Arizona Department of Transportation – Motor Vehicle Division

Independent Assessment (IA) Report for the Motor Vehicle Modernization Project

Prepared for

Gartner Consulting

December 22, 2015

GARTNER CONSULTING

Table of Contents

Executive Summary

Engagement Background

- The Arizona Department of Transportation (ADOT) Motor Vehicle Division (MVD) is currently modernizing its core legacy computer systems that provide vehicle title & registration, driver licensing, finance, trusted partner licensing & contracting, and related services to customers and business partners. MVD services affect nearly every Arizona citizen as well as thousands of organizations. MVD generates over $1.2 billion in revenue for the State of Arizona.
- The Motor Vehicle Modernization (MvM) Project is a large custom software development Project. The MvM Project is expected to take at least five years to develop and implement core functionality and has an approved budget over $55 million. The Project team ranges from 40 to 60 full-time technical and business professionals. MvM was previously known as the Legacy System Replacement (LSR) Project.
- As part of the Project oversight requirements and recommendations of the State of Arizona Information Technology Authorization Committee (ITAC) and the Arizona Strategic Enterprise Technology organization (ADOA-ASET), the MvM Project engaged an independent third party consulting firm to provide Independent Assessment (IA) services.

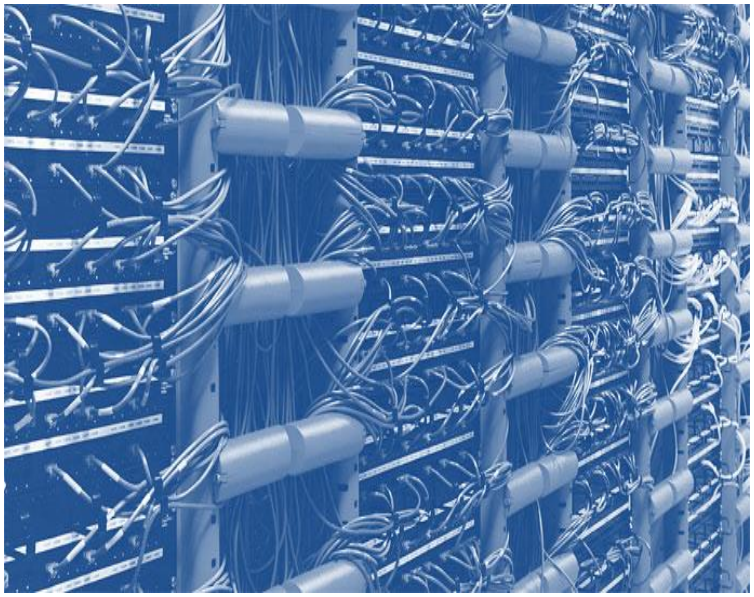
Engagement Objective

- The objective of the Independent Assessments for the MvM Project is to provide an additional source of Project oversight for stakeholders that the Project is progressing as planned. Results of the Independent Assessment will be communicated to ITAC, ADOA-ASET, and related stakeholders.
- Project oversight is defined as “an independent review and analysis to determine if the Project is on track to be completed within the estimated schedule and cost, and will provide the functionality required by the sponsoring business entity. Project oversight identifies and quantifies any issues and risks affecting these Project components.”
- Gartner’s engagement activities were designed to provide an objective, third-party assessment of Project management and control practices for the MvM Project. Our assessment activities did not focus on software code, development practices, technical approaches, or other software quality practices.
- Three different types of assessment efforts are planned as part of the Independent Assessment:
  - Initial – The focus of this engagement
  - Recurring
  - Closeout

Our Engagement Assessment Methodology Has Been Designed to Identify Upfront the Potential 'Black Swans' That Can Cause a Project To Falter

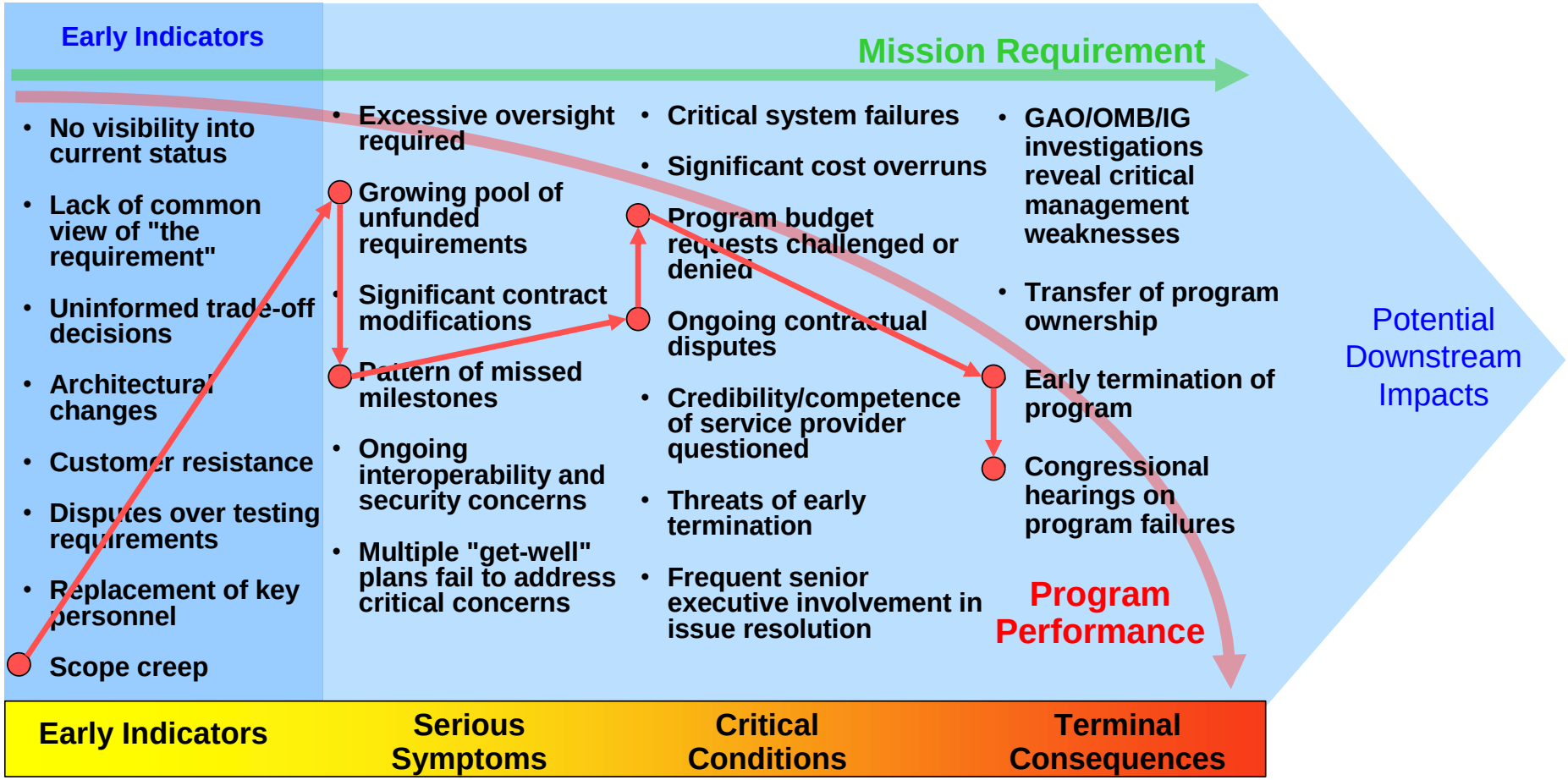
Key Findings from the Oxford Report Included:

- ✓ IT Projects were far more likely to go over budget than other major investments such as construction.
- ✓ Technology Projects are three times more likely to spiral out of control than construction or other major Projects.
- ✓ Researchers found that rare but high-impact problems, dubbed "black swans", were often to blame.
- ✓ There was a tendency for IT decision-makers to ignore low probability but high-impact risks to Project plans.



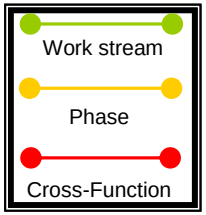
"Managers are very likely to run into black swans. They need to be able to identify them and prevent them" ***Oxford University Report – August 2011***

Traditional Project Readiness Assessments Focus on Tactical Issues, Not on the Strategic Issues that Can Provide Early Indicators of a Project's Failure



Project Activities are Interconnected, Requiring an Holistic View of a Project in Order to Identify Risks Early and Provide Time to Effectively Mitigate their Impact

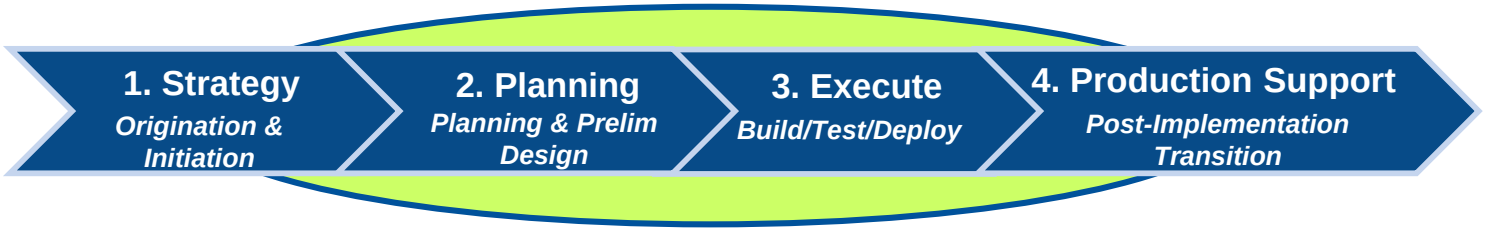
Framework	Strategize	Plan	Execute	Manage
Project Management	Charter	Project Plan	Controls	Evaluation
Financial Management	Financial Baseline	Business Case	Funding Management	ROI
Performance Management	Performance Baseline	Service Level Requirements	Dashboard Creation	Performance Monitoring
Organizational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



Gartner's Project Readiness Assessment Focuses On The Interdependencies Between Project Management, Technology, And Organizational Change

MvM Project Baseline Assessment Focus Areas

- The purpose of the Gartner MvM Project Independent Assessment was to support and contribute to the overall success of the MvM Project.
- To do this, Gartner assessed the Project's effectiveness to manage the complexities associated with the design, configuration, deployment, and adoption of the new system into the organization's culture and ongoing operations.
- This initial Baseline Assessment focused on those areas relevant to the current stage of the MvM Project's lifecycle.
- Our Baseline Assessment Report provides the MvM Project leadership and the Oversight Committee with Gartner's assessment of the Project team's activities to date and documented key risk areas identified, and provided actionable recommendations for their avoidance or mitigation.
- The Baseline Assessment focused on the strategy, planning and early execution of Project activities by the Project team.



Candidate Initial Project Assessment Focus Areas and Categories

1. Strategy
Origination & Initiation

- 1.1 Program/Project Governance
- 1.2 Business Case
- 1.3 Risk Mitigation Strategy
- 1.4 Executive Support
- 1.5 Scope Definition
- 1.6 Sourcing Strategy
- 1.7 Org Project Mgmt Capabilities
- 1.8 Technology Infra Proc Strategy

2. Planning
Planning & Prelim Design

- 2.1 Program/Project Governance
- 2.2 Risk Management
- 2.3 Schedule Management
- 2.4 Budget Planning
- 2.5 Scope Refinement
- 2.6 Resource Planning
- 2.7 Communication Planning
- 2.8 Org Change Mgmt Planning
- 2.9 Vendor Support Planning
- 2.10 Security Planning
- 2.11 Development Planning
- 2.12 Overall Test Planning
- 2.13 Data Conversion Planning
- 2.14 Training Strategy & Planning
- 2.15 Deployment Planning
- 2.16 Integration/Interface Planning
- 2.17 Reporting & BI Planning
- 2.18 Portal Planning
- 2.19 Benefit Realization Planning
- 2.20 Tech Infra & Process Planning

3. Execute
Build/Test/Deploy

- 3.1 Program/Project Governance
- 3.2 Risk Management
- 3.3 Schedule Management
- 3.4 Budget Management
- 3.5 Scope Management
- 3.6 Resource Management
- 3.7 Communication Management
- 3.8 Org Change Mgmt Execution
- 3.9 Vendor Implementation Support
- 3.10 Requirements Management
- 3.11 Security Execution
- 3.12 Development Execution
- 3.13 Overall Test Management
- 3.14 Data Conversion Execution
- 3.15 Training Dev & Delivery
- 3.16 Deployment Execution
- 3.17 Integ/Interface Implementation
- 3.18 Legacy Decommission Exec
- 3.19 Reporting & BI Implementation
- 3.20 Benefits Delivery & Tracking
- 3.21 Operational Trans Planning

4. Production Support
Post-Implementation Transition

- 4.1 Governance Transition
- 4.2 Operational Budget Transition
- 4.3 IT Operations Transition
- 4.4 Bus Ops Support Transition
- 4.5 Vendor Maint Support Trans
- 4.6 Ongoing Bus Value Mgmt
- 4.7 Technical Infra Support
- 4.8 DR/Bus Continuity Support
- 4.9 Benefits Harvesting

Risk Level

- = High
- = Medium
- = Low

Other Status

- = Element completed; remaining risks carried forward

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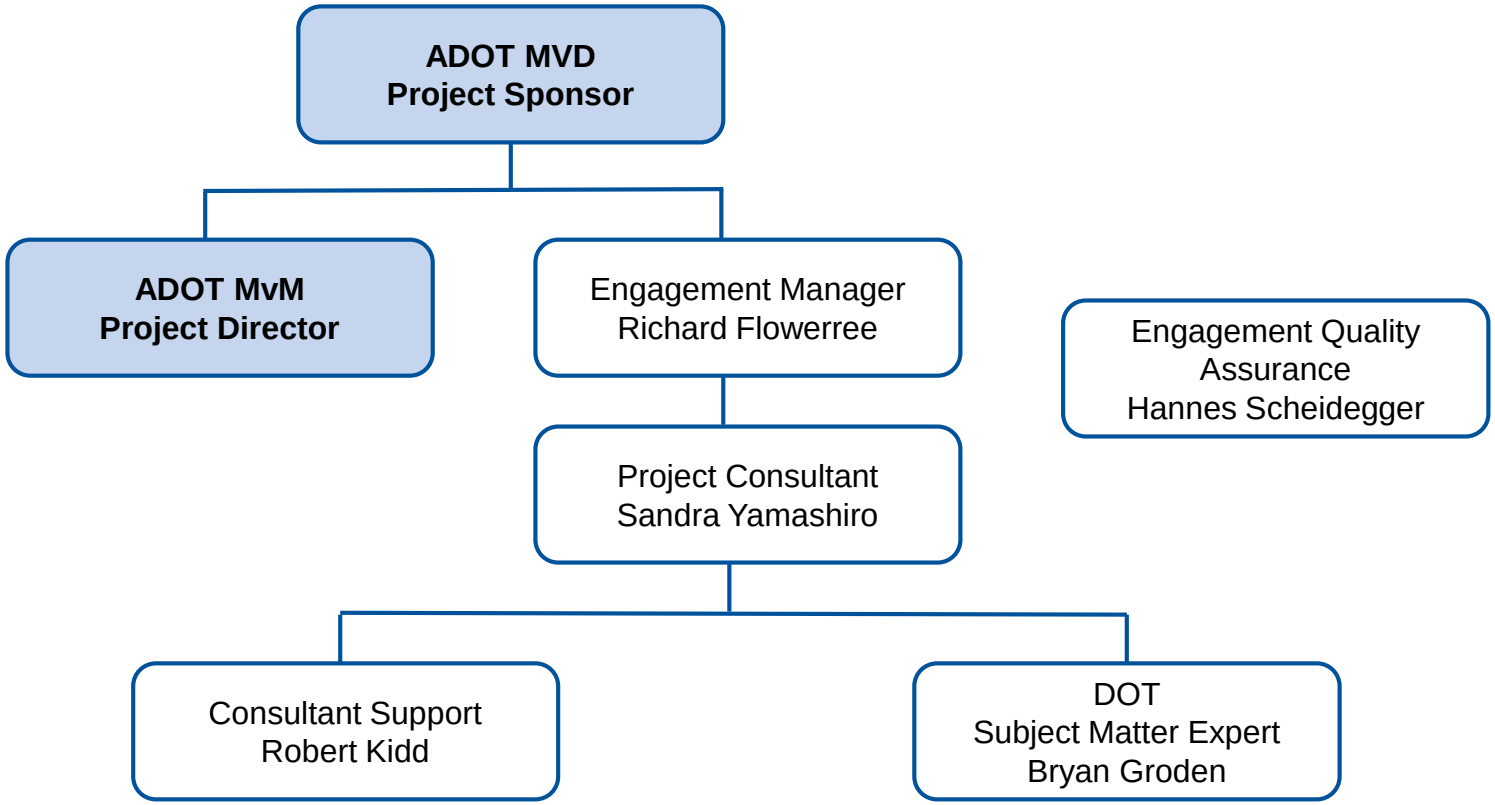
Gartner Rated Each of the Project's Focus Areas Using the Criteria Below

Risk Levels	Risk Rating Definitions
Low	**Green –** Risk area is being managed according to best practices and there is no material impact from this risk area on Project success at this time.
Medium	**Yellow –** Risk area is being managed according to some best practices, but others are missing. There is a potential material impact from this risk area on Project success that needs to be addressed proactively at this time. Recommendations for risk areas assigned this rating are important to ensure optimal Project operation.
High	**Red –** Risk area is in need of best practices mitigation to avoid downstream ramifications. There is a definite material impact from this risk area on Project success if this area is not addressed now. Recommendations for risk areas assigned this rating are essential for mitigating Project risk.
White	**White –** Risk area is not being evaluated because it is too early in the Project. Risk area will be evaluated in future assessments.
Gray	**Gray** – Risk area has been completed due to the progression of the Project. Any remaining risks have been carried forward to the appropriate risk area in a subsequent phase.

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

In some cases, recommendations are provided for areas assessed as "green".

Engagement Team Roles and Responsibilities



Our Initial Project Assessment Fact Finding Activities Included the Review and Assessment of a Number of Project Artifacts and Documentation

- System High Level Requirements Documentation
- eGov Request for Proposal (RFP)
- MvM Staffing Plan
- MvM Project Organization Chart
- Legacy System Replacement Project Investment Justification
- Legacy System Replacement Solicitation Documentation
- MvM Project Charter
- Legacy System Replacement Communication Plan
- Legacy System Replacement Project Manamgent Control Plan
- MvM Project Organizational Change Management Plan
- Legacy System Replacement Project Organizational Change and User Readiness Plan
- MvM Project Risk Log
- Legacy System Replacement Project Financial Management Plan
- MvM Project Data Readiness and Conversion Strategy
- MvM Project Test Strategy
- Legacy System Replacement Project Revised Budget and Resource Plan
- Legacy System Replacement Project July Dashboard
- Legacy System Replacement Project July Status Report
- MvM Project August Dashboard
- MvM Project August Status Report
- MvM Project September Dashboard
- MvM Project September Status Report

In Addition, We Conducted 10 Interview Sessions With Key Project Stakeholders and Subject Matter Experts To Assess the Project's Planning and Readiness Activities

- Eric Jorgensen – MVD Director and MvM Project Sponsor
- David Knigge – MvM Project Director
- Jay Chilton – MvM Project Control Manager
- Bri Ferguson – MvM Project Office Manager
- Stefano Esposito – MvM Project Technical Manager
- Don Logue – MvM Project Budget / Modernization Analyst
- Mike Cryderman – MvM Project Business Integration Manager
- Craig Stender – MvM Project Functional Manager
- Bronco Briggs – MvM Project Conversion Manager
- Jeff Kearns – MvM Team Foundation Server Lead

Engagement Schedule

Step 1 - Project Initiation → **Step 2 - Fact Finding** → **Step 3 - Assessment** → **Step 4 - Present Initial Findings** → **Step 5 - Present Final Report**

- Conduct Project planning meeting
- Develop Project plan
- Conduct Project kickoff meeting

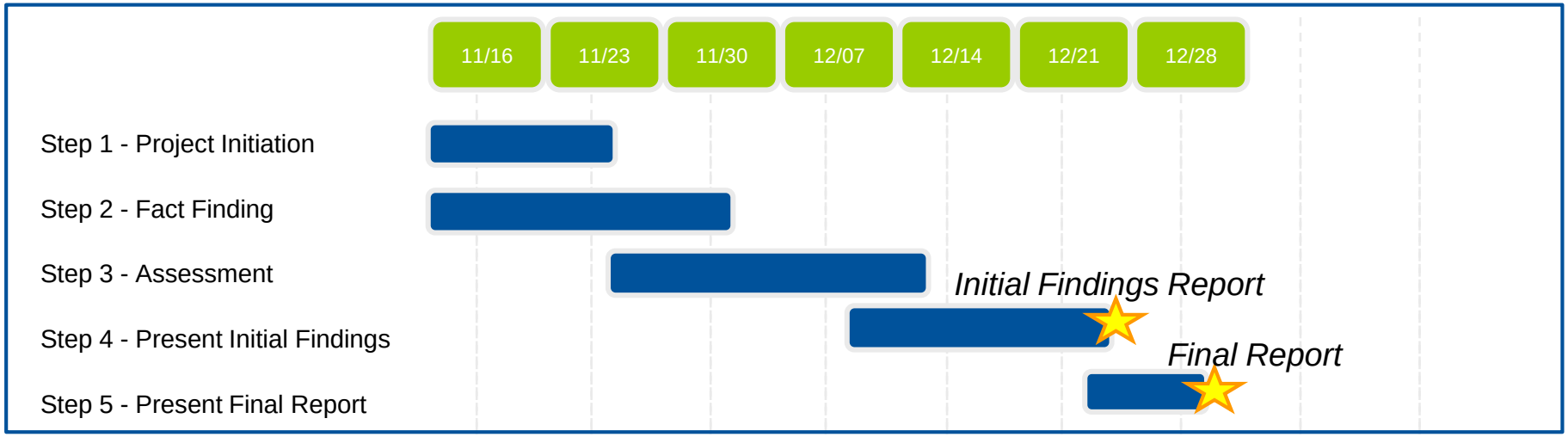
- Review and assess documentation and artifacts
- Conduct onsite interviews and fact finding

- Assess and analyze findings and document issues and recommendations
- Identify opportunities for near term action
- Document Initial Findings Report

- Present Initial Findings Report to key stakeholders
- Update Initial Findings Report based on feedback from stakeholders

- Present Final Report
- Present Go-Forward Roadmap and Next Steps

Gartner started the assessment on November 16 and anticipates concluding on December 28.



MvM Project Initial Assessment Report Summary

- This assessment reflects the Project's areas of risk as of 30 November 2015 through review of Project background documentation, participation in key meetings and interviews conducted in November 2015.
- The MvM Project Director was briefed on our initial findings on November 20th 2015. Following that, Gartner conducted additional interviews and document reviews on November 24th and 25th.
- This MvM Initial Project Assessment was focused on the Strategy, Planning and early Execution phases of the Project to date. The Execution Phase activity was not rated due to limited information available at the time this assessment was conducted.
- The figure below provides a high level assessment summary of the major evaluation phases using a "red, yellow, green light" reporting approach.

The Litmus Test of the MvM Project Will Be the On-Time Delivery of the Planned June 2016 Software Release and the Success of its Associated Support Activities Including Completion of End-User Training and Organizational Change Management Activities.

Our MvM Initial Project Assessment Focus Area Ratings Revealed No Project Show Stoppers and The Project Team is Already Addressing Issues Found

1. Strategy *Origination & Initiation*	2. Planning *Planning & Prelim Design*	3. Execute *Build/Test/Deploy*	4. Production Support *Post-Implementation Transition*
1.1 Program/Project Governance	2.1 Program/Project Governance	3.1 Program/Project Governance	4.1 Governance Transition
1.2 Business Case	2.2 Risk Management	3.2 Risk Management	4.2 Operational Budget Transition
1.3 Risk Mitigation Strategy	2.3 Schedule Management	3.3 Schedule Management	4.3 IT Operations Transition
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	2.20 Technology Infrastructure & Process Planning	3.20 Benefits Delivery & Tracking	
		3.21 Operational Trans Planning	

Risk Level

- = High
- = Medium
- = Low

Other Status

- = Focus Areas Not Rated

Overall Project Key Findings and Suggested Focus Areas Going Forward

Overall Project Initial Risk Assessment is Rated At Medium Risk

Strengths:

- The Project has strong executive support and engaged "hands on" oversight within ADOT.
- The Project Sponsor and his key staff conduct weekly onsite meetings with the MvM Project Team to assess progress and address issues.
- The Project has an effective governance process in place to assess and address issues in a timely fashion.
- The MvM Project is staffed with well qualified and experienced team members that have both the software development lifecycle (agile) methodology experience but more importantly DMV functional expertise as well.
- MvM Project Leadership work together effectively. Many have worked together in the past and this enhances team communication and productivity.
- The Project's development team is leveraging not only their expertise in DMV systems but more importantly the subject matter expertise and key end-users within MVD.

OVERALL PROJECT RISK RATING

(As of November 24, 2015)

Project Initial Risk Rating

The Overall Project Is rated Medium Risk in terms of Readiness to Move to the Next Phase.

The MvM Project was assessed across 28 Focus Areas in the Strategy & Planning Phases:

- ❑ There were **0 Red** areas identified
- ❑ There were **14 Yellow** areas identified
- ❑ There were **10 Green** areas identified
- ❑ There were 4 areas left unrated

RATING GUIDE

Red = Strong Alert, i.e., High Risk
Yellow = Use Caution, i.e., Medium Risk
Green = Acceptable to Excellent, i.e., Low Risk

Overall Project Key Findings and Suggested Focus Areas Going Forward

Strengths (continued):

- The Project Roadmap within TFS (Team Foundation Server) is being used effectively to manage and integrate the various team activities as well as provide insight into future planning/resourcing activities. The Roadmap provides very detailed set of activities documented for the near term (four months) and lesser detail beyond that.
- The project team is organized and co-located by functional area which enhances team communication and productivity as all disciplines (technical and business) are co-located together in the same work area.
- Although in the early stages of a very long and complex project, the team's agile approach to application development, testing and delivery appears to be well thought-out and executed. The litmus test of its overall effectiveness in terms of schedule compliance and delivery quality will be demonstrated in the planned 6/16 release of the team's work products.

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Overall Project Key Findings and Suggested Focus Areas Going Forward

Strengths (continued):

- The addition of a Product Owner to the team fills a void that needed to be addressed, and as such (if executed effectively) should reduce potential risks in the areas of requirements validation, testing, training, organizational change management and overall end-user adoption.
- The Project Team is already addressing the key areas of data cleanup and conversion planning that can negatively impact a project if this critical activity is not started early in a project's lifecycle.
- The Project Team is identifying policy, procedure and legislative impacts of the system, and have a process in place to track and are taking proactive action to address these issues as the arise (e.g., use of electronic signatures).

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Overall Project Key Findings and Suggested Focus Areas Going Forward

Suggested Focus Areas Going Forward

- A number of the Project's earlier program management documents were not to the depth and detail typical for a project of this magnitude and complexity. Most notable were in the areas of communications, training, and organizational change management (OCM) as these areas (if not executed well) can have a significant impact on end-user adoption and buy in. To this end, it is strongly recommended the Project Team add two additional staff members to the team to support communications planning and organizational change management activities.
- The MvM Project is viewed as more of an IT Project by the broader MVD organization versus a Business Transformation project. As a result visibility to the end users of the linkages to the larger ADOT/MVD business transformation activities and priorities is unclear in terms of what Modernization goals will be enabled by the MvM system. The Project team is encouraged to make the status of these activities more visible to ensure the system aligns with MVD business transformational drives.

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Overall Project Key Findings and Suggested Focus Areas Going Forward

Suggested Focus Areas Going Forward (continued)

- Although the team is addressing the fact that the technical framework (e.g., user interface, user experience and database schema, etc.) has not been fully fleshed out, management will need to sharply focus on this area to ensure it does not result in any future impact to planned work or delivery quality.
- The Project team does not have a dedicated security subject matter expert reporting to the Project Director. This role would help to ensure the team is executing secure application design, development, coding techniques and best practices, leading to the system being well architected and designed to address today's threat environment (internal and external). The addition of a person to address this role is strongly encouraged.
- The addition of a Product Owner function onto the Project team is applauded but this role needs to be expanded to include "Sub-Product Owners" that would be assigned to each of the primary development work streams (Driver Licensing, Control & Improvement; Vehicle Title & Registration, Licensing & Contracting; Cash Drawer & Finance; and Interfaces with other ADOT systems, State of Arizona systems, and Federal systems).

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Overall Project Key Findings and Suggested Focus Areas Going Forward

Suggested Focus Areas Going Forward (continued)

- The Project is focused on both providing ADOT with innovative IT solutions to help transform the business as well as replacement of MVD legacy applications. This approach is noteworthy but brings the very real risk of program scope creep that could impact project team productivity, delivery quality and schedule compliance. It is unclear if there are sufficient "checks and balances" in place to fully address potential Program/Project issues. The "seductive" allure of the Transformation will have to be effectively managed to ensure Program/Project success.
- The Project's Business Case and Charter did not include metrics associated with the business and technology goals and objectives of the envisioned system. The development and use of a set of key metrics (business and technical) for the assessment of project work products as they evolve over the lifecycle of the project is strongly encouraged. Such an approach allows for the early identification and correction of issues that could otherwise impact system functionality and performance following go-live where it is more difficult to correct. It is strongly suggested that key stakeholders (end-uses) and the project team develop a set of metrics to assess the team's development efforts as the system evolves to ensure issues are addressed before UAT or go-live.

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Overall Project Key Findings and Suggested Focus Areas Going Forward

Suggested Focus Areas Going Forward (continued)

- There is only limited information being communicated to end-users and the MVD organization in terms of the specific deliverables and functionality that will be delivered after the 6/16 release. The team is encouraged to develop and communicate a project plan and timeline that details the activities and deliverables over the next 18 months – with a broader depiction of items to be delivered beyond 18 months in order to set organizational expectations and support end-user buy in of the new system.
- The team's agile development approach lends itself to a Phased Deployment Model. Although DMV systems are tightly integrated, making such activities more complex, the team is encouraged to explore the potential for a more Phased Deployment Approach for the system.
- The Project is encouraged to develop and conduct a formal system post implementation assessment (120 Days following full system rollout) to ensure the system has met the goals and objectives envisioned in the business case and Project Charter. The suggested use of key metrics discussed on the previous pages should be made a key part of that assessment activity.

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Overall Project Key Findings and Suggested Focus Areas Going Forward

Suggested Focus Areas Going Forward (continued)

- The Project team needs to address the design and development of the system from a disaster recovery / failover perspective. This would ensure the system is architected and designed to provide for a "graceful" shutdown and rapid recovery of both the application and system data within the required restoration timeframes should an unplanned system anomaly or event occur. In addition, the project team needs to develop and document the processes and procedures needed to restore (and validate) the recovered system and data. This will then need to be tested to ensure the process works as planned once the final decision is made on where the system will be hosted and maintained.
- In concert with the above, Project Team and MVD should begin planning for the development and validation of the system Businesses Continuity Processes.
- Procurement issues have impacted the timely acquisition of project software and other items. To date, this has not resulted in any significant impacts to the Project, however warning signs have been noted. Therefore, MVD is encouraged to assess the procurement process and address any current of potential future bottle necks that could impact the project.

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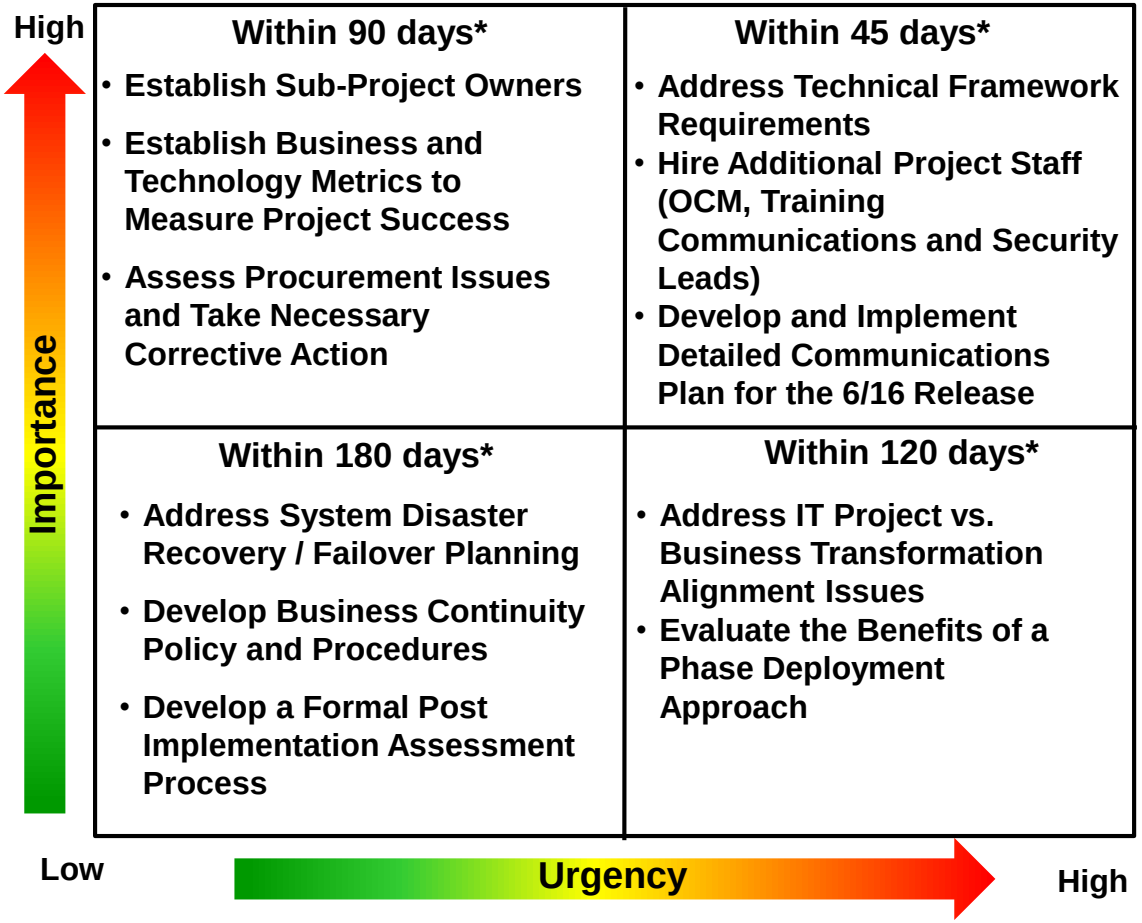
Summary and Next Steps

- The chart to the right highlights the major recommendations for the Project based on:
  - **Importance** – How important is the activity to the successful completion of the project and implementation of the system.
  - **Urgency** – How soon does the issue need to be addressed before adversely impacting the project.
- Gartner recommends the MvM Project take action on each of the documented Focus Areas Going Forward. To that end, we have plotted them to highlight the relative priorities to assist Project leadership in addressing the findings contained in this Report.



* Days Following Delivery of the Final Initial Assessment Report

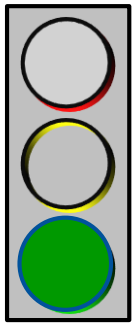
Detailed Findings

Strategy and Planning

1.1, 2.1 - Program / Project Governance

BEST PRACTICES

- Structure is documented, understood, & approved.
- Defined process aligned w/ organization & roles.
- Explicit accountability for input versus decision rights.
- Includes routine or periodic governance and non-routine governance e.g., for one-off technical decisions.
- Accounts for and defines dependencies.
- Defines approach to manage needs of competing projects.
- PMO structure exists.
- Includes planning for data governance.
- Aligned to public communication planning.



LOW RISK

FINDINGS

- The Project has an effective governance process in place to assess and address issues in a timely fashion.
- The project is focused on both providing ADOT with innovative IT solutions to help transform the business as well as replacement of MVD legacy applications. This approach is noteworthy but brings the very real risk of project scope creep that can impact team productivity, delivery quality and schedule compliance unless an effective governance process is in place.

RECOMMENDATIONS

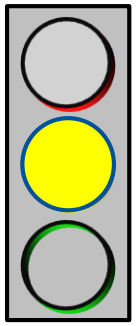
- It is unclear if there are sufficient “checks and balances” in place to fully address potential future scope creep issues. The “seductive” allure of innovation will have to be effectively managed to ensure project success. Therefore it is recommend that Project Leader review and assess the current governance process to ensure that the needed check and balances are in place to address any potential issue in this area.

Strategy

1.2 Business Case

BEST PRACTICES

- The project has a well developed business case that has been reviewed and approved by project stakeholders.
- The business case documents the current challenges faced by the organization with opportunities and specific areas for improvement.
- The business case documents the project's goals, benefits, costs, and risks areas.
- The business case outlines the solution alternatives and provides a clear recommendation for action.



MEDIUM RISK

FINDINGS

- The project's business case and charter did not include metrics associated with the business and technology goals and objectives of the envisioned system.

RECOMMENDATIONS

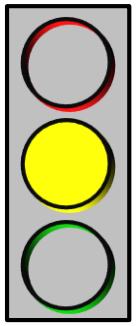
- The development and use of a set of key metrics (business and technical) for the assessment of project work products as they evolve over the lifecycle of the project is strongly encouraged. Such an approach allows for the early identification and correction of issues that could otherwise impact system functionality and performance following go-live where it is more difficult to correct. It is strongly suggested that key stakeholders (end-uses) and the project team develop a set of metrics to assess the team's development efforts as the system evolves to ensure issues are addressed before UAT or go-live.

Strategy and Planning

1.3, 2.2.- Risk Mitigation Strategy & Risk Management Planning

BEST PRACTICES

- Risk mitigation strategy & management plan are documented, understood, and approved.
- Categorized by accountable area (it, business process, etc.).
- Probability and impact defined, risk quantified, contingency established where needed.
- Mitigation strategies described, refined and approved.
- Ongoing risk management process documented, resources & roles identified and secured.
- State specific rules / regulations / legislation.
- Technology risks including data collection and security.



MEDIUM RISK

FINDINGS

- The MvM risk management process is not routinely followed on a frequent basis, (daily, weekly, etc.). Risk and Issues Logs did not appear to be updated, tracked or reported on a regular basis.

RECOMMENDATIONS

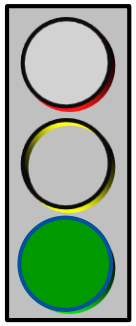
- The project management office needs to schedule and conduct recurring risk meetings as a part of a formal project risk management strategy and plan.
- Efforts should be devoted to identifying, logging, tracing and mitigating current project risks. A consolidated risk and issue register needs to be developed that; identifies risks, categorizes risks by accountable area, provides probability and impacts, describes mitigation strategies and contingencies, lists risk resources/roles assigned to address them, and identifies what next steps are to be taken and timeframe to complete.
- Critical project risks and issues need to be assessed and managed more effectively.

Strategy

1.4 - Executive Support

BEST PRACTICES

- Visibility to business and IT executives, executive understanding of program & roles.
- Active executive support, funding commitment, alignment to executive priorities.
- Project team confidence in executive commitment with clear and consistent understanding of what "done" looks like.
- Guidance on how the business case aligns with organization goals and objectives.
- Stakeholder incentives are tied to benefits realization.
- Executive understanding of quantitative benefits (hard / soft) and how benefits will be measured and realized.



LOW RISK

FINDINGS

- The project has strong executive support and engaged “hands on” oversight within ADOT.
- The project sponsor and his key staff conduct weekly onsite meetings with the MvM project team to assess progress and address issues.
- The project sponsor and project director have been proactive in terms of engaging independent 3rd party oversight of the project.

RECOMMENDATIONS

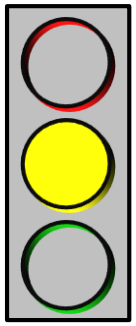
- None. This area is being effectively addressed. No issues were found.

Strategy and Planning

1.5, 2.5 Scope Definition & Refinement

BEST PRACTICES

- Scope is documented, understood, and approved.
- Aligned to business case, schedule, budget, and resources.
- Scope breadth and depth sufficient.
- Validated / approved by stakeholders
- Assumptions clear.
- Change request process described, including management of changes related to technology.
- Process owners identified per scope domain areas.
- Clear definition and understanding of public participants, and communication channels.



MEDIUM RISK

FINDINGS

- Scope is understood at a detailed level by the MvM team in terms of legacy system requirements that need to be addressed.
- There are weekly review sessions between MvM team and Modernization Team. However, the visibility / and linkages to the larger ADOT/MVD business transformation (Modernization Center) activities and priorities is unclear in terms of what is being addressed, what is being analyzed and what is being put in place in the new system.
- The recent addition of a Product Owner to the MvM Team should help address and resolve potential project scope issues if they arise. Additionally, the Product Owner should be able to provide stronger linkages with the Modernization Center.

RECOMMENDATIONS

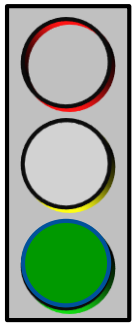
- The project team is encouraged to document in detail the status of its Modernization Center activities and make them more visible to ensure that the technology being implemented by the MvM team enhances and aligns with the business transformational drives of the Modernization Center.
- A formal change order request process needs to be developed as part of the Governance Plan for the submittal, review, assessment and approval of Modernization Center Initiatives submitted to the MvM team for action.
- Sub-Product Owners (business and technology) need to be identified and staffed to each of the MvM project's major domain areas / work streams.

Strategy

1.7 Project Management Capabilities

BEST PRACTICES

- Experienced Project Management is in place.
- Project plans and schedules are defined and maintained in an up-to-date status.
- Regular project review processes are in place and being used to manage the project on a daily basis.
- Project feedback mechanism to recognize and log action issues/risks is in place and being used to manage the project on a daily basis.
- There is a process in place for project turnover, i.e., people leaving and joining the project.



LOW RISK

FINDINGS

- The Project Director is actively involved in the day to day activities of the team, from planning to delivery.
- The Project Director has full authority to manage and oversee his team activities.
- The Project Director has extensive experience (functional, technical and software development process) managing projects of this size, scope and complexity.
- The Project uses MS Team Foundation Server (TFS) to plan, monitor, assess and report on team status, schedule compliance, time manamgent, quality, productivity by individual, team, product area and overall project.
- The Project has dedicated an experienced, full time staff member to managing TFS. His role includes acting as peer reviewer for all sprints.

RECOMMENDATIONS

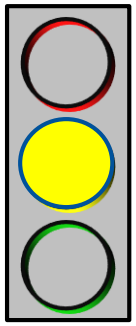
- None. This area is being effectively addressed. No issues were found.

Strategy and Planning

1.8, 2.20 - Technology Infrastructure Procurement Strategy and Process Planning

BEST PRACTICES

- Server technologies are appropriate to new solution, storage capable of supporting new solution.
- Backup/recovery/DR/BC meets likely solution requirements, plans for dc upgrades.
- Plans end user devices & upgrades, communication and collaboration services capable of meeting new solution requirements.
- Networks capable or extensible to support new solution, network access supported in environment.
- User support capable of supporting new solution and surges in support request demand during deployment.



MEDIUM RISK

FINDINGS

- The development environment is currently hosted in the cloud. The team has not fully developed the system hosting requirements for production.
- The team needs to address system architecture issues in terms of ensuring the system design provides for a “graceful” shutdown and rapid recovery of both the application suit and system data within developed, documented and required restoration timeframes should an unplanned system anomaly or event occur.
- The team has not yet addressed the development or validation of system Disaster Recovery policies or procedures.

RECOMMENDATIONS

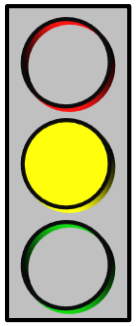
- The Project team needs to address the design and development of the system from a disaster recovery / failover perspective. This would ensure the system is architected and designed to provide for a “graceful” shutdown and rapid recovery of both the application and system data within the required restoration timeframes should an unplanned system anomaly or event occur.
- In addition, the project team needs to develop and document the processes and procedures needed to restore (and validate) the recovered system and data. This will then need to be tested to ensure the process works as planned once the final decision is made on where the system will be hosted and maintained.
- In concert with the above, Project Team and MVD should begin planning for the development and validation of the system businesses continuity processes.

Planning

2.3 - Schedule Management

BEST PRACTICES

- Schedule is documented and approved.
- Actively managed by project leadership.
- Realistic (time-boxed, includes resources and dependencies).
- Clearly defined & describes milestones.
- Includes appropriate contingency.
- Reasonable activity detail.
- Critical path and risk mitigation plan described.
- Ties to business case, budget, scope and resource plans.
- Incorporates realistic vendor schedule and schedule management process.



MEDIUM RISK

FINDINGS

- Early in the Project's lifecycle schedule compliance was an issue. Contributing factors included turnover in project leadership and sponsorship which have been addressed and corrected.
- In July 2015, responsibility for the Project was transferred from IT to the business, and since that time issues regarding schedule compliance appear to be stabilizing.

RECOMMENDATIONS

- The litmus test of the MvM project will be the on-time delivery of the planned June 2016 software release and the success of its associated support activities including completion of end-user training and organizational change management activities. To that end, the Project Sponsor, Project Director and Project Team Leads need to be laser focused on achieving the June 30, 2016 Release date.

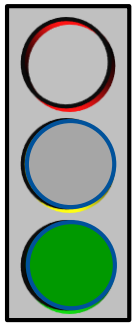
Planning

2.4 - Budget Planning

BEST PRACTICES

- Budget plan documented and approved.
- Developed by experienced project leaders.
- Realistic (total cost of ownership view; based on real costs).
- Includes appropriate contingency.
- Secured for entire project.
- Ties to business case, scope, schedule, and resource plans.

FINDINGS



LOW RISK

- The project budget and budgeting process has been approved.
- The project budget has been secured for the entire project.
- Project has established a management reserve fund to address unforeseen issues.
- The project budget appears to be in alignment with the current scope of the project.

RECOMMENDATIONS

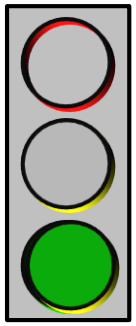
- None. This area is being effectively addressed. No issues were found.

Planning

2.6 - Resource Planning

BEST PRACTICES

- Project team is receiving commitment from management in the form of additional resources and support when necessary.
- Project team is receiving commitment from management in terms of active engagement and resolution of staffing issues.
- A process is in place for addressing project turnover issues.
- Planned project staffing levels have been adequate to meet project requirements.
- The overall project organization and reporting relationships are well-defined and stable.
- Project member roles and responsibilities are clearly defined, documented and are stable.
- Members of the project team know and understand their role in the organization.
- Members of the project team know and understand the reporting relationships for the project.
- External influences on the project team are being managed effectively.



LOW RISK

FINDINGS

- The Project Team is well resourced.
- Rolls and Responsibilities are well defined.
- The team has the full support and backing of the Project Director and Project Sponsor to address resource issues.
- Many of the members of the Project team have worked together before which has enhanced team collaboration and productivity.
- Experienced business SMEs, including retired MVD employees, are part of the MvM team.
- The team needs to address additional key roles:
  - Organizational Change Management Lead
  - Communications Lead
  - Training Lead
  - Security Lead
  - Sub-Product Owners

RECOMMENDATIONS

- The team needs to fill the following key roles ASAP:
  - Organizational Change Management Lead
  - Training
  - Communication Lead
  - Security Lead
  - Sub-Product Owners

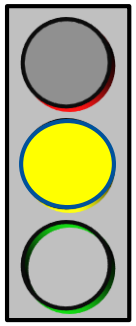
Gartner

Planning

2.7 - Communication Planning, 2.8 Organizational Change Management Planning, 2.14 Training Strategy & Planning

BEST PRACTICES

- Communication strategy and plan documented and approved.
- Ownership & accountability established.
- Aligns with governance and stakeholder network.
- Meets executive, core project, advisory team, front line employee and public needs.
- Communications team capabilities / capacity sufficient.
- Document repository established, medium and frequency of communication identified.
- Tracking mechanism established.
- Communication mechanism for scheduled updates (including advanced notifications).



MEDIUM RISK

FINDINGS

- A number of the Project's earlier program management documents were not to the depth and detail typical for a project of this magnitude and complexity. Most notable were in the areas of communications, training, and organizational change management (OCM) as these areas (if not executed well) can have a significant impact on end-user adoption and buy in. For this project this is particularly significant in that a key reason for project failures in Arizona in the past has been the fact that end-users were not involved in the development and delivery of the system they were to use.
- The addition of a Product Owner to the team fills a void that needed to be addressed, and as such (if executed effectively) should reduce potential risks in the areas of requirements validation, testing, training, organizational change management and overall end-user adoption.
- End users will be included in UI/ UX work (alpha testing) as well as UAT. UAT participants will be trained prior to UAT.

Planning

2.7 - Communication Planning, 2.8 Organizational Change Management Planning, 2.14 Training Strategy & Planning (continued)

RECOMMENDATIONS

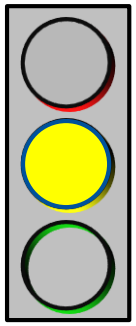
- It is strongly recommended the Project Team add three additional staff members to the team to support communications planning, organizational change management and training activities.
- In addition, MVD staff (not just supervisors and management) should be made an active partner in the development and delivery of both the OCM and Communications Planning and execution process. This will facilate MVD's involvement in supporting the business transformation activities vs. having business transformation "pushed" out to them. Finally, this will help maintain MVD involvement in, and support of, the project as it moves forward overtime.

Planning

2.10 – Security Planning

BEST PRACTICES

- OCM plan documented and approved.
- Methodology clearly defined (organization & process change).
- Ownership and accountability established.
- Team capabilities / capacity sufficient.
- Aligns with Governance Plan, stakeholder & executive needs.
- Aligns with and is specific to business case drivers.
- Tied to Communication Plan and training plan.
- Executive sponsor(s) and data owners in agreement with data conversion plan (need agility and adaptability).



MEDIUM RISK

FINDINGS

- The Project team does not have a dedicated security subject matter expert reporting to the Project Director. This role would help to ensure the team is executing secure application design, development, coding techniques and best practices, leading to the system being well architected and designed to address today's threat environment (internal and external).

RECOMMENDATIONS

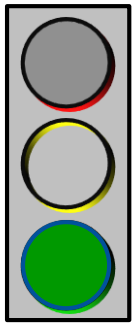
- The addition of a person to lead and manage all areas of system security who will work collaborative with their ADOT and MVD counterparts to develop a comprehensive security focus (system design, development, operation, administration and supporting policies and procedures) for the Project is strongly encouraged.

Planning

2.11 – Development Planning

BEST PRACTICES

- The Project Team is meeting all quality and delivery schedule standards for development documentation.
- System conceptual design has been fully defined, documented and approved.
- System detailed design requirements are fully defined, documented and approved.
- System functional and performance requirements are fully defined, documented and approved.
- System interface requirements are fully defined, documented and approved.
- System database design requirements are fully defined, documented and approved.
- The overall system architecture is fully defined, documented and approved.
- The overall system design does not employ “cutting-edge” technology but instead leverages industry best practices.



LOW RISK

FINDINGS

- The team is utilizing an agile development approach.
- The team is well experienced in the use of the agile development methodology for the development, testing and delivery of complex systems.
- Based on experience, the team is able to draw upon knowledge of DMVs as well as innovations in other industries (e.g., health care).
- Team responsibilities and delivery ownership is well documented and understood by all Project members.
- The team’s technical development team is supported by Functional (SME) team.
- All project work streams, team activities and individual team member activities are tracked, monitored and assessed by team leads and project management on an ongoing basis.
- All team activities, including development, are planned, tracked, assessed and managed through Microsoft Team Foundation Server.

Planning

2.11 – Development Planning (continued)

RECOMMENDATIONS

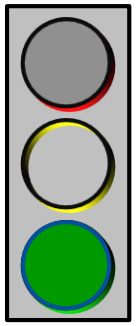
- The project team needs to address the design and development of the system from a disaster recovery / failover perspective to ensure the system is architected and designed to provide for a “graceful” shutdown and rapid recovery of both the application suit and system data within the developed, documented and required restoration timeframes should an unplanned system anomaly or event occur.
- The project team is encouraged to document in detail the status of its Modernization Center activities and make them more visible to ensure that the technology being implemented by the MvM team enhances and aligns with the business transformational drives of the Modernization Center.
- A formal change order request process needs to be developed as part of the Governance Plan for the submittal, review, assessment and approval of Modernization Center Initiatives submitted to the MvM team for action.

Planning

2.12 – Overall Test Planning

BEST PRACTICES

- A Quality Assurance Plan and organizational structure has been developed and implemented for the Project.
- A Quality Control Plan and organizational structure has been developed and implemented for the project.
- An IV&V/project oversight role has been established to monitor Project progress and activities (internal and vendor) and report independently on project status.
- Standards and criteria regarding early identification and categorization by degree of severity and prioritization of defects have been developed, documented and approved.
- These processes and standards are being used to manage early identification, categorization and prioritization of defects in project deliverables.
- The vendor is utilizing prescribed standards and processes to manage early identification and remediation of defects in project deliverables.
- A formal process has been established for review of project deliverables, including the criteria to be used to assess quality and completeness.



LOW RISK

FINDINGS

- The team is utilizing an agile development and testing approach.
- The team is well experienced in the use of the agile development methodology for the development, testing and delivery of complex systems.
- The team's technical development team is supported by functional (SME) team.
- All team activities, including testing, are planned, tracked, assessed and managed through Microsoft Team Foundation Server.
- The team is in the process of developing UAT plan.

RECOMMENDATIONS

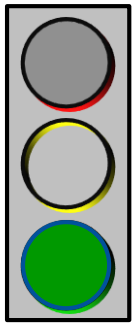
- None. This area is being effectively addressed. No issues were found.

Planning

2.13 - Data Conversion Planning

BEST PRACTICES

- Data conversion strategy and plan documented and approved.
- Data conversion methodology and tools clearly defined.
- Ownership and accountability established, team capabilities and capacity sufficient.
- Data governance and stewardship defined.
- Scope clear; aligns with system retirement strategy.
- Data cleansing risks and mitigations defined.
- Historical data archiving strategy defined.
- Schedule is realistic; dependencies clear.
- Clear inventory exists by end of design phase.



LOW RISK

FINDINGS

- Data Cleanup and Conversion Planning started early in the Project's lifecycle.
- The Lead for Data Conversion Planning and execution has a strong background and successful track record working on projects of similar scope magnitude and complexity. In addition, the data conversion lead has a strong background in, and understanding of, the nuances of DMV systems and data structures and schemes.
- End-users and data subject matter experts are actively engaged in both the data cleansing and conversion planning activities.
- Data cleanup and data conversion process and procedures are well documented and are being strongly enforced to help ensure delivery quality.

RECOMMENDATIONS

- None. This area is being effectively addressed. No issues were found.

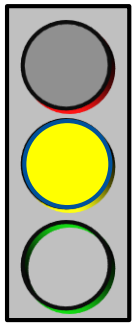
Gartner

Planning

2.15 – Deployment Planning

BEST PRACTICES

- The Project Team has Worked Collaboratively with the Organization to Clearly Define the Deployment Strategy for the New System. Together the Organization and Project Team Have Defined a Strategy and / or Have Plans in Place to Develop:
  - ✓ The Overall Deployment Approach i.e., Big Bang, Phased, Pilot, etc.
  - ✓ The System Turnover-To-Production Plan.
  - ✓ Identification of all critical resources (internal and vendor) and a process to ensure that they are available to support deployment activities.
  - ✓ A process to ensure that all critical or new technology has been fully tested and key resources have been identified to provide needed support.
  - ✓ Contingency plans to deal with implementation issues that may arise.
  - ✓ An approved governance structure and communication plan that defines the implementation decision process and go/no-go events and criteria.
  - ✓ A communications plan to keep external stakeholders informed of the implementation process and status.



MEDIUM RISK

FINDINGS

- The team is utilizing an agile development approach.
- The team is well experienced in the use of the agile development methodology for the development, testing and delivery of complex systems.
- Team responsibilities and delivery ownership is well documented and understood by all Project members.
- The team's technical development team is supported by Functional (SME) team.
- All Project work streams, team activities and individual team member activities are tracked, monitored and assessed by team leads and project management on an ongoing basis.
- All team activities are planned, tracked, assessed and managed through Microsoft Team Foundation Server.
- The Executive Committee recently approved Early Release of functionality: Customer 360. Early Release will provide a litmus test of the project's overall effectiveness in terms of schedule compliance and delivery quality. Additional releases will build upon Customer 360.

Planning

2.15 – Deployment Planning (continued)

RECOMMENDATIONS

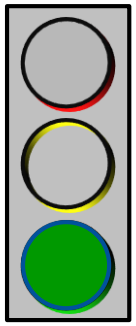
- The team's agile development approach lends itself to a Phased Deployment Model. Although DMV systems are tightly integrated, making such activities more complex, the team is encouraged to explore the potential for a more Phased Deployment Approach for the system.
- The Project Team needs to formalize the future system hosting requirements – i.e., internally supported, third party data center, or cloud based.

Planning

2.16 - Integration / Interface Planning

BEST PRACTICES

- Integration strategy & plan documented and approved, methodology & tools clearly defined.
- Ownership and accountability established, team capabilities and capacity sufficient.
- Aligns with scope and integration requirements, integration risks and mitigations defined.
- Distinguishes permanent from temporary interfaces, alignment with enterprise application integration standards.
- Clear inventory exists by end of design phase, includes assessment of key shadow systems.
- Leveraging Commercial Off The Shelf Software integration tools / frameworks.
- Ties to development, test, and deployment plans.



LOW RISK

FINDINGS

- System Interfaces and Integration requirements are well understood by the team that has both a deep understanding of the current legacy system being replaced but with complex DMV systems as well.

RECOMMENDATIONS

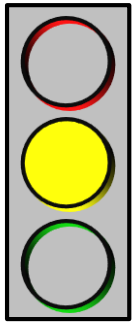
- None. This area is being effectively addressed. No issues were found.

Planning

2.19 - Benefits Realization Planning

BEST PRACTICES

- Benefits realization approach documented and approved.
- Describes benefits measurement approach.
- Aligned with the most current business case, benefits are still compelling & realistic.
- Reflects quantified and measurable, business and it benefits.
- Entire organization accountable for realization of benefits, baked into resource management (e.g. Incentives, financial projections, etc.).
- Linked to scope, and deployment, communications and Organizational Change Management Plans.
- Neutral organization is assigned to track benefits.



MEDIUM RISK

FINDINGS

- The Project's Business Case and Charter did not include metrics associated with the business and technology goals and objectives of the envisioned system. The development and use of a set of key metrics (business and technical) for the assessment of project work products as they evolve over the lifecycle of the project is strongly encouraged. Such an approach allows for the early identification and correction of issues that could otherwise impact system functionality and performance following go-live where it is more difficult to correct. It is strongly suggested that key stakeholders (end-uses) and the project team develop a set of metrics to assess the team's development efforts as the system evolves to ensure issues are addressed before UAT or go-live.

RECOMMENDATIONS

- The MvM Project should give strong consideration to the development and execution of a comprehensive Benefits Realization Plan.
- The Benefits Realization Plan must include and address the following:
  - Accountability for managing and tracking project benefits, including holding the Project Team accountable for realization of benefits.
  - Ensure that business and technical benefits metrics align with the business case and that they are measurable.
  - Documents the measurement and assessment approach to analyze the project benefits though each phase of the project's lifecycle.

Appendix A – Risk Category Definitions

Appendix A
Risk Category Definitions – Strategy Phase

Risk Category	Definition
Strategy – Program / Project Governance Strategy	The ability of the organization to place importance through demonstrated leadership commitment and governance accountability for scope, benefits, resource, schedule, communications, and risk/issues management.
Strategy – Business Case	The extent to which costs and benefits have been articulated, linked with the proposed solution and process scope, and vetted with key business and IT stakeholders to ensure input and ownership.
Strategy – Risk Mitigation Strategy	The extent to which experienced personnel and proven methodologies have been applied to identify risks, contingencies, and level of effort required to successfully mitigate the issues that may impede the success of the program.
Strategy – Executive Support	The extent to which business and IT executive leadership is engaged in the program as evidenced by their understanding of the program scope, business case, and challenges. Also examines the perspectives of the project leadership team regarding how well they feel executive management is involved and understands the critical role they should play to ensure program success.
Strategy – Scope Definition	The ability of program leadership to fully define and provide the rationale for business process scope, stakeholder scope, division/operating company scope, application (legacy and new) scope, and deliverable scope along with assumptions. Also includes a clearly defined change request process.
Strategy – Sourcing Strategy	The ability of the organization and program to demonstrate a well-planned sourcing approach with respect to both product/solution procurement as well as implementation and possible post-implementation services procurement. The sourcing strategy should complement the organization's own internal capabilities.
Strategy – Organization / Project Management Capabilities	The project management and oversight capabilities of the organization and the overall approach to using those capabilities to support the implementation of the new solution.
Strategy – Technology Infrastructure & Processes Strategy	The capability of the organization's data center and distributed computing infrastructure to support the new solution, the overall approach the organization is taking to modify the infrastructure, and the processes in place or being implemented to support the new solution.

Appendix A
Risk Category Definitions – Planning Phase

Risk Category	Definition
Planning – Program / Project Governance Plan	The extent to which program management processes (e.g., schedule mgmt, issues, mgmt, resource mgmt, etc.) are defined and governance mechanisms and structures are documented and in place across the enterprise and project teams. Also assesses the experience of the program leadership personnel.
Planning – Risk Management Planning	The extent to which program leadership has planned for processes and multiple perspectives to address ongoing overall risk as well as domain-specific risks and issues in a timely and effective manner. Contingency planning effectiveness is also examined.
Planning – Schedule Planning	The extent to which program leadership has estimated, scheduled, communicated, and managed the critical path activities, key milestones, and the enablement of high quality deliverables.
Planning – Budget Planning	Examines the level of risk related to the approved budget, it's feasibility, and the planned processes to enable program leadership to track, monitor, and control the budget.
Planning – Scope Refinement	The ability of program leadership to review the rationale for business process scope, stakeholder scope, division/operating company scope, application (legacy and new) scope, and deliverable scope along with assumptions and to determine/address gray areas in which clarity is lacking.
Planning – Resource Planning	The ability of the organization to plan for and create a dedicated internal and external team, of the required size and skills, backfilled appropriately, to enable focused attention to the program effort.
Planning – Communication Planning	The extent to which program leadership has established focused accountability for the communications effort and that the accountable team has established a network of resources and a plan to engage those resources to build and execute an effective communications program.
Planning – Organizational Change Management Planning	The extent to which program leadership has established focused accountability for the change management effort and that the accountable team has established a network of resources and a plan to engage those resources to build and execute an effective change program.

Appendix A
Risk Category Definitions – Planning Phase (cont'd)

Risk Category	Definition
Planning – Vendor Planning Support	The ability of the organization to establish an effective plan for all program-related third party (i.e., hardware, software, services) relationships to get the optimal input/outputs from each vendor for the organization's investment. The ability to establish a "win-win" relationship is also assessed as well as the key 3rd parties' effectiveness in assisting with planning activities.
Planning – Security Planning	The extent to which program leadership has established focused accountability for security and compliance controls design, build, and test activities and that the implementation methodologies explicitly support integrated, role-based security design.
Planning – Development Planning	The extent to which program leadership has articulated a development strategy that prioritizes and defines development activities and methodologies/tools from design through deployment. Also assesses the ability to adhere to guiding principles and approaches such a: "minimize customizations"; "iterative build cycles"; "off-shore vs. on-shore development"; etc.
Planning – Overall Test Planning	The extent to which program leadership has developed a test strategy that defines the types of tests, tools/methods to leverage, the accountability for tests, and considers the schedule and participation needed to ensure high quality test results when executed.
Planning – Data Conversion Planning	The extent to which program leadership has developed a data conversion strategy and plan that defines the types of conversions, the conversion options, tools/methods to leverage, the accountability for conversions, the data cleanup approach, and considers the schedule and participation needed to ensure high quality data conversion results when executed. Also examines the explicit communication of legacy systems being retired.
Planning – Training Strategy & Planning	The extent to which program leadership has developed a training strategy that defines the types of training, tools/methods to leverage, the accountability for training, and considers the schedule and participation needed to ensure the end-users are self-sufficient in the operation and the maintenance of the software after go-live.

Appendix A
Risk Category Definitions – Planning Phase (cont'd)

Risk Category	Definition
Planning – Deployment Planning	The extent to which program leadership has articulated a set of deployment options, an examination of the trade-offs of each option, and a rational recommendation for the desired option along with a risk and contingency plan for the chosen option. This also examines how well the team has articulated what kind of deployment team will be utilized before, during, and immediately after deployment. People, process, and technology deployment activities and risk should be considered.
Planning – Integration/ Interface Planning	The extent to which program leadership has developed an integration/interface plan that will define the schedule and strategy for inter-process communications and subsystem (i.e., 3rd party or legacy bolt-on, shadow system interaction, etc.). The plan should also consider the participation needed to build/test the interfaces as per proven best practices as well as the ability to create a stable integration environment.
Planning – Reporting / BI Planning	The extent to which program leadership has developed a reporting and business intelligence plan that defines both the specific reporting / BI requirements and the underlying infrastructure and architecture needed to deliver those capabilities. The plan should also consider the participation needed to build / test both the reports and the infrastructure as per proven best practices, consider external data requirements, and address ongoing and evolving reporting / BI requirements.
Planning – Portal Planning	The extent to which program leadership has developed a portal plan that will define and address the needs of all stakeholders. The plan should also consider the participation needed to build / test the portal as per proven best practices and consider the initial requirements, the portal infrastructure and architecture, and the portal's extensibility as it matures.
Planning – Benefit Realization Planning	The extent to which program leadership has developed a benefits realization plan that defines the benefits (e.g., hard or soft), the metrics, the accountability for measuring benefits, and considers the schedule and participation needed to ensure that both hard and soft benefits are realized.
Planning – Technology Infrastructure & Processes Planning	The plans to update the organizations data center and distributed infrastructure to support the new solution.

Appendix A
Risk Category Definitions – Execution Phase

Risk Category	Definition
Execution – Program / Project Governance Execution	The extent to which program leadership executes key governance processes (e.g., scope, schedule, resource, budget, resource, requirements, etc.). Examines the effectiveness of input rights and decision rights with regards to each of these processes.
Execution – Risk Management	Examines how well risk is being managed on an ongoing basis at the program level and at the individual team level. Looks at processes and multiple perspectives to address ongoing overall risk as well as the ability for domain-specific risk and issues management in a timely and effective manner. Also examines how well internal and external risk management and contingency planning roles are being leveraged.
Execution – Schedule Management	Examines how well individual and team time is being proactively estimated, scheduled, maintained, communicated, and managed to hit critical path milestones with high quality deliverables. Looks at specific cases for how schedule change requests are managed.
Execution – Budget Management	Examines how well the budget is being managed on an ongoing basis at the program level and at the individual team level. Looks at specific cases, if applicable, for how budget change requests or contingency budget usage requests are managed.
Execution – Scope Management	Examines how well the business process scope, stakeholder scope, division/operation scope, application (legacy and new) scope, and deliverable scope is being managed on an ongoing basis at the program level and at the individual team level. Looks at effectiveness of any scope refinement activities from both a functional and a technical perspective to control complexity without sacrificing benefits.
Execution – Resource Management	Assesses program leadership's ability to achieve optimal capacity from constrained internal and external resources through proactive resource loading visibility, effective internal/external team collaboration, resource changes (when required), training, and knowledge transfer.
Execution – Communication Management	The extent to which program leadership and the accountable team is executing an effective communications program . Examines upward, downward, and cross-team communications as well as communications to extended team and other external parties required for success.

Appendix A
Risk Category Definitions – Execution Phase (cont'd)

Risk Category	Definition
Execution – Organizational Change Management Execution	The extent to which program leadership is working with the focused Change Management team to communicate and prepare the organization for specific change impact items that are crucial to achieving optimal solution usage and business case realization.
Execution – Vendor Implementation Support	The extent to which program leadership has aligned itself with highly capable and knowledgeable vendor support personnel during all implementation phases. This also includes examining the vendor support processes and service level agreements in place.
Execution – Requirements Management	Examines the ability to document and trace requirements through Design, Build/Test, Deploy, and Post-Implementation phases and to link requirements to scope and business case management activities. Also assesses how well shadow system requirements are considered in the overall implementation activities.
Execution – Security Execution	The extent to which program leadership is executing the security and compliance controls design, build, and test activities and ensuring that the implementation methodologies explicitly support integrated, role-based security design.
Execution - Development Execution	Examines the ability to prioritize, assess, justify, approve, and execute customization and development activities from design through deployment. Also examines the effectiveness of managing resources and dates with respect to critical path development activities, such as functional spec development.
Execution - Overall Test Management	Examines the team's ability to manage the overall test process, specifically looking at the movement of modules from development to each successive type of testing, the leveraging of appropriate resources across test activities and the sharing of testing tools and scripts.
Execution – Unit Testing	Examines the team's ability to assign accountability and separation of duty for creating/documenting unit test cases, executing unit tests, providing corrective action, and preparing development objects for the next testing phase.

Appendix A
Risk Category Definitions – Execution Phase (cont'd)

Risk Category	Definition
Execution – Functional / Integration Testing	Examines the team's ability to assign accountability and clear integration points to fully create/document end-to-end process integration tests, execute integration tests, provide corrective action, and prepare development objects for the next testing phase. The ability to involve subject matter experts, as applicable, is also examined.
Execution – Performance Testing	Examines the project team's ability to assign accountability for creating/documenting performance and volume tests, executing the tests, providing corrective action, and preparing technology action plans to collaborate with vendors to immediately address performance issues.
Execution – User Acceptance Testing	Examines the project team's ability to involve a broader community of users to fully execute end-to-end process integration tests, provide corrective action, and prepare development objects for the final production staging phase. The ability to obtain user signoff and document unresolved issues and post-production support handling is also examined.
Execution – Data Conversion Execution	The extent to which accountable, business-led teams execute the Data Conversion Strategy & Plan. This includes the ability to cleanse the legacy data and successfully test (unit test and full mock migration) and prepare for final data conversion at cutover. Roll-back plans are also assessed. Data archiving execution is also examined. Also examines the ability to fully realize the planned retired legacy systems once conversion is completed.
Execution – Training Development and Delivery	Examines the team's ability to develop and deliver effective training to end users prior to go-live. Also examines the ability to provide ongoing and stable training environments that allow easy access for refresher and self-service training.
Execution – Deployment Execution	The extent to which program leadership prepares the deployment locations for subsequent rollouts as per the Deployment Plan. Examines how well the program has staffed for an effective deployment team that considers the challenge of multiple (and possibly concurrent) deployments. The ability to obtain location readiness signoff and document unresolved issues and post-production support handling is also examined. This also includes clear definition of and acceptance of business data stewardship and data governance responsibilities.

Appendix A
Risk Category Definitions – Execution Phase (cont'd)

Risk Category	Definition
Execution – Integration / Interface Implementation	Examines the team's ability to develop and utilize a true end-to-end integration environment that is stable and provides true interoperability to all 3rd party and legacy systems and data. Also examines the supportability of the developed interfaces with respect to SOA and efficient maintenance capabilities (i.e., avoidance of point-to-point to realize configurable interfaces that can effectively scale and take advantage of external services).
Execution – Legacy Decommission Execution	Examines the team's ability to identify key legacy applications that will be decommissioned as a result of the implementation, while communicating the timing, impact, procedures, and risks associated with the decommission activities. Key considerations include: transition and cutover activities, data retention plans and activities, length of time available after cutover, support required, connectivity required, transitional modifications required, and batch ob/process dependencies.
Execution – Reporting / BI Implementation	Examines the development, testing, and deployment of reports, dashboards and analytic capabilities on an appropriate reporting infrastructure and architecture. Ensures that inherent risks of timeliness, accuracy, ease of use, and integration are being addressed. Also examines the organization's core capabilities to support a stable environment at a reasonable cost with capable people.
Execution – Portal Implementation	Examines the development, testing, and deployment of the portal(s) for each stakeholder group. The initial functionality is considered, along with the portal infrastructure and architecture, and the ability to extend functionality as the portal matures. Ensures that inherent risks of ease of use and integration are being addressed. Also examines the organization's core capabilities to support a stable environment at a reasonable cost with capable people.
Execution – Benefits Delivery and Tracking	Examines the program's ability, throughout the implementation life-cycle, to maintain the business case benefits so that they are still synchronized with scope, schedule, and/or solution changes as well as changes to the timing of expected benefits realization.
Execution – Operational Transition Planning	The extent to which program leadership has developed a transition plan that defines the operational structure, processes, and staffing required to provide operations support as per proposed service levels. As a priority, examines governance planning, IT operations planning, and business support planning

Appendix A
Risk Category Definitions – Manage Phase

Risk Category	Definition
Manage – Governance Transition	Examines the program's ability to proactively refine, communicate, and establish post-production governance structures and processes for effective and efficient decision input and decision-making across the enterprise.
Manage – Operational Budget Transition	Examines the program's ability to proactively determine the projected budget for the fully operational support organization.
Manage – IT Operations Transition	Examines the program's ability to proactively define the specific IT support organization structure, processes, and staffing required to efficiently and effectively provide IT operations support as per proposed service levels.
Manage – Business Operations Support Transition	Examines the program's ability to proactively define the specific business support organization structure, processes, and staffing required to efficiently and effectively provide business operations support as per proposed service levels.
Manage – Vendor Maintenance Support Transition	Examines the program's ability to proactively define the specific vendor (hardware, software, and services) support processes to efficiently and effectively provide required vendor support as per proposed service levels.
Manage – Ongoing Business Value Management	Examines the program's ability to proactively define the specific means and accountability to measure and document benefits and compare them to the business case. The processes defined must also consider creating a continuous improvement action plan to further optimize business value after implementation.
Manage – Technical Infrastructure Support	Examines the readiness and ability of the organization to provide an appropriate technical infrastructure including servers, storage, network, operations tools, etc.
Manage - Disaster Recovery / Business Continuity Support	Examines the disaster recovery and business continuity planning, processes and infrastructure. Disaster recovery focuses on the technology and the ability to continue running the application in the case of a disaster. Business continuity focuses on the alternative business processes required to temporarily perform the essential functionality supported by the application, without the use of the application.

Appendix A
Risk Category Definitions – Manage Phase (cont'd)

Risk Category	Definition
Manage – Benefits Harvesting	Examines the existence of the appropriate approaches, mechanisms and responsibilities associated with ensuring the benefits projected by the project / program business case are realized.

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