

State of Connecticut Department of Social Services

EMS Eligibility System Application Risk Assessment

Prepared for:

STATE OF CONNECTICUT
DEPARTMENT OF SOCIAL SERVICES

Final Report

September 9, 2011

GARTNER CONSULTING

Engagement: 330003199

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Project Background

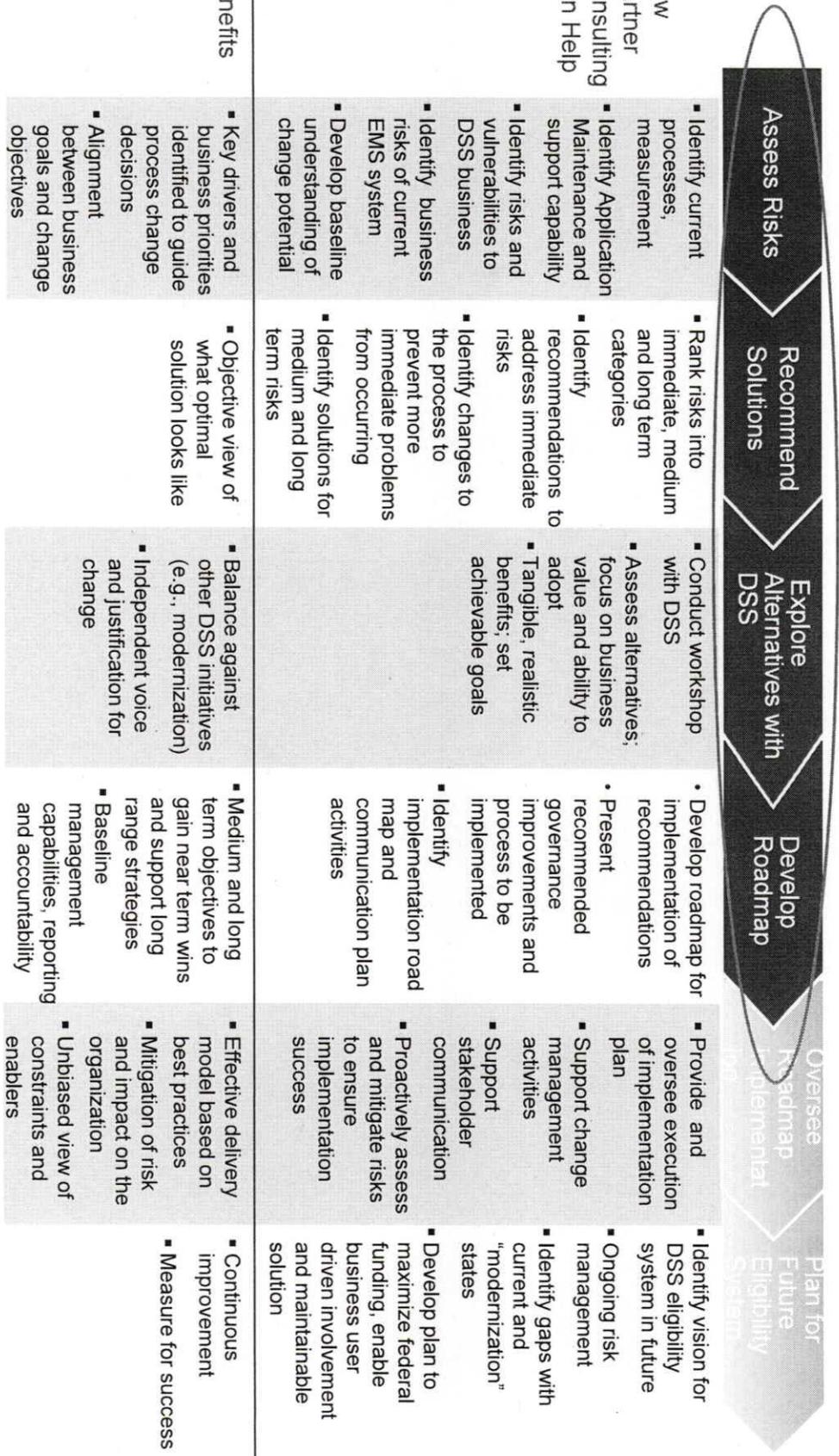
- The Connecticut Department of Social Services (DSS) aims to assess the overall health of its key eligibility application, Eligibility Management System (EMS). EMS was implemented in 1989 to support eligibility determination for Federally funded Aid to Families with Dependent Children (AFDC) (now known as Temporary Assistance to Needy Families - TANF), Food Stamps (now known as Supplemental Nutrition Assistance Program - SNAP), Medicaid and other means and asset tested programs.
- The new Commissioner, Rod Bremby, has identified serious risks and vulnerabilities for DSS with the application.
- Potential, known vulnerabilities of the current system include:
 - EMS is 20+ years old, is not stable and is costly to operate and maintain
 - There is no business continuity plan should EMS fail
 - Key IT staff that support EMS are retiring
 - EMS does not adequately support the current business processes and business needs
 - DSS is embarking on a modernization project for EMS to streamline front-end and back-end processing

Project Objectives

- By conducting an application risk assessment, DSS seeks to identify recommendations and a corresponding road map for implementing those recommendations that will achieve the following objectives:
 - Identify issues, risks and vulnerabilities related to the Department of Social Services' mission critical EMS application, used for eligibility determination for TANF, SNAP, Medicaid and other programs
 - Develop alternative solutions with DSS to close immediate gaps where the State is at risk (ongoing staffing and support of the system, business continuity plan, etc.) in the immediate, medium and long term
 - Develop a roadmap of key actions required to address the immediate risks and take significant steps towards the bringing the recommended alternative to fruition
 - Identify potential federal funding opportunities that may support recommendations

Gartner Approach

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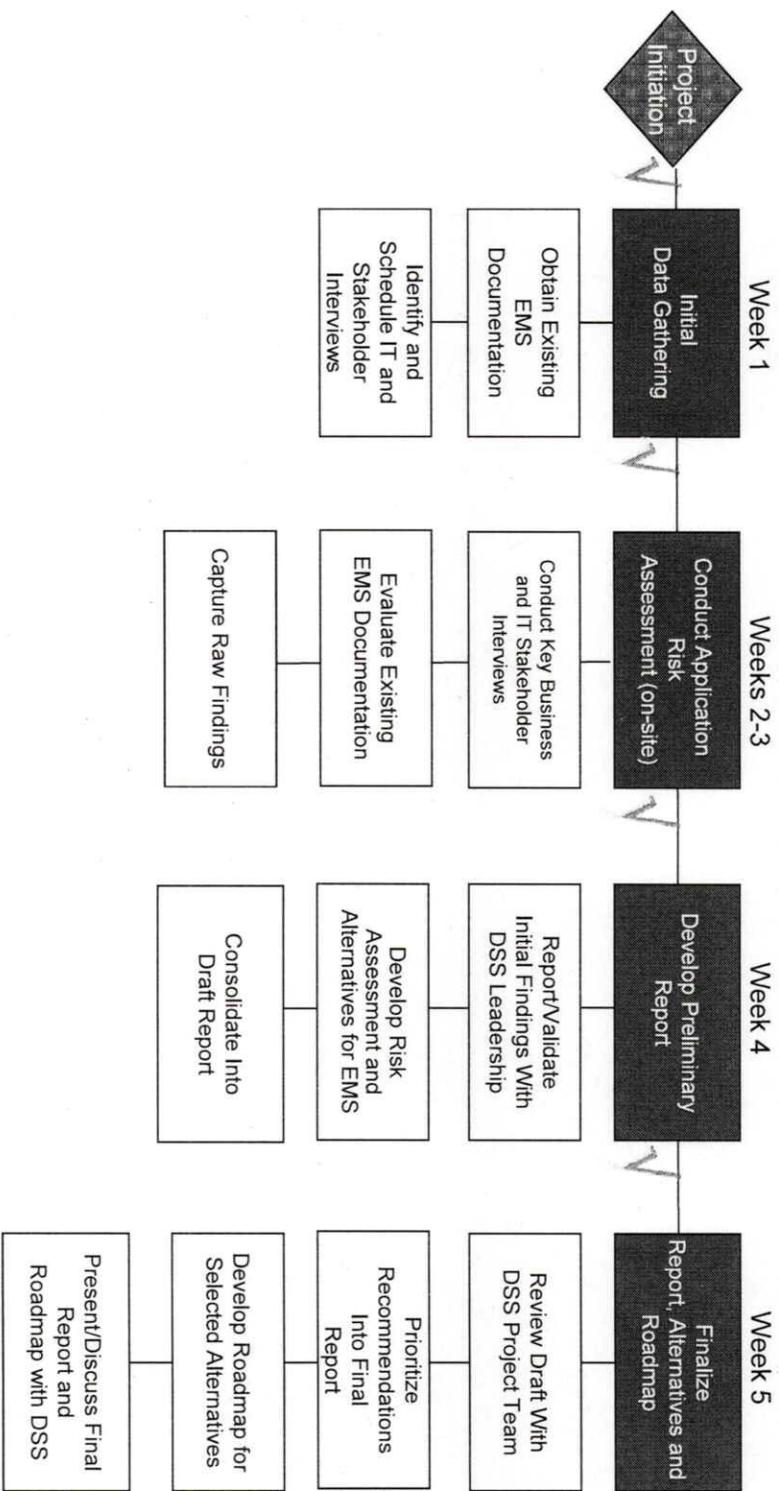


○ = scope of current engagement

Work Plan

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- A comprehensive application assessment will establish a broad and deep snapshot of existing risk and provide actionable recommendations that can be implemented immediately.



Project Background and Objectives

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Risk Findings

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- The following findings represent the major risk themes Gartner has identified during our analysis. The findings are categorized by risk area, namely:
 - Staffing
 - Application
 - Process
 - Security
 - Modernization Project

Staffing Risk

Dwindling EMS Knowledge Negatively Impacts Operations

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Staffing Risk: The ITS support organization currently has very few resources who possess a deep understanding of the EMS application, which can eventually lead to dire consequences for business operations.

Likelihood: High
Impact: High

- The number of existing ITS staff members who have a deep understanding of the EMS application is extremely limited (3 FTE). These limited numbers are at further risk due to imminent retirement
- The primary positions - DBA (already retired and now consulting) and Financial and Application leads (could retire within a year) - have no in-house backup that can assume all required duties
- Should the individuals currently filling these roles leave DSS, routine maintenance will be affected, overall system stability compromised, and the ability to address issues diminished

Short term mitigation:

- Recruit at least one additional senior DBA with preferably having background of EMS. Try to bring back ex-EMS DBA's (example: Ray McKabe)
- Recruit programmers to grow the financial team and transfer knowledge from single staff member
- Hire additional application leads to build additional depth
- Continue transferring knowledge to existing DBA's and application programmers
- Implement succession plans and cross-training program

Constraints:

- Budgetary constraints
- Difficulty finding/attracting experienced COBOL, CICS, IMS talent
- On-the-job training may take up to two years for a senior recruit to get up to speed with EMS

Staffing Risk

Critical Loss of EMS Support Staff Hampers Operations

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Staffing Risk: Reduction of the EMS application support staff in the past two decades due to attrition and retirement has reached a critical juncture.

Likelihood: High
Impact: High

- The EMS application support team has been significantly reduced from a total of 93 FTEs in the 1990's to a current number of less than 30 individuals with an average age of 60
- Shortage of staff is a key reason that many of the EMS change requests are not implemented. This has resulted in time consuming workarounds by the case workers to support their clients
- With new programs already underway (Modernization, Managed Care vs. ASO, Non Emergency Medical Transportation, etc.) the EMS team is expected to be utilized at 80+% capacity over the next two years. Imminent retirement, time off from work and union agreements will impact the teams ability to perform day-to-day tasks for maintaining and supporting EMS even in its existing form with no changes. Additional changes, regulatory or otherwise, cannot be effectively implemented in EMS. Finally, there is no room for any cross-training, succession planning and handle any major production issue

Short term mitigation:

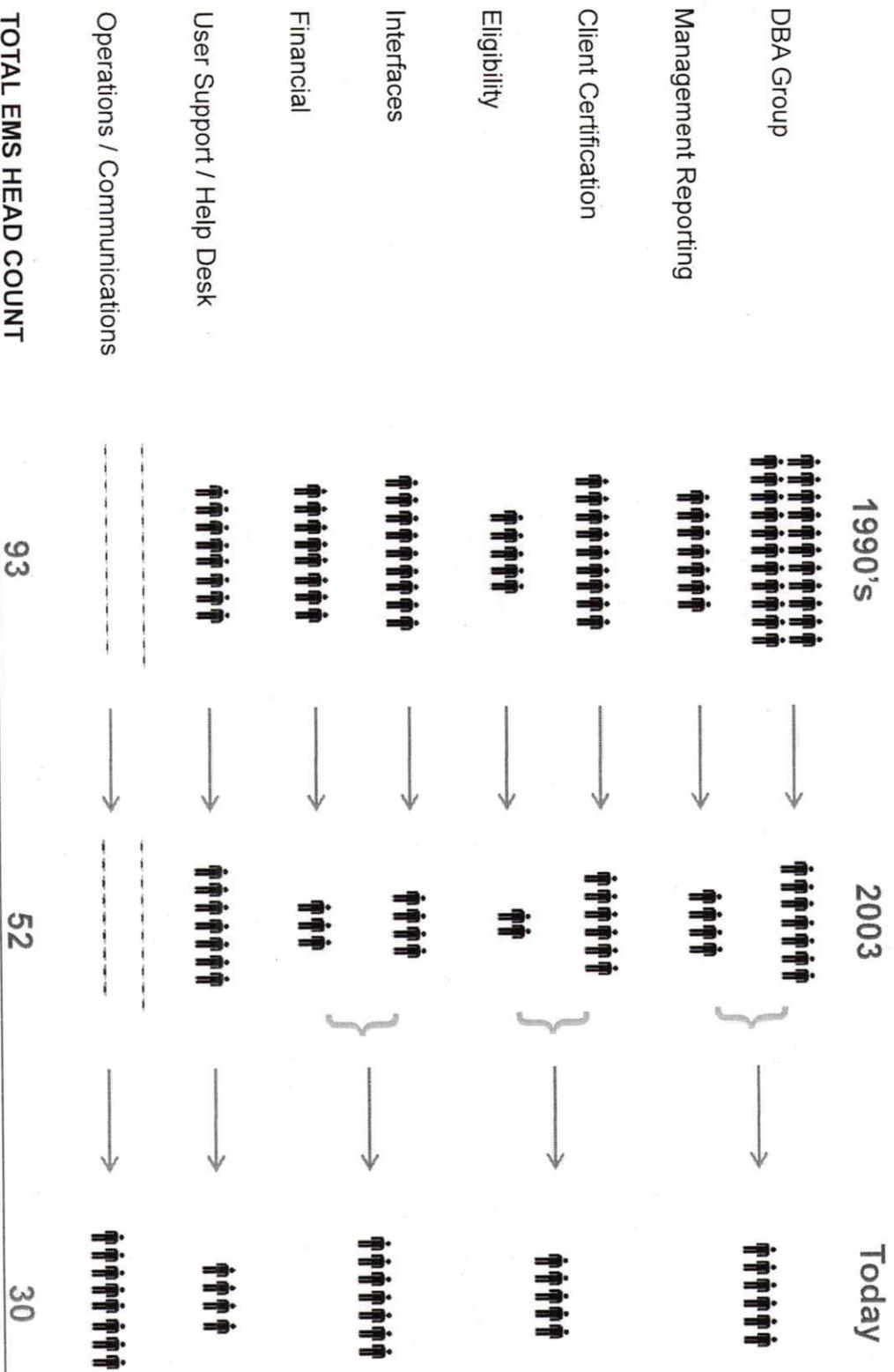
- Increase the application support team to minimize impact to EMS production support
- Aggressively continue transferring knowledge to new application programmers
- Implement succession plans and cross-training program

Constraints:

- Budgetary constraints
- Difficulty finding/attracting experienced COBOL, CICS, IMS talent
- On-the-job training of less experienced talent may take 2-4 years

Staffing Risk

EMS Support Staff Reduced by Almost 70% in 20 Years



Application Risk: Changes to EMS are not adequately tested for impacts to other areas of the application, causing ripple effects that lead to errors.

Likelihood: **Medium**
Impact: **High**

- There are no system artifacts that document the EMS programmatic interrelations, data flows or processes. This information is almost entirely institutional knowledge amongst senior ITS staff.
- When a EMS modification is implemented, ancillary problems often show up in production. It may be quite some time before these problems get detected. For example: The S03 and SAGA program are no longer active, however some clients with disability continue to receive benefits through these programs because the system changes were not adequately tested.
- The current UAT testing process does not perform negative testing. For example in a change to SNAP, there were issues on Notices being sent to clients that were not detected during testing, and subsequently discovered by the federal government. This particular issue, and a myriad of other potential issues could lead to penalties and other negative impacts.

Short term mitigation:

- Ensure that the impact to other parts of the application are documented in the change request. This may be accomplished by having each change request go through a review process by experienced EMS business and IT staff
- Perform regression and negative testing of all changes based on the review process

Constraints:

- The involvement of experienced business and IT staff in this process will put additional demands on the already limited resource availability

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Attenuated Timeline for Deployment of Notices Impacts Business

Application Risk

Application Risk: Inability to implement changes to notices has created a backlog that can have negative operational and financial impacts.

Likelihood: **Medium**
Impact: **High**

- Simple changes to notices average 2-3 weeks of effort to development; over 100 changes currently pending in the pipeline
- A feature of EMS is its ability to produce notices historically in the exact format originally issued. This capability is complex and requires significant processing, formatting, tracking of data, etc. DSS has been under scrutiny by FNS because notices have not been issued correctly, resulting in legal actions that could cost the state millions of dollars
- Further compounding the problem are the following:
 - Changes to Notices are driven by program and business changes and have been very frequent over the past few years
 - The mainframe environment is a suboptimal environment for formatting print text output
 - Without in-house historical knowledge, it is very time consuming to fix and add notices

Short term mitigation:

- To the extent possible, limit the number of new notices and change requests
- Document all notice formats so that they can be produced for storage in a document imaging application
- In planning for the EMS replacement, consider imaging options for storing historical notices

Constraints: None

Application Risk

EMS Reports Critically Fail to Meet Business Needs

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Application Risk: Reports from the EMS application are not representative of management expectations and therefore do not meet business needs, leading to critical information gaps or misinformation.

Likelihood: **Low**
Impact: **Medium**

- Until about two years ago, all reports were hard copy. Reports are now online in PDF format in response to a paperless directive by the governor, but the content has not been modified to reflect changes in reporting requirements.
- The reporting formats are not intuitive today. The way the data is structured does not necessarily support the intended use of the data. For example, a number of program categories have shifted over the years leading to aggregation errors and data manipulated to make it useful for end users.
- To make the reports useful, data from the PDF's are aggregated and entered into an Excel format for management reporting. The reports contain data that is not valid. For example the productivity report on clients contains name of individuals that have not been at DSS for many years

Short term mitigation:

- The report conversion project is an example of an ITS modernization initiative without appropriate involvement of business. All new modernization initiatives should be based in business strategy and needs.
- Automate the process of converting PDF into Excel using automated tools like Monarch

Constraints:

- Converting the report formats to represent business requirements will require huge effort that will put additional demands on the already limited resource availability

Application Risk

Lack of Application Documentation Impacts Corporate Knowledge

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Application Risk: Except for a data dictionary, there is no evidence of updated application support documentation since the original implementation, leaving DSS with a gap in terms of documented business rules and DSS knowledge.

Likelihood: **Medium**
Impact: **High**

- There is no updated documentation available that describes the application in its current form. The available documentation is from the original implementation and is not useful with the current system. Updates to the system and related information reside in the memories of the SME's
- Business rules and processes are, at a high-level, captured through the menu structure and policies and procedures in EMS, but more detailed formal documentation is not present
- The organization skills development team has been documenting the program processes from a training perspective. This process is necessary due to the various workarounds within the system.

Short term mitigation:

- Recruit business analysts who can help document the EMS user procedures and system processes
- Supplement the high level processes developed by business with the technical details within EMS
- Document the dependencies, interaction within programs and the eligibility process. This document will be useful to the development of a new EMS system in the future

Constraints:

- Recruiting business analysts who are familiar with EMS processes and who understand the workings of a mainframe environment
- Each COBOL program will have to be reviewed by the current senior developers to validate all the processes are reflected in the documentation

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Application Risk
Inability to Meet Regulatory Requirements Creates Financial Impacts

Application Risk: The EMS application has not kept up with changes to interfaces with other state and regulatory agencies, which could lead to funding or other negative financial impacts.

Likelihood: **Medium**
Impact: **High**

- Issues with some interfaces (e.g., SSA, Bendix) occasionally create errors that lead to doubling the income of some clients, or causing the system to cease delivery of benefits.
- The interface with CCES been in development for over 5 years. Without an automated interface, the user must access both systems manually to reconcile the information. This manual process has potential for errors and is time consuming. Errors related to an incorrect data entry often result in a phone call from the client, which is time consuming process for the case workers
- The interface between EMS and MMIS is not consistent with federal requirements. ITS has not been able to fix this interface (either because of a lack of skill set or lack of resources), which has resulted in HP supporting the process to ensure compliance.

Short term mitigation:

- Implement the new CCES interface.
- A full test environment is not available and has resulted in delays. Create or make available a new UAT environment to enable the completion by the testing team
- Recruit experienced resources that can be trained on maintaining interfaces

Constraints:

- Creating a UAT environment will require the services of key DBA resources

Security Risk

Inappropriate User Access Compromises Data

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Security Risk: Access to EMS data is not restricted and readily available to some users not intended to view this data.

Likelihood: **Medium**
Impact: **High**

- EMS security is based on user functional roles. However EMS security has limitations that are not as granular as desired due to the EMS application being an integrated system
- There is concern voiced by the QA and security teams that too many individuals have full access to EMS data. EMS does not restrict access to data, meaning that anyone that has access can review and change data anywhere within EMS.
- There has been evidence that ex-EMS workers have been looking at profiles and information that should be inaccessible through proper user permissions; their access is still not removed.
- During the last year two DSS employees were fired due to inappropriate access to EMS. One case worker was able to change the address of a client to a location where the employee would get the check. Once the check was received, the case worker returned to EMS and changed the location to its original address so it would go unnoticed. This security breach continued for a long time before the case worker was eventually caught.

Short term mitigation:

- Restrict the access of EMS users to limit by a specific area or region
- Enhance the process that identifies when employees leave state service and notifies the security offices to suspend EMS access

Constraints:

- None

Process Risk

Workarounds Negatively Impact Business Performance

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Process Risk: Major workarounds are required in the field to support the changes to DSS programs

Likelihood: **Medium**
Impact: **High**

EMS modifications are not timely to accommodate policy and business process changes. There are some inherent limitations that cannot be easily overcome. For example:

- The EMS application was designed for a face-to-face interview and entering data via a screen-by-screen process. For SNAP, this face-to-face interview process has been waived by the State. Because of the system driven navigation of the interview process, a case cannot be opened. As a result, the State tracks the information outside of EMS and enters it when the information is complete. This workaround is inefficient and prone to human errors.
- Within EMS, clients can be setup as a family. However if the Head of Household has to be removed because of death or change a location, the entire family stops receiving benefits. The case worker has to rely upon the help desk to correct the problem. This problem has existed since the original implementation of EMS.

Short term mitigation:

- Document each of the program processes into formalized documentation. Ensure that the processes are documented accurately.

Constraints:

- There are no short term fixes. We recommend documenting the detailed processes by a business analyst familiar with business and IT. These process will be valuable when it is time to implement a new EMS system



Process Risk

Lack of Documented System Changes Impacts Support Efficiency

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Process Risk: No documented logs or history of prior system errors and fixes exist leads to redundant support and poor resource utilization.

Likelihood: **Medium**
Impact: **Low**

- There is no evidence of any document that lists error logs or help desk requests.
- In the past the help desk logged each call, with each call a record was kept; including the issue, the date it occurred, how the issue was resolved, etc. Currently this is not being done.
- Tracking the history of calls and changes enable the support organization to identify redundant fixes and issues logged, note trends or recurring problems, and identify other information gaps that lead to inefficient use of support resources.

Short term mitigation:

- Create and maintain a log of all help desk calls.
- Create a report of logs to determine patterns of issues so steps can be taken to mitigate future, common issues.

Constraints:

- None

Process Risk

Informal Change Management Process Impacts Operations

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Process Risk: The EMS change request process is informal. Decisions on whether to implement changes and set priorities are made through voting, which can result in incorrect priorities and resource allocation.

Likelihood: **Medium**
Impact: **Medium**

- The use of the request application has brought some consistency to the change process. However, it does not include a formalized assignment, approval process, SLA's or implementation dates when the changes are needed.
- The meeting to prioritize new work requests - WRAP- involves a statewide group that meets once every couple of months. The group prioritizes requests by voting rather than by business need. This process generally results in selecting requests that are easy to implement – not by their impact. The process is not a objective and very slow
- All tickets are reviewed by the Exp. Manager who determines the problem area. He will assign it to the App Online, batch Mgr who will review and assign it further to the appropriate team member

Short term mitigation:

- Rewrite the request application using current technology that can be managed by new IT resources. Document dependency rules from the request application and make it available to the testing teams.
 - Track tickets by type to bypass the process of determining which team has to work on it.
 - Add dates of when specific requests must be implemented
 - Formalize the process of approving each request
 - Add a section to assess impact to DSS if change not implemented
- Constraints:**
- Availability of resources to rewrite the new application.

Process Risk
EMS Usability Negatively Impacts Case Worker Productivity

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Process Risk: EMS is not easy to use nor does it support current program policy, thus case workers roles are job more difficult and time consuming.

Likelihood: **Medium**
Impact: **Medium**

- From its inception, it has been difficult for a case worker to erase data on a screen. To remove data, users attempt to erase the data on the screen, but EMS will not delete it from the database unless a code is entered and a special key pressed. This feature creates confusion and frustration in the field which must be corrected by technical staff via a database script, which is time consuming for the ITS resources
- Lack of online checks. There are PF help keys to guide the user within a specific screen, but they were written for the original EMS and lot has changed .
- Many users do not want to use EMS because it is not friendly and is difficult to use. For example, the MMS system summarizes the clients eligibility on a single screen while in EMS the information is accessed by month and then manually summarized.

Short term mitigation:

- Update the online help screens on EMS
- Add online checks where ever possible

Constraints:

- Availability of resources
- Understanding the needs of the business users. The processes that the current users utilize is not well documented and needs to be updated to keep up with program changes

Modernization Project Risk

Modernization Provides Little Improvement for EMS

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Risk: Initial analysis of the Modernization Project does not show any risk mitigation for the EMS application

Likelihood: N/A
Impact: High

- Modernization will not change the core EMS system, case workers will continue to enter information as they do now. EMS will remain the system of record with all eligibility rules contained within its current logic
- Modernization will be fully implemented in two years. It is expected to provide benefits to clients and case workers by giving clients online access to the application thereby improving data accuracy and streamline the application entry process.
- However, the application completed by clients does not directly interface with EMS. The case worker must re-enter the data into EMS from the application image (another feature of new project). This re-entry process will potentially cause the same issues of data accuracy.
- Furthermore, the project does not address the key EMS risks cited earlier:
 - Staffing issues will continue and will be exacerbated with ITS staff being utilized at 80%
 - Regulatory or legislative changes may be delayed resulting in additional workarounds
 - System enhancements will likely be eliminated
 - Production issues and emergency fixes may push out the modernization effort beyond 2 yrs.
 - Issues related to Testing, Reporting, Security, Notices, Interfaces remain the same
- When implemented, changes to programs will require modifications to both the new online application as well as EMS, adding more complexity, risks and the tracking of issues in 2 systems

Modernization Project Risk

Modernization Provides Little Improvement for EMS (cont.)

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Risk: Initial analysis of the Modernization Project does not show any risk mitigation for the EMS application

Likelihood: N/A
Impact: High

Short term mitigation:

- DSS should immediately start investing in the analysis of a new EMS with an implementation target completion date in 2-3 years
- Document current ITS data flows and business processes for each program
- Staff EMS support teams

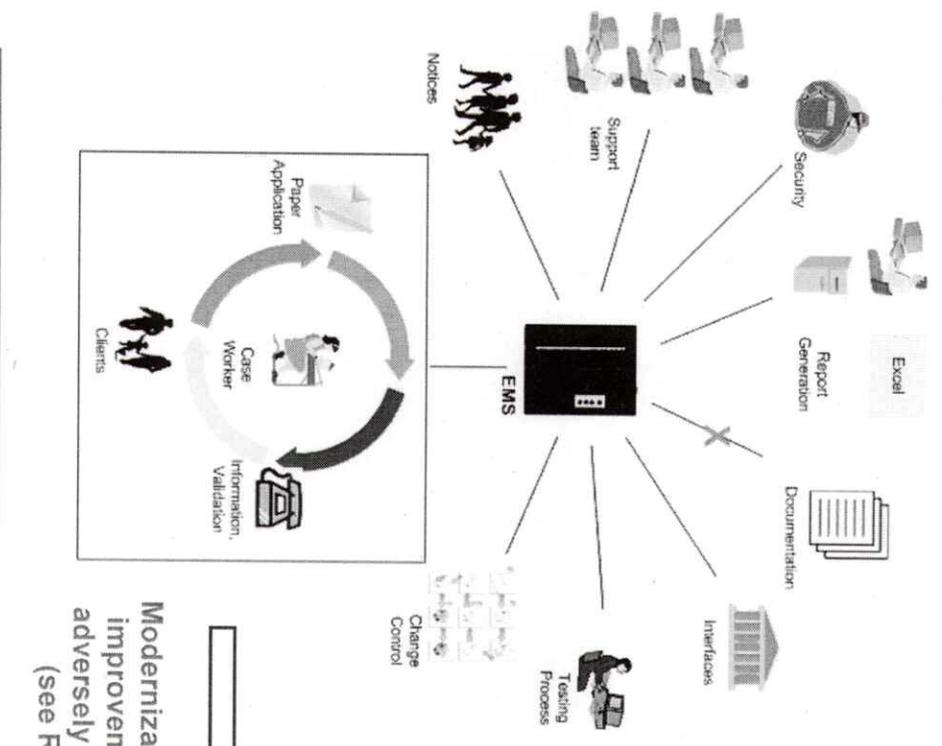
Constraints: Budget and Approvals

Modernization Project Risk

Modernization Provides Little Improvement for EMS (cont.)

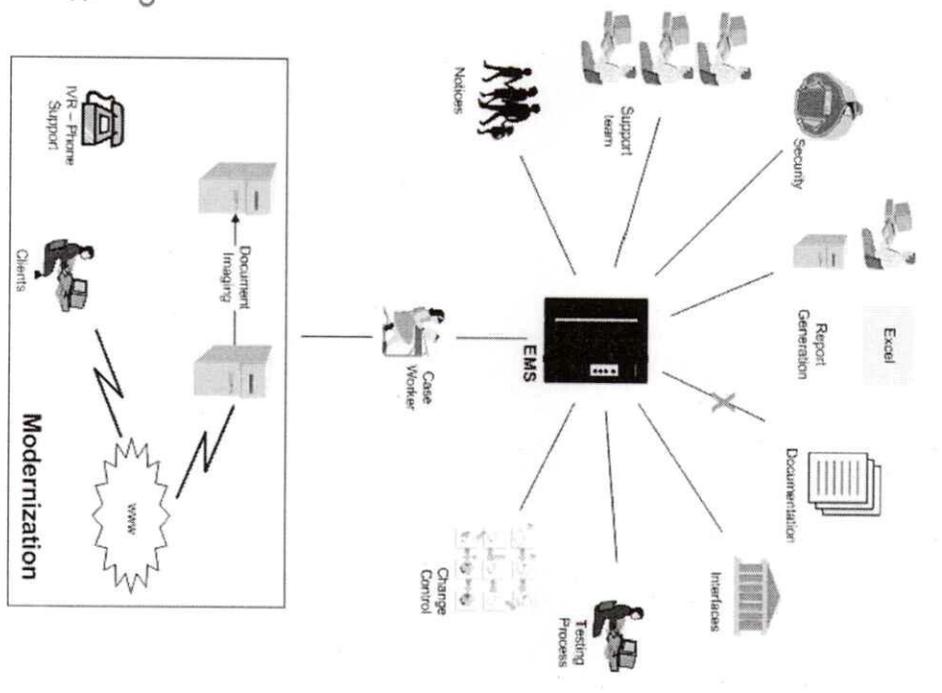
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BEFORE MODERNIZATION



No change to:
ITS Support
ITS Processes
Technology

AFTER MODERNIZATION



Modernization Project offers no improvement to EMS and will adversely impact EMS support (see Risk Scenario #4)



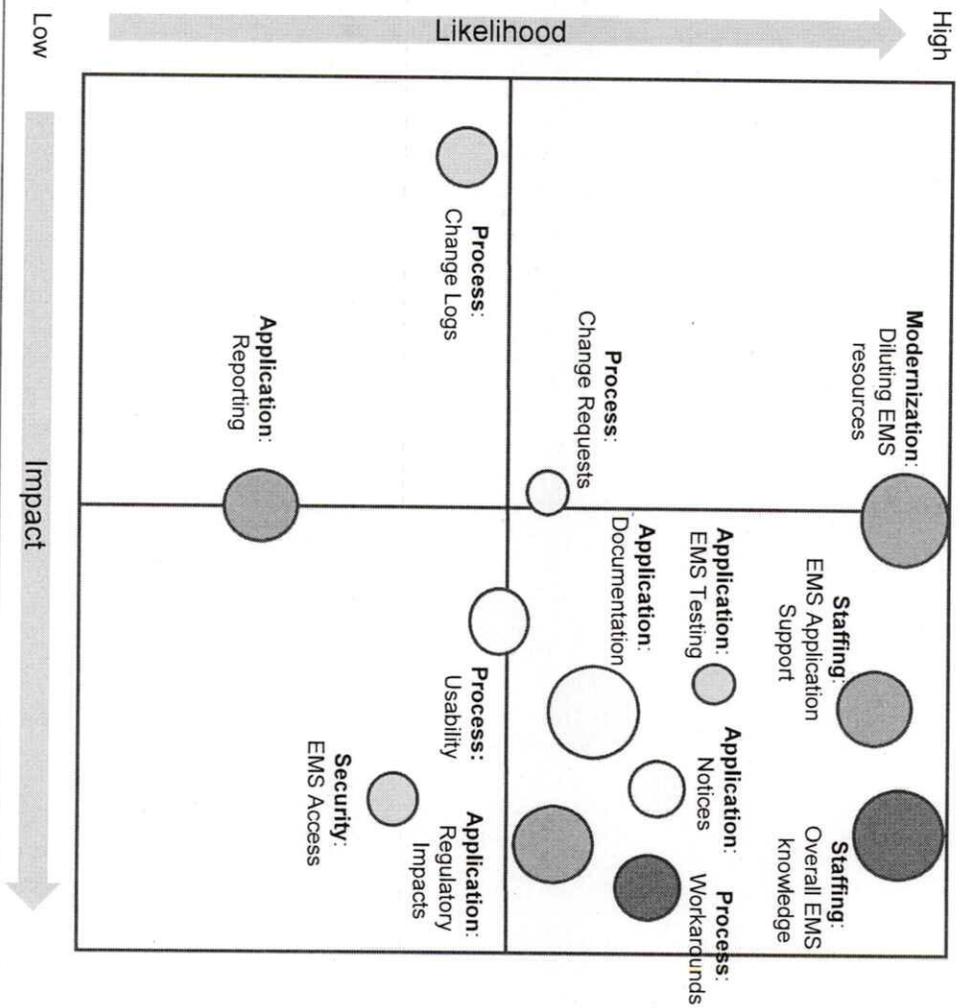
Risk Matrix

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The diagram on the right highlights the major risks of EMS based on:

- Likelihood of the risk materializing
 - Potential impact of the risk
 - Effort/cost to mitigate
 - Ability to mitigate successfully
- The risks on the upper right are the ones that Gartner believes have the highest likelihood of occurring and the greatest impact on the sustainability of the current mainframe-based financial application

- Relative size of mitigation effort/cost
- Ability to mitigate successfully



Project Background and Objectives

Risk Assessment Findings

Risk Scenarios

Recommendations and Roadmap

Moving Forward – DSS Enterprise Strategy

Risk Scenarios

What Will Happen if EMS Risks are Not Addressed?

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- A series of "Risk Scenario" have been developed in an effort to clearly communicate the magnitude and negative impact of remaining with the status quo and not acting immediately to address the key risks identified in this study. The risk scenarios focus on likely or certain events that will impact DSS in the future if action is not taken.
- Each Risk Scenario is mapped back to the specific risk(s) identified through the assessment.

Risk Scenario	Primary Risks Addressed
1. EMS Workforce Retirement and Lack of Succession Planning Reaches Critical Juncture	Staffing: Overall EMS Knowledge Staffing: EMS Application Support
2. Implementation of a Major Program Change, NEMT, creates critical implementation constraints that severely impacts operations	Staffing: EMS Application Support Application: EMS Testing Application: Documentation Application: Regulatory Impacts Process: Workarounds
3. Aggregation of Unmet Business Needs in EMS leads to major, public program failure	Staffing: EMS Application Support Application: EMS Testing Application: Regulatory Impacts Process: Workarounds
4. Modernization Initiative Critically Drains EMS Resources	Staffing: Overall EMS Knowledge Staffing: EMS Application Support Application: Regulatory Impacts Application: EMS Testing Process: Workarounds

Risk Scenarios

#1 EMS Workforce Retirement Reaches Critical Juncture

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Description: The rapid progression of retiring DSS employees that have primary or secondary EMS support responsibilities will eventually lead to a critical point with potentially dire consequences. Implementing new regulatory changes as well as execution of day-to-day tasks will be severely hampered, leading to significant service and financial consequences for the DSS organization.

Probable Evolution of Risk:

- Given the current progression based on analysis of retirement eligibility in DSS, the bare essential EMS workforce will fall below minimum staffing requirements at a rapid pace
- More than one EMS operational resources or managerial staff retire at roughly the same time, leaving DSS with an inability to backfill and also ensure other required day-to-day tasks are completed
- Day-to-day tasks do not get completed, impacting notices, reports, and eventually financial transactions
- Negative public reaction reaches high visibility, very few "quick fix" options to effectively address issues

Probability:
100%

Mitigation Strategies:

- Develop succession plan ASAP
- Immediately start investing in the analysis of a new EMS with an implementation target completion date in 2-3 years
- Explore hiring/contracting options to add EMS support resources ASAP
- Document current ITS data flows, business rules, and business processes for each program

Dependencies:

- Formally deciding to move to a new platform could accelerate retirement plans for some resources that do not want to be involved in the transition
- Modernization initiative resource requirements can also accelerate the timeline

Key Takeaway:

- If succession plan and resource issues are not addressed ASAP, EMS staffing will reach detrimental levels as soon as 2012, with little recourse to effectively address problem at that point

Risk Scenarios

#2 Implementation of Major Program Change Hampers Operations

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Description: Implementation of a major program change, NEMT, (Non-Emergency Medical Transportation Services) requires a level of effort that cannot be handed by the short-staffed EMS team, leading to delays in implementation, impact to day-to-day operations, and failure of service to delivery to DSS customers.

- Probable Evolution of Risk:**
- Mandate to implement NEMT with a defined deadline rises to the top of the priority list for EMS application changes
 - Other in-process changes, as well as backlog of 1200+ requests are delayed or put on hold in order to implement NEMT
 - Sheer person-hours required cannot be handled at current staffing levels
 - NEMT not implemented on time, leading to workaroud, service impacts, and negative public attention
 - Concurrently, changes on hold put the EMS staff further behind which can lead to similar negative results

Probability:
75%

- Mitigation Strategies:**
- Develop succession plan ASAP
 - Explore hiring/contracting options to add resources ASAP
 - Address demand management and backlog of requests to prepare and free up resources for NEMT implementation

- Dependencies:**
- Modernization initiative resource requirements exacerbate the risk
 - EMS resource retirement trajectory could also increase the potential impact of this event

- Key Takeaway:**
- The limited flexibility of EMS, coupled with the decimated EMS support staff, puts DSS in a position where one major program change, such as NEMT, can trigger a series of negative operational impacts with severe customer service and financial impacts.

Risk Scenarios

#3 Unmet Business Needs Lead to Major, Public Failure

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Description: The aggregation of unmet business needs in EMS leads to a potential major, and /or public failure. Regulatory changes, coupled with the backlog of requests and the threadbare EMS support staff eventually lead to an EMS-driven disruption of service, resulting in public scorn and potentially financial implications.

Probable Evolution of Risk:

- Number of enhancement requests, bug fixes, and regulatory mandates continues to grow faster than EMS support staff is able to implement changes
- Staffing increases are not achieved so level of EMS support remains the same
- Aggregation of work requests exceeds resource availability of EMS support staff, and changes are not made in a timely manner in EMS
- A very public impact of this evolution leads to public admonishment and potentially financial consequences.

Dependencies:

- Modernization initiative resource requirements exacerbate the risk
- EMS resource retirement trajectory could also increase the potential impact of this event

Probability:
75%

Mitigation Strategies:

- Develop succession plan ASAP
- Explore hiring/contracting options to add resources ASAP
- Address demand management and backlog of requests
- Explore hiring/contracting options to add EMS support resources ASAP

Key Takeaway:

- Irrespective of the previous staffing and major change risks, the current progression of demand vs. available resources will eventually lead to major, negative impacts for DSS operations, culminating in public admonishment.

Risk Scenarios

#4 Modernization Initiative Critically Drains EMS Resources

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Description: The implementation of the Modernization initiative will not remediate any of the EMS risks outlined in this document. On the contrary, it will exacerbate the current risks, steer the focus away from a longer term strategy of moving to a new EMS platform, And potentially resulting in a more serious support issue of continuing the use of EMS.

Probable Evolution of Risk:

- Over the next 2 years, nearly 80% of the resources are expected to be utilized towards this initiative. EMS changes to allow new Organizational Change Management procedures to function properly. Additionally FNS is requiring tracking of a number of EMS functions to comply with FNS waiver related to client initiated phone interviews. Many of these tracking functions will need to be developed in the EMS system
- Regulatory changes will get pushed out resulting in additional workarounds
- System enhancements may have to be curtailed completely, or to a minimum
- Future changes to programs will require modifications to both the new online application as well as EMS, adding more complexity, risks and the tracking of issues in 2 systems
- Unforeseen issues may push out the modernization effort beyond two years

Dependencies:

- EMS resource retirement trajectory could also increase the potential impact of this event

Probability:
75%

Mitigation Strategies:

- Immediately start investing in the analysis of a new EMS with an implementation target completion date in 2-3 years
- Document current ITS data flows, business rules, and business processes for each program
- Explore hiring/contracting options to add EMS support resources ASAP

Key Takeaway:

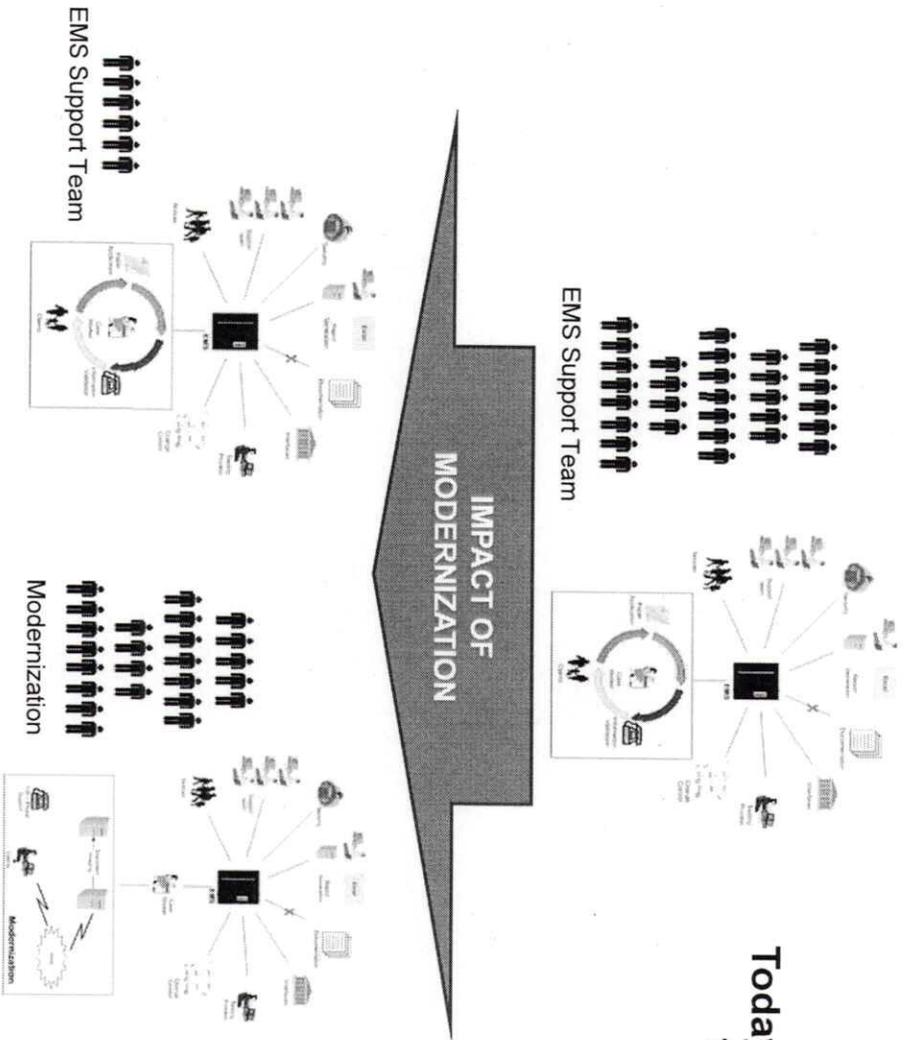
- The modernization project will utilize key resources over the next 2 yrs – at a time when they are near retirement and their expertise is critical for succession planning; knowledge transfer and the analysis of a long term strategic direction for EMS

Risk Scenarios

#4 Initiative: Impact of Modernization Initiative (cont.)

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Today, dwindling staff is struggling to meet EMS support and maintenance needs



- Other Competing Priorities:**
- Analysis towards a long-term future EMS strategy
 - New Federal or State mandated changes
 - Major Production Issues
 - Retiree Replacement

For the next 2+ years, modernization is expected to utilize 80% of the ITS staff with a bare minimum remaining for EMS support

Project Background and Objectives

Preliminary Findings

Risk Scenarios

Recommendations and Roadmap

Moving Forward – DSS Enterprise Strategy

Recommendations

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1. Immediately Develop Strategy and Analyze Options for Future State

Description: Analyze alternative solutions for the migration of existing legacy EMS to a future target state. For each option document the pros and cons, a high level cost estimate and implementation timeline.

Key Activities:

- Gather high level business requirements
 - Conduct Eligibility Process Assessment (As-Is / To-Be)
 - For each Option, perform Gap Analysis against high level requirements and processes
 - For each Option, document the pros and cons
 - For each Option, prepare a high level cost estimate and an implementation timeline
 - For each Option, analyze best fit for Support, Technology and Functional Fit. Weigh the following:
 - Usability and Functionality
 - Manageability
 - Flexibility and scalability
 - Upgradability
 - Organize a steering committee inclusive of SME's from Business and ITS to review and analyze alternative solutions
-

Objectives:

- Presentation of an objective analysis of alternative solutions for a future state EMS
 - The details of the analysis should be sufficient to enable DSS to make a selection for the future direction of EMS
-

Key Deliverables:

- Analysis of Options presenting alternative solutions for a future state EMS
 - Formation of Steering Committee
-

Recommendations

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2. Develop Comprehensive Succession Plan and Immediate-Term Options

Description: Analyze resource needs against available resources to generate a comprehensive Succession Plan for supporting EMS now, during the modernization effort and for the future.

Key Activities:

- Prepare Skills Matrix for EMS support
 - Prepare Retirement Matrix for current EMS support team
 - Perform gap of available resources to Project Resource Requirements
 - Analyze talent pool against critical support areas
 - Prepare cross training plan
 - Generate a Succession Plan
 - Determine availability of ex-DSS employees and resources from other state agencies
 - Analyze options for gradually outsourcing certain application support functions
 - Work with HR to analyze incentives to retain critical resources
-

Objectives:

- Focus on a comprehensive Succession Plan that enables DSS to adequately maintain an EMS support team during and after the modernization effort and also enable it to focus on a future state EMS strategy and vision
 - The plan should be updated regularly and identify resource needs to enable DSS to work with HR in filling the gaps
-

Key Deliverables:

- Succession Plan
 - Skills and Retirement Matrix
 - Resource utilization matrix to meet deliverables
-

Recommendations

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3. Document Technical and Business Requirements & Processes

Description: Hire business analysts for documenting as-is and to-be business processes, system data flows, interfaces, etc., that can be used to assemble a complete set of detailed functional and system documentation.

Key Activities:

- Recruit business analysts who are familiar with EMS business and have a deep understanding of computer systems
- Document requirements and processes by meeting with key business SME's. Leverage existing documentation developed by OSD (Organization of Skill Development)
- Work with ITS team to supplement the high level processes with EMS technical details
- Document the data flow between DSS programs. Detail dependencies, interaction within programs and the eligibility process. This document will be useful for both maintenance of current EMS and assist in the development of a new EMS system for the future

Objectives:

- Documentation that can be utilized for the analysis selection and implementation of a future state EMS
- Documentation that can be leveraged to help train resources for support and management of current state EMS

Key Deliverables:

- A complete set of functional and system documentation that can be utilized to generate a business requirements document (BRD) for the final selection and implementation of a future state EMS

4. Implement Best Practices for Selected ITS Processes

Description: Review all ITS procedures to ensure that best practices are being followed. Establish a formalized plan to implement processes that need to be updated as outlined below.

Key Activities:

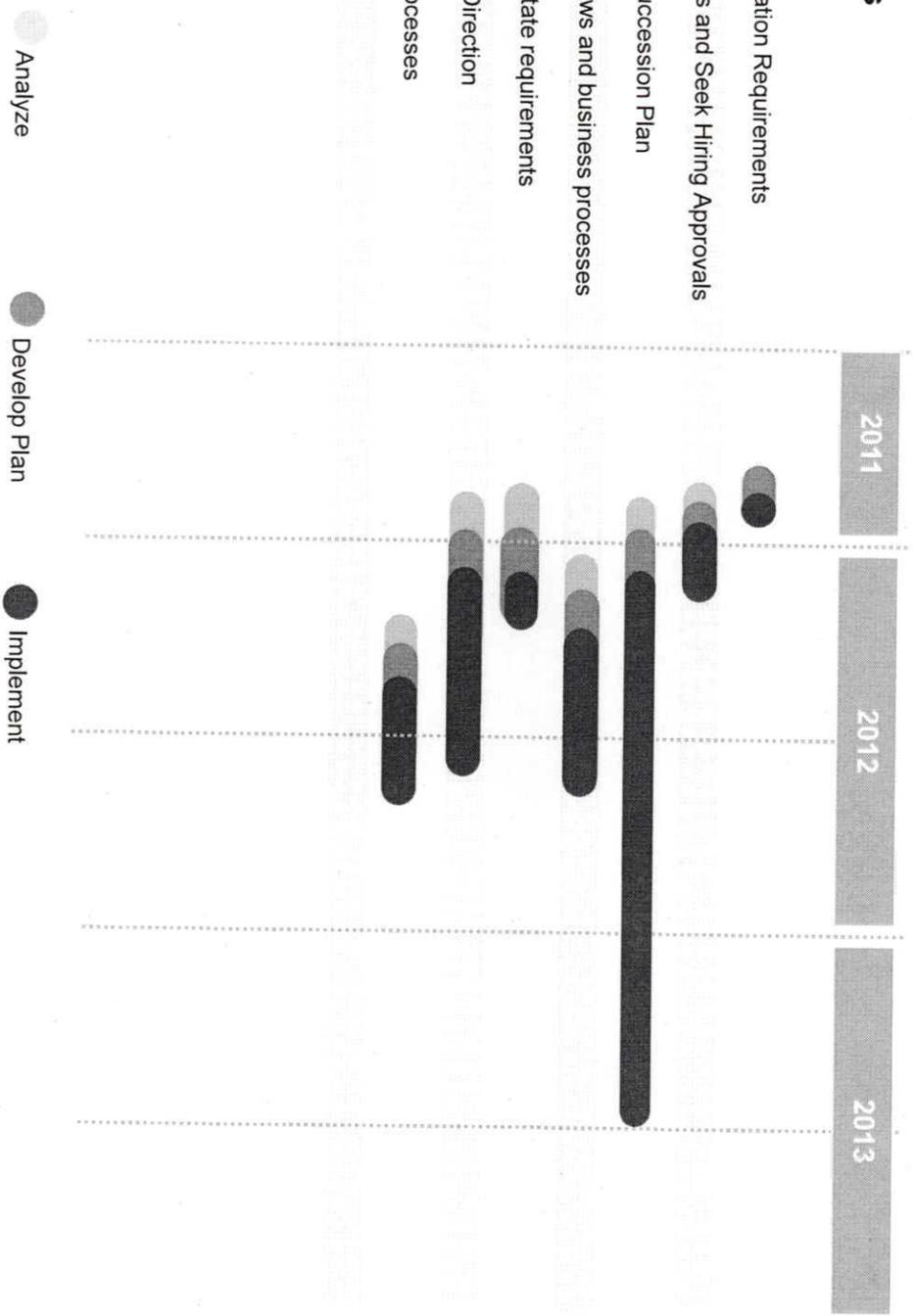
- Analyze, review and implement best practices for the following processes outlined as risks in this document
 - Improve system testing
 - For each change, document test scripts that include testing of impact to other areas of the system
 - Include testing of interfaces, Notices, etc. even if they are not directly effected by the change
 - Formalize release process with approvals to ensure regression testing of all impacted areas
 - Update the Change Control Process
 - Ensure that all changes to the system are documented prior to implementation
 - With each change include its impact to business, when required
 - Prioritize each change request by priority based on impact to business
 - Formalize the approval process
 - Security
 - Implement Policy to immediately remove users when they are no longer required access to EMS
 - Create and establish user access privileges based on required EMS usage
 - Log all system and Help Desk issues. Review logs regularly to determine patterns for addressing issues proactively
- Objectives:**
- Implement best practice to processes whose lack thereof has been the cause of additional costs and delays to DSS
- Key Deliverables:**
- Formalized procedures that are implementable in the current DSS environment
 - Create a plan to review processes regularly to ensure that the procedures are being adhered to

High-Level Roadmap

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Initiatives

- 1 – Document Resource Allocation Requirements
- 2 – Analyze Organization Gaps and Seek Hiring Approvals
- 3 – Develop and Implement Succession Plan
- 4 – Document As-Is system flows and business processes
- 5 – Identify High-Level future state requirements
- 6 – Analysis for a future EMS Direction
- 7 - Adopt ITS Best Practice Processes



High-Level Roadmap Activities

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1. **Document Resource Allocation Requirements.**
DSS must begin this activity immediately to determine their Resource needs for today and into the future. As identified elsewhere in this document, with the current small resource pool and an aging support team, the risks of delaying this activity could jeopardize EMS support by 2012.
(Duration: 2 weeks). Key activities include:
Generate a skill and resource requirement matrix for 2-3 years. Consider all of the following:
 - a. Modernization and other projects (ASO, Non-Emergency Medical Transportation);
 - b. Analysis of future EMS strategy;
 - c. Hiring and training of resources including cross-training of existing resources;
 - d. Documenting business processes and IT system flows

2. **Analyze Organization Gaps and Seek Hiring Approvals**
This activity must begin in tandem with Step 1 to identify resource gaps and get funding approvals
(Duration: 3-4 weeks). Key Activities include:
 - a. Identify resource gaps based on skills and requirements matrix
 - b. Setup budgetary requirements and get DSS approval. Delays in funding will delay the next critical steps (3-7) of mitigating EMS related risks.

3. **Develop and Implement Succession Plan**
This activity must begin soon after approval are met to fill in resource gaps
(Duration: This is an ongoing event that must be updated regularly. However immediate hiring may begin if critical needs are identified early and approved by DSS). Key Activities include:
 - a. Start hiring resources based on plan
 - b. Document Risks and Impact for each position if not filled
 - c. Develop training plan
 - d. Update succession plan periodically to meet changes in demand, retirement and future planning

High-Level Roadmap Activities (cont.)

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4. Document AS-IS System Flows and Business Processes

We believe that this painstaking and less rewarding activity must be performed for contributing to the support and well being of the current system as well as prepare for the migration to a future state EMS. The availability of business analysts with appropriate system and business skills are required for successful completion of this activity. The lack of current documentation necessitates that this activity begin as soon as resources are available. However, DSS currently does not have these resource skills within their ITS team and would need to recruit new members. This step is therefore dependent on the previous budget approval process.

- (Duration: estimated at 6 months – a more accurate estimate would require further detailed analysis). Key activities include:
- a. Generate list of processes and system flows to be documented. Create a plan to document all processes
 - b. Leverage existing documentation developed by OSD (Organization of Skill Development)
 - c. Work with ITS team to supplement the high level processes with EMS technical details
 - d. Document the data flow interfaces between DSS programs. Detail dependencies, interaction within programs and the eligibility process
 - e. Document interface to other Agencies and down-stream applications

5. Identify Future State High Level Requirements

The information gathered during this phase will be primarily used for the analysis of a future state strategy for EMS. It is recommended that DSS utilize the same resources for Steps 4 and 5.

- (Duration: estimated at 3 months – piggybacking the AS-IS information gathered in Step 4). Key activities include:
- a. Document requirements and processes by meeting with key business SME's
 - b. Include reporting requirements, Security Capabilities, System Maintainability, Robustness and Scalability