.

- ✧ Review the project's initial Stakeholder Analysis periodically during the remainder of the project, specifically the stakeholder dynamics component, and adjust the project's stakeholder engagement approach and/or communications plan as necessary.

BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1220, 12207 and 1028, including:**
  - A robust project schedule including milestone management and tracking process is in place to ensure that the project schedule and delivery milestone commitments are managed and reported on a routine basis.
  - A comprehensive project schedule and delivery milestone review process is in place and is being utilized to manage the project's delivery commitments.
  - Project delivery commitments are reported "transparently" to all key stakeholders.
  - Open communication is the norm.
  - The project has a transparent decision making process in place and is using it.
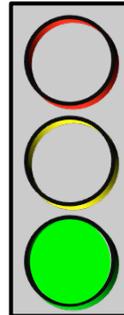
LOW RISK

FINDINGS & OBSERVATIONS

- No significant risks have been identified at this stage.
- A project schedule exists and is being maintained by the PM.
- No artificial milestone dates or constraints appear to exist.
- The project maintains a high level milestone plan for communicating with executive sponsors and the stakeholder community which is an effective communications vehicle.
- The project communicates openly and transparently about the project schedule which is encouraging, particularly with the sponsors and Executive Steering Committee.
- Although the schedule recently incurred an impact due to an issue encountered during the procurement process, the project team assessed the impact and engaged with the project's sponsor and ESC to re-plan and quickly establish a revised baseline schedule. This scenario indicates that the project team and the PM controls are working effectively.

RECOMMENDATIONS

- ✧ Please refer to the recommendations provided within the Schedule Assessment section, slides 52 – 54.

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BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 830 and 12207 including:**
  - The project deliverables are clearly defined and discussed with the management team and key stakeholders.
  - The project management team understands the impact of changing specifications during the project.
  - The project is focused on the full scope of the original specifications.
  - Impacted business units are involved in scope changes.
  - All interfaces between the solution and external systems have been identified and accommodated within the solution scope.
  - The definition of the scope does not include any "to be determined" placeholders.

N/A
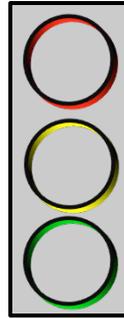
FINDINGS & OBSERVATIONS

- Not applicable at this stage. No risks identified.

RECOMMENDATIONS

✧ None.

Risk Assessment
Assessment Category │ Decision Drivers

ID	Risk Description	Potential Impacts *(Schedule, Scope, Budget, Quality)*	Risk Response *(Avoid, Transfer, Mitigate, Accept)*	Severity (H/M/L)
-	None identified to date	N/A	N/A	-

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IT QA Assessment
Category: Project Management

Initial Project Risk Assessment

IT QA Services for OEM Frame Relay Project

State of Oregon, Military Department, Office of Emergency Management (OEM)

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BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1028,1220 and 12207 including:**
  - The project's scope is clearly defined.
  - The project deliverables are clearly defined and discussed with the management team and key stakeholders.
  - The project management team understands the impact of changing specifications during the project.
  - A structured mechanism and process are in place to assess and implement scope changes.
  - The project is focused on the full scope of the original specifications.
  - Criteria for scope changes exist.
  - Impacted business units are involved in scope changes.
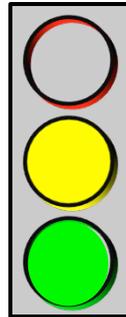
MED /
LOW
RISK

FINDINGS & OBSERVATIONS

- Requirements are documented within the RFP however a formal requirements repository that clearly articulates and delineates all requirements does not exist. This poses a minor to moderate risk to managing the integrity of the requirements during implementation.
- OEM engaged with technical experts from DAS and ETS to develop the requirements as well the project's PSAP community.
- A structured requirements development methodology does not appear to have used however, which could mean the requirements aren't full comprehensive and could result in "new" requirements being identified during the implementation stage of the project. However, given ETS used their knowledge and experience of the existing IT landscape to develop the requirements this risk is perceived to be moderate to low.
- All other project scope is defined within the Project Charter, Project Management Plan and the RFP.

RECOMMENDATIONS

- ✧ Create a central repository of requirements that allows the project team to easily capture, track and report on a range of different associated requirements attributes such as, but not limited to: Ownership, Compliance/Non-compliance, Status, Identified impacts, Issues.

- ✧ Consider including a requirement in the RFP that asks the Vendor to conduct an Impact Assessment that will help the State understand the potential changes/impacts the Frame Relay solution will have to the PSAP organizations, operations and technology in order to ensure the project is fully successful.

BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1028 and 12207 including:**
  - Business objectives are still valid.
  - There is a linkage between the tangible business benefits and the deliverables of the project.
  - Defined business objects have associated system, operational and performance metrics defined.
  - Business benefits are defined and quantified and will be used to measure the successful operation and performance of the new system.
  - A process is in place to measure the business benefits on an ongoing basis.
  - Management is aware of the benefit measurement process, and sponsors its implementation.
  - A change process is in place that links changes in business objectives to organizational benefits and system requirements.
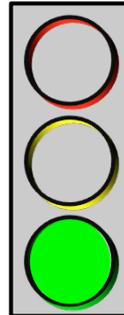
LOW RISK

FINDINGS & OBSERVATIONS

- No significant risks have been identified at this stage.
- An approved Project Charter exists and is maintained by the project team.
- Objectives, goals and success criteria are defined in the Project Charter and Project Management Plan.
- The project's goals are aligned with business / operational mandates identified within the project charter.
- Specific business benefits are not defined however they are implied within the project charter.
- No formal benefits management plan exists that identifies the relationship between business goals, project objectives, intended benefits and the requirements. Nor is there a plan or process that describes how intended benefits will be measured and realized. This does not pose a risk to OEM's ability to manage the project however it would be make it easier to demonstrate success if a benefits strategy and benefits management plan was documented and implemented.

RECOMMENDATIONS

- ✧ Please refer to the recommendations in the previous category – 08 Definition of the Project.
- ✧ In addition:
  - ✧ Consider adding a section to the Project Charter that explicitly defines the intended benefits that will be delivered by the project, specifically tangible (quantitative) and intangible benefits (qualitative).
  - ✧ Consider adding a Benefits Management Plan to the Project Management Plan (summarized within the PMP and/or included as an appendix).

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BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with PMBOK and IEEE STD 1028 and 12207 including:**
  - ❑ The project has strong executive support.
  - ❑ Key stakeholders from each affected area (business and IT) have been identified and are part of the overall Project Team.
  - ❑ There is a high level of business and end-user involvement on the Project Team.
  - ❑ A forum is in place to solicit feedback and to gather information from the user base.
  - ❑ Senior management has made themselves available to end-user organizations to explain the changes driving the new system development activities and why they are needed.
  - ❑ Key executives from each affected area (business and IT) have been identified and are part of the overall Project Team.

**LOW
RISK**

FINDINGS & OBSERVATIONS

- No significant risks have been identified at this stage.
- The project's governance plan has been defined in the Project Charter and the Project Management Plan. It appears to be functioning effectively. Functions, roles and responsibilities are clearly defined with a supporting RACI-V and communications plan.
- The project has an Executive Sponsor with OEM whom provides demonstrable support for the project.
- The project has an Executive Steering Committee whose membership includes senior representation from the project's key stakeholder groups and meets regularly.
- The project team engages with its Executives and regularly, both formally at meetings of the ESC and informally whenever necessary. This provides the project with a suitable number of forums within which progress can be reported, feedback can be solicited, issues discussed and progress reported.

RECOMMENDATIONS

- ✧ When necessary, ensure than any changes in the project organization are managed directly, such as any new executives or other stakeholders whom join the project mid-implementation. Engage with these individuals directly to:
  - ✧ Ensure they are suitably briefed and brought up to speed with the project's background, scope, progress, key risks/issues, etc.
  - ✧ Ensure they understand the project's governance structure and communications plan
  - ✧ Ensure they understand their own role and responsibilities within the project organization and governance plan
  - ✧ Identify and manage any risks or issues their expectations, agendas or perspectives might present the project.

BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1028,1220, 12207 and PMBOK (5th Edition) including:**
  - ❑ Experienced Project Management is in place.
  - ❑ Project plans and schedules are defined and maintained in an up-to-date status.
  - ❑ Regular project review processes are in place and being used to manage the project on a daily basis.
  - ❑ Project feedback mechanism to recognize and log action issues/risks is in place and being used to manage the project on a daily basis.
  - ❑ There is a process in place for project turnover, i.e., people leaving and joining the project (both the vendor and OEM).
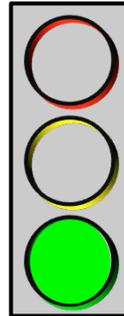
**LOW
RISK**

FINDINGS & OBSERVATIONS

- The OEM project manager appears to be suitably capable and experienced for the scope and complexity of this project.
- OEM has generally addressed the major findings from Gartner's previous risk assessment of the NG9-1-1 project. Additionally, the OEM PM is continually reviewing and making enhancements to the PM approach and controls as the project progresses which is extremely encouraging.
- A formal project management plan (PMP) with a documented, structured approach that describes how the project is being managed has been documented and approved. The PMP conforms to basic PMBOK standards.
- The Vendor is expected to have their own PM Approach / PMP and Implementation Methodology, Gartner expects the State to use its overarching PMP (with supporting PM processes, controls, standards and tools) and ensure there is alignment and integration between the State and Vendor methodologies. OEM confirmed this is their expectation also.
- Several additional PM control processes have been identified by the OEM PM team as being necessary to implement before the vendor is selected and the implementation starts. Gartner agrees.

RECOMMENDATIONS

- ✧ Establish additional PM control processes and accompanying tools ahead of the Frame Relay Vendor being selected, including but not limited to:
  - ✧ Scope (Requirements) Management Plan
  - ✧ Scope Management tools (e.g. a requirements traceability matrix, this could be given to the Vendor to own)
  - ✧ Change Request Form and Change Control Register to support the change control process identified in the Project Plan.
- ✧ Plan to integrate the selected Frame Relay Vendor's PM approach into OEM's at the beginning of the implementation phase, including but not limited to:
  - ✧ Scope (Requirements) Management, Project Communications and Status Reporting, Change Control, Schedule Management and Control, Deliverables Tracking, Deliverables Acceptance, Requirements Management and Traceability, Risks and Issues, Assumptions and Dependencies Management.
- ✧ For Schedule Planning and Control Recommendations, please refer to slides 52 – 54.

BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1028,1220, 12207 and PMBOK (5th Edition) including:**
  - The project has a documented communications plan in place that addresses internal and external project stakeholders.
  - The project's leadership team conducts routine meetings to keep all stakeholders apprised of the project's progress and issues.
  - The project provides routine updates and news related to the project either on the Web, through e-mail or with a project newsletter.
  - Open communication is encouraged at all levels of the project. Project leadership fosters an "open door" policy.
  - All ideas are encouraged to be presented in order to facilitate an open communications environment.
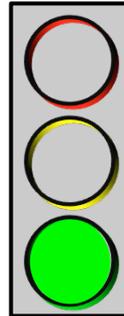
LOW RISK

FINDINGS & OBSERVATIONS

- No significant risks have been identified at this stage.
- Effective project management communications appear to have to documented and established by the OEM project team.
- Project status reporting has been established. The project status reports contain an appropriate level of detail and the project employs a health-check scoring system which helps communicate overall status to stakeholders quickly and effectively.
- Executive level reporting to the Executive Steering Committee has been established and continues on a regular basis.
- Executives are engaged on a regular basis but also brought together to discuss any important escalations or deviations that need to be addressed quickly (e.g. October's exceptional meeting of the ESC to discuss the RFP schedule)
- A project communications plan exists within the PMP, specifying major communications events, communications types and stakeholder audiences.
- The project management team encourages open communication across the engagement team.

RECOMMENDATIONS

- ✧ Consider breaking out the project's Communications Plan from the Project Plan into a separate artifact to make it easier to manage and maintain without having to make updates to the PMP. The PMP can reference the Communications Plan.

- ✧ Also, please refer to the recommendations in the previous category – 11: Project Management Approach.

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BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1028,1220, 12207 and PMBOK (5th Edition) including:**
  - The project manager has authority over all key areas of the project including, budget, staffing, work assignments and resource allocation, contract management, vendor management and quality management.
  - The project manager is the single focal point for the project and is solely accountable for its success.
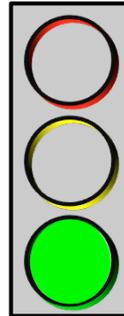
**LOW
RISK**

FINDINGS & OBSERVATIONS

- A new full-time Project Manager has been hired by OEM whom is the single point of accountability for the project on a practical level, working directly with a program manager and the executive sponsor.

- The OEM PM appears to have the appropriate level of support and delegated authority from the Executive Sponsor and Executive Steering Committee.

- Roles and responsibilities between the project participants were previously ambiguous and appeared to cause a level of confusion regarding objectives, task ownership, expected deadlines and quality expectations. This issue appears to have improved dramatically.

- No significant risks have been observed here.

RECOMMENDATIONS

- ✧ The Project Manager should continue to engage with the Project's Sponsor on a regular basis, formally and informally, to maintain the rapport and effective working relationship that has been established. This will facilitate the project's ability to continue to deal with any particular issues or risks that might present themselves in the future, quickly and effectively.

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BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1028,1220, 12207 and PMBOK (5th Edition) including:**
  - The project's sponsors and executive steering committee are acting as champions for the project, providing support for the project manager.
  - The project's sponsors are involved in developing and ultimately approving the project's charter and business case.
  - The project's sponsors provide regular oversight and monitoring of the project manager.
  - The project's sponsors are involved in developing the project's governance plan which identifies the project manager as the single focal point for the project and solely accountable for its success, provided with appropriate authority.
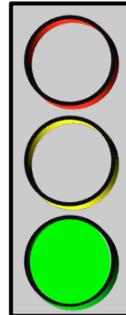
LOW RISK

FINDINGS & OBSERVATIONS

- A new full-time Project Manager has been hired by OEM whom is the single point of accountability for the project on a practical level, working directly with a program manager and the executive sponsor.

- Support from the Executive Steering Committee and the Project Sponsor is evident for the project, and they appear to be champions for the project.

- The OEM PM appears to have the appropriate delegated authority from the Executive Sponsor and Executive Steering Committee.

- The Executive Steering Committee and Project Sponsor are providing regular oversight and monitoring of the project and the Project Management Team.

- No significant risks have been observed here.

RECOMMENDATIONS

✧ Please refer to the recommendations in the previous category – 13: Project Manager Authority.

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Risk Assessment
Assessment Category | Project Management

ID	Risk Description	Potential Impacts *(Schedule, Scope, Budget, Quality)*	Risk Response *(Avoid, Transfer, Mitigate, Accept)*	Severity (H/M/L)
PM-01	**Need for Scope Management Process and Tool(s)** No formal change control form or change register appear to exist for managing the integrity of the project's scope during the implementation. Project scope changes are currently only captured through documented and approved charter change request processes. Without a formal scope management process and accompanying tool(s) (e.g. requirements traceability matrix) the project's ability to manage the integrity of the scope during the implementation will be challenging, presenting a number of risks such as: - The vendor missing / overlooking requirements in the design - The vendor missing / overlooking requirements in the implementation - Ultimately, the solution not fully meeting the needs and/or expectations of the State.	<u>Schedule</u>: Delays if rework is required if the requirements scope is invalidated during the implementation. <u>Scope</u>: Managing the integrity of the project's scope and vendor compliance could be challenging. <u>Cost</u>: Rework or missing scope will likely create additional cost. <u>Quality</u>: If the integrity of the project's scope is impacted there is a risk of the solution not fully meeting the objectives of the State.	<u>Mitigate</u>: • Use a change control form to capture all changes the project's scope, schedule or budget. Capture a log is these changes in a change control register. • Create a central requirements repository that clearly articulates and delineates all functional, non-functional (technical) and non-functional (non-technical) elements. • Include management and traceability attributes to all requirements such as: ownership, impact, compliance/ non-compliance, status, identified impacts, issues. • Ensure the process by which OEM and the Vendor together will manage the project's scope is documented and agreed by both parties.	M

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Risk Assessment
Assessment Category │ Project Management (continued)

ID	Risk Description	Potential Impacts (Schedule, Scope, Budget, Quality)	Risk Response (Avoid, Transfer, Mitigate, Accept)	Severity (H/M/L)
PM-02	**OEM / Vendor PM Approach Alignment** The Frame Relay vendor will presumably have their own PMP and their own PM approach. Gartner expects the State to use its overarching PMP (with supporting PM processes, controls, standards and tools) and ensure there is alignment and integration between the State and Vendor methodologies. Based on the observed project behaviors, Gartner expects this will happen and the likelihood of this risk resulting in any issues is unlikely at this time. This risk has been included for completeness and so OEM can ensure this is kept on the radar.	Schedule and Quality: • Limited alignment between the State's and Vendor's project management processes would result in at least schedule delays as well as impacts to quality.	Mitigate: ✧ Establish additional PM control processes and accompanying tools ahead of the Frame Relay Vendor being selected, including but not limited to: ▪ Scope (Requirements) Management Plan ▪ Scope Management tools (e.g. a requirements traceability matrix, this could be given to the Vendor to own) ▪ Change Request Form and Change Control Register to support the change control process in the Project Plan. ✧ Plan to integrate the selected Frame Relay Vendor's PM approach into OEM's at the beginning of the implementation phase, including but not limited to: ▪ Scope (Requirements) Management ▪ Project Communications and Status Reporting ▪ Change Control ▪ Schedule Management and Control ▪ Deliverables Tracking, ▪ Deliverables Acceptance, ▪ Requirements Management and Traceability ▪ Risks and Issues, ▪ Assumptions and Dependencies Management.	L

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Risk Assessment

Assessment Category │ Project Management (continued)

ID	Risk Description	Potential Impacts (Schedule, Scope, Budget, Quality)	Risk Response (Avoid, Transfer, Mitigate, Accept)	Severity (H/M/L)
PM-04	**Schedule Planning & Control** The project schedule doesn't appear to contain a suitable level of detail (tasks) in order to appropriately plan for and effectively manage the anticipated work from task to task. The project team reported that schedule planning involved all stakeholders (e.g. DAS, Procurement, ETS) which is an indicator that the schedule has been validated, however without a more detailed breakdown of work it is difficult to independently validate the feasibility of the project achieving it's milestone dates. The project schedule also doesn't contain any dependencies between tasks ("Predecessors" or "Successors") which makes it difficult to maintain control.	Schedule, Scope and Quality: • Without a more detailed breakdown of work it is difficult to validate the feasibility of the project achieving it's milestone dates. • Determining the impact on the overall schedule of changing the dates of any individual task would be a manual calculation prone to error, presenting risk. • Difficult to validate the feasibility of the project achieving it's milestone dates in the current version of the schedule. • Also, it is difficult to validate the integrity of the schedule (i.e. can the tasks be completed per the duration estimates with the available number of team members).	Mitigate: ✧ Conduct a Schedule Planning exercise in order to develop a more detailed set of activities that can be used to create a more robust schedule. *(Having a more detailed work breakdown detailed in the schedule will also mitigate the risk of the having to transition the project over to another PM, should there be any transition of project personnel during the life of the project).* ✧ Identify Task Dependencies during the recommended Schedule Planning exercise. ✧ Include the identified dependencies in the project schedule as attributes of the appropriate tasks.	L

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IT QA Assessment
Category: Project Parameters

Initial Project Risk Assessment

IT QA Services for OEM Frame Relay Project

State of Oregon, Military Department, Office of Emergency Management (OEM)

Gartner.

BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1220 and 12207 including:**
  - ❑ Current legacy system's platforms (desktops, servers, mainframes, etc.) require little or no upgrade or modification to support the initial deployment of the new solution.
  - ❑ Current legacy system's platforms (desktops, servers, mainframes etc.) require little or no upgrade or modification to support the operational life of the new system.
  - ❑ The solution design is not limited by the current legacy system software, hardware environments or network infrastructure.
  - ❑ The solution's performance is not limited by the current legacy system environment.

**LOW
RISK**
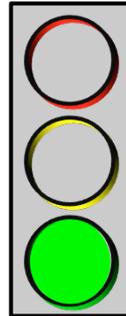
FINDINGS & OBSERVATIONS

- Based on the discussions with the OEM project team and Gartner's review of the available project documentation (see slide 6), no technology constraints have been identified that should influence or impact the project.

- The only potential point that could be considered a constraint is the fact that the existing infrastructure needs to be replaced however this is not something that is expected to unduly influence the design, selection of an appropriate vendor or technology that will be implemented.

RECOMMENDATIONS

- ✧ Once the Frame Relay Vendor has been selected, ask the vendor to perform a review of the current state technology and available background documentation to validate the assumption that no technology constraints exist. If the Vendor does identify any technology constraints:

  - ✧ Document the findings appropriately within the project folder such as, but not limited to: an Assumption within the Assumptions Register and/or a Risk within the Risk Register.

  - ✧ Ask ETS to perform a validation of the Vendor's finding and determine if there are any impacts on the scope or intended design.

BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1220, 12207, 1028 and PMBOK (5th Edition) including:**
  - A process for developing an approximation of the monetary resources needed to complete project activities is in place and has been followed using either an analogous and/or parametric approach.
  - At least the following information from the scope baseline documents has been reviewed in order to determine a cost estimate: Product description; Product deliverables; Work packages; Technical description of work; Acceptance criteria; Assumptions; Constraints.
  - Appropriate contingency has been provided in the overall project budget.
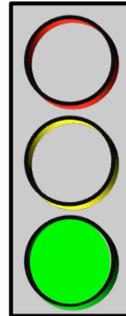
LOW
RISK

FINDINGS & OBSERVATIONS

- No significant risks have been identified at this stage.
- OEM reported that existing service costs were used to estimate the cost initially.
- The project's cost estimates have been further informed by the RFP responses provided by the vendors during the summer of 2015.
- It was noted at the beginning of the project that the Governor's established budget ($500k) and actually approximately $1.5m was needed for implementation cost.
- Additional costs might be required (e.g. depending on whether the State leases or buys certain solution components, such as routers) however the cost could also ultimately be less than current projections.
- The project team has a process by which changes to the cost estimates get documented, reviewed by the project's sponsor and put forward to the Executive Steering Committee for approval.

RECOMMENDATIONS

- ❖ None identified.
- ❖ Please refer to the observations and recommendations within the Budget and Financial Controls Assessment section, slides 49 – 50.

BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1220, 12207 and 1028, including:**
  - A robust budget management process is in place to ensure that costs are managed and reported on a routine basis.
  - A comprehensive budget review process is in place and is being utilized to manage the project budget and cost drivers.
  - A project issue/risk management process is in place and being used to control project costs.
  - Project budget and cost reporting is "transparent" to all key stakeholders.
  - Appropriate contingency has been provided in the overall project budget.
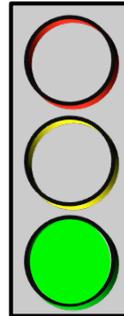
LOW RISK

FINDINGS & OBSERVATIONS

- Budget Management controls have been established in the form of a documented process within the Project Management Plan and a separate Budget Tracker this is maintained on a regular basis by the Project Management Team.
- The cost estimates and spend to date are maintained in a cost spreadsheet / budget tracker as an appendix to the project management plan.
- The project's budget tracker including actuals to date vs. estimated implementation costs.
- Budget related risks/issues are documented through the project's risks/issues management plan and tool(s).
- The project team has a process by which changes to the cost estimates get documented, reviewed by the project's sponsor and put forward to the Executive Steering Committee for approval.

RECOMMENDATIONS

- ♢ None identified.
- ♢ Please refer to the observations and recommendations within the Budget and Financial Controls Assessment section, slides 49 – 50.

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BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1220, 12207 and 1028 including:**
  - A robust project schedule and milestone management and tracking process is in place to ensure that the project schedule and delivery milestone commitments are managed and reported on a routine basis.
  - A comprehensive project schedule and delivery milestone review process is in place and is being utilized to manage the project's delivery commitments.
  - A project issue/risk management process is in place and being used to control delivery commitment items.
  - Project delivery commitments are reported "transparently" to all key stakeholders.
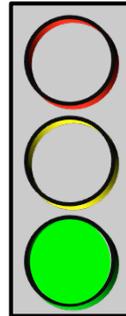
LOW RISK

FINDINGS & OBSERVATIONS

- The project sponsors and executives appear to be appropriately committed to the project given the established governance plan and their attendance at major project events, such as the Executive Steering Committee meetings.

- A project schedule has been developed, it is updated on a regular basis and reviewed regularly with the project sponsor and Executive Steering Committee. However;

- The project schedule doesn't appear to contain a suitable level of detail (tasks) in order to appropriately plan for and effectively manage the anticipated work from task to task.

- Project tolerances have not been established or agreed with with the project's sponsors and Executive Steering Committee. Typical these would be documented in the Project Charter and/or the Project Management Plan.

RECOMMENDATIONS

- Establish project tolerances with the project's sponsors and Executive Steering Committee, such as:
  - Scope tolerances and thresholds
  - Schedule tolerances and thresholds
  - Quality tolerances and thresholds
  - Budget tolerances and thresholds
- Also, please refer to the Schedule Planning and Control recommendations described on slides 52 – 54.

BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1220, 12207 and 1028, including:**
  - ❑ A robust project schedule including milestone management and tracking process is in place to ensure that the project schedule and delivery milestone commitments are managed and reported on a routine basis.
  - ❑ A comprehensive project schedule and delivery milestone review process is in place and is being utilized to manage the project's delivery commitments.
  - ❑ A project issue/risk management process is in place and being used to control delivery commitment items.
  - ❑ Project delivery commitments are reported "transparently" to all key stakeholders.
  - ❑ Appropriate contingency was provided in the schedule.

N/A
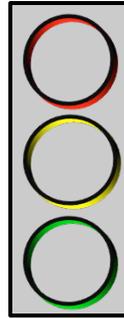
FINDINGS & OBSERVATIONS

- Not applicable at this time, however please refer to the previous Quality Standard, 19: Delivery Commitment.

RECOMMENDATIONS

✧ Not applicable.

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Risk Assessment
Assessment Category │ Project Parameters

ID	Risk Description	Potential Impacts *(Schedule, Scope, Budget, Quality)*	Risk Response *(Avoid, Transfer, Mitigate, Accept)*	Severity (H/M/L)

PP-01	**Project Tolerances**
	
	Project tolerances have not been established or agreed with with the project's sponsors and Executive Steering Committee. Typical these would be documented in the Project Charter and/or the Project Management Plan.
		Schedule, Quality
		
		❖ Establishing project tolerances helps the project make decisions quickly with its executives when exceptions occur
		❖ Predefined tolerances set and help to manage the expectations of the project's sponsors and the Executive Steering Committee
		❖ Without tolerances defined the project views issues as black/white and decisions on scope or schedule can become binary making it difficult to react to and overcome issues in a practical and acceptable way.
			Avoid:
			
			◇ Establish project tolerances with the project's sponsors and Executive Steering Committee, such as:
			   ◇ Scope tolerances and thresholds
			   ◇ Schedule tolerances and thresholds
			   ◇ Quality tolerances and thresholds
			   ◇ Budget tolerances and thresholds
				L

PP-02	**Budget Size** It was noted at the beginning of the project that the Governor's established budget ($500k) and actually approximately $1.5m was needed for implementation cost. Additional costs might be required (e.g. depending on whether the State leases or buys certain solution components, such as routers) however the cost could also ultimately be less than current projections.	Budget: ❖ Additional funding might be required *(however it is understood that additional funding is available, it would simply be a matter of defining the requirement and obtaining approval).*	Mitigate: ◇ The project team has a process by which changes to the cost estimates get documented, reviewed by the project's sponsor and put forward to the Executive Steering Committee for approval. ◇ Continue to follow the established budget management process.	L

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IT QA Assessment
Category: Project Team

Initial Project Risk Assessment

IT QA Services for OEM Frame Relay Project

State of Oregon, Military Department, Office of Emergency Management (OEM)

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BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 12207 and 1028 including:**
  - Project team is getting commitment from management in the form of additional resource and support when necessary.
  - Project team is getting commitment from management in terms of active engagement and resolution of staffing issues.
  - A process is in place for addressing project turnover issues, i.e. people leaving and joining the project (both internal and external resources).

**LOW
RISK**
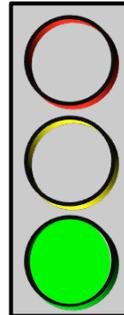
FINDINGS & OBSERVATIONS

- No significant risks have been identified at this stage.
- A full time Project Manager has been put in place by OEM who is dedicated to the project.
- The availability of project executives and stakeholders does not appear to present the project team with any challenges.
- The project's executives understand the importance of the project and the risks to the service if the project is not successful.
- A project staffing plan has not yet been developed however given OEM is sourcing a serviced solution, OEM expect and require the Vendor to develop a staffing plan and resource their implementation team appropriately in order to deliver the project.
- At this stage, based on discussion with OEM, no additional State provided staffing requirements have been identified.

RECOMMENDATIONS

- ✧ Ensure the selected Vendor provides a Staffing Plan and resources their implementation team appropriately.

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BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 12207, 1028 and PMBOK (5th Edition) including:**
  - A team of qualified personnel exists to support the project that has the mix of skills and experience to perform activities such as, but not limited to:
    - Managing the project and PM processes;
    - Representing operational and technical reqs.
    - Examining the suitability of the software product or solution for its intended use;
    - Identifying discrepancies from specifications and standards;
    - Asking questions and making comments about possible errors, violation of development standards, and other problems.
  - A review of the project requirements shall be conducted to establish and make timely provision for acquiring or developing the resources and skills required by the management and technical staff
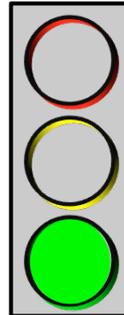
LOW RISK

FINDINGS & OBSERVATIONS

- The OEM project manager appears to be suitably capable and experienced for the scope and complexity of this project.

- The project manager appears to have an appropriate level of support from key personnel within OEM, DAS, ETS and LFO responsible for specific project processes and activities.

- OEM expects and requires the Vendor to develop a staffing plan at the start of the implementation stage and will resource their implementation team appropriately in order to deliver the project.

- OEM has requested resumes for key vendor personnel within the RFP in order to ensure the vendor team has the appropriate level of experience and mix of team skills. This is a sensible approach.

RECOMMENDATIONS

- None.

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BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 12207, 1028 and PMBOK (5th Edition) including:**
  - ❑ Project team personnel have appropriate experience with the areas of technology specific and/or related to the project, such as:
    - ➤ Business analysis and technical / solution design as it relates to communications and networks IT
    - ➤ Public safety communications
    - ➤ 9-1-1 networks and infrastructure
    - ➤ IP networks and related infrastructure
    - ➤ Business continuity and disaster recovery
    - ➤ Geographic Information Systems (GIS) and GeoData
  - ❑ *Note: the "project team" can consist of a mix of OEM, vendor and project stakeholder personnel.*
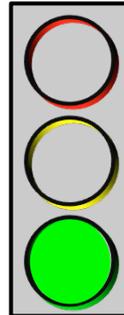
**LOW
RISK**

FINDINGS & OBSERVATIONS

- The OEM project manager appears to be suitably capable and experienced for the scope and complexity of this project, additionally the OEM PM has a background in similar technology projects, such as data centers and related infrastructure.

- The project team reports that the technology experts from ETS have the appropriate background and experience with the related technology.

- Per the previous assessment category (21: Mix of Team Skills), OEM expects and requires the Vendor to develop a staffing plan at the start of the implementation stage and will resource their implementation team appropriately in order to deliver the project.

- OEM should consider requesting resumes for key vendor personnel in order to ensure the vendor team has the appropriate level of experience and mix of team skills.

RECOMMENDATIONS

✧ Please refer to the recommendations in the previous category – 21: Mix of Team Skills.

BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 12207, 1028 and PMBOK (5th Edition) including:**
  - ❑ Project member roles and responsibilities are clearly defined and documented (OEM and vendor).
  - ❑ Project schedule and deliverable milestone dates are clearly defended and documented.
  - ❑ All project milestones dates are being met on-time.
  - ❑ Planed project staffing levels have been adequate to meet project requirements.
  - ❑ Project deliverables are being delivered in compliance with all required quality standards.
  - ❑ There is little or no rework required on project deliverables.
  - ❑ The customers are satisfied with the team's progress and deliverables.
  - ❑ Conflict management techniques are employed when necessary.
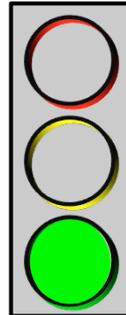
LOW RISK

FINDINGS & OBSERVATIONS

- The project team doesn't have a formal method for measuring project team productivity however the project's productivity can be implied through a combination of existing project control processes. Specifically:

- The project measures its progress against the baseline schedule. Two schedule impacts have been incurred during the life of the Frame Relay project but both have been managed and controlled through the established project governance plan.

- The project monitors and controls its risks and issues through formal control processes and tools.

- The project reports progress against a number of key metrics in the regular status reports. Exceptions regarding major risks and issues or resource constraints are flagged and based on discussions with OEM, these are resolved quickly.

RECOMMENDATIONS

- ✧ In addition to schedule variance reporting (already included in the RFP), consider requiring the vendor to employ the following controls, communicating them through their status reporting, that will help demonstration project team productivity. Including but not limited to:

  - ✧ Risks and issues performance tracking – current volumes and severity, trend reporting, dates opened / dates closed, average closure rates

  - ✧ Deliverable tracking – statuses of each monitoring until the point of acceptance

Risk Assessment
Assessment Category | Project Team

ID	Risk Description	Potential Impacts *(Schedule, Scope, Budget, Quality)*	Risk Response *(Avoid, Transfer, Mitigate, Accept)*	Severity (H/M/L)
PT-01	**Vendor Resources, Skills and Experience** The vendor must provide a team with a suitable mix of skills and experience in order to appropriately and effectively manage the project. For various reasons, such as timing and availability, personnel proposed in a Vendor's proposal are not always eventually provided to the implementation team. The risk of this occurring is expected to be low however for completeness it has been included for tracking purposes.	<u>Schedule, Quality</u> Without a suitable and appropriate mix of team skills and experience the project could incur schedule delays and worse, issues achieving a quality, stable solution that meets the State's requirements.	<u>Mitigate</u> ✧ Ensure the Vendor develops a staffing plan at the start of the implementation stage and will resource their implementation team appropriately in order to deliver the project. ✧ Request resumes for key vendor personnel in order to ensure the vendor team has the appropriate level of experience and mix of team skills.	L

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IT QA Assessment
Category: Organization Management

Initial Project Risk Assessment

IT QA Services for OEM Frame Relay Project

State of Oregon, Military Department, Office of Emergency Management (OEM)

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BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 12207 and 1028 including:**
  - The overall project organization and reporting relationships are well defined and stable.
  - Project member's roles and responsibilities are clearly defined and documented (OEM and vendor) and are stable.
  - Members of the project team know and understand their role in the organization.
  - Members of the project team know and understand the reporting relationships for the project.
  - External influences on the project team are being managed effectively.
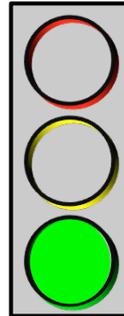
LOW RISK

FINDINGS & OBSERVATIONS

- A new OEM Director has been appointed during the life of the project however
- The former OEM Director is still a member of the Executive Steering Committee.
- The new OEM Director (and new Project Sponsor) has been involved with the project since the beginning and is familiar with the context, scope, objectives and plan.
- A new Adjutant General for OMD has been appointed and is ultimately accountable for the project. The project team hasn't yet conducted a formal briefing with the General however it is understood that the General has is aware of the project through the status reporting process.
- No issues with continuity have been experienced thus far. OEM plan on meeting with the General and providing him with a formal briefing soon.
- Members of the project team know and understand the reporting relationships for the project.

RECOMMENDATIONS

- ✧ No additional recommendations have been identified. Please refer to the recommendations within the following section:
  - ✧ 10: Leadership

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BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with IEEE STD 1028, 1220 and 12207, including:**
  - Open communication is the norm.
  - The project has a transparent decision-making process in place and in use.
  - Documented governance policies and procedures are in place.
  - An executive steering committee has been established and is actively supporting project activities.
  - A stakeholder communication process is in place and being effectively used by the project management team to address and manage political influences.
  - The project manager has authority over all key areas of the project including: budget, staffing, work assignments and resource allocation, contract management, vendor management and quality management.
  - The project manager is the single focal point for the project and is primarily accountable for its success.
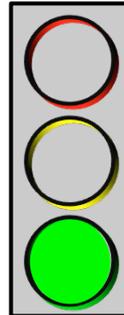
LOW RISK

FINDINGS & OBSERVATIONS

- The Project Management Plan contains a sufficient level of detail about the project organization, membership, roles and responsibilities.

- Roles and responsibilities are defined in the form of a RACI matrix as well as there being narratives explaining major project processes.

- The PMP also contains the project's governance plan and communications plan which both contain a sufficient level of detail.

- OEM, DAS and the project's stakeholders appear to understand their roles and responsibilities. No significant risks or issues have been identified.

- The Project Manager has the expected level of authority over all keys areas of the project, as well as being the primary point of contact and accountability.

RECOMMENDATIONS

- No additional recommendations have been identified. Please refer to the recommendations within the following sections:

  - 11: Project Management Approach

  - 12: Project Management Communications

BEST PRACTICES

- **Activities and processes for this Focus Area are in concert with PMBOK and IEEE STD 1028 and 12207 including:**
  - The project has executive support.
  - Key stakeholders from each affected area (business and IT) have been identified and are part of the overall Project Team.
  - There is a high level of business and end-user involvement on the Project Team.
  - A forum is in place to solicit feedback and to gather information from the user base.
  - Senior management has made themselves available to end-user organizations to explain the changes driving the new system development activities and why they are needed.
  - Key executives from each affected area (business and IT) have been identified and are part of the overall Project Team.
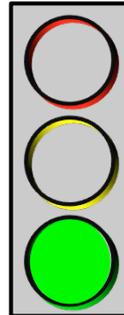
LOW RISK

FINDINGS & OBSERVATIONS

- The Executive Steering Committee membership is defined with the project's governance plan and has been established, meeting on a regular basis.
- The project's Executives and Senior Management appear to be making themselves available to the project team as expected.
- Executive level reporting to the Executive Steering Committee has been established and continues on a regular basis. The reports sent to the Executive Steering Committee appear to contain a sufficient level of detail regarding scope, progress, risks and issues.
- Executives are engaged on a regular basis but also brought together to discuss any important escalations or deviations that need to be addressed quickly (e.g. October's exceptional meeting of the ESC to discuss the RFP schedule)

RECOMMENDATIONS

- ✧ No additional recommendations have been identified. Please refer to the recommendations within the following section:
  - ✧ 12: Project Management Communications

Risk Assessment
Assessment Category │ Organization Management

ID	Risk Description	Potential Impacts *(Schedule, Scope, Budget, Quality)*	Risk Response *(Avoid, Transfer, Mitigate, Accept)*	Severity (H/M/L)
OM-01	**Recent Change in OMD Leadership** A new Adjutant General for OMD has been appointed and is ultimately accountable for the project. The project team hasn't yet conducted a formal briefing with the General however it is understood that the General has is aware of the project through the status reporting process. No issues with continuity have been experienced thus far. OEM plan on meeting with the General and providing him with a formal briefing soon.	Schedule, Scope If the person whom is ultimately accountable for the project is not fully aware of its nature, intended outcomes, scope and plan there is a risk that the schedule and/or scope could be impacted should there be any objections raised at a later date.	Mitigate ✧ Provide the new OMD Adjutant General with a formal project briefing in order to: ▪ Ensure he is suitably briefed and brought up to speed with the project's background, scope, progress, key risks/issues, etc. ▪ Ensure he understands the project's governance structure and communications plan ▪ Ensure he understands his own role and responsibilities within the project organization and governance plan ▪ Identify and manage any risks or issues that his expectations, agendas or perspectives might present the project.	L

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Schedule Assessment
Observations and Recommendations

- Since the previous Risk Assessment conducted on the NG9-1-1 Project, a more detailed project schedule with a PMBOK compliant structure has been developed for the project and is being proactively managed by the OEM project management team.

- A graphic representation of the schedule is also maintained (below) to facilitate communication with the project's stakeholders; this is a useful tool and effective approach.

- Gartner's observations on the project schedule are discussed on the following slides.

- Gartner has reviewed the project schedule considering:
  - Structure
  - Work breakdown
  - Sequencing and dependencies
  - Critical path
  - Resourcing
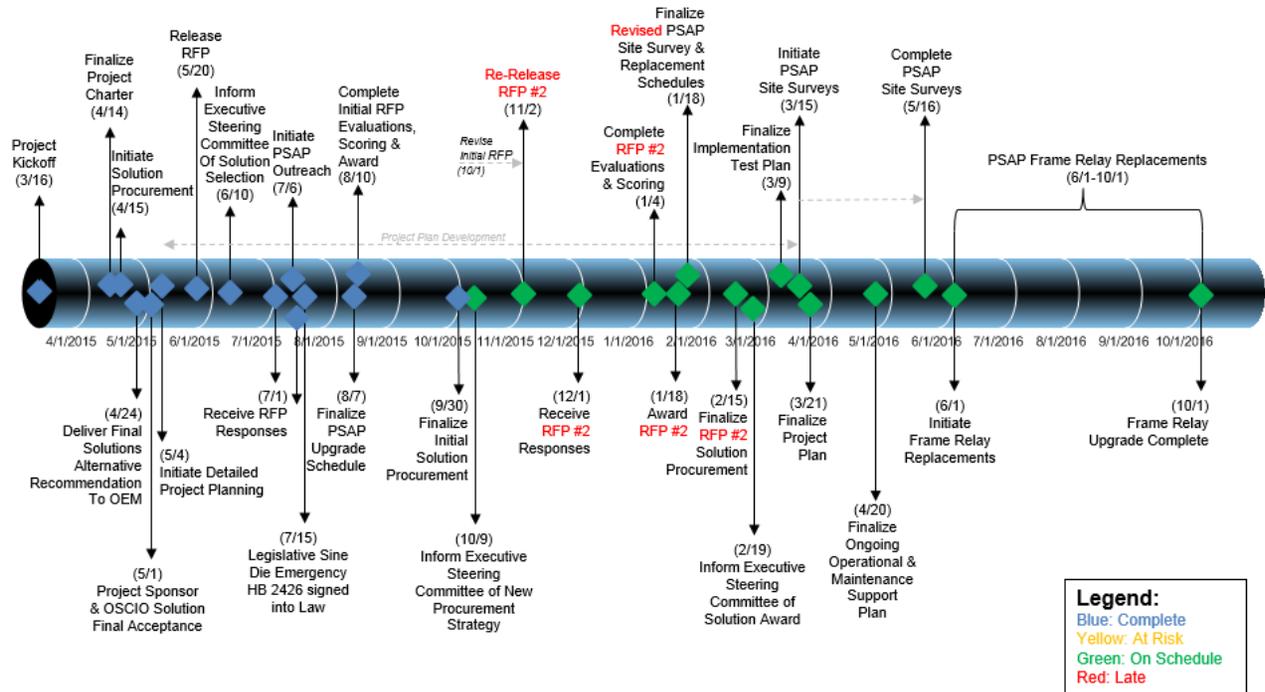
Legend:
Blue: Complete
Yellow: At Risk
Green: On Schedule
Red: Late

Date: 10/1/15

Baseline schedule reference: OEM Frame Relay Project Timeline (Draft – Schedule Re-Baseline 2nd Procurement)

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Schedule Assessment
Observations and Recommendations (continued)

Topic	Observation	Recommendation	Rating
Basic Structure	The project schedule uses the PMBOK process groups to organize the project plan which is an acceptable means of organizing tasks.	Consider moving the "Design / Engineering" group of tasks under "Execution" within the hierarchy and then further expand upon the hierarchy with the implementation lifecycle stages once the vendor is selected.	**Advised (Low Risk)**
		Consider creating separation within the "Execution" grouping into Vendor activities (mile level milestones minimum from the Vendor's schedule when available) and State owned activities.	**Advised (Low Risk)**
Work Breakdown / Level of Detail	The project schedule doesn't appear to contain a suitable level of detail (tasks) in order to appropriately plan for and effectively manage the anticipated work from task to task. The project reported that Schedule Planning involved all stakeholders (e.g. DAS, Procurement, ETS) which is an indicator that the schedule has been validated, however without a more detailed breakdown of work it is difficult to validate the feasibility of the project achieving it's milestone dates.	Conduct a Schedule Planning exercise in order to flush out a more detailed set of activities that can be used to develop a more robust schedule. Having a more detailed work breakdown detailed in the schedule will also mitigate the risk of the having to transition the project over to another PM, should there be any transition of project personnel during the life of the project (none expected currently).	**Advised (Medium Risk)**

Schedule Assessment
Observations and Recommendations (continued)

Topic	Observation	Recommendation	Rating
Dependencies	The project schedule doesn't appear to contain any dependencies between tasks ("Predecessors" or "Successors"). The project team report that non exist at present however dependencies are expected in any project and the team should be prepared to document and manage them as/when they are identified. Without dependencies, it will be extremely difficult for the project to maintain control of the schedule. For example, determining the impact on the overall schedule of changing the dates of any individual task would be a manual calculation prone to error, presenting risk.	Identify Task Dependencies during the recommended Schedule Planning exercise (above).	**Advised (Medium Risk)**
		Include the identified dependencies in the project schedule as attributes of the appropriate tasks.	**Advised (Medium Risk)**
		Consider providing a separate list of dependencies for the major activities to help the reader understand the risk profile. The list of dependencies could include: - Owner of the inbound task (predecessor) - Owner of the outbound task (successor) - Any risk(s) associated with the associated tasks - Any mitigation strategies for ensuring the tasks stay on-schedule.	**Advised (Low Risk)**
Critical Path	The project schedule's critical path has been established in the graphical summary (pipeline) version of the schedule which effectively communicates the key milestones to project stakeholders and executives. Understanding the critical path is a useful input for the project manager's ability to manage and control the schedule.	None.	**N/A**

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Schedule Assessment
Observations and Recommendations (continued)

Topic	Observation	Recommendation	Rating
Resourcing the Schedule	No significant observations to note.	None	**N/A**

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Appendix A: Approach and Methodology Summary

Initial Project Risk Assessment

IT QA Services for OEM Frame Relay Project

State of Oregon, Military Department, Office of Emergency Management (OEM)

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Approach and Methodology Summary
Gartner IT QA Services for Oregon OEM Frame Relay Project

	Task 0 Engagement Initiation & Planning	Task 1 Quality Mgmt Planning	Task 2 Quality Control	Task 3 Quality Assurance	Task 4 Testing	Task 5 Risk Assessment
Gartner Activities	▪ Launch engagement ▪ Conduct project initiation meeting ▪ Finalize approach, plan and schedule ▪ Performing high level stakeholder analysis, confirming the stakeholder landscape, roles and necessary levels of participation ▪ Perform background documentation review	▪ Validate and/or verifying the set of quality standards that are relevant to the Project ▪ Determine how to best satisfy needs ▪ Assess OEM 9-1-1 and statewide policies & standards, and other Project material ▪ Identify / document quality standards and checklists relevant to the Project.	▪ Monitor the Project activities by all participants ▪ Review / assess all relevant Project work products, deliverables project management processes ▪ Review and assess the OEM 9-1-1 and OEM Contractors' work products and deliverables throughout the life of the Project.	▪ Develop key QA reports on an ongoing basis based to provide an independent perspective and assessment of project progress, needs, issues, risks and budget and schedule variance. ▪ The reports provided will be for the duration of the project (36 months).	▪ Support independent testing verification for the project by developing an IV&V Master Test Plan (MTP) ▪ Execute the MTP with associated status reporting, as needed.	▪ Apply best practice risk assessment methodology, as needed, for ongoing risk management. ▪ Gartner's process and risk framework will clearly articulate the project risks and provide actionable, practical mitigation recommendations.
Deliverables	▪ 0.1) Project Initiation Document (PID) ▪ 0.2) Stakeholder Analysis	▪ *Quality Standards – Operational Definitions Report** ▪ *Quality Checklists** ▪ 1.3) Quality Mgmt Plan ▪ 1.4) Baseline Project Plan ▪ *Presentations / Special Requests** ▪ *Lessons Learned Report**	▪ 2.1) Quality Control Reviews ▪ *Security Code Review & Sampling Plan** ▪ 2.3a) Executive Briefing: Quality Status Reporting and Tracking ▪ *Security Process Review & Sampling Plan**	▪ 3.1) QA Status and Improvement Reports / Presentations	▪ *IV&V Master Test Plan (MTP)** ▪ *Test Execution and Status Report**	▪ 5.1) Initial Project Risk Assessment Report ▪ 5.2) Ongoing Risk Notification Reports

*TBD by subsequent task release order or WOC amendment
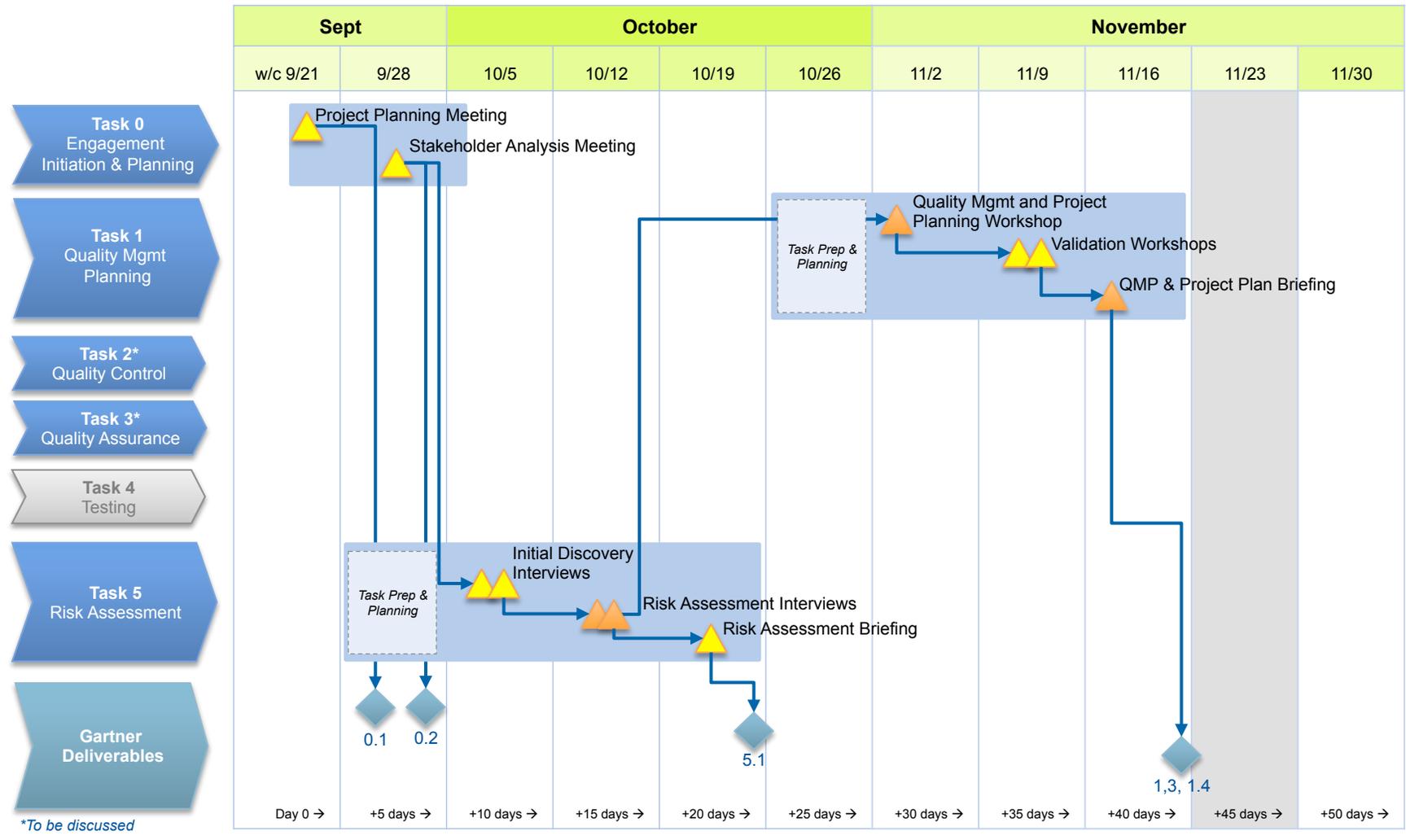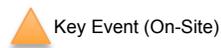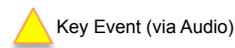
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Approach and Methodology Summary
Gartner IT QA Deliverables

Task 0: Engagement Initiation & Planning

ID	Deliverable	Status	Baseline Date	Proposed Actual Date
0.1	Project Initiation Document (PID)	Optional	N/A – Complimentary Work Product	9/30/2015
0.2	Stakeholder Analysis	Optional	N/A – Complimentary Work Product	10/2/2015

Task 1: Quality Management Planning

ID	Deliverable	Status	Baseline Date	Proposed Actual Date
1.1	Quality Standards – Operational Definitions Report	Optional	TBD by subsequent task release order or WOC amendment	N/A
1.2	Quality Checklists	Optional	TBD by subsequent task release order or WOC amendment	N/A
1.3	Quality Management Plan	Required	Engagement Start + 40 Business Days	11/20/2015
1.4	Baseline Project Plan	Required	Engagement Start + 40 Business Days	11/20/2015
1.5	Internal/External presentations and Special Requests	Optional	TBD by subsequent task release order or WOC amendment	N/A
1.6	Lessons Learned Report – Project Evaluation	Optional	TBD by subsequent task release order or WOC amendment	N/A

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Approach and Methodology Summary
Gartner IT QA Deliverables

Task 2: Quality Control

ID	Deliverable	Status	Baseline Date	Proposed Actual Date
2.1	Quality Control Review • Project Plan Report, Monthly • Requirements, Design Documents and Deliverable Solutions • Data Conversion Plan • System Testing & Acceptance Plans	Optional	Upon request and as agreed upon.	TBD
2.2	*Security Code review and Sampling Plan*	*Optional*	*TBD by subsequent task release order or WOC amendment*	*N/A*
2.3a	Executive Briefing: Quality Status Reporting and Tracking	Optional	Upon request and as agreed upon.	TBD
2.4	*Security Process Review*	*Optional*	*TBD by subsequent task release order or WOC amendment*	*N/A*

Task 3: Quality Assurance

ID	Deliverable	Status	Baseline Date	Proposed Actual Date
3.1	Quarterly QA Status and Improvement Reports/Presentations	Optional	Monthly – as agreed to by the parties	TBD

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Approach and Methodology Summary
Gartner IT QA Deliverables

Task 4: Testing

ID	Deliverable	Status	Baseline Date	Proposed Actual Date
4.1	*IV&V Master Test Plan (MTP)*	*Optional*	*TBD by subsequent task release order or WOC amendment*	*N/A*
4.2	*Test Execution and Status Report*	*Optional*	*TBD by subsequent task release order or WOC amendment*	*N/A*

Task 5: Risk Assessment

ID	Deliverable	Status	Baseline Date	Proposed Actual Date
5.1	Initial Project Risk Assessment Report	Required	Engagement Start + 20 Business Days	10/23/2015
5.2	On-Going Risk Notification Report	Optional	As needed.	Written report three (3) days after verbal notification.

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Approach and Methodology Summary
A Recent Oxford University Study Reports 'Black Swans' are Busting IT Budgets

Key Findings from the Oxford Report Included:

- ✓ IT projects were far more likely to go over budget than other major investments such as construction

- ✓ Technology projects are three times more likely to spiral out of control than construction or other major projects

- ✓ Researchers found that rare but high-impact problems, dubbed "black swans", were often to blame

- ✓ There was a tendency for IT decision-makers to ignore low probability but high-impact risks to project plans
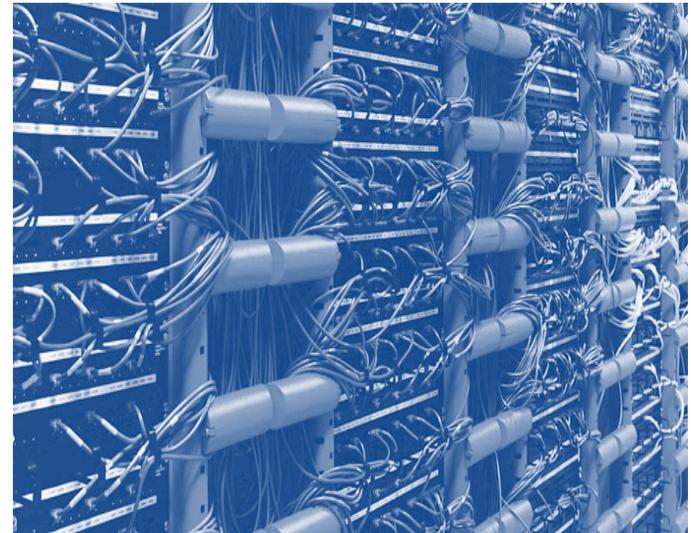
> *"Managers are very likely to run into black swans. They need to be able to identify them and prevent them"* Oxford University Report – August 2011

Approach and Methodology
Strategic Project Management vs. Tactical Issues Management

■ Traditional project management focuses on managing tactical issues, not on the strategic issues that can provide early indicators of a project's failure.

Early Indicators

Mission Requirement

- **No visibility into current status**
- **Lack of common view of "the requirement"**
- **Uninformed trade-off decisions**
- **Architectural changes**
- **Customer resistance**
- **Disputes over testing requirements**
- **Replacement of key personnel**
- **Scope creep**

- **Excessive oversight required**
- **Growing pool of unfunded requirements**
- **Significant contract modifications**
- **Pattern of missed milestones**
- **Ongoing interoperability and security concerns**
- **Multiple "get-well" plans fail to address critical concerns**

- **Critical system failures**
- **Significant cost overruns**
- **Program budget requests challenged or denied**
- **Ongoing contractual disputes**
- **Credibility/competence of service provider questioned**
- **Threats of early termination**
- **Frequent senior executive involvement in issue resolution**

- **GAO/OMB/IG investigations reveal critical management weaknesses**
- **Transfer of program ownership**
- **Early termination of program**
- **Congressional hearings on program failures**

Potential Downstream Impacts

Program Performance

Early Indicators	Serious Symptoms	Critical Conditions	Terminal Consequences

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Approach and Methodology
An Interconnected, Holistic Approach is Key to Success

■ Project activities are interconnected, requiring a holistic view of a project in order to identify risks early and provide time to effectively mitigate their impact.

Framework	Strategize	Plan	Execute	Manage
Project Management	Charter	Project Plan	Controls	Evaluation
Financial Management	Financial Baseline	Business Case	Funding Management	ROI
Performance Management	Performance Baseline	Service Level Requirements	Dashboard Creation	Performance Monitoring
Organizational Management	Skill / Role Assessment	Impact Analysis	Alignment	Staff Optimization
Solution Management	Concept Development	Technical Requirements	Testing and Deployment	Solution Integration
Customer Management	Business Objectives	Functional Requirements	Acceptance	Outcome Evaluation
Change Management	Readiness Assessment	Awareness	Adoption	Reinforcement
Contract Management	Acquisition Strategy	Statement of Work	Compliance	Contract Refresh
Supplier Management	Market Research	Source Selection	Project Team Integration	Relationship Assessment
Foundational Elements	Risk Management			
	Portfolio Management			
	Enterprise Architecture			
	Governance			

Legend:
- Work stream
- Phase
- Cross-Function

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Gartner Focuses on Interdependencies Between PM, IT, and Org Change

■ Gartner's Project Risk Assessment Focuses on the Interdependencies Between Project Management, Technology, and Organizational Change. Our approach is based on best practice risk management methodology and tailored to meet the specific needs of the OEM 9-1-1 project and project team.


Consolidated
Project Reporting

Issue & Risk
Management
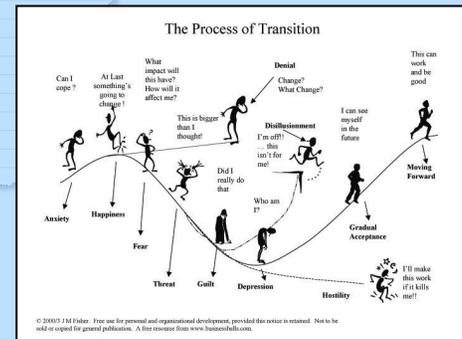
Organizational Change
Management

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Approach and Methodology
IT QA Services Based on Industry Best Practices and Standards

IEEE/EIA 12207.0-1996
(A Joint Standard Developed by IEEE and EIA)

IEEE Standard for Software Verification and Validation

IEEE Guide
Adoption of PMI Standard
A Guide to the Project Management Body of Knowledge
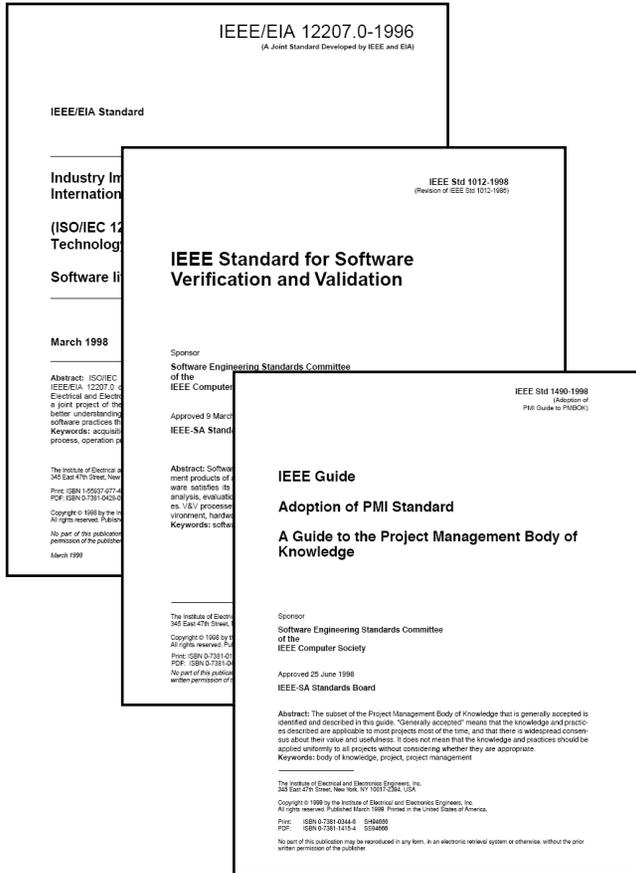
Driven by Gartner Best Practices and Industry Standards

Key Challenge	Findings/Observations
Activities and processes for this Focus Area are in concert with IEEE STD 12207 including: ■ Open communication is the norm. ■ The project has a transparent decision-making process in place and is using it. ■ Documented governance policies and procedures are in place. ■ An executive steering committee has been established and is actively supporting project activities. ■ A stakeholder communication process is in place and being effectively used by the project management team to address and manage political influences.	■ The team continues to maintain a strong management infrastructure (executive steering committee, governance, risk management and quality assurance processes etc.) which is needed to provide the required oversight and transparency to help ensure the project's success. ■ Open communication appears to continue on the project at all levels. All parties are encouraged to provide their assessment and input on any issue. ■ Project management openly addresses all issues in a timely manner.

Recommended Action
■ Continue to foster open communication at all levels of the project management, business unit and executive team levels. ■ Project management should continue to review and assess developed processes and policies and make needed "mid-course" corrections and changes where required or appropriate.

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Appendix C: Quality Assessment Categories and Standards Definitions

Initial Project Risk Assessment

IT QA Services for OEM Frame Relay Project

State of Oregon, Military Department, Office of Emergency Management (OEM)

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Approach
Quality Assessment Categories

- Business Mission and Goal

- Decision Drivers

- Project Management

- Project Parameters

- Project Team

- Organization Management

- Customer / User

- Specification and Design

- Development Process

- Development Environment

- Technology

- Deployment

- Maintenance

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Approach
Quality Standards Summary

Business Mission and Goals			
Quality Standard	**Low Risk Cue**	**Medium Risk Cue**	**High Risk Cues**
Project Fit to Customer Organization (PSAPs)	Directly supports customer organization mission and/or goals	Indirectly impacts one or more goals of customers	Does not support or relate to customer organization mission or goals
Project Fit to Provider Organization (OEM)	Directly supports provider organization mission and/or goals	Indirectly impacts one or more goals of provider	Does not support or relate to provider organization mission or goals
Customer Perception (Public)	Customer expects this organization to provide this product	Organization is working on project in area not expected by customer	Project is mismatch with prior products or services of this organization
Workflow	Little or no change to workflow	Will change some aspect of have small affect on workflow	Significantly changes the workflow of method of organization

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Approach
Quality Standards Summary

Decision Drivers			
Quality Standard	**Low Risk Cue**	**Medium Risk Cue**	**High Risk Cues**
Political Influences	No particular politically driven choices being made	Project has several politically motivated decisions, such as vendor selected for the political reasons, rather than qualification	Project has a variety of political influences or most decisions are made behind closed doors.
Convenient Date	Date for delivery has been set by reasonable project commitment process	Date is being partially driven by need to meet marketing demo, trade show, or other mandate not related to technical estimate	Date is being totally driven by need to meet marketing demo, trade show, or other mandate not related to technical estimate
Short Term Solution	Project meets short term need without serious compromise to long term outlook	Project is focused on short-term solution to a problem, with little understanding of what is needed in the long term	Project team has been explicitly directly to ignore the long term outlook and focus on completing the short term deliverable

*Note: **Quality standards in bold** are the baseline standards. All others have been recommended for inclusion by Gartner to be used as a measure for the project's quality.*

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Project Management

Quality Standard	Low Risk Cue	Medium Risk Cue	High Risk Cues
Definition of the Project	Project is well defined with a scope that is manageable by this organization	Project is well defined but unlikely to be handled by this organization	Project is not well defined or carries conflicting objectives in the scope
Project Objectives	Verifiable project objectives, reasonable objectives	Some project objectives, measures may be questionable	No established project objectives or objectives are not measurable
Leadership	Project has a sponsor	Project has a sponsor reasonable for project but unable to spend enough time to direct effectively	Project has no sponsor or project manager concept is not in use
Project Management Approach	Product and process planning controls in place	Planning and controls need enhancement	Weak or nonexistent planning and controls
Project Management Communication	Clearly communicated goals and status between the team and rest of organization	Communications some of the information some of the time	Rarely communicates clearly to the team or to others who need to be informed of team status

*Note: **Quality standards in bold** are the baseline standards. All others have been recommended for inclusion by Gartner to be used as a measure for the project's quality.*

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Quality Standards Summary

Project Management (continued)			
Quality Standard	**Low Risk Cue**	**Medium Risk Cue**	**High Risk Cues**
Project Manager Authority	Has line management or official authority that enables project leadership effectiveness	Is able to influence those elsewhere in the organization, based on personal relationships	Has little authority from location in the organization structure and little personal power to influence decision making and resources
Support of the Project Manager	Complete support by team and management	Support by most of team with some reservations	No viable support, manager in name only
Risks & Issues Management	Approach, processes and tool(s) established and followed.	Approach, processes and tool(s) established but not followed.	No approach, processes or tool(s) are in place.
Vendor Management	Approach, processes and tool(s) established and followed.	Approach, processes and tool(s) established but not followed.	No approach, processes or tool(s) are in place.
Documentation / Configuration Management	Approach, processes and tool(s) established and followed.	Approach, processes and tool(s) established but not followed.	No approach, processes or tool(s) are in place.

*Note: **Quality standards in bold** are the baseline standards. All others have been recommended for inclusion by Gartner to be used as a measure for the project's quality.*

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Quality Standards Summary

Project Parameters			
Quality Standard	**Low Risk Cue**	**Medium Risk Cue**	**High Risk Cues**
Technology Constraints	Little or no technology-imposed constraints or single platform	Some technology-imposed constraints, several platforms	Significant technology-imposed constraints, multiple platforms
Budget Size	Sufficient budget allocated	Questionable budget allocated	Doubtful budget
Budget Management (Cost Controls)	Well established process / controls, in place	Process / controls in place, weak in areas	Process / controls lacking or nonexistent
Delivery Commitment	Stable commitment dates	Some uncertain commitments	Unstable, fluctuating commitments
Development Schedule	Project team and vendor(s) agree that schedule is acceptable and can be met	Project team and vendor(s) agree finds one phase of the plan to have a schedule that is too aggressive	Project team and vendor(s) agree that two or more phases of schedule are unlikely to be met

*Note: **Quality standards in bold** are the baseline standards. All others have been recommended for inclusion by Gartner to be used as a measure for the project's quality.*

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Quality Standards Operational Definitions Report Approach Quality Standards Summary

Project Team			
Quality Standard	**Low Risk Cue**	**Medium Risk Cue**	**High Risk Cues**
Team Member Availability (OEM, RCC, NG9-1-1 Vendor)	In place, little turnover expected, few interrupts for resolving of tactical issues	Available, some turnover expected, some resolving of tactical issues	High turnover, not available, team spends most of time resolving tactical issues
Mix of Team Skills (OEM, RCC, NG9-1-1 Vendor)	Good mix of disciplines	Some disciplines inadequately represented	Some disciplines not represented at all
Experience with Technology (OEM, RCC, NG9-1-1 Vendor)	High experience	Average experience	Low experience
Project Team Productivity (OEM, RCC, NG9-1-1 Vendor)	All milestones met, deliverables on time, productivity high	Milestones met, some delays in deliverables, productivity acceptable	Productivity low, milestones not met, delays in deliverables

*Note: **Quality standards in bold** are the baseline standards. All others have been recommended for inclusion by Gartner to be used as a measure for the project's quality.*

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Organization Management

Quality Standard	Low Risk Cue	Medium Risk Cue	High Risk Cues
Organizational Stability (OEM, DAS, OMD, PSAPs)	Little or no change in management or structure expected	Some management change or reorganizational expected	Management or organization structure is continually or rapidly changing
Project Organizational Roles and Responsibilities (OEM, DAS, OMD, PSAPs)	Individuals throughout the project organization understand their own roles and responsibilities and those of others	Individuals understand their own roles and responsibilities, but are unsure who is responsible for work outside their immediate group	Many in the project organization are unsure or unaware of who is responsible for many of the activities of the project organization
Executive Involvement (Executive Steering Committee)	Visible and strong support	Occasional support, provides help on issues when asked	No visible support, no help on unresolved issues

*Note: **Quality standards in bold** are the baseline standards. All others have been recommended for inclusion by Gartner to be used as a measure for the project's quality.*

Approach
Quality Standards Summary

Customer / User			
Quality Standard	**Low Risk Cue**	**Medium Risk Cue**	**High Risk Cues**
User Involvement	Users highly involved with project team, provide significant input	Users play minor roles, moderate impact on system / solution	Minimal or no user involvement, little user input
User Acceptance	Users accept concepts and details of system / solution, process is in place for user approvals	Users accept of most of concepts and details of system / solution, process in place for user approvals	Users do not accept any concepts or design details of system / solution

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Specification and Design

Quality Standard	Low Risk Cue	Medium Risk Cue	High Risk Cues
Requirements Management (Requirements Complete & Clear)	All complexity specified and clearly written	Some requirements incomplete or unclear	Some requirements only in the head of the customer
Testability	Solution requirements easy to test, plans underway	Parts of solution hard to test, or minimal planning being done	Most of solution hard to test, or no test plans being made
Implementation Difficulty	Solution design are reasonable for this team to implement	Solution design have elements somewhat difficult for this team to implement	Solution design have components this this team will find very difficult implement
Solution Dependencies	Clearly defined dependencies of the solution effort and component systems	Some elements of the solution are well understood and planned; others are not yet comprehended	No clear plan or schedule for how the whole solution will come together

*Note: **Quality standards in bold** are the baseline standards. All others have been recommended for inclusion by Gartner to be used as a measure for the project's quality.*

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Development Process

Quality Standard	Low Risk Cue	Medium Risk Cue	High Risk Cues
Quality Assurance Approach (OEM, RCC, NG9-1-1 Vendor)	QA system established, followed, effective	Procedures established but not well followed or effective	No QA process or established procedures
Development Documentation	Correct and available	Some deficiencies but available	None existent
Solution Issues (Defects / Faults / Failures) Tracking	Issues tracking defined, consistent, effective	Issues tracking process defined, but inconsistently used	No process in place to track issues
Lessons Learned	Lessons learned and improvements made at milestones or phases	Lessons learned conducted, improvements not incorporated	No lessons learned conducted, improvements not incorporated
Development Methodology (Solution Development / Engineering)	Development methodology well established, in place and being followed by the team	Development methodology in place, but not followed or it is ineffective	Development methodology nonexistent

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Approach
Quality Standards Summary

Development Environment			
Quality Standard	**Low Risk Cue**	**Medium Risk Cue**	**High Risk Cues**
Physical Facilities	Little or no modification needed	Some modifications needed, some existent	Major modifications needed or facilities nonexistent
Hardware Platform	Stable, no changes expected, capacity is sufficient	Some changes under evolution, but controlled	Platform under development along with software
Tools Availability	In place, documented, validated	Available, validated, some development needed (or minimal documentation)	Not validated, proprietary or major development needed, no documentation

*Note: **Quality standards in bold** are the baseline standards. All others have been recommended for inclusion by Gartner to be used as a measure for the project's quality.*

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Approach
Quality Standards Summary

Technology			
Quality Standard	**Low Risk Cue**	**Medium Risk Cue**	**High Risk Cues**
Technology Experience of Project Team	Good level of experience with related technology	Some experience with related technology	No experience with related technology
Availability of Technology Expertise	Technology support and experts readily available	Experts available elsewhere in organization of OEM and/or Vendors	Will need to acquire help from outside the organization of OEM and/or Vendors
Maturity of Technology	Technology has been in use by the project participates for quite some time (PSAPs, OEM, Vendors)	Technology is well understood in the industry and by project participants (PSAPs, OEM, Vendors)	Technology is leading edge, if not "bleeding edge" in nature

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Approach
Quality Standards Summary

Deployment			
Quality Standard	**Low Risk Cue**	**Medium Risk Cue**	**High Risk Cues**
Technology Resources	Mature, growth capacity in solution, flexible	Available, some growth capacity	No growth capacity, inflexible
Response or other Performance Factors	Readily fits boundaries needed, analysis has been done	Operates occasionally at boundaries	Operates continuously at boundary levels
Customer Service Impact (PSAPs, OEM)	Requires little change to customer service	Requires minor changes to customer service	Requires major changes to customer service approach or offerings
Data Migration Required	Little or no data to migrate	Much data to migrate, but good descriptions available of structure and use	Much data to migrate; several types of databases or no good descriptions of what is where
Deployment Approach	Clearly defined approach with agreed to timeline, roles and responsibilities	Ambiguities exist, approach is not fully defined and/or roles and responsibilities unclear	No approach defined or defined approach not being followed
External Interfaces	Little or no external integration or interfaces needed	Some external integration or interfaces needed	Extensive external interfaces required

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Quality Standards Summary

Maintenance			
Quality Standard	**Low Risk Cue**	**Medium Risk Cue**	**High Risk Cues**
Solution Complexity	Structurally maintainable (low complexity measured or projected)	Certain aspects difficult to maintain (medium complexity)	Extreme difficulty to maintain (high complexity)
Support Personnel (OEM, NG9-1-1 Vendor)	In place, experienced, sufficient in number	Missing some areas of expertise	Significant discipline or expertise missing
Vendor Support	Complete support at reasonable price and in needed time frame	Adequate support at contracted price, reasonable response time	Little or no support, high cost, and/or poor response time
Support Model	Support model is well defined and support agreements are in place between all relevant parties (PSAPs, OEM, Vendors where relevant)	Certain aspects of support are defined with limited support processes and agreements in place	Support model is undefined and no support agreements are in place

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