

## Tallahassee CAD Risk Assessment Report

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The City Tallahassee, Leon County and the Leon County Sheriff's Office  
Computer Aided Dispatch Risk Assessment  
Gartner Consulting



August 6, 2015

### GARTNER CONSULTING

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## Section 1: Executive Summary

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Tallahassee CAD Risk Assessment Report  
Gartner Consulting

## Executive Summary

### Background and Context

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- Emergency call taking and public safety dispatching services are provided to the City of Tallahassee, Leon County and the Leon County Sheriff's Office (the Client) by the Consolidated Dispatch Agency (CDA), a jointly controlled independent entity.
- As part of the consolidation of services to the CDA, the Client engaged Motorola to upgrade the existing City of Tallahassee Computer Aided Dispatch (CAD) system with Motorola's new PremierOne™ CAD product in order to support call taking and dispatch operations for all of the agencies served by the CDA. That new system went live September 17, 2013 with the opening of the CDA.
- Since its implementation stakeholders have become increasingly concerned about the CAD system stability, performance and missing functionality. The Client now seeks an independent and objective assessment of the new CAD system and these concerns.
- Gartner conducted its assessment using a Gartner program risk assessment model based on Gartner research and industry best practice. The Gartner team conducting the assessment has extensive industry experience, operational expertise and technical knowledge of CAD systems.
- Gartner's findings and recommendations are presented in this report along with a description of the assessment process that was used.

## Executive Summary

### Gartner Approach

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- Gartner's risk assessment examined the following nine program risk categories:

A. Performance	D. Requirements	G. Client Support
B. Vendor Support	E. Governance	H. Training
C. Scope	F. Testing	I. Infrastructure

To complete this assessment, Gartner considered information from the following sources:

- Interviews with approximately 35 executives, sponsors and stakeholders / users
- The review of approximately 85 client provided files and documents
- Telephone interviews with Motorola
- Telephone and email interviews with other agencies using PremierOne™ CAD
- Telephone interviews with three other CAD vendors, besides Motorola
- The experience and expertise of Gartner's subject matter experts

Gartner conducted an independent assessment using an objective process, Gartner Research and the experience of industry experts. Our recommendations were formed based on the key findings of our assessment and priorities provided by the Client.

## Executive Summary

### Assessment Overview by Category

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#### A. Performance

**Risk Rating: Major**

The CAD system is mostly performing at an acceptable level and able to support CDA call taking and dispatch operations. While there was a clear history of instability during the first twelve months of operation, performance has been improving. Since January 2015 there have been two full system outages attributable to Motorola, resulting in a total of approximately sixteen minutes of system downtime. Reliability of individual CAD workstations and mobile computers continues to be an issue as unexplained workstation outages persist and efforts to resolve them have been inconclusive. The Client and Motorola have not agreed to what constitutes acceptable system performance or how performance will be measured resulting in differing perspectives of how stable the system actually is and very little progress towards building trust or user confidence.

#### B. Vendor Maintenance / Management

**Risk Rating: Moderate**

Support roles and responsibilities between the City and Motorola are not clearly defined making it difficult to assign accountability for the identification and resolution of problems. The Client and Motorola often do not agree on severity, frequency, root cause and resolution for open issues, including those that continue to disrupt the operation. The process used to track issues is inadequate for a mission-critical system of this type and complexity and both the Client and Motorola are inconsistent in how issues are tracked making it difficult to accurately assess the nature and severity of current system problems.

#### C. Scope Management

**Risk Rating: Moderate**

The process that the Client and Motorola followed to define project scope and implement the CAD system was inadequate for a project of this size and complexity resulting in misaligned expectations of how the system would be delivered, tested and accepted.

## Executive Summary

### Assessment Overview by Category

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#### D. Requirements

**Risk Rating: Moderate**

The process that the Client and Motorola followed to define and validate requirements was inadequate for a project of this size, complexity and considering the number of new stakeholders resulting in misaligned expectations of what functions the system would perform. The functional differences or gaps between the new system and the previous system were not well documented or understood, until after the system was delivered. The system was accepted without all of the user requirements being clearly defined, leaving major differences in how functions used to be performed and in some cases leaving users without expected functionality.

#### E. Governance

**Risk Rating: Minor**

The decision making and executive leadership structure is complex in that it involves several stakeholder groups, each with their own priorities. However, the CDA Board, made up of the City Executive, County Executive and Sheriff provides a consistent structure for overall executive direction and decision making. The governance structure includes input from stakeholders and provides for regular communications through the technical and operational sub-committees and workgroups.

#### F. Testing

**Risk Rating: Moderate**

The testing process followed by the Client and Motorola was inadequate for a project of this size and complexity. Users were unable to identify functional gaps before go-live and system errors causing instability were introduced into the production environment due to inadequate testing. Minimum system performance baselines were not established and simulated system performance testing under load was not performed, resulting in periods of instability in production that were unexplained and unexpected.

## Executive Summary

### Assessment Overview by Category

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#### **G. Client Support**

**Risk Rating: Moderate**

The City is responsible for managing the support of the CAD system on behalf of the Client, which includes overseeing Motorola and fulfilling specific obligations for supporting workstations, mobile devices and the telecommunications network that CAD relies on. The previous CAD system was largely supported by Motorola and required minimal involvement from City staff. However, the new system's larger scope and new technology platform requires the City to provide a higher level of both support management and hands-on technical expertise. While the Sheriff's Office provides an additional support resource to the CDA and the City's recent hiring of an additional dedicated technical resource have helped, in practice the City does not have sufficient resources to fulfill its support responsibilities.

#### **H. Training**

**Risk Rating: Moderate**

End-user training of the CAD system operations was adequately provided. However, the Client has not received adequate system administration training or documentation which has made it more difficult for the Client to fulfill its support and system administration responsibilities.

#### **I. Infrastructure**

**Risk Rating: Moderate**

Support responsibilities for the system infrastructure are shared between the City and Motorola. Motorola is responsible for major system components such as servers, database and storage and the City is responsible for the support of end-user devices and the telecommunications network. This shared responsibility has made troubleshooting problems more difficult. For example, recent mobile workstation outages have been difficult to diagnose and seem to indicate more systemic problems with overall network stability and to date the City and Motorola are unable to definitively rule-out network related causes.

## Executive Summary

### Overall Risk Assessment

#### Overall Risk Assessment

**Risk Rating: Moderate**

- Gartner's conclusion is that the overall program risk rating is Moderate. There are sufficient risks that should concern the CDA Board if left unaddressed. Specifically, users confidence in system stability and the periodic, unexplained disruption of individual CAD workstations have the potential to threaten public and officer safety should they occur while users are performing critical job functions.
- The CAD system is mostly performing at an acceptable level and able to support CDA call taking and dispatch operations. However roles and responsibilities for both the City and Motorola are not adequately defined for a system of this nature, size and complexity making it difficult to ensure the proper level of response and accountability for problem root cause identification and resolution. Motorola's proposed support and maintenance agreement does not include sufficient requirements for minimally acceptable system availability, performance or service responsiveness and the City needs to commit additional dedicated personnel in order to fulfill its support obligations. When combined, these issues have caused system performance and support expectations to be misaligned and have damaged the trust and working relationship between the Client and Motorola.
- The CDA Board, agency executives and the public are fatigued by the potential risks to public safety and the amount of time and money spent addressing a variety of serious issues surrounding the CAD system performance since go-live. Inability to agree on the actual health of the system and how acceptable system performance can be achieved has left very little tolerance for any continued efforts that do not result in swift, specific and definitive accountability for ensuring that the CDA has a stable, functional and well performing CAD system.

## Executive Summary

### Recommendation Considerations

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In making its recommendations Gartner considered the following:

- The interest of public and officer safety above all other factors
- The Client's direction that cost and time should not limit the alternatives considered
- The Client's direction that Gartner's recommendation must be to either keep or replace the Motorola CAD system based on the information available today
- Gartner's independent review and assessment of trouble tickets since go-live
- Interviews with Client executives and key stakeholders
- Review of project artifacts, documentation and contracts
- Interviews with representatives from Motorola
- Interviews with other agencies, as provided by Motorola, using the same system
- Interviews with other CAD system vendors
- The Gartner team's industry experience and expertise
- Gartner's independent research and best practices

## Executive Summary

### Recommendations

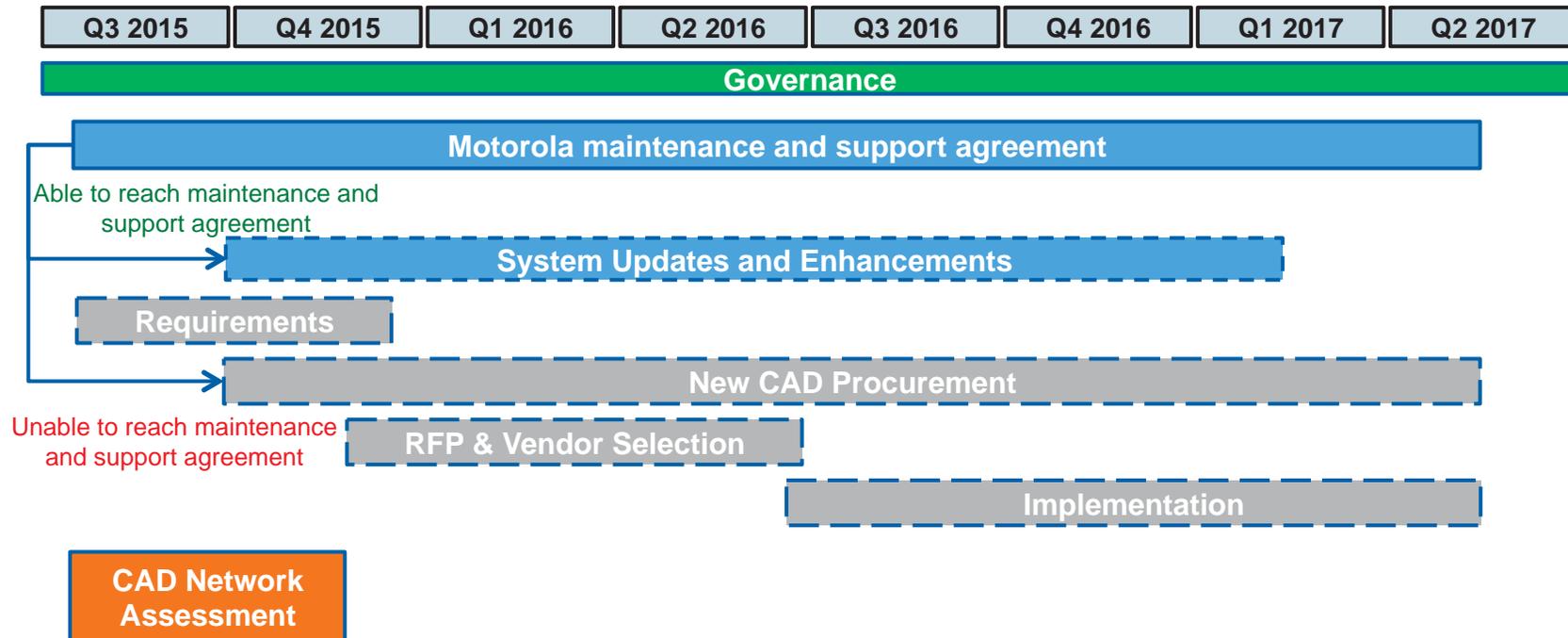
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Considering these factors, Gartner recommends the following:

- The Client should continue its relationship with Motorola only if able to execute a maintenance and support agreement that includes specific system performance and service level requirements with associated financial incentives using the guidelines provided in Gartner's report.
- If the Client and Motorola are unable to reach agreement on a revised maintenance and support agreement, then the Client should continue with Motorola under the proposed maintenance and support agreement and immediately begin the process to find a suitable replacement system using a market-based competitive bid process.
- The Client should seek an outside, independent assessment of the City and County network infrastructure that supports CAD system users including the CDA local area network, the City and County wide-area network and the mobile radio / commercial carrier network infrastructure to identify and resolve any outstanding network performance issues.
- Gartner has identified several other factors that have contributed to the Clients inability to resolve issues surrounding the CAD system such as the Client's role in system support, scope, requirements and vendor management. Gartner's report includes 37 total recommendations that the CDA Board should also consider in order to improve overall system performance and ensure future success.

# Executive Summary

## Recommendation Roadmap



## Executive Summary

### Recommendation Summary

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#### A. Performance Recommendations (5)

**A1.** The Client should define minimally acceptable system performance criteria using the guidelines provided in this report. These should be used to monitor and measure system performance and incorporated into the Motorola maintenance and support agreement.

**A2.** The Client should monitor system performance against the minimally acceptable system performance criteria for a period of 90-days to establish a baseline of stable system performance.

**A3.** The Client should follow the Motorola recommended workstation and server maintenance schedule of weekly workstation reboots, monthly application server reboots and quarterly database server reboots.

**A4.** The Client should report all system performance related issues, including each occurrence of CAD or mobile workstation errors and any system-wide performance issues to Motorola in order to properly document the nature, frequency and severity of issues and to assist in the identification of root cause.

**A5.** The Client should work with Motorola to create a test environment able to simulate production level system loads. The Client should require Motorola to conduct a performance test baseline simulating full production load as part of any major version upgrade before it is released into production.

## Executive Summary

### Recommendation Summary

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#### B. Vendor Maintenance and Management Recommendations (6)

**B1.** The Client should continue with Motorola only if the Client is able to execute a maintenance and support agreement that defines specific system performance and service level requirements and has associated financial incentives using the guidelines provided in this section of Gartner's report.

**B2.** If the Client and Motorola are unable to agree on a suitable maintenance and support agreement, then the Client should continue with Motorola using a standard maintenance and support agreement and immediately begin the process to find a suitable replacement system using a market-based competitive bid process.

**B3.** The City and Motorola should follow an agreed upon process for creating, documenting and managing support tickets using standardized severity level definitions and escalation policies.

**B4.** The City and Motorola should institute daily teleconference calls to review open priority issues and develop a transparent and trusting way to communicate findings and actions taken when troubleshooting issues.

**B5.** The City should assign a dedicated CAD support manager with no other duties besides the management of the CAD system support. The CAD support manager should be assigned to work at the CDA and be responsible for tracking and reporting of all CAD issues.

**B6.** The Client should require Motorola to complete System Administration training as a condition of signing any maintenance and support agreement.

## Executive Summary

### Recommendation Summary

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#### C. Scope Management (5)

**C1:** The City and Motorola should follow a consistent process for defining, prioritizing and tracking open work including issue resolution, maintenance update and enhancements.

**C2:** The City and Motorola should agree on specific tasks and timelines for each open issue and report progress regularly.

**C3:** The City and Motorola should agree on an issue escalation process that clearly defines how and when issues are reported and escalated and to whom, including both Motorola and the Client stakeholders.

**C4:** The City should use a more formal and structured scope management process for large, complex IT projects to set and manage expectations of both system stakeholders and vendors.

**C5:** Any future major system enhancements, upgrades or new system implementations should include a detailed Statement of Work that includes scope, schedule, deliverables and acceptance criteria.

## Executive Summary

### Recommendation Summary

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#### D. Requirements Management (3)

**D1.** The Client should develop a full set of high-level, outcome-objective based CAD requirements using business owner representatives. These requirements will help to identify actual critical gaps in functionality and can be used to either scope enhancement requests for Motorola or a baseline for any future system procurement.

**D2.** The Client should define observable acceptance criteria for any enhancements or future system deliverables so that clear traceability between the requirement and the delivered software can be maintained.

**D3.** The Client should prioritize requirements so that system functionality can be delivered incrementally as budget allows.

## Executive Summary

### Recommendation Summary

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#### F. User Acceptance Testing (4)

**F1:** The Client should create a test environment where full system load testing can be performed using automated tools. Each new release should be fully load tested and tested for expected error conditions under load before being released to production.

**F2:** The Client should create a comprehensive regression test plan for all new releases and where possible automate the regression test using testing tools. The regression test should be periodically reviewed and updated to ensure that the appropriate level of testing is performed on each new release.

**F3:** The Client should share the regression tests with Motorola and request that Motorola follow the same regression tests before providing new releases to the Client for testing and should not accept any releases that have not been fully regression tested.

**F4:** The Client should continue to carefully track regression test errors to improve the quality of each version release.

## Executive Summary

### Recommendation Summary

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#### G. Client Support (8)

**G1:** The City should provide a more 'hands-on' and in-depth level of technical system support including system administration and the ability to conduct technical diagnostics and trouble identification (support Level 2 / 3).

**G2:** The City should assign a dedicated CAD support manager who has no other duties besides the management of CAD system support. The CAD support manager should be assigned to work at the CDA and be responsible for the accurate tracking and reporting of all CAD issues.

**G3:** The CAD support manager should work with the CDA, Client stakeholders and Motorola to create and track key support performance metrics for both the City and Motorola, and report support performance against those metrics regularly to the CDA Board.

**G4:** The City should provide centralized provisioning support, including the identification and tracking of all provisioning tasks and requests through its help desk system. Centralized provisioning should be accountable for all provisioning requests, and support end-users who may have provisioning responsibility.

**G5:** The City should support centralized management reporting, including the organization of a representative group of stakeholders to cooperatively define data element definitions and the structure and use of standardized reports.

**G6:** The City should provide additional dedicated support resources, particularly for network infrastructure and system administration, who can aid in the identification, diagnosis and resolution of outstanding issues.

## Executive Summary

### Recommendation Summary

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#### G. Client Support (8)

**G7:** The City should develop standardized infrastructure health ‘checklists’ used to identify and validate the health and condition of critical infrastructure components for which it is responsible and provide them as part of routine troubleshooting.

**G8:** The CDA Board should establish support level expectations for the City that include regular reporting of system health against established system performance criteria and clear escalation and notification of priority issues.

## Executive Summary

### Recommendation Summary

Role	Responsibility	Current	Recommended
CAD Support Manager	<ul style="list-style-type: none"> <li>Overseeing all CAD support</li> <li>Reporting against support level metrics</li> </ul>	0	1 full time (+1)
CAD Administrator	<ul style="list-style-type: none"> <li>Centrally managing provisioning</li> <li>Centrally managing reporting</li> </ul>	1 full time	2 full time (+1)
Subject Matter Expert (SME)	<ul style="list-style-type: none"> <li>Providing business rules</li> <li>End user testing</li> </ul>	As needed	As needed
System Administrator	<ul style="list-style-type: none"> <li>Hardware infrastructure configuration, support and monitoring</li> <li>System troubleshooting, technical support</li> </ul>	1 full time	1 full time (no change)
Database Administrator	<ul style="list-style-type: none"> <li>Database support and monitoring</li> </ul>	0	1 part time (+1)
Network Administrator	<ul style="list-style-type: none"> <li>Network support and monitoring</li> </ul>	0	1 part time (+1)
Graphical Information Systems (GIS) Administrator	<ul style="list-style-type: none"> <li>Map database updates and maintenance</li> </ul>	1 full time	1 full time (no change)

## Executive Summary

### Recommendation Summary

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#### H. Training (2)

**H1:** The Client should require Motorola to complete System Administration training and provide required documentation.

**H2:** The Client should continue to enhance the Motorola provided training materials making them more specific to and useful for the CDA, where appropriate.

## Executive Summary

### Recommendation Summary

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#### I. Infrastructure (4)

**I1:** The City should invest in and deploy the necessary tools required to actively monitor and troubleshoot the complete end-to-end CAD network performance and connectivity, including the LAN, WAN and RadiolP. The tools should be deployed with sufficient coverage to provide visibility of the complete health and condition of the network from CAD servers to / from any end user device.

**I2:** The City should hire an outside, independent network specialist to assess the current network design and performance across all public safety systems and aid in the identification of potential problems and in the development of a network monitoring program.

**I3:** The City should assign a single Network Support Administrator to be accountable for the maintenance and support of the CAD network.

**I4:** The City should work to create a network health checklist that can be used to definitively establish the health of the network at any given time, and in particular when issues of slowness or connectivity are reported. This should include both observable connectivity tests as well as reports from network monitoring tools before, during and after the time issues are reported.

## Section 2: Findings and Recommendations

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Tallahassee CAD Risk Assessment Report  
Gartner Consulting

# Assessment Overview

## Assessment Approach

	Task 1 Initiation and Project Management	Task 2 Discovery	Task 3 Assessment	Task 3A Market Assessment	Task 4 Final CAD Assessment Report
	Week 1	Weeks 2-4	Weeks 5-6	Weeks 5-6	Weeks 7-8
<b>Activities</b>	<ul style="list-style-type: none"> <li>Launch project</li> <li>Conduct project initiation meeting</li> <li>Finalize approach, plan and schedule</li> <li>Confirm stakeholder landscape</li> <li>Confirm project governance and communications plan</li> <li>Identify and collect background documentation</li> <li>Distribute Project Status Reports prior to Weekly Project Status Meetings</li> </ul>	<ul style="list-style-type: none"> <li>Review existing background information and data</li> <li>Tailor the Gartner IT Project Assessment framework for the specific needs and dynamics of the client organization</li> <li>Conduct up to 10 interviews with key stakeholders, operations and technical teams, users, and vendors.</li> <li>Conduct operational tours</li> <li>Document observations and findings.</li> <li>Conduct current state findings briefing to validate data collected and conclusions</li> </ul>	<ul style="list-style-type: none"> <li>Perform analysis of findings</li> <li>Conduct follow up interviews, as needed</li> <li>Build out assessment profiles and risk scoring for each assessment category</li> <li>Develop summary recommendations</li> <li>Prepare Assessment Workshop</li> <li>Conduct Assessment Workshop</li> </ul>	<ul style="list-style-type: none"> <li>Conduct functional market assessment</li> <li>Conduct peer agency functional assessment</li> <li>Summarize findings and conclusions</li> <li>Present findings and conclusions to project team</li> </ul>	<ul style="list-style-type: none"> <li>Revise the recommendations and remediation/mitigation based on input from the Assessment Workshop</li> <li>Develop summary roadmap for implementation of recommendations</li> <li>Develop final Assessment Report</li> <li>Prepare Executive Briefing</li> <li>Deliver Executive Briefing</li> </ul>
<b>Deliverables</b>	<ul style="list-style-type: none"> <li>Project Initiation Document (PID); communications plan and final schedule</li> <li>Site visit &amp; interview schedule</li> <li>Status Report (Weekly)</li> </ul>	<ul style="list-style-type: none"> <li>Current State Findings and Initial Observations</li> <li>Findings Workshop</li> </ul>	<ul style="list-style-type: none"> <li>Assessment and Recommendations</li> <li>Assessment Workshop</li> </ul>	<ul style="list-style-type: none"> <li>Findings Summary (included in Step 3 deliverable)</li> </ul>	<ul style="list-style-type: none"> <li>Final CAD Assessment Report</li> <li>Executive Briefing</li> </ul>

**Consolidated Steps\***

\* Gartner's original eight week work plan was condensed into five and a half weeks in order to accommodate the Client's Board meeting deadlines. This consolidation of the schedule was agreed to by the client and Gartner and Tasks 2, 3 and 3A were combined with no interim deliverables.

## Assessment Overview

### Assessment Categories

- The Gartner Risk Assessment Framework includes over 50 assessment categories across four project stages
- For this assessment Gartner focused on **nine** categories, highlighted below, selected based on the assessment objectives
- To assess each category, Gartner conducted interviews and document reviews\* and has provided detailed findings in each area



\* See Appendix for listing of interviews and documents reviewed.

## Assessment Overview

### Assessment Category Descriptions

Risk Category	Definition
<b>A. Performance</b>	Assessment of the overall system performance and stability. Vendor and Client's ability to effectively monitor and maintain reliable system performance and work together to address system performance issues.
<b>B. Vendor Support</b>	Assessment of the vendor's role in supporting the system; the definition of roles and responsibilities and support expectations; the vendors ability to support the system within the agreed upon service levels; and the Client's ability to effectively manage the vendors performance.
<b>C. Scope</b>	Assessment of how work tasks have been defined and agreed to; assessment of how well the vendor and the client accomplish tasks; roles and responsibilities; and how well tasks are tracked and managed by both the vendor and the Client.
<b>D. Requirements</b>	Assessment of the needed system capabilities and whether or not those capabilities have been well defined by the Client and delivered by the vendor. Assessment of completeness of the solution to identify gaps in expected capabilities.
<b>E. Governance</b>	Assessment of how well the Client makes routine and non-routine decisions and the effectiveness of those decisions. Assessment of how well stakeholders identify and communicate decisions, the nature of risks and issues and how decisions are documented and managed.
<b>F. Testing</b>	Assessment of the Client and vendors overall ability to effectively manage a comprehensive test process, including unit, functional and performance testing; assessment of the use of appropriate resources across test activities and the sharing of testing responsibility.
<b>G. Client Support</b>	Assessment of the Client's role in supporting the system; the definition of roles and responsibilities and support expectations; the Client's ability to support the system within the agreed upon service levels; and the Client's ability to effectively manage their support activities.
<b>H. Training</b>	Assessment of overall accountability for and execution of training; Assessment of the completeness of training provided by the vendor required in order for the client to effectively operate the system and to fulfill its support obligations.
<b>I. Infrastructure</b>	Assessment of the performance and management of the system infrastructure. Vendor and Client's ability to effectively monitor and maintain a reliable infrastructure and work with the vendor to address infrastructure related issues.

## Assessment Overview

### Assessment Risk Dimensions

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#### Business Benefit Risk

An assessment of how the business is effected in terms of expected business benefits and outcomes. Low business benefit risk would mean that there is little or no impact to expected benefits. High business benefit risk would mean that the business is not receiving the expected value from its investment in the system or program.

#### Budget Risk

An assessment of the how the program budget may be effected in terms of actual or secondary costs. Low budget risk would mean that there is little or no impact to the expected cost or program budget. High budget risk would mean that the budget will be significantly impacted and/or funding may not be available.

#### Operational Risk

An assessment of how day-to-day operations may be effected in terms of the organization's ability to meet its service delivery obligations. A low operational risk would mean there is little to no impact on operations ability to function. A high operational risk would mean the operations would be significantly impacted and/or may not be able to function.

#### Organizational Risk

An assessment of how the organization may be effected in terms of changes to how they do things and whether or not these changes are acceptable and manageable.

#### Public / Officer Safety Risk

An assessment of how the public or officer safety is effected in terms of their perception of service provided. A low public risk would mean there is little to know effect on the public and a high risk would mean the public would perceive a degradation of service.

Each assessment category is evaluated in five risk dimensions in order to determine the impact of any deficiencies in a particular assessment category.

# Assessment Overview

## Assessment Risk Dimension Impact Ratings

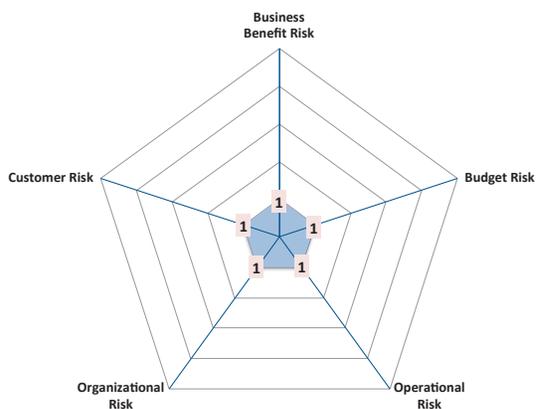
Impact	Business Benefit Risk	Budget Risk	Operational Risk	Organizational Risk	Customer/Public Risk
<b>1 Insignificant</b>	<ul style="list-style-type: none"> <li>No foreseeable business benefit impact.</li> </ul>	<ul style="list-style-type: none"> <li>No foreseeable cost impact.</li> </ul>	<ul style="list-style-type: none"> <li>No foreseeable operational impact.</li> </ul>	<ul style="list-style-type: none"> <li>No foreseeable organizational impact.</li> </ul>	<ul style="list-style-type: none"> <li>No foreseeable customer/public impact.</li> </ul>
<b>2 Minor</b>	<ul style="list-style-type: none"> <li>Risk may result in a minor change(s) to or delivery of new/other/unplanned business benefits, but is acceptable to the stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>Risk may result in additional cost, but within project tolerances.</li> </ul>	<ul style="list-style-type: none"> <li>Risk may result in minor change(s) to business process or procedures, but is acceptable to the stakeholders or users.</li> </ul>	<ul style="list-style-type: none"> <li>Risk may result in minor change(s) in the structure and/or involvement/interaction of the organization, but is acceptable to the stakeholders or users.</li> </ul>	<ul style="list-style-type: none"> <li>Risk may result in minor change(s) to public process or procedures, but is acceptable to the stakeholders or users.</li> </ul>
<b>3 Moderate</b>	<ul style="list-style-type: none"> <li>Risk may result in moderate change(s) or loss of some business benefits, and will require negotiation with the stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>Risk may result in additional cost beyond project tolerances but within Program tolerances.</li> </ul>	<ul style="list-style-type: none"> <li>Risk may result in a moderate change(s) or impact(s) to business process or procedures, and will require negotiation with the stakeholders or users. Or:</li> <li>Risk may result in unanticipated effort / time from the operational representatives that is difficult to accommodate.</li> </ul>	<ul style="list-style-type: none"> <li>Risk may result in moderate change(s) or impact(s) to the structure of the organization or acceptance by the end users, and will require negotiation with the stakeholders or users.</li> </ul>	<ul style="list-style-type: none"> <li>Risk may result in moderate change(s) or impact(s) to the services provided to the public, and will require negotiation with the Program sponsors or users.</li> </ul>
<b>4 Major</b>	<ul style="list-style-type: none"> <li>Risk may result in significant reduction to one or more key business benefits that the Program's business case is based upon. Executive escalation is required.</li> </ul>	<ul style="list-style-type: none"> <li>Risk may require additional funding beyond the Program's baseline budget. Executive escalation would be required. Or:</li> <li>Risk may result in a significant change to the existing budget.</li> </ul>	<ul style="list-style-type: none"> <li>Risk may result in significant change(s) or impact(s) to the services provided to the end users deemed as unacceptable. Executive escalation would be required. Or:</li> <li>Risk may result in unanticipated effort / time from the operational representatives that is very difficult to accommodate.</li> </ul>	<ul style="list-style-type: none"> <li>Risk may result in significant change(s) or impact(s) to the structure of the organization or acceptance by the end users. Executive escalation would be required.</li> </ul>	<ul style="list-style-type: none"> <li>Risk may result in significant change(s) or impact(s) to the services provided to the customer/public by the operation or the users. Executive escalation would be required.</li> </ul>
<b>5 Catastrophic</b>	<ul style="list-style-type: none"> <li>Risk may result in such significant loss to planned business benefits that the business case may be completely invalidated.</li> </ul>	<ul style="list-style-type: none"> <li>Risk that the Program probably could not be funded even after executive escalation. Or</li> <li>Risk may result in a complete withdrawal of the existing budget.</li> </ul>	<ul style="list-style-type: none"> <li>Risk poses unacceptable change(s) or impact(s) to the operation where by services to the end users are critically impeded and/or completely invalidates the Program's business case. Or:</li> <li>Risk may result in unanticipated effort / time from the operational representatives that is impossible to accommodate.</li> </ul>	<ul style="list-style-type: none"> <li>Risk poses insurmountable change(s) or impact(s) to the organization which is rejected by the stakeholders and/or completely invalidates the Program's business case.</li> </ul>	<ul style="list-style-type: none"> <li>Risk poses an unacceptable impact to the public where by services to the public are critically impeded and/or completely invalidates the Program's business case.</li> </ul>

## Assessment Overview

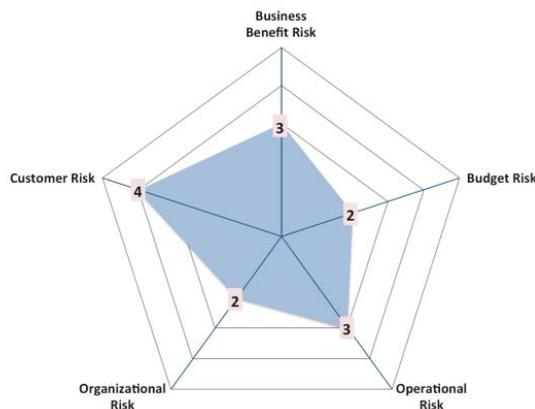
### Assessment Category Risk Radar

- A radar diagram is used to graphically describe a risk profile, presenting a summary view of the scoring of each individual dimension of risk on a scale of 1 to 5.
- The risk rating is based both on the *current* risk condition and the *potential* risk if the current conditions are not addressed.
- An overall CAD project risk profile is provided in the Executive Summary using the average scores for each risk dimension across all nine assessment categories.
- An individual risk profile for each of nine assessment categories is provided in the Detailed Findings and Recommendations section.

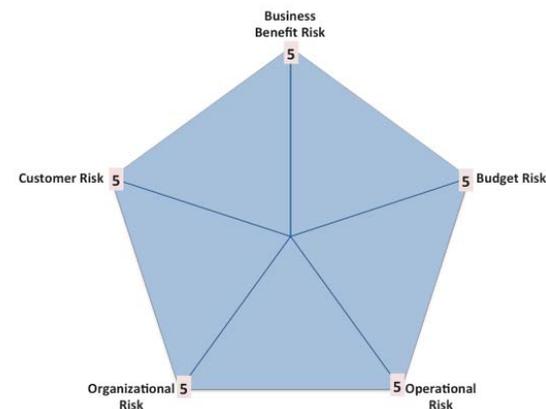
**Lowest Risk / Best Possible Profile**



**Typical Distributed Profile**



**Highest Risk / Worst Possible Profile**

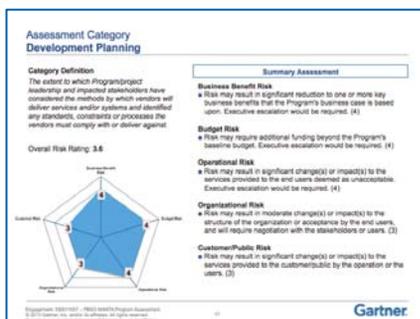


# Assessment Overview

## Presentation of Category Assessment

The following are created for each of the nine assessment categories:

### Scorecard



- *Category definition*
- *Risk profile score in each risk dimension*

### Findings

Challenges	Impacts
<ul style="list-style-type: none"> <li>&gt; Project management processes missing or those that exist are outdated or poorly defined</li> <li>&gt; Project management controls missing or those that exist are lacking in substance and quality</li> <li>&gt; Limited evidence of documented project delivery approach and project management methodology</li> <li>&gt; Limited evidence of adherence to any form of quality or industry standard development methodology</li> </ul>	<ul style="list-style-type: none"> <li>• Limits management control of the project</li> <li>• Inconsistent approach and low quality work products</li> <li>• Inefficient use of project resources and time</li> <li>• High risk of schedule delays</li> <li>• Increases risk of solution quality issues in production</li> <li>• Increases risk for re-work</li> <li>• Increases risk of project failure</li> <li>• No way to ensure Motorola are delivering to a quality controlled method</li> <li>• No way to validate that Motorola are following their own processes</li> <li>• Extremely difficult to report on progress and determine if the project is on schedule</li> <li>• Extremely difficult to identify and mitigate risks</li> <li>• High risk of schedule delays</li> <li>• Increases risk of solution quality issues in production</li> <li>• Increases risk for re-work</li> <li>• Increases risk of project failure</li> </ul>

- *Key findings*
- *Supporting examples*
- *Impact of findings*

### Recommendations

Recommendations	Critical Success Factors
<ul style="list-style-type: none"> <li>• Implement / update essential PMSO PM control processes, including:               <ul style="list-style-type: none"> <li>• Roles and issue definition, tracking, management</li> <li>• Requirements management, traceability</li> <li>• Change control for scope/contract, requirements and related business process change</li> <li>• Deliverable approval process</li> <li>• Compliance to contract, deliverables tracking</li> <li>• Regular, more meaningful status reporting on contractual deliverables, schedule / major milestones and dependencies, risks and issues</li> </ul> </li> <li>• Appoint a PMSO technical lead who can act as a Solution or Technical Architect for the MANTA Program               <ul style="list-style-type: none"> <li>- This person will be responsible for ensuring that PMSO have a complete understanding of the suite of public safety systems being delivered by Motorola</li> <li>- This person will be able to provide insight and aid in the ongoing support and maintenance of the systems once they have been delivered</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Executive commitment to use of a structured methodology</li> <li>• Motorola support for demonstrating process transparency</li> <li>• PMSO personnel with appropriate skills / capabilities</li> </ul> <p><b>Complexity/Effort</b></p> <ul style="list-style-type: none"> <li>• Low to Moderate complexity</li> <li>• 80 hours / 1 month duration for minimum target</li> <li>• 0.5 FTE for extended target</li> </ul> <p><b>Value</b></p> <ul style="list-style-type: none"> <li>• Improve communication and coordination</li> <li>• Improve decision-making and problem resolution</li> <li>• Improve Program control quality and consistency</li> <li>• Improve vendor performance reliability by improving PMSO management capabilities</li> <li>• Reduce risk to schedule and budget</li> </ul>

- *Recommended remediation's to address key findings*
- *Estimated complexity and required resources to implement recommendations*

## A. Performance Summary Assessment

### Category Definition

*Assessment of the overall system performance and stability. Vendor and Client's ability to effectively monitor and maintain reliable system performance and work together to address system performance issues.*

Overall Risk Rating: 3.8



### Summary Assessment: Major Risk Profile

#### Business Benefit Risk

- Performance issues continue to impact the Client's ability to accomplish their mission using the CAD system as expected. (4)

#### Budget Risk

- At a minimum remediation will require investment in additional support resources and system monitoring tools and may require additional hardware. If the current CAD system stability can not be verified, may require total system replacement. (4)

#### Operational Risk

- The system supports day-to-day operations, but there is on-going concern regarding the potential for slowdowns and/or restarts. Performance issues can impact response times, delaying critical services or information needed by first responder. (4)

#### Organizational Risk

- Lack of confidence is degrading support for the system and increasing tensions between stakeholders. (3)

#### Public / Officer Safety Risk

- Poor system performance can impact CDA's ability to provide service. (4)

## A. Performance

### General Findings

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- Since the Motorola PremierOne™ CAD went live in September 2013, issues concerning system stability, performance and functionality have eroded the confidence of users, stakeholders and Client executives. Gartner considers a typical ‘system stabilization’ period following the transition to a new CAD system to be between three to six months
- The CAD system is mostly performing at an acceptable level and able to support CDA call taking and dispatch operations. Since January 2015 there have been two full system outages attributable to Motorola, resulting in a total of approximately sixteen minutes of system downtime.
- While the frequency of system-wide outages (Severity Level 1) has declined over the past six months, issues involving the reliable performance of individual CAD workstations and mobile computers continue to be reported. When these outages occur they are unexpected and can take several minutes to recover from. If they occur when a user is performing a critical function, the result may be detrimental to public and officer safety.
- Recent efforts to resolve outstanding issues, have resulted in very little progress towards building user confidence. In many cases, particularly with regard to issues surrounding the performance of City of Tallahassee Police Department (TPD) mobile computers, Motorola and the Client have reached an impasse in their ability to definitively troubleshoot and correct problems to a level that TPD considers acceptable.

## A. Performance

### General Findings

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- Review of system error logs indicates a pattern of a higher than expected number of internal system errors. The types of errors seen can be indications underlying system design issues, such as poor exception handling and/or inadequate system testing, particularly under load. Gartner considers these errors to be significant to the extent they can be leading indicators of larger issues of system robustness such as degraded performance under load, inability to complete user functions in a timely manner and reduced overall application stability.
- Evaluation of the most recent full system outage\* (Severity Level 1) and recent reports of significant performance degradation+ (Severity Level 2) shows that the CAD system is susceptible to having performance issues when it is unable to communicate with remote mobile devices. This is likely an indication of inadequate exception and/or error handling and Gartner considers this to be a significant vulnerability for a mission-critical system.
- Baseline system performance standards are not defined making it difficult to measure whether or not system performance is “acceptable” or within an acceptable, agreed upon range.

\* May 17, 2015 eight minute outage, Motorola case #24353685

+ May 6 and May 11

## A. Performance

### General Findings

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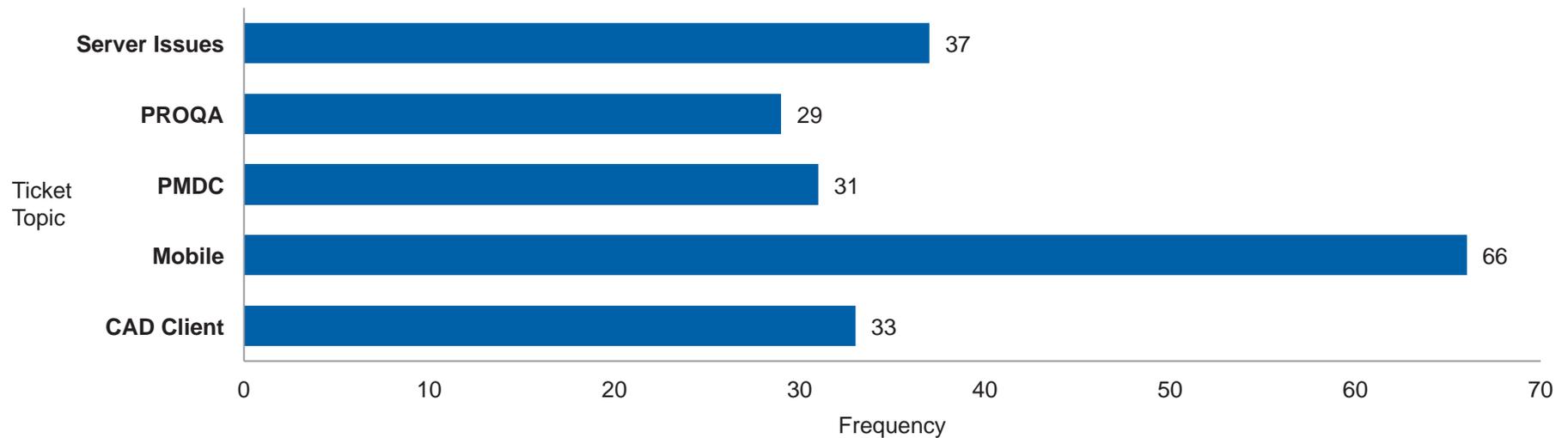
- System load testing was not performed as part of initial system acceptance and is not performed before major system upgrades. System performance under load is only tested after the new release is transitioned into the production environment..
- The Client has stopped reporting every instance of CAD and mobile workstation ‘slow’ or ‘freezing’ making it difficult to assess the nature, frequency and severity of the issues effecting CAD client workstations. The Client support staff have instructed users to restart workstations when they become unresponsive and to only report issues that cannot be resolved with a restart.
- Client support staff have implemented a practice of daily CAD workstation reboots as a way to mitigate the risk of unexpected workstation slowdowns. While this practice is not recommended by Motorola, the Client reports that they have seen a reduction in the frequency of workstation ‘freezing’ since they have been doing this. Motorola recommends weekly CAD workstation reboots as part of routine maintenance.
- Client support staff have implemented a practice of ‘monthly’ CAD server reboots as a way to mitigate the risk of unexpected server slowdowns. While this practice is not recommended by Motorola, the Client reports that they have seen a reduction in the frequency of general server slowdowns and restarts since they have been doing this. Motorola recommends that application servers are rebooted every 30 days and database servers are are rebooted every 90 days as part of routine maintenance.

## A. Performance

### Support Ticket Analysis

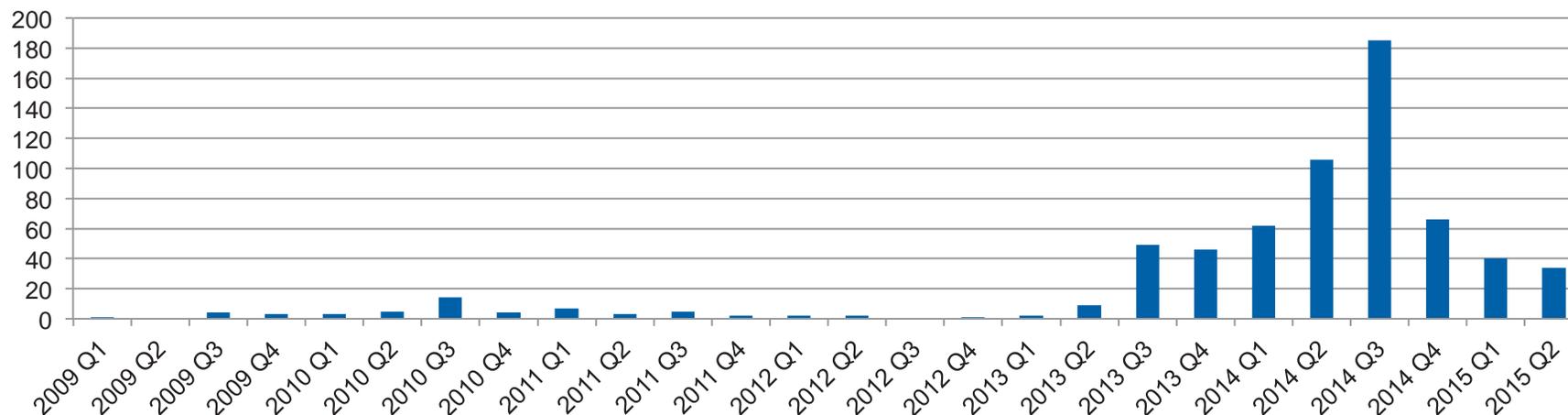
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- Gartner evaluated support ticket history from 2009 to May 2015
- The highest number of support tickets was in 2014 during implementation, as expected
- The majority of support tickets are categorized as Severity Level 2 or 3, as expected
- The average time-to-closure is 95 days, higher than expected
- The average age of currently open tickets is 195 days, higher than expected
- Frequency of support tickets by type indicates mobile, server and CAD client to be the top three reported issues



## A. Performance Support Ticket Analysis

### Motorola CAD Support Tickets, Q1 2009 - Q2 2015



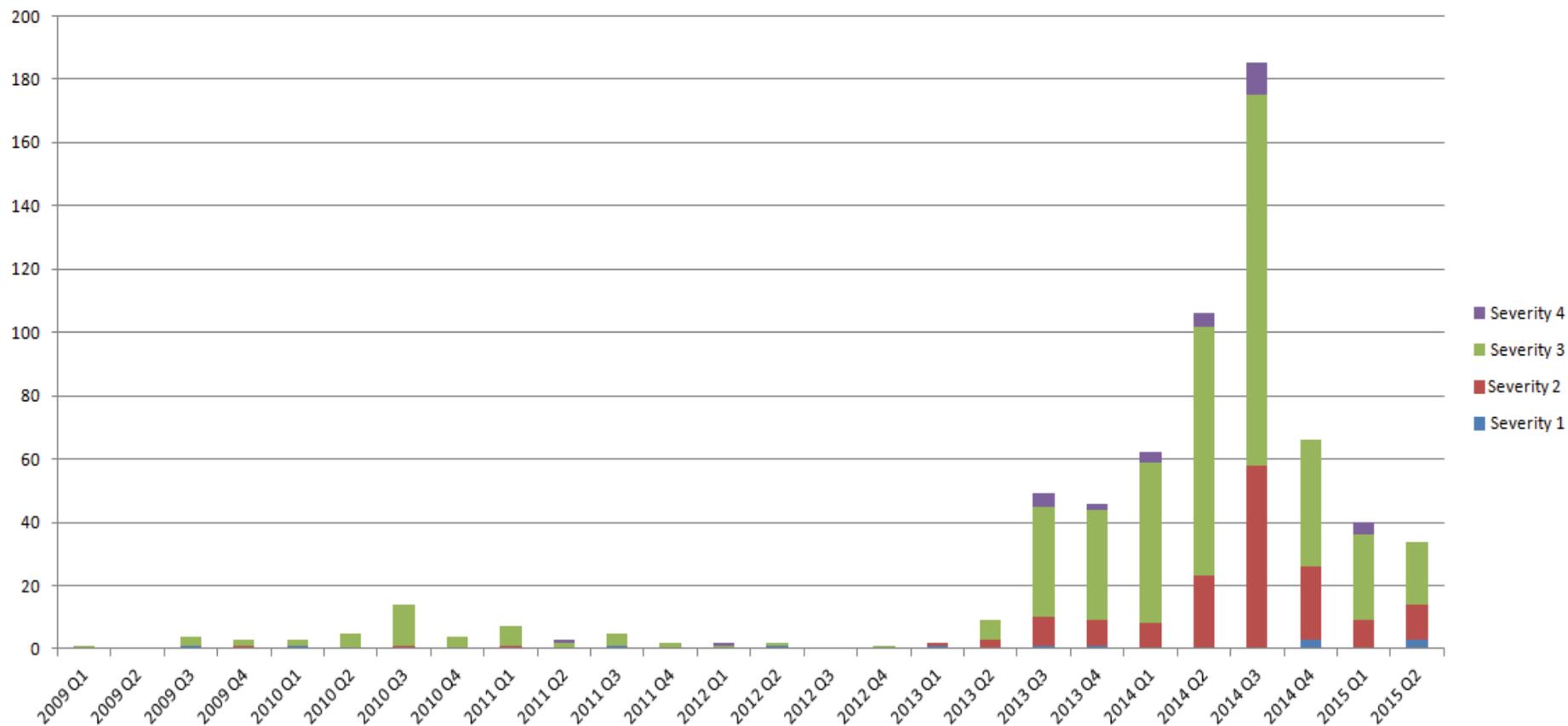
All Tickets by Current Status	
AWAITING RESOURCES	1
AWAITN UPGRADE	2
CLOSED	406
CLOSED BUS APPRVD	3
CLOSED CUST APPRVD	152
DEVELOPMENT	11
INPROG	25
INPROG AWT CUST	3
INPROG AWT ENG	17
RSLVD AWT CUST	34
RSLVD AWT RELEASE	1
<b>Total</b>	<b>655</b>

All Tickets by Category	
Awaiting Customer	3
Awaiting Upgrade	36
Closed	561
Pending Release	5
Support Field	17
With Engineering	22
With Solutions	11
<b>Total</b>	<b>655</b>

All Tickets by Year	
2009	8
2010	26
2011	17
2012	5
2013	107
2014	418
2015	74
<b>Total</b>	<b>655</b>

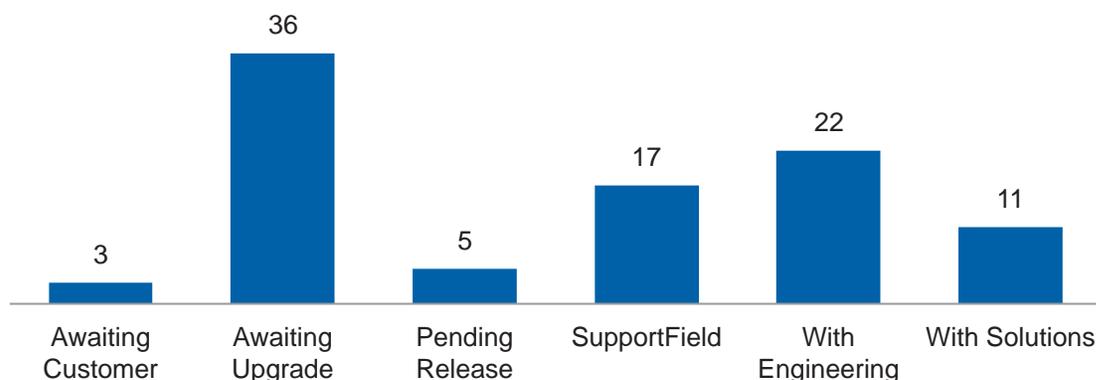
## A. Performance Support Ticket Analysis

**Motorola CAD Support Tickets by Severity  
(Q1 2009 - Q2 2015)**



## A. Performance Support Ticket Analysis

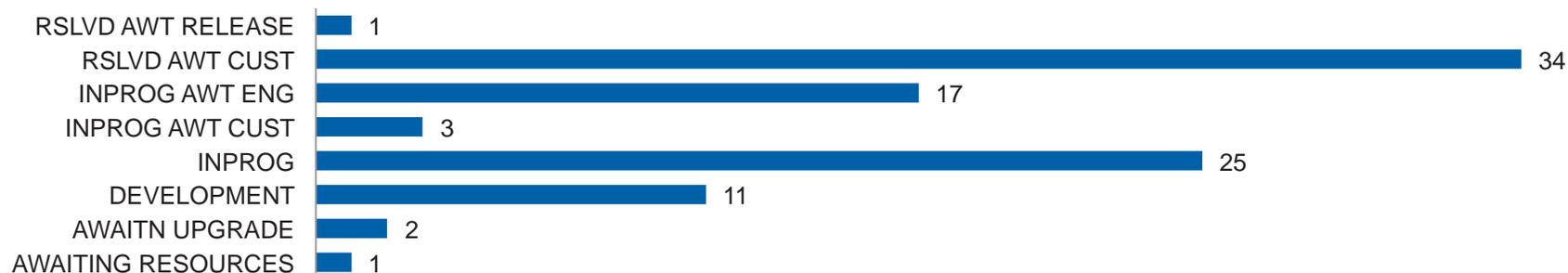
### Open Motorola CAD Support Tickets by Category



Summary	
Total Open Tickets (as of 6/5/15)	94
Avg. Age of Open Tickets	195 Days
Age of Longest Open Ticket	707 Days

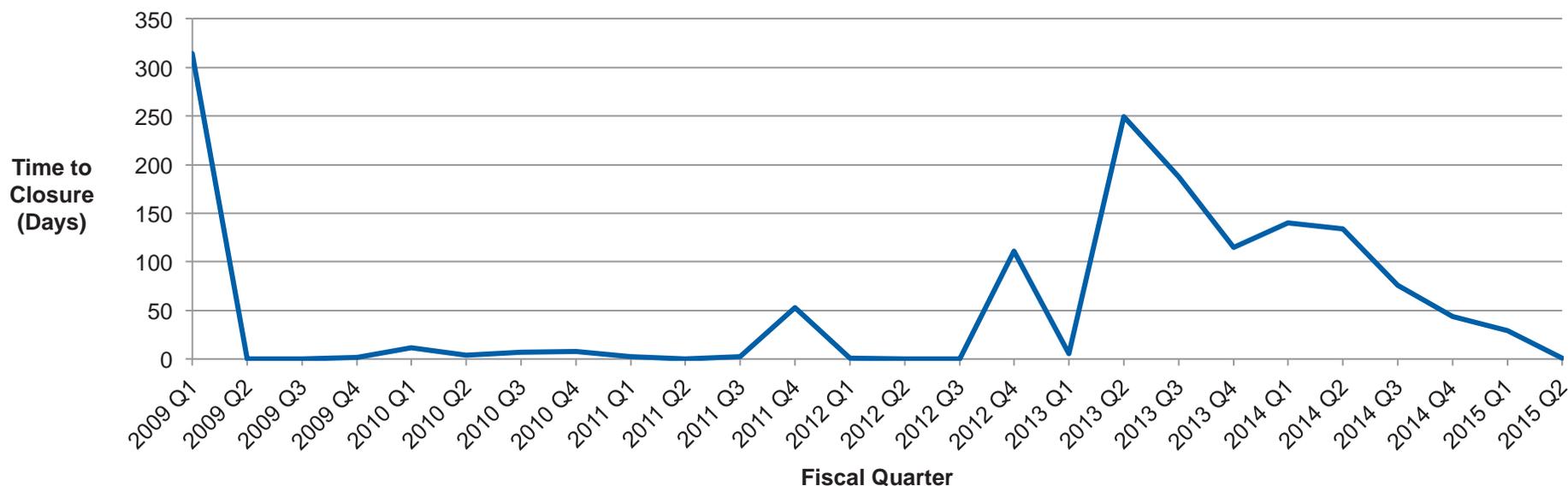
Open Tickets - Severity		
Severity Level	Total Tickets	Average Age
Severity 1	3	30 Days
Severity 2	18	140 Days
Severity 3	68	201 Days
Severity 4	5	409 Days

### Open Motorola CAD Support Tickets by Current Status



## A. Performance Support Ticket Analysis

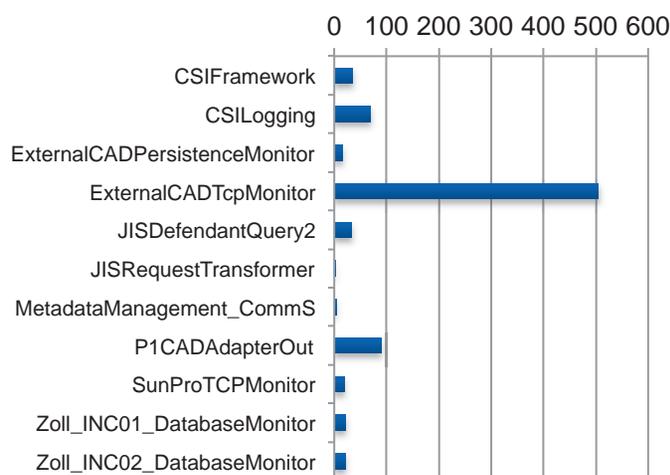
**Average Time to Ticket Closure by Fiscal Quarter (Days)**



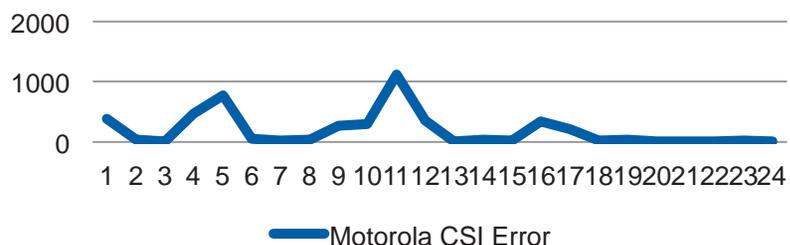
Summary	
<b>Total Closed Tickets (as of 6/5/15)</b>	561
<b>Avg. Time to Closure</b>	95 days
<b>Longest Time to Closure</b>	314 days

Closed Tickets - Severity		
Severity Level	Total Tickets	Avg. Time to Closure
<b>Severity 1</b>	10	5 days
<b>Severity 2</b>	138	95 days
<b>Severity 3</b>	389	101 days
<b>Severity 4</b>	24	46 days

## A. Performance System Log File Analysis



Motorola CSI Error- May 1 ~ June 12, by hour of day



- System log file analysis indicates a higher than expected number of internal system errors, particularly database connection errors

### Error samples:

- **CSIFramework**. Exception Interface Name: Component ID: Message ID: Method: LeasedInterfaceCheck Detail: Message: System.Data.SqlClient.SqlException (0x80131904): **Timeout expired**. The timeout period elapsed prior to completion of the operation or the server is not responding. at System.Data.SqlClient.SqlInternalConnection.OnError
- **CSILogging**: Component ID: Message ID: Method: LogWithDatabase Detail: Error logging to database. Switching to CSI event logging. Message: System.Data.SqlClient.SqlException (0x80131904): **Timeout** expired. The timeout period elapsed prior to completion of the operation or the server is not responding.
- **ExternalCADPersistenceMonitor**. **Retry Interface Name:** P1CADToExternalCAD Component ID: ExternalCADPersistenceMonitor Message ID: Method: DoScheduledWork Detail: Update persistence record unsuccessful. Maximum retries attempted. Message:
- **JISDefendantQuery2** Category: **Exception** Interface Name: QueryInterfaces Component ID: JISDefendantQuery2 Message ID: 7fe1947c-bb4b-4633-b3df-90437a5bfd9e.1 Method: Motorola.PremierOne.CommonServices.Interfaces.ODBCCCommon.**Execute SqlTextQuery**
- **JISResponseTransformer** cannot be found. Either the component that raises this event is not installed on your local computer or the installation is corrupted. You can install or repair the component on the local computer.

## A. Performance

### Category Assessment Criteria

Criteria	Findings
A Performance Test Plan is defined, either stand alone or part of another artifact such as a Testing Strategy. [Yes/Partial/No]	✧ No. A performance test plan was not defined and system performance testing was not done by the client. There is no baseline performance expectation and no way to measure actual system performance.
Roles and responsibilities are clearly delineated for Performance Testing between the Client Project Team/ Members, and Vendor Project Team/Members. [Yes/Partial/No]	✧ No. Performance testing was not performed and there are no specific roles or responsibilities defined for performance testing.
Performance Testing requirements were appropriately defined within the Requirements AND the Performance Test Plan. [Yes/Partial/No]	✧ No. There were no specific requirements defined for system performance and subsequently no requirements for testing.
Acceptance criteria / performance targets are/were defined in the Performance Test Plan (and/or Supporting Test Cases) [Yes/Partial/No]	✧ No. There were no specific requirements defined for system performance and subsequently no requirements for testing.
Performance test results are/were documented and available [Yes/Partial/No]	✧ No. There were no performance tests to document.
Performance test results satisfied or exceeded established thresholds / targets / acceptance criteria [Yes/ Partial/No]	✧ No. There were no specific requirements defined for system performance and subsequently no requirements for testing.

## A. Performance Recommendations

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- A1.** The Client should define minimally acceptable system performance criteria using the guidelines provided in this report. These should be used to monitor and measure system performance and incorporated into the Motorola maintenance and support agreement.
- A2.** The Client should monitor system performance against the minimally acceptable system performance criteria for a period of 90-days to establish a baseline of stable system performance.
- A3.** The Client should follow the Motorola recommended workstation and server maintenance schedule of weekly workstation reboots, monthly application server reboots and quarterly database server reboots.
- A4.** The Client should report all system performance related issues, including each occurrence of CAD or mobile workstation errors and any system-wide performance issues to Motorola in order to properly document the nature, frequency and severity of issues and to assist in the identification of root cause.
- A5.** The Client should work with Motorola to create a test environment able to simulate production level system loads. The Client should require Motorola to conduct a performance test baseline simulating full production load as part of any major version upgrade before it is released into production.

## A. Performance

### Minimally Acceptable System Performance Criteria

The criteria for minimally acceptable system performance is recommended based on industry norms for mission-critical computer aided dispatch systems. These criteria are commonly found in CAD system requests for proposals and maintenance and support agreements.

Performance Measure	Performance Target	Examples
<b>System Availability.</b> The percentage of time the system is operating normally, without unexpected or unplanned interruption or 'down-time'.	<ul style="list-style-type: none"> <li>• 99.99% uptime</li> <li>• ≤ 6 minutes per month</li> <li>• ≤ 2 minutes per week</li> </ul>	<ul style="list-style-type: none"> <li>• System is unavailable to all users</li> <li>• System is unresponsive or so slow to respond that it is unusable</li> </ul>
<b>Critical Component Failures.</b> A count of the number of times when critical element of the system does not function as expected and there is no suitable workaround.	<ul style="list-style-type: none"> <li>• ≤ 2 per day</li> <li>• ≤ 4 per week</li> <li>• ≤ 8 per month</li> </ul>	<ul style="list-style-type: none"> <li>• CAD workstation 'lock-up' that requires reboot</li> <li>• System is "slow" or intermittently unresponsive with corresponding system-level error messages</li> <li>• Mobile workstations unavailable due to CAD software failures</li> </ul>

## A. Performance Recommendation Summary

### Recommendation

**A1.** The Client should define minimally acceptable system performance criteria using the guidelines provided in this report. These should be used to monitor and measure system performance and incorporated into the Motorola maintenance and support agreement.

**A2.** The Client should monitor system performance against the minimally acceptable system performance criteria for a period of 90-days to establish a baseline of stable system performance.

**A3.** The Client should follow the Motorola recommended workstation and server maintenance schedule of weekly workstation reboots, monthly application server reboots and quarterly database server reboots.

**A4.** The Client should report all system performance related issues, including each occurrence of CAD or mobile workstation errors and any system-wide performance issues to Motorola in order to properly document the nature, frequency and severity of issues and to assist in the identification of root cause.

**A5.** The Client should work with Motorola to create a test environment able to simulate production level system loads. The Client should require Motorola to conduct a performance test baseline simulating full production load as part of any major version upgrade before it is released into production.

### Critical Success Factors

- Support of executives and stakeholders
- Stakeholder agreement on terms of stability
- Network availability can be actively monitored and maintained

**Complexity: Moderate**

- Agreement on acceptable performance criteria will require compromise
- Isolating system performance failures can be difficult when support responsibilities are shared
- System performance testing is difficult and inconclusive in current test environment

**Estimated Cost: Moderate**

- May require additional investment in test environment and tools

**Value: High**

- Improve user perception and trust of system
- Improve public perception and trust of system
- Increase system reliability
- Mitigate risk of failure and slowdown in performance

## B. Vendor Maintenance & Management Summary Assessment

### Category Definition

*Assessment of the vendor's role in supporting the system; the definition of roles and responsibilities and support expectations; the vendors ability to support the system within the agreed upon service levels; and the Client's ability to effectively manage the vendors performance.*

Overall Risk Rating: 2.6



### Summary Assessment: Moderate Risk Profile

#### Business Benefit Risk

- Business benefits are not being fully realized due to misaligned expectations for system support. Support service levels, roles and responsibilities are not well defined. (3)

#### Budget Risk

- Current maintenance and support agreement is within expected budget, but additional out of scope issues could add costs outside of planned budget. (3)

#### Operational Risk

- Moderate operational risk if support roles are not clearly defined, especially during initial reporting and troubleshooting. (3)

#### Organizational Risk

- Minor changes expected to the organization in terms of structure and/or involvement. (2)

#### Customer/Public Risk

- Service to the public can be effected by how well the vendor is managed, but the relationship should be managed internally without a direct impact on the public. Minor changes to business process/procedures may be implemented. (2)

## B. Vendor Maintenance & Management

### General Observations

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- The Client has lost confidence in Motorola's commitment and ability to effectively support the system due to system performance and stability issues that have persisted over the course of the past 22 months since go-live.
- Motorola has changed key team members several times since system implementation creating inconsistency in support levels and responsiveness. In the past, the Client executives have had to be involved in escalating issues to Motorola senior staff in order to get the proper level of attention and resolution.
- The City of Tallahassee Information System Services is responsible for managing the Motorola relationship. However, in practice, support duties are shared by the City, the Sheriff's Office and CDA personnel. This sharing of responsibility creates unclear accountability and misalignment of what's expected with regard to how issues are managed and reported, both internally and with Motorola.
- The City changed support team members during system implementation creating inconsistency in support levels and responsiveness to Motorola and the CDA.
- Key vendor management processes, such as how issues are reported, tracked and escalated are not consistently followed by the City or Motorola making problem tracking, accountability and resolution more difficult.

## B. Vendor Maintenance & Management

### General Observations

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- Problem troubleshooting, especially relating to the performance of the City's network, is not well coordinated between the City and Motorola. Both parties accuse the other of withholding key information and not being fully transparent while working known issues.
- Motorola has been slow to provide root cause analysis and resolution information for critical issues. Most recently, issues relating to system restarts, transitions to high-performance mode and workstation slow-downs have been resolved without a complete root-cause analysis and explanation.
- The Client and Motorola do not currently have a maintenance and support agreement in place. An agreement has been proposed and reviewed, but the Client is withholding signature pending the outcome of Gartner's assessment.
- The proposed Motorola maintenance and support agreement does not sufficiently identify support responsibilities between the Client and Motorola and contains conflicting terms of responsibility for system (server) hardware and infrastructure software (e.g. operating system, database) support.
- The proposed Motorola maintenance and support agreement does not include provisions for updates / upgrades to infrastructure software, such as operating system and database updates, that may be required for future CAD system version updates (e.g. upgrade of SQL-Server or operating system).

## B. Vendor Maintenance & Management Assessment Criteria

Criteria	Findings
1) A Support Model for CAD is defined, which includes scope of support, processes, tools and for each defined Agency (IT Operations) and Vendor(s) responsibilities [Yes/No/Partial]	✧ Partial. Vendor maintenance and support agreement has been provided but not signed and accepted because system acceptance is still in dispute based on reliability issues.
2) The support model has been established and is currently operating by the Vendor per the agreed to scope/processes [Yes/No/Partial]	✧ No. Agreement has not been signed. Agreement is dependent on system acceptance, which is contingent on system reliability issues being resolved.
3) The Vendor has appropriate personnel, skills, capabilities and capacity to execute/manage the defined support model - processes, tasks, etc. [Yes/No/Partial]	✧ Partial. Basic issues are addressed, but recurring issues not resolved. Vendor help desk support was reported as limited in capabilities. Vendor escalation is frequently required to get resolution.
4) SLAs for Vendor support processes are clearly defined [Yes/No/Partial]	✧ No. maintenance and support agreement identified but SLA is not well defined. Without clear metrics and downtime definitions, system performance will still be in dispute.
5) SLAs for Vendor support processes are being monitored [Yes/No/Partial]	✧ No. Definition of failure is not specified, thus SLA compliance is in dispute. System has not been accepted because of reliability issues.
6) SLAs for Vendor support processes are being achieved [Yes/No/Partial]	✧ No. Without clear metrics and down time definitions, compliance is in dispute.
7) A performance improvement plan/process exists that is used to identify/address and resolve problems with any support processes or SLA [Yes/No/Partial]	✧ No. Issue resolution has generally not been acceptable. Escalation process is not well documented.

## B. Vendor Maintenance & Management Recommendations

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**B1.** The Client should continue with Motorola only if the Client is able to execute a maintenance and support agreement that defines specific system performance and service level requirements and has associated financial incentives using the guidelines provided in this section of Gartner's report.

**B2.** If the Client and Motorola are unable to agree on a suitable maintenance and support agreement, then the Client should continue with Motorola using a standard maintenance and support agreement and immediately begin the process to find a suitable replacement system using a market-based competitive bid process.

**B3.** The City and Motorola should follow an agreed upon process for creating, documenting and managing support tickets using standardized severity level definitions and escalation policies.

**B4.** The City and Motorola should institute daily teleconference calls to review open priority issues and develop a transparent and trusting way to communicate findings and actions taken when troubleshooting issues.

## B. Vendor Maintenance & Management Recommendations

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**B5.** The City should assign a dedicated CAD support manager with no other duties besides the management of the CAD system support. The CAD support manager should be assigned to work at the CDA and be responsible for the accurate tracking and reporting of all CAD and mobile data issues. The CAD support manager should also be responsible for working with Motorola and the Client stakeholders to create and track key performance indicators for CAD and produce daily/weekly/monthly status reports.

**B6.** The Client should require Motorola to complete System Administration training as a condition of signing any maintenance and support agreement.

## B. Vendor Maintenance & Management Recommendation Summary

### Recommendation

**B1.** The Client should continue with Motorola only if the Client is able to execute a maintenance and support agreement that defines specific system performance and service level requirements and has associated financial incentives using the guidelines provided in this section of Gartner’s report.

**B2.** If the Client and Motorola are unable to agree on a suitable maintenance and support agreement, then the Client should continue with Motorola using a standard maintenance and support agreement and immediately begin the process to find a suitable replacement system using a market-based competitive bid process.

**B3.** The City and Motorola should follow an agreed upon process for creating, documenting and managing support tickets using standardized severity level definitions and escalation policies.

**B4.** The City and Motorola should institute daily teleconference calls to review open priority issues and develop a transparent and trusting way to communicate findings and actions taken when troubleshooting issues.

**B5.** The City should assign a dedicated CAD support manager with no other duties besides the management of the CAD system support. The CAD support manager should be assigned to work at the CDA and be responsible for tracking and reporting of all CAD issues.

**B6.** The Client should require Motorola to complete System Administration training as a condition of signing any maintenance and support agreement.

### Critical Success Factors

- Support of executives and stakeholders
- Stakeholder agreement on support roles and terms
- Adequate City support staffing level and competency

**Complexity:** **Low**

- Requires agreement on support process
- Requires discipline to adhere to support process
- Requires routine review of support process

**Estimated Cost:** **Moderate**

- May require additional full time staff to manage support

**Value:** **High**

- Improve user perception and trust of system
- Improve public perception and trust of system
- Increase system reliability
- Mitigate risk of failure and slowdown in performance

## B. Vendor Maintenance & Management

### Service Level Agreement Performance Target Recommendations

Service Level	Performance Measure	Performance Target	Examples
<b>Total System Outage.</b> Occurs when the System is not functioning or any major issue that results in an unstable or unusable system and there is no workaround. (Severity 1 Events)	% of continuous system operation without disruption of service.	<ul style="list-style-type: none"> <li>• 99.99 % (4 9's) uptime</li> <li>• ≤ 6 minutes per month</li> <li>• ≤ 2 minutes per week</li> </ul>	<ul style="list-style-type: none"> <li>• System is unavailable to all users</li> <li>• System is unresponsive or so slow to respond that it is unusable</li> </ul>
<b>Critical Component Failure.</b> Occurs when critical element of the system does not function as expected and there is no suitable workaround. (Severity 2 Events)	A count of the number of distinct failure events that occur within a specific period of time.	<ul style="list-style-type: none"> <li>• ≤ 2 per day</li> <li>• ≤ 4 per week</li> <li>• ≤ 8 per month</li> </ul>	<ul style="list-style-type: none"> <li>• CAD workstation 'lock-up' that requires reboot</li> <li>• System is "slow" or intermittently unresponsive with corresponding system-level error messages</li> <li>• Mobile workstations unavailable due to CAD software failures</li> </ul>
<b>Event Response Time.</b> Time to respond by the assignment and confirmation by support personnel to the initial report of an event.	The percentage of events responded to within the targeted period of time.	<ul style="list-style-type: none"> <li>• Sev 1 100% &lt; 30 minutes, 7x24</li> <li>• Sev 2 100% &lt; 3 hours, 7x24</li> <li>• Sev 3 80% &lt; 8 hours, 5x12</li> </ul>	
<b>Event Resolution Time.</b> Time required to address the event and restore service by fix or workaround.	The percentage of events resolved with a suitable work around to restore service within the targeted period of time.	<ul style="list-style-type: none"> <li>• Sev 1 100% &lt; 30 minutes, 7x24</li> <li>• Sev 2 100% &lt; 3 hours, 7x24</li> <li>• Sev 3 100% &lt; 6 hours, 5x12</li> </ul>	
<b>Root Cause Resolution Time.</b> Time required to address the event and restore service by fix or workaround.	The percentage of events resolved via the implementation of permanent fixes within a specific period of time.	<ul style="list-style-type: none"> <li>• Sev 1 100% &lt; 2 weeks, analysis</li> <li>• Sev 2 100% &lt; 2 weeks, analysis</li> <li>• Sev 3 100% &lt; 4 weeks , analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Sev 1 90% &lt; 4 weeks, fix</li> <li>• Sev 2 90% &lt; 4 weeks, fix</li> <li>• Sev 3 90% &lt; 8 weeks , fix</li> </ul>

## B. Vendor Maintenance & Management Service Credit Guidance

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- Use service credits as financial incentive to maintain service level objectives and as a way to reimburse the Client for the value of diminished services. Service credits are applied when specific service level targets are missed within a specific measurement period.
- Apply service credits as a percentage of the monthly maintenance cost and consider using an escalating scale that is reset at the beginning of each new month, for example:
  - First Occurrence – 10% reduction of monthly service charge.
  - Second Occurrence – 15% reduction of monthly service charge
  - Third Occurrence – 25% reduction of monthly service charge
- At any time, the Client will rely on standard contractual provisions for exiting due to non-performance if multiple SLA's are missed consistently
- Missed SLA occurrences should be cumulative within a single month, based on the number of total occurrences across SLA's, not only within a single SLA. For example,
  - More than six minutes of total system downtime AND more than two Sev 2 events within a single month would be TWO occurrences of missed critical SLA's that month
- Multiple occurrences of the same event should not be counted once the root cause has been determined and a fix has been offered.
- SLA's and service credits would not apply to events caused by issues that the Client is responsible for supporting, such as the network or workstation hardware.

## B. Vendor Maintenance & Management maintenance and support agreement Guidance

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### Escalation and Notification Provisions

- Set clear notification requirements by severity level. At a minimum, notification of the initial event and at event resolution should be set for Severity Level 1 and 2 events and should be documented within the support ticket when attempted and made.
- Set clear escalation requirements by severity level. Current escalation only applies to Severity 1 events. At a minimum, response escalation should be required for Severity Level 1 and 2 events, and include the escalation of unresolved events to senior management.
- As part of event escalation, require the vendor provide qualified on-site resources whenever two or more SLA's are missed within a single month.

## B. Vendor Maintenance & Management maintenance and support agreement Guidance

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### Roles and Responsibilities

- Define Client support responsibilities and how those responsibilities will be validated as part of part of problem reporting and root cause analysis. For example,
  - Client is responsible for the maintenance and support of CAD client workstations. This includes the maintenance and support of the hardware and ensuring that all software is configured and maintained according to Motorola specifications. All client workstation related problems must be reported with workstation log files taken at the time of the event.
  - Client is responsible for the maintenance and support of the CAD network, including the monitoring of network health and utilization. All major system outages, Severity 1 and 2, must be reported with accompanying network utilization reports that show that status and health of the network at the time of the event.
- Clarify support roles and responsibilities for covered hardware and infrastructure software. The maintenance and support agreement should clearly identify and delineate roles and responsibilities with regard to hardware, operating system and database maintenance and upgrades, including any upgrades or updates that may be required for future CAD version releases.
- Clarify roles and responsibilities for deployments and maintaining system environments in terms of software updates, patches and releases. Motorola should be responsible for ensuring that all environments remain in-sync and within fully supported versions.

## B. Vendor Maintenance & Management maintenance and support agreement Guidance

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### Software Releases and Updates

- Clarify roles and responsibilities with respect to Product Releases, Standard Releases, Supplemental Releases, Cumulative Updates, and On Demand Releases. The maintenance and support agreement should clearly identify and delineate roles and responsibilities for version control and deployment.
- Clarify expectations that the Client / Motorola will maintain the software, including Product Releases, Standard Releases, Supplemental Releases, Cumulative Updates, and On Demand Releases, within a fully supported version. The maintenance and support agreement should ensure that the Client is not falling out of a fully supported version and should not hold Motorola accountable for fixes that are tested and accepted, but that the Client does not allow Motorola to deploy into production.
- Clarify Client responsibilities and expectations with respect to the timeliness of testing of Product Releases, Standard Releases, Supplemental Releases, Cumulative Updates, and On Demand Releases Releases to ensure that the release is tested in a timely manner and free of defects and so that Motorola can keep the software within a fully supported version. SLA's should be suspended if fixes are offered, but not tested in a timely manner.
- Clarify expectations for the testing and deployment Product Releases, Standard Releases, Supplemental Releases, Cumulative Updates, and On Demand

## B. Vendor Maintenance & Management maintenance and support agreement Guidance

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### Staging Environment and Load Testing

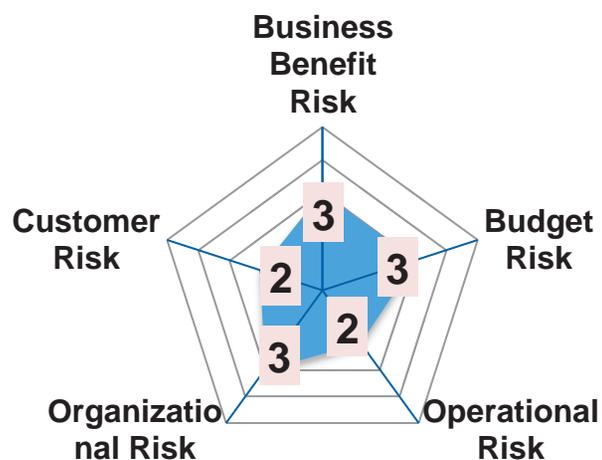
- The maintenance and support agreement should include the provisioning and support of a staging environment that is identical to the production environment (with the exception of live system interfaces) so that it can be used for accurate pre-production simulation and load testing prior to and as a condition of releasing new versions into production.
- The maintenance and support agreement should include the ability to perform simulated load testing on production-ready releases

## C. Scope Management Summary Assessment

### Category Definition

*Assessment of how work tasks have been defined and agreed to; assessment of how well the vendor and the client manage the tasks, roles and responsibilities; and how well these tasks are tracked and managed by both the vendor and the Client.*

Overall Risk Rating: **2.6**



### Summary Assessment: Moderate Risk Profile

#### Business Benefit Risk

- Due to lack of scope identification and management, the CDA has not received all of the benefits and outcomes expected. Proper scope management will identify areas of contention and allow for expected scope to be achieved. (3)

#### Budget Risk

- The unmanaged scope may result in additional costs in order to achieve the desired outcome. Budget impact will be dependent on tasks to be performed, and could be internalized or outsourced to the vendor for completion. (3)

#### Operational Risk

- Better scope management will improve the day-to-day operations, without a significant investment in time or cost. (2)

#### Organizational Risk

- Improved scope management requires a fundamental change in vendor management philosophy. Without significant change, many of the same mistakes will be repeated. Impacts to end users should be minimal, but beneficial to the organization. (3)

#### Customer/Public Risk

- Benefits to the customer/public should result from improved vendor management. The results will include perceived value as well as actual value. (2)

## C. Scope Management

### General Observations

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- The City of Tallahassee Information System Services is responsible for managing the scope of the CAD project. However, in practice, scope management is shared by the City, the Sheriff's Office and CDA personnel. This sharing of responsibility creates unclear accountability and misalignment of what's expected with regard to project scope, both internally and with Motorola.
- The City and Motorola do not follow a consistent process for defining issues and prioritizing them. Problem severity codes are not consistently used making it difficult to assess open system issues and hold Motorola or the City accountable for open work against agreed upon resolution targets.
- There is disagreement between the City and Motorola about the nature and severity of open items. The City has stopped reporting some issues but still considers them deficiencies, such as issues with AVL location updates and EMS unit recommendations, making it difficult to hold Motorola accountable for addressing them.

## C. Scope Management

### General Observations

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- The original project scope was not well defined in terms of how the system would be implemented, tested and accepted. The Motorola contract and statement of work did not contain the project controls needed for a project of this size and complexity. For example, system acceptance was based on beneficial use of the system in production and not on the successful completion of acceptance or performance testing; functional gaps between the current and new system were not identified or addressed as part of Motorola's scope.
- Scope management was further complicated by the fact that the project was originally proposed by Motorola as an upgrade to the City's existing Police and Fire CAD, before there were requirements for the creation of a consolidated dispatch agency that included EMS and multiple law enforcement agencies. The Sheriff's Office and EMS were not as involved in the initial requirements and contract development, but were involved in the implementation and acceptance process, which created a misalignment of expectations and a level of frustration amongst the stakeholders.

## C. Scope Management Assessment Criteria

Criteria	Findings
1) A Scope Management Plan is defined, either stand alone or part of another artifact such as a Project Management Plan. [Yes/Partial/No]	✧ No. Because the CAD transition was considered an “upgrade”, minimal project or scope management documents were created. Management was performed primarily through a project schedule.
2) Roles and responsibilities are clearly delineated for Scope Mgmt between Project Executives, the PM, Client Project Team/Members, Vendor Project Team/Members. [Yes/Partial/No]	✧ Partial. Roles and responsibilities between City, County and SO are defined. A variety of committees, sub-committees and workshops were created. Roles and responsibilities of vendor were not clearly defined.
3) Change Management processes exist with the Scope Mgmt plan, or external to the Scope Mgmt plan. [Yes/Partial/No]	✧ Partial. Change management processes are now in place and documented. However, during the early phases of the project, with numerous issues and upgrades, changes were not as well documented.
4) The Scope Management Plan is being / was used [Yes/Partial/No]	✧ No. Scope management was not managed well during the initial upgrade. Change management procedures and processes have now been implemented and are being used.
5) The Scope Management Plan outlines how the scope was developed, the inputs used and how the scope will be managed (deliverables, artifacts, processes, people and requirements) [Yes/Partial/No]	✧ Partial. Scope management for City/County/SO was developed as a part of consolidation roles and responsibilities, but Motorola scope was limited to high level contract documents.

## C. Scope Management Recommendations

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- C1:** The City and Motorola should follow a consistent process for defining, prioritizing and tracking open work including issue resolution, maintenance update and enhancements.
- C2:** The City and Motorola should agree on specific tasks and timelines for each open issue and report progress regularly.
- C3:** The City and Motorola should agree on an issue escalation process that clearly defines how and when issues are reported and escalated and to whom, including both Motorola and the Client stakeholders.
- C4:** The City should use a more formal and structured scope management process for large, complex IT projects to set and manage expectations of both system stakeholders and vendors.
- C5:** Any future major system enhancements, upgrades or new system implementations should include a detailed Statement of Work that includes scope, schedule, deliverables and acceptance criteria.

## C. Scope Management Recommendation Summary

### Recommendation

**C1:** The City and Motorola should follow a consistent process for defining, prioritizing and tracking open work including issue resolution, maintenance update and enhancements.

**C2:** The City and Motorola should agree on specific tasks and timelines for each open issue and report progress regularly.

**C3:** The City and Motorola should agree on an issue escalation process that clearly defines how and when issues are reported and escalated and to whom, including both Motorola and the Client stakeholders.

**C4:** The City should use a more formal and structured scope management process for large, complex IT projects to set and manage expectations of both system stakeholders and vendors.

**C5:** Any future major system enhancements, upgrades or new system implementations should include a detailed Statement of Work that includes scope, schedule, deliverables and acceptance criteria.

### Critical Success Factors

- Support of executives and stakeholders
- Stakeholder agreement on support roles and terms
- Adequate City support staffing level and competency

**Complexity: Moderate**

- Requires agreement on scope management process
- Requires discipline to adhere to scope management process
- Requires routine review of scope management process

**Estimated Cost: Low**

- Low to no cost to adhere to scope management process
- May require additional PM training

**Value: High**

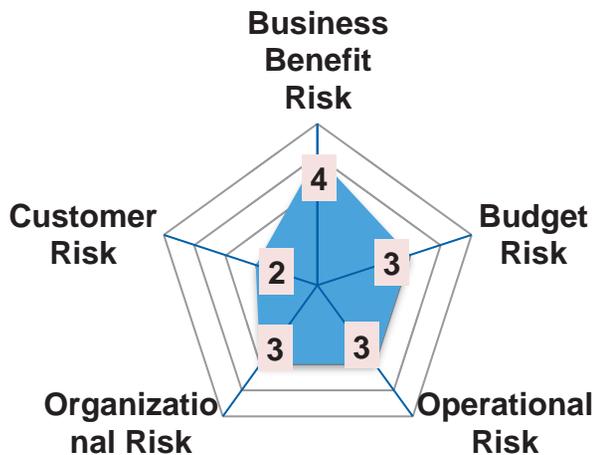
- Improve user perception and trust of system
- Improve public perception and trust of system

## D. Requirements Management Summary Assessment

### Category Definition

*Assessment of the needed system capabilities and whether or not those capabilities have been well defined by the Client and delivered by the vendor. Assessment of completeness of the solution to identify gaps in expected capabilities.*

Overall Risk Rating: 3.0



### Summary Assessment: Moderate Risk Profile

#### Business Benefit Risk

- Identification of baseline requirements and subsequent requirements management will require a change in management style to monitor and enforce requirements management with the vendor. Currently the lack of requirements management resulted in expected capabilities not being provided. (4)

#### Budget Risk

- In order to obtain undelivered requirements, the project budget will incur additional costs in the form of enhancements (change orders) to Motorola, or 3<sup>rd</sup> party products. (3)

#### Operational Risk

- Missing functionality has had an impact on system operations and end users. Workarounds have required additional time and effort. (3)

#### Organizational Risk

- Moderate changes to the organization are needed to address the lack of requirements management. (3)

#### Customer/Public Risk

- Direct impact to public is minor. Delayed response due to increased manual activity, or operator error as a result of system deficiencies could result in safety issues. (2)

## D. Requirements Management: General Observations

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- CAD is operating in production and meeting the minimally acceptable functional needs of the Client. However, the lack of a clearly defined and well managed requirements and disagreement about how 'system upgrade' was defined, from P-CAD to P1 CAD, continue to cause misalignment of expectations between the Client and Motorola.
- Motorola provided a Functional System Description with the CAD contract, which described what system functionality would be delivered. However Motorola was not required by the Client to provide an assessment of differences between P-CAD and P1-CAD and the Client did not conduct its own assessment or comparison, creating a gap in what was expected and what was being delivered.
- The Tallahassee Police Department and Leon County Sheriff's Office did not report any operationally significant gaps in CAD system functionality, but did identify issues that impacted workflow and performance. Their primary frustration is with the general stability and performance of the mobile computers.
- The Tallahassee Fire Department considers there to be significant gaps in core fire dispatch functionality that are preventing them from implementing desired operational changes. However, these were not specific requirements of the CAD upgrade and have not been reported to Motorola as deficiencies.

## D. Requirements Management

### General Observations

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- The Leon County Emergency Medical Services reported deficiencies in CAD's ability to record certain critical time stamps, support System Status Management, support field supervision and provide a 'more robust' unit recommendation. However, these were not specific requirements of the CAD upgrade and have not been reported to Motorola as deficiencies.
- The Consolidated Dispatch Agency (CDA) reported no major functional deficiencies, where the CAD was unable to perform a needed function. However, the CDA did report several examples of features that operated differently, and in some cases less efficiently than with the previous CAD, such as Premise Hazard and multi-jurisdiction officer-initiated calls. Premise Hazard has been identified as an officer safety issue.
- All CAD stakeholders reported deficiencies in the ability to produce robust management reports from CAD data, citing the inability to easily access CAD data for reporting purposes, lack of a well documented 'data dictionary' and inadequate training.
- Due to configuration and administrative differences, features that work differently in the new CAD require customization to work correctly. Even the interpretation of some requirements has been challenging. In some instances Motorola interprets the system to perform correctly, and the Client indicates that the requirement is not satisfied.

## D. Requirements Management Assessment Criteria

Criteria	Findings
1) A Requirements Management Plan is defined, either stand alone or part of another artifact such as a Project Management Plan. [Yes/Partial/No]	✧ No. Since the project was initially considered an upgrade, no requirements management plan was developed.
2) Roles and responsibilities are clearly delineated for Requirements Mgmt between Project Executives, the PM, Client Project Team/Members, Vendor Project Team/ Members. [Yes/Partial/No]	✧ Partial. Roles and responsibilities between City, County and SO are defined, but have not been successfully performed due to split responsibilities. Roles and responsibilities of vendor were not clearly defined..
3) A standardized structure / method exists that is/was used for the development and articulation of the requirements (e.g. MoSCoW, User Stories, Use Cases, other). [Yes/Partial/No]	✧ No. The existing PCAD functionality was considered the baseline by CDA. Seldom used features were not identified in a timely manner. This was a significant issue which resulted in missed expectations.
4) A tool is being / was used to manage the requirements [Yes/Partial/No]	✧ No. There was no mechanism to track requirements or measure success / failure in meeting requirements.
5) A Requirements Traceability matrix is defined, exists and is being / was used [Yes/Partial/No]	✧ No. Requirements are not defined, and as a result there is no requirements traceability matrix.
6) It is possible to demonstrate (with documented evidence) the solution's compliance with the requirements (At the beginning of the project and, if appropriate, at the end of the project) [Yes/Partial/No]	✧ Partial. Acceptance test was provided by Motorola, but existing CAD functionality was not included. A regression test was later developed by CDA to test new versions of the software. Neither of these tools provide a complete list of requirements or compliance with requirements.

## D. Requirements Management Recommendations

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**D1.** The Client should develop a full set of high-level, outcome-objective based CAD requirements using business owner representatives. These requirements will help to identify actual critical gaps in functionality and can be used to either scope enhancement requests for Motorola or a baseline for any future system procurement.

**D2.** The Client should define observable acceptance criteria for any enhancements or future system deliverables so that clear traceability between the requirement and the delivered software can be maintained.

**D3.** The Client should prioritize requirements so that system functionality can be delivered incrementally as budget allows.

## D. Requirements Management Recommendations Summary

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### Recommendation

**D1.** The Client should develop a full set of high-level, outcome-objective based CAD requirements using business owner representatives. These requirements will help to identify actual critical gaps in functionality and can be used to either scope enhancement requests for Motorola or a baseline for any future system procurement.

**D2.** The Client should define observable acceptance criteria for any enhancements or future system deliverables so that clear traceability between the requirement and the deliverable software can be maintained.

**D3.** The Client should prioritize requirements so that system functionality can be delivered incrementally as budget allows.

### Critical Success Factors

- Support of executives and stakeholders
- Commitment on time to perform detailed needs assessment
- Agreement on multi-agency baseline requirements

**Complexity: Moderate**

- Thorough review of CAD requirements for old (PCAD) and new (P1 CAD) systems as well as individual agency requirements

**Estimated Cost: Moderate**

- Will require minimum of 1 man-month, and participation from all agencies

**Value High**

- Provides baseline for existing system
- Can be used for future procurement
- Improves ability to perform regression testing

## E. Project Governance Summary Assessment

### Category Definition

*Assessment of how well the Client makes routine and non-routine decisions and the effectiveness of those decisions.*

*Assessment of how well stakeholders identify and communicate decisions, the nature of risks and issues and how decisions are documented and managed.*

Overall Risk Rating: **1.8**



### Summary Assessment: Minor Risk Profile

#### Business Benefit Risk

- Decision making is challenged by organizational structure. Dual PMs limit effectiveness. As a result, business benefit is limited. Cooperation between agencies is being tested by different management approaches. (2)

#### Budget Risk

- Potential for added costs as management of project between agencies could increase. Budget impact should be minimal. (2)

#### Operational Risk

- Minor impact to operations could result from conflicting or redundant methodologies creating delays or unclear responsibility assignments and approaches to problem resolution. (2)

#### Organizational Risk

- Changes in governance would have minimal impact on organizational operations. (2)

#### Customer/Public Risk

- Project governance should not have a direct impact on the customer/public. Project management impacts should primarily effect internal operations. (1)

## E. Project Governance

### General Observations

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- Considering the nature, size and complexity of the CAD program and the fact that there are at least four major stakeholders (City, County, Sheriff's Office, CDA), each with potentially conflicting interests and priorities, the Client has done well in establishing a governance structure that accommodates input from all stakeholders and provides for regular communications through the technical and operational sub-committees and working groups.
- Concerns about ambiguous roles and responsibilities, as well as differing approaches to support, project and vendor management are creating challenges with potential for conflict of interests between stakeholders.
- CAD issue and status reporting is inconsistent amongst stakeholders and is not based on a standardized and agreed upon set of metrics that indicate system health and stability. The understanding of the nature of open risks and issues is not consistent amongst stakeholders.

## E. Project Governance Assessment Criteria

Criteria	Findings
1) A program / project governance model is defined (stand alone or within another artifact e.g. project charter. [Yes/Partial/No]	✧ Yes. Interagency agreement signed.
2) Roles and responsibilities are clearly delineated between Project Executive, the PM, Client Project Team/ Members, Vendor Project Team/Members. [Yes/Partial/ No]	✧ Partial. Roles and responsibilities between City, County and SO are defined, but not implemented consistently. Roles and responsibilities of vendor were not clearly defined.
3) Governance bodies (e.g. Steering Committee, Project Teams) meet on a regular basis [Yes/Partial/No] AND	✧ Yes. Steering committee meets weekly. Meetings with vendor occur weekly (status and issues meetings). Also CDA Board, Mgmt, Tech, Ops and CAD groups
4) Minutes/Actions from Governance bodies are documented. [Yes/Partial/No]	✧ Yes. Meeting agendas, actions and minutes are tracked and distributed.
5) Escalation processes exist to support the defined Governance. [Yes/Partial/No]	✧ Partial. Escalation was performed several times during the project, but it is not clear if a defined process was followed.
6) A Communications Plan exists to support the defined Governance. [Yes/Partial/No]	✧ No. Formal communications plan was not provided. There is a need for a structured plan given the amount of publicity that has occurred due to CAD performance.

## E. Project Governance Recommendations

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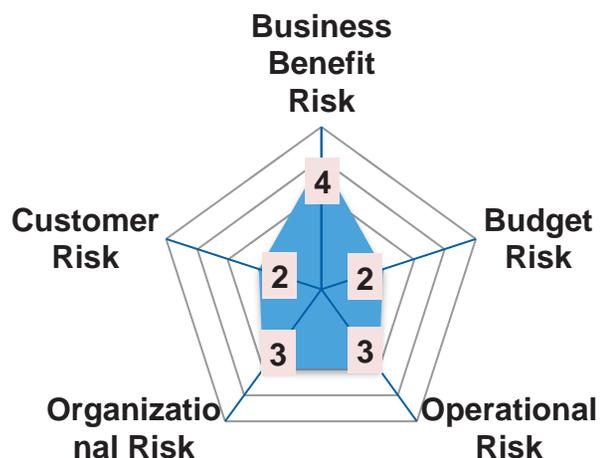
None. Issues that concern the overall governance of the CAD system have been addressed within the other category recommendations. There are no specific recommendations with regard to changes to the overall CAD governance model.

## F. User Acceptance Testing Summary Assessment

### Category Definition

*Assessment of the Client and vendors overall ability to effectively manage a comprehensive test process, including unit, functional and performance testing; assessment of the use of appropriate resources across test activities and the sharing of testing responsibility.*

Overall Risk Rating: **2.8**



### Summary Assessment: Moderate Risk Profile

#### Business Benefit Risk

- User acceptance and system performance testing was not comprehensive or well defined and did not involve all stakeholders making it less likely that functional gaps would be identified before go-live. (4)

#### Budget Risk

- Inadequate acceptance testing may have accelerated beneficial use making it difficult to withhold payment due to issues with system performance or functionality in production. (2)

#### Operational Risk

- Increased operational risk due to no system performance testing under load and inadequate user acceptance testing. (3)

#### Organizational Risk

- Increased organizational risk if project sponsors are expecting certain functionality and it is not realized that these functions are inadequate or missing until after implementation. (3)

#### Customer/Public Risk

- Increased public/customer risk if critical functions are not properly tested and accepted as part of implementation. (2)

## F. User Acceptance Testing

### General Observations

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- User acceptance testing was based on Motorola's Acceptance Test Procedure (ATP), which was designed to validate the delivery of functionality described in Motorola's Functional System Description. The ATP was not designed to test for gaps in functionality between P-CAD and P1-CAD, leaving these gaps largely unaddressed during implementation.
- User acceptance testing did not include system performance testing under load or baseline system performance in-production (e.g. stable system performance in production for a set period of time) as there were no performance requirements defined as part of the contract or maintenance and support agreement. Load testing as part of system acceptance may have helped to identify performance issues earlier and before the system was in use in production.
- Final system acceptance (Final Completion) was based on beneficial use of the system in production\*, not on the successful completion of acceptance or performance testing, making it difficult to address gaps in performance
- Motorola's testing of release updates appears to be inadequate based on examination of the support tickets. The Client reports a higher than expected number of issues that had been fixed in a previous release and found again in subsequent release. This is usually associated with inadequate unit and integration testing prior to release of new software.

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\* CAD Contract Attachment A 5.11

## F. User Acceptance Testing Assessment Criteria

Criteria	Findings
1) A User Acceptance Testing Plan is defined, either stand alone or part of another artifact such as a Testing Strategy. [Yes/Partial/No]	✧ Partial. Motorola provided an acceptance test procedure, but the ATP was not tailored for CDA and did not include PCAD functionality. There is no complete ATP that tests all functionality to be used for acceptance. Acceptance was by “beneficial use”.
2) Roles and responsibilities are clearly delineated for UAT between the Client Project Team/Members, and Vendor Project Team/Members. [Yes/Partial/No]	✧ No. Since there was no formal ATP, CDA performed testing by using the system in a training environment, and subsequently an operational environment to test the system.
3) UAT requirements were defined (appropriately) within the Requirements AND the UAT Plan. [Yes/Partial/No]	✧ Partial. Motorola UAT included baseline requirements, but not customized for CDA and not all inclusive. There were no performance requirements.
4) Acceptance criteria / performance targets are/were defined in the UAT Plan (and/or Supporting Test Cases) [Yes/Partial/No]	✧ No. There were no performance requirements. Acceptance was defined as “beneficial use”. A continuous reliability period was never achieved based on CDA reported issues.
5) UAT results are/were documented and available [Yes/Partial/No]	✧ Partial. No formal ATP. Motorola test was performed, and issues logs were maintained to track failures.
6) UAT results satisfied or exceeded established thresholds / targets / acceptance criteria [Yes/Partial/No]	✧ Partial. Basic functionality identified in Motorola ATP was successful, but missing functionality not tested and performance and reliability not satisfied.

## F. User Acceptance Testing Recommendations

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**F1:** The Client should create a test environment where full system load testing can be performed using automated tools. Each new release should be fully load tested and tested for expected error conditions under load before being released to production.

**F2:** The Client should create a comprehensive regression test plan for all new releases and where possible automate the regression test using testing tools. The regression test should be periodically reviewed and updated to ensure that the appropriate level of testing is performed on each new release.

**F3:** The Client should share the regression tests with Motorola and request that Motorola follow the same regression tests before providing new releases to the Client for testing and should not accept any releases that have not been fully regression tested.

**F4:** The Client should continue to carefully track regression test errors to improve the quality of each version release.

## F. User Acceptance Testing Recommendation Summary

---

**F1:** The Client should create a test environment where full system load testing can be performed using automated tools. Each new release should be fully load tested and tested for expected error conditions under load before being released to production.

**F2:** The Client should create a comprehensive regression test plan for all new releases and where possible automate the regression test using testing tools. The regression test should be periodically reviewed and updated to ensure that the appropriate level of testing is performed on each new release.

**F3:** The Client should share the regression tests with Motorola and request that Motorola follow the same regression tests before providing new releases to the Client for testing and should not accept any releases that have not been fully regression tested.

**F4:** The Client should continue to carefully track regression test errors to improve the quality of each version release.

### Critical Success Factors

- Ability to create load test environment
- Ability to load test using automated tools
- Ability to regression test using automated tools

### Complexity **Med**

- Requires adoption, configuration, use of testing tools
- May require cooperation with Motorola to implement tools

### Cost: **Med**

- May require additional investment in hardware / software for test environment
- May require investment in testing tools for regression and performance testing

### Value **High**

- Improve overall software quality with better testing
- Improve user confidence by introducing fewer errors

## G. Client Support Summary Assessment

### Category Definition

*Assessment of the Client's role in supporting the system; the definition of roles and responsibilities and support expectations; the Client's ability to support the system within the agreed upon service levels; and the Client's ability to effectively manage their support activities.*

Overall Risk Rating: 2.6



### Summary Assessment: Moderate Risk Profile

#### Business Benefit Risk

- Client support roles are defined, but support provided from different agencies with different management approaches and styles. (3)

#### Budget Risk

- Risk to budget primarily associated with cost for additional staffing. (3)

#### Operational Risk

- Changes to business processes are needed in order to manage vendor appropriately. (3)

#### Organizational Risk

- Client's and system administration responsibilities are not clearly defined. Organizational change is needed to roles and responsibilities. (3)

#### Customer/Public Risk

- Little to no risk to public. Only applicable if issues impact performance. This has not been an issue from an IT implementation perspective. (1)

## G. Client Support

### General Observations

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- According to the CDA inter-local agreement, the City is responsible for managing the support of the CAD system. This includes managing Motorola's maintenance and support agreement and fulfilling the Clients obligations for system support which include workstations (CAD and mobile) and the CAD network infrastructure. In practice, the City and Sheriff's Office share support responsibility as the Sheriff's Office also provides CAD support resources to the CDA who assist with technical support and system configuration (provisioning).
- In the past, the Motorola CAD system was highly proprietary and largely supported by Motorola with little involvement by City support staff. The new system requires the City to provide a higher level of technical expertise, particularly in the areas of system and database administration and network support.
- The resources needed to adequately support the CAD system were not fully explained by Motorola as part of the transition to the new system and were not well understood by the time the City cut over to the new system. In early 2015, the City hired an additional full-time technical resource to fulfill these system monitoring and maintenance responsibilities.

## G. Client Support

### General Observations

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- The hiring of a dedicated CAD system administrator has improved the City's ability to manage the system. Issue reporting and the proactive identification of and reaction to performance issues has likely contributed to the steady increase in system reliability over the past six months.
- The City is able to use the system management tools, primarily System Center Operations Manager (SCOM), provided by Motorola to monitor the general health and stability of the CAD system and to track and troubleshoot system errors. However, Motorola has not provided adequate System Administration training or documentation to the City, leaving them less able to fully adopt a more in-depth and advanced technical support role.
- The City is limited in its ability to monitor and troubleshoot the CAD network infrastructure for which it is responsible. Several system performance issues, especially those related to TPD mobile computers, may be related to network connectivity issues. The City is unable to provide full end-to-end visibility into network performance making diagnosis more difficult. Within the past three months the City has invested in additional network monitoring and diagnostic software and since then the number and severity of mobile related issues has decreased.

## G. Client Support

### General Observations

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- Responsibility for CAD system provisioning (configuration management) is not centrally managed. Provisioning is shared amongst stakeholders with differing levels of training and proficiency. This has caused misalignment of expectations how and when system changes will be made, and made it difficult to prioritize provisioning tasks.
- Responsibility for CAD system reporting (management reports) is not centrally managed. Reporting is shared amongst stakeholders with differing levels of training and proficiency. The Client does not have a clear understanding of data element definitions and Motorola is unable to provide complete data dictionary or other definition documentation. This has caused confusion and a misaligned expectations how statistical and operational performance information is reported from CAD to the CDA and various stakeholders.
- Other Motorola PremierOne™ CAD clients report having at least one full-time CAD Project Manager, one full-time System Administrator, one part-time Database Administrator, one part-time Network Administrator, one to two full time CAD administrators and a number of 'super-users' identified to assist with field support.

## G. Client Support Assessment Criteria

Criteria	Findings
1) A Support Model for CAD is defined, which includes scope of support, processes, tools and for each defined Agency (IT Operations) and Vendor(s) responsibilities [Yes/No/Partial]	✧ Partial. Generic scope of support, processes and roles and responsibilities have been identified. Additional tools are being identified for network troubleshooting. No SLAs are defined, and reliability measurements are not agreed upon between CDA and Motorola.
2) The support model has been established and is currently operating by the Agency (IT Operations) per the agreed to scope/processes [Yes/No/Partial]	✧ Partial. General support model is in place and is being implemented, but without SLAs, and reliability metrics are not quantified.
3) The Agency has appropriate personnel, skills, capabilities and capacity to execute/manage the defined support model - processes, tasks, etc. [Yes/No/Partial]	✧ Yes. However, additional personnel were hired to satisfy the needs, and some IT personnel are not CDA employees but assigned to CDA project. Risk of competing interests and loyalty.
4) SLAs for Agency support processes are clearly defined [Yes/No/Partial]	✧ No. Metrics for response are not defined. Criteria for downtime is not established (basic definition is 15 minute increments of downtime, but server / workstation / mobile criteria not established)
5) SLAs for Agency support processes are being monitored [Yes/No/Partial]	✧ No. Since the metrics are not defined, monitoring is not being performed, except for major system failures.
6) SLAs for Agency support processes are being achieved [Yes/No/Partial]	✧ No. Continuous reliability period was never achieved. Workstation and mobile issues are not being tracked accurately.
7) A performance improvement plan/process exists that is used to identify/address and resolve problems with any support processes or SLA [Yes/No/Partial]	✧ Partial. Reporting process improved but workstation / mobile issues need to be tracked more closely. Clear failure and failure type definitions are needed.

## G. Client Support Recommendations

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**G1:** The City should provide a more 'hands-on' and in-depth level of technical system support including system administration and the ability to conduct technical diagnostics and trouble identification (support Level 2 / 3).

**G2:** The City should assign a dedicated CAD support manager who has no other duties besides the management of CAD system support. The CAD support manager should be assigned to work at the CDA and be responsible for the accurate tracking and reporting of all CAD issues.

**G3:** The CAD support manager should work with the CDA, Client stakeholders and Motorola to create and track key support performance metrics for both the City and Motorola, and report support performance against those metrics regularly to the CDA Board.

**G4:** The City should provide centralized provisioning support, including the identification and tracking of all provisioning tasks and requests through its help desk system. Centralized provisioning should be accountable for all provisioning requests, and support end-users who may have provisioning responsibility.

**G5:** The City should support centralized management reporting, including the organization of a representative group of stakeholders to cooperatively define data element definitions and the structure and use of standardized reports.

## G. Client Support Recommendations

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**G6:** The City should provide additional dedicated support resources, particularly for network infrastructure and system administration, who can aid in the identification, diagnosis and resolution of outstanding issues.

**G7:** The City should develop standardized infrastructure health 'checklists' used to identify and validate the health and condition of critical infrastructure components for which it is responsible and provide them as part of routine troubleshooting.

**G8:** The CDA Board should establish support level expectations for the City that include regular reporting of system health against established performance criteria and clear escalation and notification of priority issues.

## G. Client Support Recommendation Summary

**G1:** The City should provide a more 'hands-on' and in-depth level of technical system support including system administration and the ability to conduct technical diagnostics and trouble identification (support Level 2 / 3).

**G2:** The City should assign a dedicated CAD support manager who has no other duties besides the management of CAD system support. The CAD support manager should be assigned to work at the CDA and be responsible for the accurate tracking and reporting of all CAD issues.

**G3:** The CAD support manager should work with the CDA, Client stakeholders and Motorola to create and track key support performance metrics for both the City and Motorola, and report support performance against those metrics regularly to the CDA Board.

**G4:** The City should provide centralized provisioning support, including the identification and tracking of all provisioning tasks and requests through its help desk system. Centralized provisioning should be accountable for all provisioning requests, and support end-users who may have provisioning responsibility.

**G5:** The City should support centralized management reporting, including the facilitation of a representative group of stakeholders to uniformly define data elements and standardized reports.

**G6:** The City should provide additional dedicated support resources, particularly for network infrastructure and system administration, who can aid in the identification, diagnosis and resolution of outstanding issues.

**G7:** The City should develop standardized infrastructure health 'checklists' that can be used to identify and validate the health and condition of critical infrastructure components as part of routine troubleshooting.

**G8:** The CDA Board should establish support level expectations for the City that include regular reporting of system health against established system performance criteria and clear escalation and notification of priority issues.

### Critical Success Factors

- Stakeholder agreement on service level expectations
- Ability to attract and hire required resources

### Complexity **Low**

- Define minimum service level expectations
- Define roles and responsibilities

### Cost: **High**

- May require additional investment in personnel / contractors

### Value **High**

- Improve support level and responsiveness

## G. Client Support Support Resource Recommendations

Role	Responsibility	Current	Recommended
CAD Support Manager	<ul style="list-style-type: none"> <li>Overseeing all CAD support</li> <li>Reporting against support level metrics</li> </ul>	0	1 full time (+1)
CAD Administrator	<ul style="list-style-type: none"> <li>Centrally managing provisioning</li> <li>Centrally managing reporting</li> </ul>	1 full time	2 full time (+1)
Subject Matter Expert (SME)	<ul style="list-style-type: none"> <li>Providing business rules</li> <li>End user testing</li> </ul>	As needed	As needed
System Administrator	<ul style="list-style-type: none"> <li>Hardware infrastructure configuration, support and monitoring</li> <li>System troubleshooting, technical support</li> </ul>	1 full time	1 full time (no change)
Database Administrator	<ul style="list-style-type: none"> <li>Database support and monitoring</li> </ul>	0	1 part time (+1)
Network Administrator	<ul style="list-style-type: none"> <li>Network support and monitoring</li> </ul>	0	1 part time (+1)
Graphical Information Systems (GIS) Administrator	<ul style="list-style-type: none"> <li>Map database updates and maintenance</li> </ul>	1 full time	1 full time (no change)

## H. Training Summary Assessment

### Category Definition

*Assessment of overall accountability for and execution of training; Assessment of the completeness of training provided by the vendor required in order for the client to effectively operate the system and to fulfill its support obligations.*

Overall Risk Rating: 2.6



### Summary Assessment: Moderate Risk Profile

#### Business Benefit Risk

- End user training was satisfactory, but system administration and management reporting training was deficient. (2)

#### Budget Risk

- Additional cost of outside training if required to enhance Motorola provided training. Configuration changes may require additional training for dispatch personnel. (3)

#### Operational Risk

- Operational risk from incorrect system configuration resulting from poor system administration training. (3)

#### Organizational Risk

- Configuration changes may have a minor impact on call taking and dispatch procedures. (2)

#### Customer/Public Risk

- Issues in training and associated system configuration will be reflected in the service provided. This could have an impact on the service provided to the customer/public. (3)

## H. Training

### General Observations

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- Gartner found no significant issues related to end-user training. Users were informed and aware of how to operate the system and what to expect in terms of system functionality. Issues with system performance or concerns about how certain capabilities functioned were not found to be relating to lack of training.
- Motorola has not provided the Client with sufficient System Administration training. The System Administration training and documentation provided to-date did not cover all aspects of system administration and was not sufficient in the level of technical detail required for the client to completely fulfill its support obligations.
- Motorola has not provided the Client with sufficient training or documentation for the Reporting Data Warehouse (RDW) or the SQL Server Reporting Service (SSRS). The training provided to-date was not comprehensive and the client felt as though the trainers provided by Motorola did not have sufficient knowledge of the system to answer detailed technical questions. The Client is unable to fully utilize the reporting database and tools to produce accurate operational performance reports and statistical information.
- The Motorola provided training materials are generic and not written specifically for the CDA environment, making them less useful.

## H. Training Assessment Criteria

Criteria	Findings
1) A Training Strategy or Plan is defined. [Yes/Partial/No]	✧ Yes. Training plans provided and reviewed.
2) Roles and responsibilities are clearly delineated for Training between the Client Project Team/Members, and Vendor Project Team/Members. [Yes/Partial/No]	✧ Yes for end-user training, Partial for system admin and reporting training. Motorola provided initial training.
3) Training is planned to be / was provided to all users of CAD, per the agency's policies / requirements (e.g. 40 hours of classroom training, other OTJ training etc). [Yes/Partial/No]	✧ Yes, for end-user training, Partial for system admin and reporting training. Motorola provided initial training.
4) Training materials were tailored to reflect the agency's implementation of the system (i.e. NOT generic training material, training materials were developed in parallel to the project implementation, taking requirements and design into consideration) [Yes/Partial/No]	✧ No. Generic training materials. Customizations specific to CDA operations will be beneficial for all users, and should decrease subsequent overall training time (or make more efficient).
5) Training results were documented and satisfied or exceeded established thresholds / targets / acceptance criteria [Yes/Partial/No]	✧ Partial. Basic training provided. No issues identified, but training was generic. Evaluation sheets that were reviewed were positive.
6) Access to refresher training, online or physically, and access to FAQs is available [Yes/Partial/No]	✧ Partial. User manuals for COTS product are available both in hard copy and on line. No FAQs available.

## H. Training Recommendations

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**H1:** The Client should require Motorola to complete System Administration training and provide required documentation.

**H2:** The Client should continue to enhance the Motorola provided training materials making them more specific to and useful for the CDA, where appropriate.

## H. Training Recommendation Summary

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**H1:** The Client should require Motorola to provide sufficient training and documentation for system administration and use of the management reporting system.

**H2:** The Client should enhance the Motorola provided training materials making them more specific to and useful for the CDA, where appropriate.

### Critical Success Factors

- Motorola's ability to provide sufficient training

**Complexity** **Low**

- Reiterate training expectations

**Cost:** **Low**

- There should be no additional cost except for development of customized training materials

**Value** **Med**

- Fully trained client staff are better able to support the system.

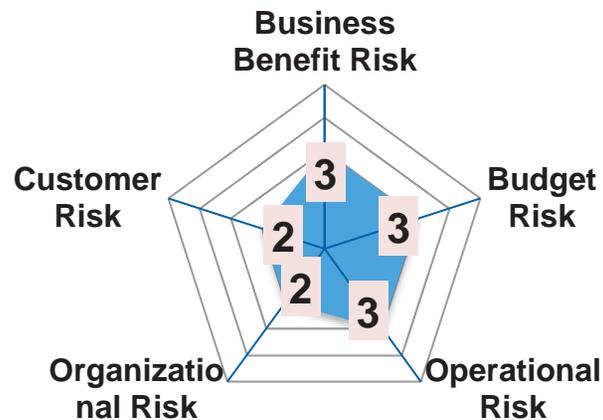
# I. Infrastructure

## Summary Assessment

### Category Definition

*Assessment of the performance and management of the system infrastructure. Vendor and Client's ability to effectively monitor and maintain a reliable infrastructure and work with the vendor to address infrastructure related issues.*

Overall Risk Rating: **2.6**



### Summary Assessment: Moderate Risk Profile

#### Business Benefit Risk

- Performance and response times are tied to adequate systems and infrastructure. Risk identified is associated with network performance and associated monitoring of network. (3)

#### Budget Risk

- Additional tools and/or staff are required to monitor network and report/correct issues in real time. (3)

#### Operational Risk

- Performance and reliability is being effected by the network performance. (3)

#### Organizational Risk

- Minor impact to overall organizational operations. Changes effect monitoring of both wired and wireless networks. (2)

#### Customer/Public Risk

- Direct effect on public is minimal, but improved monitoring of Infrastructure correlates to improved service. (2)

## I. Infrastructure

### General Observations

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- The most serious recent system outages involving mobile computer connectivity and subsequent CAD server restarts seem to be an indication of both network related issues and the CAD system's inability to effectively deal with these error conditions. When combined, the result is often a more serious systemic issue that effects more than just the initial users who were unable to access the system.
- The information provided to Gartner from both the Client and Motorola indicated that all system infrastructure components, including servers, database, network and storage, are in compliance with Motorola specifications.
- While Gartner did not perform a detailed technical assessment of the City network, the persistence of performance issues, particularly those effecting the mobile users, related to network availability, indicate more systemic problems with network stability. The City is unable to definitively rule-out the network as contributing to recent system outages. The City's inability to definitively identify and troubleshoot CAD network issues has made root cause identification more difficult and led to 'finger pointing' between Motorola and the City.
- Over the past six weeks, the City has installed and is using additional network monitoring tools on a trial basis to monitor network congestion, as well as monitor mobile data computer device coverage.

## I. Infrastructure Assessment Criteria

Criteria	Findings
1) A Support Model for Technical Infrastructure is defined, which includes scope of support, processes, tools and for each defined Agency (IT Operations) and Vendor(s) responsibilities [Yes/No/Partial]	✧ Yes. Motorola minimum criteria have been identified and met (note that future enhancements now require Virtualized servers and this is not currently in place)
2) The Infrastructure design and implementation has been established and is currently operating and/or in place per the agreed to specification. [Yes/No/Partial]	✧ Yes. Issues do not appear to be infrastructure related. Motorola has also acknowledged the infrastructure is satisfactory. New network monitoring tools are being deployed to identify network congestion.
3) The Vendor / City / County have appropriate personnel, skills, capabilities and capacity to execute/manage the defined support model - processes, tasks, etc. [Yes/No/Partial]	✧ Yes. Additional CDA resources were required and obtained. Resources are not all dedicated to CDA, which could create a conflict of interest.
4) SLAs for Vendor support processes are clearly defined [Yes/No/Partial]	✧ No. There is no contract SLA in place for uptime, response time, etc. This needs to be implemented.
5) SLAs for Vendor support processes are being monitored [Yes/No/Partial]	✧ No. SLA not defined. Need to quantify Motorola response time/up time and monitor for compliance.
6) SLAs for Vendor support processes are being achieved [Yes/No/Partial]	✧ No. Issues with vendor support personnel have been identified. Obtaining the appropriate resource has been challenging depending on the nature of the issue.
7) A performance improvement plan/process exists that is used to identify/address and resolve problems with any support processes or SLA [Yes/No/Partial]	✧ No. Issue resolution has generally not been acceptable. Escalation process is not well documented.

## I. Infrastructure Recommendations

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**I1:** The City should invest in and deploy the necessary tools required to actively monitor and troubleshoot the complete end-to-end CAD network performance and connectivity, including the LAN, WAN and RadioIP. The tools should be deployed with sufficient coverage to provide visibility of the complete health and condition of the network from CAD servers to / from any end user device.

**I2:** The City should hire an outside, independent network specialist to assess the current network design and performance across all public safety systems and aid in the identification of potential problems and in the development of a network monitoring program.

**I3:** The City should assign a single Network Support Administrator to be accountable for the maintenance and support of the CAD network.

**I4:** The City should work to create a network health checklist that can be used to definitively establish the health of the network at any given time, and in particular when issues of slowness or connectivity are reported. This should include both observable connectivity tests as well as reports from network monitoring tools before, during and after the time issues are reported.

## I. Infrastructure Recommendation Summary

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**I1:** The City should invest in and deploy the necessary tools required to actively monitor and troubleshoot the complete end-to-end network performance and connectivity, including the LAN, WAN and RadiolP. The tools should be deployed with sufficient coverage to provide visibility of the complete health and condition of the network from CAD servers to / from any end user device.

**I2:** The City should consider hiring an outside, independent network specialists to assess the current network design and performance across all public safety systems and aid in the identification of potential problems and in the development of a network monitoring program.

**I3:** The City should assign a single Network Support Administrator to be responsible for the maintenance and support of the CAD network.

**I4:** The City should work to create a network health checklist that can be used to definitively establish the health of the network at any given time, and in particular when issues of slowness or connectivity are reported. This should include both observable connectivity tests as well as reports from network monitoring tools before, during and after the time issues are reported.

### Critical Success Factors

- Ability to actively monitor and troubleshoot network

**Complexity** **Med**

- Requires acquisition, configuration and training on new tools to monitor network.

**Cost:** **Med**

- Cost of additional network monitoring tools
- Cost of outside consultants

**Value** **High**

- Lower resolution time
- Higher system performance / availability
- Reduce 'finger-pointing'

## Section 3: Alternatives Assessment

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Tallahassee CAD Risk Assessment Report

Gartner Consulting

## Alternatives Assessment Introduction

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- Considering the findings of the risk assessment and given the parameters provided by the Client, Gartner is to recommend whether or not the Client should continue using the Motorola CAD or change to a new CAD vendor.
- In making it's recommendation, Gartner considered the following:
  - The interest of public and officer safety above all other factors
  - The Client's direction that cost and time should not limit the alternatives considered
  - The Client's direction that Gartner's recommendation must be to either keep or replace the Motorola CAD system based on the information available today.
  - Gartner's independent review and assessment of trouble tickets since go-live
  - Cost by itself should not be a limiting factor in considering alternatives
  - Review of project artifacts, documentation and contracts
  - Interviews with representatives from Motorola
  - Interviews with other agencies, as provided by Motorola, using the same system
  - Interviews with other CAD system vendors
  - The Gartner team's industry experience and expertise
  - Gartner's independent research and best practices
  - Interviews with Client executives and key project stakeholders

## Alternatives Assessment Introduction

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Gartner considered three possible alternatives

- Stay with Motorola, without changes to the maintenance and support agreement
  - Accept the system performance and functionality as it is today
  - Enter into the proposed maintenance and support agreement to ensure support continuity
  - Document and prioritize new functional needs and enhance functionality over time
- Stay with Motorola, conditional on revised maintenance and support agreement
  - Accept the system performance functionality as it is today
  - Enter into a maintenance and support agreement with defined service levels and credits
  - Document and prioritize new functional needs and enhance functionality over time
- Replace Motorola with a market solution starting immediately
  - Accept the system performance and functionality as it is today
  - Enter into the proposed maintenance and support agreement to ensure support continuity
  - Immediately begin a process to replace Motorola, starting with requirements and solicitation
  - Evaluate and select market alternatives, implement new CAD over next 18 – 24 months

## Alternatives Assessment Approach Framework

The following areas are used to differentiate each of the available alternatives. The purpose of the alternatives framework is to provide a balanced assessment of each alternatives considering those factors most important to the Client.

Functional Fit	Technical Fit
<ul style="list-style-type: none"> <li>• Ability to fully meet functional requirements</li> <li>• Ability to adapt to changing requirements</li> <li>• Requires minimal custom development</li> <li>• Requires minimal training / retraining</li> <li>• Easy to use</li> </ul>	<ul style="list-style-type: none"> <li>• Proven, stable technical environment</li> <li>• Ability to meet performance demands</li> <li>• Ability to operate reliably with minimal downtime</li> <li>• Ability for City to support technology stack</li> <li>• Ability for vendor to support software</li> <li>• Ability to adapt to new technology platforms</li> </ul>
Risk	Cost
<ul style="list-style-type: none"> <li>• No identified major risks</li> <li>• Proven implementation approach</li> <li>• Known risks can be easily managed</li> <li>• Lifecycle / obsolescence risk is low</li> </ul>	<ul style="list-style-type: none"> <li>• One-time acquisition cost</li> <li>• Ongoing support cost</li> <li>• Project implementation cost</li> <li>• Total Cost of Ownership</li> </ul>

## Alternatives Assessment

### Option 1: Stay with Motorola, without changes to the maintenance and support agreement

Accept the Motorola CAD as it is and agree to the proposed maintenance and support agreement without changes.

Functional Fit ●	Technical Fit ●
<ul style="list-style-type: none"> <li>• Meets core functional needs and has been operational since Sept 2013</li> <li>• Accepts known functional gaps such as lack of support for EMS system status management</li> <li>• Provides new functionality through change orders and/or new releases</li> </ul>	<ul style="list-style-type: none"> <li>• History of stability and performance issues</li> <li>• Recent stability and performance improvements</li> <li>• Familiar technical environment</li> <li>• Potential issues of performance under load</li> <li>• Potential issues of workstation 'lock-up'</li> <li>• Unable to conduct performance testing under load outside of production environment</li> </ul>
Risk ●	Cost ●
<ul style="list-style-type: none"> <li>• Does not address user trust and confidence in Motorola's ability / commitment to support</li> <li>• Maintenance roles and responsibilities remain ill-defined and unclear</li> <li>• No specific service level expectations creates discrepancies between actual and expected system performance standards</li> <li>• Inadequate escalations and incentives for maintaining system stability and performance</li> </ul>	<ul style="list-style-type: none"> <li>• No 'switching' cost</li> <li>• No additional system acquisition costs</li> <li>• Credits for past system performance</li> <li>• Known five year maintenance cost</li> <li>• Possible future costs for for enhancements to address functional gaps, if required</li> </ul>

## Alternatives Assessment

### Option 2: Stay with Motorola, conditional on revised maintenance and support agreement

Accept the Motorola CAD as it is only if able to execute a maintenance and support agreement that includes specific system performance and service level requirements and associated financial incentives.

Functional Fit ●	Technical Fit ●
<ul style="list-style-type: none"> <li>• Meets core functional needs and has been operational since Sept 2013</li> <li>• Accept known functional gaps such as lack of support for EMS system status management</li> <li>• Adding new functionality requires change orders and/or new releases</li> </ul>	<ul style="list-style-type: none"> <li>• History of stability and performance issues</li> <li>• Recent stability and performance improvements</li> <li>• Familiar technical environment</li> <li>• Potential issues of performance under load</li> <li>• Potential issues of workstation 'lock-up'</li> <li>• Able to conduct performance testing under load outside of production environment</li> </ul>
Risk ●	Cost ●
<ul style="list-style-type: none"> <li>• Addresses most significant risks</li> <li>• Builds user trust and confidence in Motorola's ability / commitment to support</li> <li>• Defines maintenance roles and responsibilities</li> <li>• Provides specific service level expectations creates discrepancies between actual and expected system performance standards</li> <li>• Contains escalations and incentives for maintaining system stability and performance</li> </ul>	<ul style="list-style-type: none"> <li>• No 'switching' cost</li> <li>• No additional system acquisition costs</li> <li>• Credits for past system performance</li> <li>• Known five year maintenance cost</li> <li>• Possible future costs for for enhancements to address functional gaps, if required</li> </ul>

## Alternatives Assessment

### Option 3: Replace Motorola with a market solution immediately

Accept the Motorola CAD as it is and execute the proposed maintenance and support agreement. At the same time, begin a competitive market procurement process to replace the CAD in 18 – 24 months

Functional Fit ●	Technical Fit ●
<ul style="list-style-type: none"> <li>• Opportunity to address functional gaps</li> <li>• Opportunity to compare / contrast vendors</li> <li>• Opportunity for prioritization of needs</li> <li>• Opportunity to meet CDA operational needs</li> <li>• Requires functional trade-offs and compromise between stakeholders depending on selected vendor</li> </ul>	<ul style="list-style-type: none"> <li>• Opportunity to address technical, performance and stability issues</li> <li>• Some degree of technical uncertainty will remain until vendor is selected, then will have to be managed</li> <li>• Requires Client to provide strong technical leadership</li> </ul>
Risk ●	Cost ●
<ul style="list-style-type: none"> <li>• Complex, multi-stakeholder procurement</li> <li>• Complex, technical system implementation</li> <li>• Risks will vary significantly depending on selected vendor</li> <li>• Motorola service level and performance risks continue for the duration of the procurement</li> </ul>	<ul style="list-style-type: none"> <li>• Significant 'switching' cost \$2.0M - \$2.5M</li> <li>• No additional system acquisition costs</li> <li>• Credits for past system performance</li> <li>• Known five year maintenance cost</li> <li>• Possible future costs for for enhancements to address functional gaps, if required</li> </ul>

## Alternatives Assessment Summary

Alternative	Relative Prioritization Factors			
	Functional Fit	Technical Fit	Risk	Cost
Stay with Motorola, as-is with no conditions				
Stay with Motorola, conditional on validation of performance and stability				
Replace Motorola with a market solution				

**Gartner recommends that the Client *Stay with Motorola, conditional on a revised maintenance and support agreement.***

## Appendix A: Interviews

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Tallahassee CAD Risk Assessment Report  
Gartner Consulting

## Appendix A: Interviews (1 of 4)

Name	Title & Organization	Telephone	Email	Date	Session
Lane, Harold Sr.	IT Administrator - City	850 544 4856	<a href="mailto:harold.lane@talgov.com">harold.lane@talgov.com</a>	5/28/2015	Tallahassee IT
Richardson, Janna	IT Manager, Sheriff's Office	850 606 3206	<a href="mailto:RichardsonJ@leoncountyfl.gov">RichardsonJ@leoncountyfl.gov</a>	5/28/2015	Tallahassee IT

Name	Title & Organization	Telephone	Email	Date	Session
Ron Wostel	City of Tallahassee Radio Shop		<a href="mailto:Ronald.Wostel@talgov.com">Ronald.Wostel@talgov.com</a>	5/28/2015	Radio/Fire Station Alerting
Chris Pandolf	City of Tallahassee Radio Shop			5/28/2015	Radio/Fire Station Alerting

Name	Title & Organization	Telephone	Email	Date	Session
Sabrina Holloman	Chief Information Systems Officer	850-891-8402	<a href="mailto:Sabrina.Holloman@talgov.com">Sabrina.Holloman@talgov.com</a>	5/28/2015	PSC Tech Sub Committee
Pat Curtis			<a href="mailto:CurtisP@leoncountyfl.gov">CurtisP@leoncountyfl.gov</a>	5/28/2015	PSC Tech Sub Committee
Various				5/28/2015	PSC Tech Sub Committee

Name	Title & Organization	Telephone	Email	Date	Session
Mike Wood	Sheriff			5/28/2015	Leon County Sheriff's Office
Rob Swearingen	Under-Sheriff			5/28/2015	Leon County Sheriff's Office
Bobby Long	Attorney / legal council for SO			5/28/2015	Leon County Sheriff's Office
Gene Griffin	Chief Administration Officer			5/28/2015	Leon County Sheriff's Office

## Appendix A: Interviews (2 of 4)

Name	Title & Organization	Telephone	Email	Date	Session
Berenger, Luis	CDA	800 606 5852	<a href="mailto:luis.berenger@tlccda.org">luis.berenger@tlccda.org</a>	5/28/2015	Tallahassee
Davidson, Brett	Captain, LCEMS	850 606 2117	<a href="mailto:davidsonb@leoncountyfl.gov">davidsonb@leoncountyfl.gov</a>	5/28/2015	Tallahassee
Henderson, Brian J.	CAD Systems Administrator	850 363 3168	<a href="mailto:Brian.Henderson@talgov.com">Brian.Henderson@talgov.com</a>	5/28/2015	Tallahassee
Lane, Harold Sr.	IT Administrator - City	850 544 4856	<a href="mailto:harold.lane@talgov.com">harold.lane@talgov.com</a>	5/28/2015	Tallahassee
Pandolfi, Chris	ISS 800 MHZ	850 544 3756	<a href="mailto:chris.pandolfi@talgov.com">chris.pandolfi@talgov.com</a>	5/28/2015	Tallahassee
Pence, Patrick	GIS Coordinator - Public Safety	850 891 4941	<a href="mailto:patrick.pence@talgov.com">patrick.pence@talgov.com</a>	5/28/2015	Tallahassee
Richardson, Janna	IT Manager, Sheriff's Office	850 606 3206	<a href="mailto:RichardsonJ@leoncountyfl.gov">RichardsonJ@leoncountyfl.gov</a>	5/28/2015	Tallahassee
Smith, Fredrick	ISS Public Safety	850 891 4743	<a href="mailto:fredrick.smith@talgov.com">fredrick.smith@talgov.com</a>	5/28/2015	Tallahassee
Wostel, Ron	ISS 800 MHZ	850 544 4868	<a href="mailto:ron.wostel@talgov.com">ron.wostel@talgov.com</a>	5/28/2015	Tallahassee

Name	Title & Organization	Telephone	Email	Date	Session
Abrams, Chad	Deputy Chief, LCEMS	850 606 2100	<a href="mailto:abramsc@leoncountyfl.gov">abramsc@leoncountyfl.gov</a>	5/28/2015	Tallahassee EMS
Chan, Norberto	IT Network Analyst, EMS	850 728 7399	<a href="mailto:chann@leoncountyfl.gov">chann@leoncountyfl.gov</a>	5/28/2015	Tallahassee EMS
Davidson, Brett	Captain, Communications Supervisor	850 606 2117	<a href="mailto:davidsonb@leoncountyfl.gov">davidsonb@leoncountyfl.gov</a>	5/28/2015	Tallahassee EMS
James, Jake	IT Coordinator, EMS	850 606 5544	<a href="mailto:jamesj@leoncountyfl.gov">jamesj@leoncountyfl.gov</a>	5/28/2015	Tallahassee EMS
Kemp, Mac	Deputy Chief, Ops. LCEMS	850 606 2100	<a href="mailto:kempm@leoncountyfl.gov">kempm@leoncountyfl.gov</a>	5/28/2015	Tallahassee EMS
Quillin, Tom	Chief, LCEMS	850 606 2100	<a href="mailto:quillint@leoncountyfl.gov">quillint@leoncountyfl.gov</a>	5/28/2015	Tallahassee EMS

## Appendix A: Interviews (3 of 4)

Name	Title & Organization	Telephone	Email	Date	Session
Aleman, Jenny	BSA, City of Tallahassee	850 544 1814	<a href="mailto:jenny.aleman@talgov.com">jenny.aleman@talgov.com</a>	5/29/2015	Tallahassee Fire
Davison, Judi	Liaison, Tallahassee Fire	850 766 7137	<a href="mailto:judi.davison@talgov.com">judi.davison@talgov.com</a>	5/29/2015	Tallahassee Fire
Gaines, Jerome	Fire Chief, Tallahassee Fire	850 891 6600	<a href="mailto:jerome.gaines@talgov.com">jerome.gaines@talgov.com</a>	5/29/2015	Tallahassee Fire
Gatlin, John	Deputy Chief, Tallahassee Fire	850 891 6600	<a href="mailto:john.gatlin@talgov.com">john.gatlin@talgov.com</a>	5/29/2015	Tallahassee Fire
Lane, Harold Sr.	IT Administrator - City	850 544 4856	<a href="mailto:harold.lane@talgov.com">harold.lane@talgov.com</a>	5/29/2015	Tallahassee Fire
Roberts, Lori	Division Chief, Tallahassee Fire	850 891 6600	<a href="mailto:lori.roberts@talgov.com">lori.roberts@talgov.com</a>	5/29/2015	Tallahassee Fire
Sanders, Gene	Division Chief, Tallahassee Fire	850 891 6600	<a href="mailto:gene.sanders@talgov.com">gene.sanders@talgov.com</a>	5/29/2015	Tallahassee Fire
Smith, Fredrick	ISS Public Safety PM	850 891 4743	<a href="mailto:fredrick.smith@talgov.com">fredrick.smith@talgov.com</a>	5/29/2015	Tallahassee Fire
Washington, Kermit	Division Chief, Tallahassee Fire	850 891 6600	<a href="mailto:kermit@washington@talgov.com">kermit@washington@talgov.com</a>	5/29/2015	Tallahassee Fire

Name	Title & Organization	Telephone	Email	Date	Session
Aleman, Jenny	BSA, City of Tallahassee	850 544 1814	<a href="mailto:jenny.aleman@talgov.com">jenny.aleman@talgov.com</a>	5/29/2015	Tallahassee Police Dept.
Alford, David	Patrol, Tallahassee Police Dept.	850 891 4200	<a href="mailto:david.alfrod@talgov.com">david.alfrod@talgov.com</a>	5/29/2015	Tallahassee Police Dept.
Barrett, Gerry	Patrol, Tallahassee Police Dept.	850 891 4200	<a href="mailto:gerry.barrett@talgov.com">gerry.barrett@talgov.com</a>	5/29/2015	Tallahassee Police Dept.
Britt	Gang Unit, Tallahassee Police Dept.	N/A	N/A	5/29/2015	Tallahassee Police Dept.
Combs, Michael	Patrol, Tallahassee Police Dept.	850 891 4200	<a href="mailto:michael.combs@talgov.com">michael.combs@talgov.com</a>	5/29/2015	Tallahassee Police Dept.
Creamera, George	Patrol, Tallahassee Police Dept.	850 891 4200	<a href="mailto:george.creamera@talgov.com">george.creamera@talgov.com</a>	5/29/2015	Tallahassee Police Dept.
Harrison, Sandra	Patrol, Tallahassee Police Dept.	850 528 3997	<a href="mailto:sandra.harrison@talgov.com">sandra.harrison@talgov.com</a>	5/29/2015	Tallahassee Police Dept.
Holloman, Sabrina	N/A	N/A	N/A	5/29/2015	Tallahassee Police Dept.
Lane, Harold Sr.	IT Administrator - City	850 544 4856	<a href="mailto:harold.lane@talgov.com">harold.lane@talgov.com</a>	5/29/2015	Tallahassee Police Dept.
Lawyer, Reginald	Liaison, Tallahassee Police Dept.	850 264 7673	<a href="mailto:reginald.lawyer@talgov.com">reginald.lawyer@talgov.com</a>	5/29/2015	Tallahassee Police Dept.
Murray, Reginald	Patrol, Tallahassee Police Dept.	850 891 4200	<a href="mailto:reginald.murray@talgov.com">reginald.murray@talgov.com</a>	5/29/2015	Tallahassee Police Dept.
Smith, Fredrick	ISS Public Safety PM	850 891 4743	<a href="mailto:fredrick.smith@talgov.com">fredrick.smith@talgov.com</a>	5/29/2015	Tallahassee Police Dept.
Van Stein, Michael	Patrol, Tallahassee Police Dept.	850 544 2814	<a href="mailto:michael.vonstein@talgov.com">michael.vonstein@talgov.com</a>	5/29/2015	Tallahassee Police Dept.
Winfrey, Wes	VCRT, Tallahassee Police Dept.	850 891 4200	<a href="mailto:wes.winfrey@talgov.com">wes.winfrey@talgov.com</a>	5/29/2015	Tallahassee Police Dept.

## Appendix A: Interviews (4 of 4)

Name	Title & Organization	Telephone	Email	Date	Session
Tim Lee	CDA Director			5/29/2015	CDA
Casey	Asst. Director			5/29/2015	CDA
Lane, Harold Sr.	IT Administrator - City	850 544 4856	<a href="mailto:harold.lane@talgov.com">harold.lane@talgov.com</a>	5/29/2015	CDA
Richardson, Janna	IT Manager, Sheriff's Office	850 606 3206	<a href="mailto:RichardsonJ@leoncountyfl.gov">RichardsonJ@leoncountyfl.gov</a>	5/29/2015	CDA
Sabrina Holloman	Chief Information Systems Officer	850-891-8402	<a href="mailto:Sabrina.Holloman@talgov.com">Sabrina.Holloman@talgov.com</a>	5/29/2015	CDA

Name	Title & Organization	Telephone	Email	Date	Session
Anita Thompson	City of Tallahassee Executive			5/29/2015	City Manager

Name	Title & Organization	Telephone	Email	Date	Session
Danielle	Police/Fire dispatcher			5/29/2015	CDA Communications
Michael Porter	Call taker/dispatcher for PD/FD			5/29/2015	CDA Communications
Tom Cone	EMS Dispatcher			5/29/2015	CDA Communications
Michelle	EMS Dispatcher			5/29/2015	CDA Communications

Name	Title & Organization	Telephone	Email	Date	Session
Michael DeLeo	Chief of Police			6/19/2015	Tallahassee Police Dept.
	Deputy Chief			6/19/2015	Tallahassee Police Dept.
Sabrina Holloman	Chief Information Systems Officer	850-891-8402	<a href="mailto:Sabrina.Holloman@talgov.com">Sabrina.Holloman@talgov.com</a>	6/19/2015	Tallahassee Police Dept.
Lane, Harold Sr.	IT Administrator - City	850 544 4856	<a href="mailto:harold.lane@talgov.com">harold.lane@talgov.com</a>	6/19/2015	Tallahassee Police Dept.

## Appendix B: Documentation Review Summary

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- Gartner reviewed and analyzed a total of 85 files as part of this assessment. These documents covered 16 topics and included 5 file formats, summarized below:

Files by Topic	Total
Audit Reports	1
Change Orders	8
Changer Orders	1
Communications to Motorola	3
Contracts	1
Cutover Plan	1
Interfaces	17
Internal Messages	1
Milestones	1
Outages	8
Production Changes	1
Schedules	1
System Documentation	2
System Logs	16
Test Plans	2
Trainings	21
<b>Grand Total</b>	<b>85</b>

Files by Format	Total
DOC	21
Event Log File	16
Excel	7
Outlook	2
PDF	39
<b>Grand Total</b>	<b>85</b>

## Appendix B: Documentation Reviewed (1/1)

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### ■ Gartner reviewed the following 85 files are part of this assessment:

- 11273581466\_5F3F5D7931BA4DE3BB27649514C65E2A.eml
- 11446444584\_4C250BB89EA442CAB556441CF30145D2.eml
- 12-27-10 FINAL CONTRACT -Talla-Leon CAD Mobile Radio - with Signatures.pdf
- Application-APP1.evtx
- Application-APP2.evtx
- Application-APP3.evtx
- Application-DB01.evtx
- Application-DB02.evtx
- Application-RDW.evtx
- Boss Tickets.pdf
- CAD\_TTT\_Eval\_1.pdf
- CDA\_Audit\_Report.pdf
- CDA\_P1CAD\_Bradshaw\_MARVLIS\_IRD\_Signature\_063013.pdf
- CDA\_P1CAD\_Bradshaw\_MARVLIS\_IRD\_v2.doc
- CDA\_P1CAD\_Crimeview\_IRD\_Signed.doc
- CDA\_P1CAD\_E911\_IRD.doc
- CDA\_P1CAD\_JIS\_Query\_IRD.doc
- CDA\_P1CAD\_Legacy\_ProQA\_IRD\_v2.doc
- CDA\_P1CAD\_MOSCAD\_IRD.doc
- CDA\_P1CAD\_Paging\_TnR\_IRD.doc
- CDA\_P1CAD\_Query\_IRD\_Signature\_062713.pdf
- CDA\_P1CAD\_Sansio\_Health\_EMS\_IRD.doc
- COO3-PSC-P1CAD\_Paramount\_ProQA\_Signed\_5-13-2013 2-Final.pdf
- CountyRequested\_Liquidateddamages provision to\_CO1.pdf
- E911\_IRD\_Fully\_Signed.pdf
- EMS Mobile Issue 5-11-15.docx
- Evaluation folder.docx
- IDD Training.pfd
- Interview Schedule.xls
- JIS\_IRD\_Signature\_Page\_V2.pdf
- Letter to TimBoyle\_Motorola\_June24\_2014.doc
- Mobile\_Provisioning\_Trn.pdf
- Mobile\_Train\_the\_Trainer\_TFD\_LCEMS.pdf
- MOSCAD\_IRD\_Signature\_Page\_V2.pdf
- Motorola\_Approved\_CityCountyLCSO\_Language\_CO1.docx
- MotorolaCSI-APP1.evtx
- MotorolaCSI-APP2.evtx
- MotorolaCSI-APP3.evtx
- New\_TestingServers.pdf
- Original\_Language\_CO01-PSC-P1\_CAD MAINT\_012615.pdf
- Outage and City Mobile Issue 5-17-15.docx
- P1 CAD Server Issue Log.xls
- P1 CAD System Admin Training Outline.pdf

## Appendix B: Documentation Reviewed (1/2)

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### ■ Gartner reviewed the following 85 files are part of this assessment:

- P1 Provisioning Training Course Description.doc
- P1CAD\_Issues\_Log\_5\_29\_2015-Internal.xls
- P1CAD\_PROD\_Changes.xlsx
- P1ImportTools\_Agenda.doc
- P1Mob Provisioning.doc
- Paging\_T\_n\_R\_IRD.pdf
- Pre\_Provisioning\_Attendance.pdf
- Premier One R3 1 CAD ATP.pdf
- PremierOne CAD SSRS Training Outline.pdf
- PremierOne\_3.1.7\_CAD\_Mobile\_Provisioning.pdf
- PremierOne\_3.1.7\_CAD\_Mobile\_Reporting\_Guide.pdf
- PremierOne\_3.1.7\_CAD\_Mobile\_SysAdmin\_Guide.pdf
- PremierOne\_3.1.7\_CAD\_User\_Guide.pdf
- PremierOne\_3.1.7\_GIS\_Setup\_For\_CAD\_and\_Mobile\_User\_Guide.pdf
- PremierOne\_3.3\_CAD\_Mobile\_Provisioning\_Guide.pdf
- Provisioning\_Trn\_Follow\_Up.pdf
- PSA Customer Cases.xlsx
- Sansio\_SignaturePage.pdf
- Server Issue\_4\_23\_2015
- Signed Milestones.pdf
- Signed\_Re\_RackP1Servers.pdf
- Signed\_Zoll\_IRD\_COT\_MOT.pdf
- SSRS Course Description.pdf
- Suite Separation\_PSC\_P1CAD\_051613\_SIGNED (2).pdf
- Sys Info.xlsx
- System-APP1.evtx
- System-APP2.evtx
- System-APP3.evtx
- System-DB01.evtx
- System-DB02.evtx
- System-DB03.evtx
- Tallahassee Change Order 004\_SIGNED\_5-8-2013-Final.pdf
- Tallahassee Team ATP.xlsx
- Tallahassee\_SSRS\_Training\_Attendance.pdf
- TallahasseeSysAdminAttendance.pdf
- TLH CDA - Cutover Plan - 2561 p1 CAD-Mobile 090513 v4.docx
- TLH\_Leon\_Co\_Mobile\_Prov.pdf
- TLH\_State\_Queries\_062713.doc
- TPD Issues.pdf
- TPD Mobile Issue 5-3-15.docx
- TPD Mobile Issue 5-6-15.docx
- TPD Mobile Issue.docx

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