OFFICE OF THE STATE INSPECTOR GENERAL

Virginia Department of Social Services: Implementation of the Virginia Case Management System

Performance Audit
March 2018

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Acting State Inspector General
Report No. 2018-PA-001

March 23, 2018

Governor Ralph Northam
PO Box 1475
Richmond, VA 23219

Dear Governor Northam:

The Office of the State Inspector General (OSIG) recently completed an audit of the Virginia Department of Social Services' (VDSS) implementation of the Virginia Case Management System (VaCMS). The final report, which offers four recommendations for improvements with future projects, is attached.

OSIG would like to thank former VDSS Commissioner Margaret Schultze and her staff, as well as the Commonwealth's Chief Information Officer Nelson Moe and his staff for their cooperation and assistance during this audit.

Respectfully,

Michael C. Westfall, CPA
Acting State Inspector General

CC: Clark Mercer, Chief of Staff to Governor Northam
Suzette P. Denslow, Deputy Chief of Staff to Governor Northam
Daniel Carey, M.D., Secretary of Health and Human Resources
Keyanna Conner, Secretary of Administration
Senator Bryce E. Reeves, Chairman, Rehabilitation and Social Services Committee
Delegate Robert D. Orrock Sr., Chairman, Health, Welfare and Institutions Committee
Duke Storen, Commissioner, Virginia Department of Social Services
Nelson Moe, Chief Information Officer of the Commonwealth

Virginia Department of Social Services (VDSS) – Virginia Case Management System (VaCMS)

What OSIG Found

Observation - The project did not meet Systems Development Life Cycle (SDLC) best practices

While remaining in compliance with Virginia Information Technologies Agency (VITA) and Centers for Medicare & Medicaid Services (CMS) requirements, VDSS was not able to achieve compliance with SDLC best practices. A lack of resources, including time, contributed to incomplete and/or inadequate documentation in various phases of the SDLC process, resulting in conflicting priorities, post-implementation system issues and untrained end users.

Commendable – Optimization of Federal Funding Participation (FFP) resulted in decreased general fund contributions from the Commonwealth

VDSS was one of 13 states to achieve the original October 1, 2013 deadline established by CMS, resulting in VDSS increasing its federal operating assistance from 50 percent to 75 percent. This rate increase is permanent unless changed by future federal actions. Further, VDSS was able to continue utilizing the 90 percent federal match to customize and optimize VaCMS through its completion in March 2017. In total, the development costs related to the VaCMS project were approximately $156.1 million, of which $124.8 million was federally funded.

The 75 percent operating assistance has resulted in an annual $8 million reduction in general fund contributions from the Commonwealth. Further, through the implementation of VaCMS, VDSS was able to sunset its Unisys box in early 2017, leading to additional savings as VaCMS costs less to operate than the legacy ADAPT system.

Observation - Factors outside of VDSS's control impacted the efficiency and effectiveness of the VaCMS implementation

The VaCMS implementation was under scrutiny from start to finish due its size, cost, complexity, risk and potential impact. VDSS was subject to oversight provided from CMS, various Commonwealth agencies/departments and Independent Verification & Validation (IV&V) vendors throughout the implementation. Deadlines and project requirements were set by CMS. VDSS had to comply with both federal and state SDLC methodologies. Further, VDSS had to respond to frequent changes initiated by CMS, which negatively impacted its on-time and on-budget performance.

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BACKGROUND

The Virginia Department of Social Services (VDSS) is a state supervised and locally administered social services system responsible for promoting the well-being of Virginia citizens through the delivery of essential services and benefits. In this state supervised model, VDSS provides oversight and guidance to 120 Local Department of Social Services (LDSS) offices across the Commonwealth. The agency is responsible for the oversight of a wide variety of programs that include various Medicaid programs, Temporary Assistance for Needy Families (TANF), Supplemental Nutrition Assistance Program (SNAP), Medicaid Eligibility Determination, Adoption, Child Care Assistance, Refugee Resettlement Services, and Child and Adult Protective Services.

The Federal Patient Protection and Affordable Care Act was signed into law on March 23, 2010. At that point, VDSS knew changes in the Medicaid program and technologies utilized to process applications were imminent for the agency. However, it was not until April 11, 2011, that the Center for Medicaid Services (CMS) issued its Seven Standards and Conditions for Enhanced Funding. These standards defined requirements that must be met by the states for Medicaid technology investments to be eligible for 90 percent Federal Financial Participation (FFP) funding.[1] State agencies had to meet minimum critical success factors to accept the new, single, streamlined application, which include making Modified Adjusted Gross Income (MAGI)-based determinations and coordinating with marketplaces by October 1, 2013. Agencies that achieved this deadline as approved by CMS, would receive an increase in federal operating assistance from 50 percent to 75 percent of eligible expenditures. Additionally, CMS did not put an end date on the increased funding percentage. These enhanced FFP funding percentages (i.e., 90 percent and 75 percent) were determined by VDSS to be rare; therefore, they prioritized the achievement of the conditions and deadlines.

In December 2012, VDSS entered into a contract with Deloitte Consulting LLP (Deloitte) to modernize the existing automated eligibility systems for all public assistance programs, beginning with the Medicaid program. In order to meet Federal Patient Protection and Affordable Care Act requirements, the required changes to Medicaid were implemented by replacing the legacy eligibility system Application Benefit Delivery Automation Project (ADAPT). This replacement:
- Automated Medicaid categories not currently in ADAPT;
- Implemented a statewide document management and imaging system; and

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[1] Department of Health and Human Service. April 2011. "Enhanced Funding Requirements: Seven Conditions and Standards." Medicaid IT Supplement MITS-11-01-v1.0. Accessible at https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Data-and-Systems/Downloads/EFR-Seven-Conditions-and-Standards.pdf

- Converted current Medicaid-related cases from ADAPT and the Department of Medical Assistance Services (DMAS) system into the new case management system, the Virginia Case Management System (VaCMS).

Due to the project's size and complexity, Virginia Information Technologies Agency (VITA) IT Project Management Division (PMD) decided the project should be broken down into three smaller projects as follows:
1. MAGI Project;
2. Conversion Project; and
3. Migration Project.

MAGI Project
The purpose of the MAGI project was to create a new system to process Medicaid-MAGI applications that complies with policy changes within the Federal Patient Protection and Affordable Care Act. The system needed to comply with CMS's Seven Standards and Conditions, be online and able to process applications by October 1, 2013. The project was initiated on December 5, 2012. VDSS met the October 1, 2013, deadline to process applications online; however, there were significant flaws in the system at that time. As VDSS was one of 13 states to meet the deadline, they qualified for 75 percent federal operating assistance going forward, and continued to receive 90 percent enhanced federal funding for development costs. In an effort to continue to promote the goal of improving Medicaid programs and technologies, CMS extended the 90 percent FFP funding to December 31, 2015. The MAGI project was completed on June 30, 2014, with a total project cost of $26.3 million.[2]

Conversion Project
The purpose of the Conversion project was to build additional functionality into MAGI by identifying and converting all Medicaid-MAGI data within VDSS's legacy system, ADAPT,[3] and DMAS's legacy system, CHAMPS,[4] into VaCMS. The project was initiated on April 25, 2013, and completed on October 13, 2014, with a total project cost of $12.6 million.[5]

Migration Project
The purpose of the Migration project was to create additional functionality within VaCMS to process all other Non-MAGI, Medicaid applications, including those that were previously paper-based (e.g., Age, Blind, Disabled [ABD] and Long Term Care [LTC]), and to process all other

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[2] VITA, (June 30, 2014), "CPGA Project Closeout Report (Form) / EDSP - Eligibility Modernization - MAGI Project," page 10 of 32. This number was not audited by OSIG.
[3] ADAPT (Application Benefit Delivery Automation Project) processed applications for Families and Children plans.
[4] CHAMPS (Child Health Administration Management Program System) processed applications for Family Access to Medical Insurance Security (FAMIS) plans.
[5] VITA, (November 18, 2014), "CPGA Project Closeout Report (Form) / EDSP - Eligibility Modernization - Conversion," page 11 of 29. This number was not audited by OSIG.

assistance programs (e.g., Supplemental Nutrition Assistance Program [SNAP], Temporary Assistance for Needy Families [TANF], Energy Assistance Programs [EAP]). This required certain data elements to be manually input into VaCMS, as ABD and LTC programs were historically paper-based applications, and data elements from other program categories would be converted into VaCMS. The project was initiated on March 15, 2013. In April 2015, CMS extended the deadline again until December 31, 2018, for the enhanced FFP funding for eligible systems, allowing agencies to continue to receive the 90 percent match. Therefore, VDSS attempted to utilize as much of that enhanced funding as possible to meet CMS's changing requirements, as well as to enhance the system for optimization. The project was completed on March 31, 2017, with a total project cost of $117.2 million.[6]

The VaCMS implementation experienced multiple modifications, primarily based on changes received from CMS, increasing the total project budget by $47.8 million[7] and delaying the completion date by 15 months. The development of the VaCMS cost $156.1 million,[8] including both Deloitte and VDSS labor expenses, of which $124.8 million[9] was federally funded. Through completion of all three sub-projects in March 2017, $107.9 million[10] was paid to Deloitte for the development of VaCMS compared to an original budget of $69 million.[11]

SCOPE

The audit scope covered the period from conception, considered to be April 11, 2011, when CMS released its Seven Standards and Conditions to obtain FFP funding, through March 31, 2017, when the third and final VaCMS project was completed.

In July 2015, OSIG performed a review at VDSS. While executing that performance review, VDSS requested that VaCMS be excluded from the scope due to the tight deadlines associated with the Migration project and anticipated expiration of enhanced federal funding. OSIG agreed

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[6] VITA, (June 30, 2017), "CPGA Project Closeout Report (Form) / EDSP - Eligibility Modernization - Program Migration Project," page 15 of 36. This number was not audited by OSIG.

[7] Total budgeted project dollars were calculated based on numbers reported on VITA Project Initiation Approval documents, each signed by the Secretary of Technology, for MAGI (signed December 18, 2012, for $22.5 million), Conversion (signed April 25, 2013, for $10.6 million) and Migration (signed March 15, 2013, for $75.2 million) totaling an original budgeted amount of $108.3 million. The change in project budget of $47.8 million was calculated by subtracting $108.3 million from total expenditures of $156.1 million.

[8] The total cost of $156.1 million is the sum of all expenditures reported on the closeout reports provided by VITA. A total project cost of $153.6 million was reported in VDSS's Semi-Annual Report on Eligibility Systems Modernization dated July 2017. Per VDSS, the formal closeout of Migration was extended to April 30, 2017, to ensure all project costs were captured; therefore, $156.1 million was determined to be more representative of total actual project costs. These numbers were not audited by OSIG.

[9] VDSS, (July 2017), "Semi-Annual Report on Eligibility Systems Modernization – Executive Summary" page 5 of 10.

[10] VDSS, (July 2017), "Semi-Annual Report on Eligibility Systems Modernization – Executive Summary" page 5 of 10.

[11] This amount came from the VITA "Agency Procurement Request 12-117 Approval Letter," dated June 14, 2012, which stated VDSS was delegated authority to conduct a competitive procurement to acquire system modernization services not to exceed $69 million plus 10 percent.

to exclude VaCMS from that project's scope.[12] Observations from that performance review led OSIG to conduct this audit of VaCMS.

OBJECTIVES

Objectives of this audit were:
- Review the effectiveness and efficiency in the development of VaCMS from conception to deployment.
- Review the VaCMS implementation for compliance with the Commonwealth of Virginia Information Technology Resource Management Project Management Standard (ITRM Project Management Standard).

SC&H utilized VITA's ITRM Project Management (PM) Standard and ITRM PM Guidelines,[13] which will be identified collectively in this report as "VITA PM standards."

METHODOLOGY

OSIG, with assistance from SC&H Group Inc., an outside professional services firm, conducted this performance audit in accordance with generally accepted government auditing standards (GAGAS). Those standards require that OSIG plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for the findings and conclusions based on the audit objectives. OSIG believes the evidence obtained provides reasonable basis for the findings and conclusions based on the audit objectives.

OSIG conducted multiple procedures during the audit process to gather and analyze information pertinent to the audit scope and to assist with developing and testing the audit objectives. The performance audit procedures included:
- Analyzing prior review results, such as:
  - Auditor of Public Accounts (APA) reports
  - Joint Legislative Audit and Review Commission (JLARC) reports
  - CMS gate review reports
  - Independent Verification & Validation (IV&V) reports;
- Reviewing OSIG's VDSS report[14] to understand observations and recommendations that were directly related to the VaCMS implementation;

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[12] While major components of the VaCMS were excluded from the scope, the availability of the system's modules in production and the training conducted for using those modules were included due to the impact these items have on the daily processing operations. The report, "Performance Review - Virginia Department of Social Services" dated July 21, 2015 can be accessed at: https://osig.virginia.gov/media/5037/2014-pr-004.pdf

[13] VITA's ITRM Project Management Standard and VITA'S ITRM Project Management Guideline can be accessed on VITA's website at: https://www.vita.virginia.gov/oversight/projects/.

[14] OSIG, (July 21, 2015), *Performance Review Virginia Department of Social Services* (Report Number 2017-PR-004), retrieved from OSIG's website at: https://osig.virginia.gov/media/5037/2014-pr-004.pdf

- Conducting interviews with both VDSS and VITA to gain an understanding of the VaCMS implementation;
- Reviewing CMS standards, requirements and approval letters/reports;
- Reviewing VITA's ITRM Project Management Standard and ITRM Project Management Guidelines to identify and evaluate key elements of compliance;
- Evaluating VITA's PMD supporting documentation, including letters, approvals, memorandums and monthly project status notes;
- Preparing flowcharts to document key steps throughout the systems implementation to determine risk areas that impacted the achievement of project objectives, specifically documenting:
  - o The RFP and contracts process
  - o MAGI project
  - o Conversion project
  - o Migration project;
- Assessing processes for efficiency and effectiveness;
- Collecting and analyzing relevant data; and
- Researching best practices for SDLC implementations for benchmarking VDSS's performance.

REVIEW RESULTS

To analyze the implementation of VaCMS, OSIG identified key risk areas to evaluate efficiency, effectiveness and compliance. For each risk area, OSIG documented the impact that various factors – both internal and external to VDSS – had on the overall implementation. The review concluded with lessons learned throughout the implementation by both VDSS and VITA. Note: See **Recommendations** section for formal recommendations.

VDSS and the VaCMS implementation were under scrutiny from start to finish due the project's size, cost, complexity, risk and potential impact to citizens of the Commonwealth. However, VDSS complied with all VITA PM standards, evidenced through VITA's approvals of VDSS's detailed project plans and supporting documentation. Further, based on various gate reviews performed by CMS, evidenced through CMS letters and reports, as well as VDSS's continual achievement of enhanced federal funding throughout the project, VDSS complied with federal standards as well. Therefore, compliance was not identified as a risk area below.

RISK AREA 1 – PROJECT SETUP[15]

Project setup encompasses activities that impacted the VaCMS project before the RFP was finalized. VDSS started the system implementation with an aggressive timeline due to CMS-issued standards and deadlines for Medicaid technology investments to be eligible for enhanced FFP funding. It was also decided during initial discussions between VDSS, VITA and eHHR that the entire implementation project would be separated into three projects, and each would need to be in compliance with VITA's PM standards. Lastly, due to VDSS's prior experience managing a major IT project (i.e., automation of child-care benefits project), VDSS chose to create the Enterprise Delivery System Program (EDSP) Office. The EDSP Office was comprised of VDSS technology, business and program employees who were taken away from normal business duties to be fully dedicated to the VaCMS implementation project.

Impact on VaCMS Implementation

Through the procedures previously described, the following was noted:

- The VaCMS implementation ran on aggressive timelines resulting in multiple negative impacts including:
  - VDSS did not have enough time to adequately plan, execute and test the system, as noted below in **Risk Area #4**.
  - VDSS was unable to train LDSS offices adequately before VaCMS-MAGI was released, as mentioned below in **Risk Area #6**.

  However, inadequacies in these areas allowed VDSS to concentrate on achieving CMS requirements to receive the 75 percent and 90 percent enhanced funding for the operations and development costs, respectively.

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[15] Management Comment #1

- Breaking the project into three parts[16] resulted in VDSS having to provide three sets of documentation and go through three approval processes for documentation, negatively impacting project schedule and deadlines.[17]
- No formal cost/benefit analysis was performed regarding the decision to divide the VaCMS implementation into three smaller projects; therefore, it was not clear if breaking the VaCMS implementation into three projects provided any tangible substantial value to the Commonwealth, other than a reduction in risk, which is difficult to measure.
- During preliminary project planning, VDSS identified the need for approximately 36 additional resources (authorized employment positions) to execute the implementation based on past experience, timelines and size of the project:
  - o eHHR approved an additional 18 positions;
  - o The state budget only allowed for eight additional positions.
- Despite EDSP shifting people from their normal business duties to work on VaCMS, VDSS still experienced resource constraints throughout the entire project. The lack of resources negatively impacted VDSS's ability to achieve project goals and deadlines.

Lessons Learned

1. Project timelines and deadlines that are overly aggressive and known at the project planning stage should be supported with adequate staffing, especially when the achievement of deadlines can result in increased FFP funding. During process interviews with VDSS and VITA, two topics frequently mentioned as having impacted VaCMS's success were timing and resources.

2. When appropriate, as with large, complex projects like the VaCMS implementation, a cost/benefit analysis should be considered when breaking a project into multiple smaller projects. By understanding the total level of effort at both the program level and project level, VITA can work with agencies to ensure the most efficient approach is executed while also appropriately mitigating project risk. Developing an understanding of the total level of effort should include an assessment of time spent by agencies to ensure compliance with VITA's standards, as well as periodic monitoring/reporting updates.

RISK AREA 2 – RFP TO CONTRACT PROCESS [18]

The process to draft the RFP for the Eligibility Modernization project began in August 2011. VITA initially stated it would perform the procurement, but later decided it would not. This was communicated to VDSS in November 2011, resulting in a delay, as no progress was made on the

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[16] The eHHR Program Oversight Committee accepted VITA's recommendation to separate the EDSP effort into three projects, which is an industry best practice designed to reduce overall risk. The governing eHHR Program Oversight Committee directed VDSS EDSP to do this in order to reduce the overall risk to the program by separating the VaCMS implementation the three inter-related projects.

[17] VITA responded that since all three projects were part of the same EDSP, significant amounts of required documents were consolidated and completed once for all projects at the program level, thereby eliminating some of the additional burden.

[18] Management Comment #2

RFP from August to November of 2011. VDSS immediately began drafting the RFP, which would have to be reviewed and approved by VITA. However, VDSS did not have experienced staff to draft an RFP of this magnitude due to its size, complexity and significance to the Commonwealth. The resulting RFP was eventually reviewed and approved by VITA and posted in May 2012. Responses were due in late July 2012.

The only vendor to respond to the RFP was Deloitte, the contractor that developed the Child Care system, which was ongoing during the early stages of the VaCMS project. Deloitte was evaluated and considered responsive. VITA also required the responsive bidder to utilize previously purchased technologies, such as a rules engine, and/or Commonwealth developed technologies, such as the Commonwealth Authentication Service (CAS). These requirements extended the negotiations process, which was not finalized until December 18, 2012.

Impact on VaCMS Implementation

Through inquiry with key VDSS and VITA contacts and inspection of supporting documents, including the RFP, contract approvals and emails, the following was noted:

- The delayed issuance of the RFP compressed an already aggressive timeline, giving VDSS less than 10 months to execute the MAGI implementation to achieve the October 1, 2013, CMS deadline.
- The RFP was inadequately developed due to the inexperience of the team developing the RFP as well as the rush to create it.
  - o The inadequately developed RFP potentially resulted in reduced bidders.
  - o An inadequately defined business case, technical requirements, scope, etc. within the RFP and contract potentially led to change orders and/or contract modifications, which this project experienced as mentioned in **Risk Area #6** below.
- Only one organization bid on the RFP, which was disclosed during negotiations, potentially limiting VDSS bargaining power.
- VDSS was limited in how it could address and negotiate technical requirements with the most effective tools and technologies.
  - o The resulting contract was not finalized until December 2012.

<u>Lessons Learned</u>

3. Agencies should:
   a. Ensure an adequate, experienced internal team to develop complex RFPs within the agency, or consider seeking assistance from another agency or external consultant to ensure RFPs are properly developed.
   b. Seek as much assistance from VITA as early as possible when internal experience is considered inadequate.
   c. Begin the RFP development process as early as possible to be flexible to respond to changes or delays.
   d. When developing an RFP, strive to achieve an appropriate balance between setting overly restrictive requirements and providing enough detail to state clearly the business case to elicit multiple bidders.
4. VITA should:
   a. Be more forthcoming in its decision-making and communications regarding whether it will lead a procurement.
   b. Provide prioritized support for similar projects that are high risk, complex and have tight deadlines/turnaround times. While documentation within VITA's approvals notes that it expedited approvals and approved documents with exceptions, VDSS still viewed VITA's support as lacking strong partnership to ensure project success and achievement of deadlines.
   c. Provide more assistance to agencies in developing large, complex and high-risk RFPs and contracts.

RISK AREA 3 – PROJECT OVERSIGHT [19]

Oversight for this project came from multiple areas. Therefore, each project decision, documentation and/or deliverable had to be reviewed and approved by stakeholders within multiple or all of the following agencies/offices, increasing the amount of time necessary to make decisions and obtain approvals:

- VDSS;
- eHHR;
- VITA; and
- CMS.

Additionally, multiple reviews were conducted throughout the project implementation, taking focus from project responsibilities to satisfy various review requirements, including:

- Two APA reviews;
- One JLARC review;

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[19] Management Comment #3

- One OSIG review (focused on agency operations, compliance and employee training/ competency. However, observations and recommendations in those areas related to VaCMS.);
- Several CMS reviews (at various project stages as required by federal CMS standards);
- Several VITA reviews at various project stages for all three projects as required by VITA PM standards (e.g., project initiation review and detailed project planning review); and
- Six Independent Verification & Validation reviews (two per project - MAGI, Conversion, Migration, as required per VITA PM standards).

Impact on VaCMS Implementation

Throughout the procedures previously described, the following was noted:

- VDSS could not make decisions quickly. Many decisions had to be approved internally, then through eHHR and then through VITA and/or CMS. Decisions related to use of shared service technologies required additional approvals from other agencies.
- Various reviews performed throughout the implementation further constrained resources. Instead of focusing on the execution of project critical tasks, key individuals were required to address audit or review needs.
- Overall, extensive oversight impacted VDSS's ability to obtain approvals, make decisions and respond timely to project issues.

Lessons Learned

5. Agencies would benefit from having a dedicated team that could coordinate with various stakeholders to provide information. If all information came from and was disseminated through the same team, redundancies in documentation requests could be alleviated, ensuring a consistent and accurate message is represented in reports. However, due to resource constraints previously noted, VDSS could not have supported such a team.
6. Agencies should work with entities administering regulation and oversight to ensure objectives are understood by all and identify ways to combine/streamline efforts.
7. VITA should work with federal or other oversight agencies[20] to reduce duplication/redundancies in oversight and streamline efforts, when possible.

RISK AREA 4 – PROJECT EXECUTION[21]

VITA's PM standards are intended to provide agencies with guidance for executing IT projects. Agencies are required to fill out forms to provide VITA with information related to the project. For each project, VITA reviewed and approved the following project-level documentation:

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[20] VITA management responded that this change has already taken place in recent projects. The DMAS Medicaid Enterprise System Program eliminated potential duplication of oversight efforts by allowing federal CMS IV&V requirements to encompass and supersede the ITRM PM Standard IV&V requirements.
[21] Management Comment #4, #6

- Project Scope & Business Objectives Worksheet
- Work Breakdown Structure
- Organization Work Breakdown Structure
- Activity Definition & Sequencing Worksheet
- Resource Plan
- Project Schedule
- Risk Management Plan
- Communication Plan
- Quality Management & IV&V Plan
- Change & Configuration Management Plan
- Organization Change Management Plan
- Performance Plan
- Budget Plan
- Project Plan Summary
- CPGA Project Planning Risk/Complexity Analysis
- Microsoft Project 2010 Schedule: MAGI

Although VITA recognized the compressed timelines and allowed for adjustments to its review process, project documents had to be approved at various levels. Most approvals were by PMD; however, key documents required approval of the Commonwealth's CIO and Secretary of Technology to move forward.

As required by VITA PM standards, VDSS had two IV&V reviews performed for each project. The IV&V reviews often noted areas for VDSS to improve its project management practices. For each of the following areas, VDSS acknowledged that it did exactly what it needed to do to meet Commonwealth and federal requirements to keep the project moving forward, which often resulted in documentation that was not as detailed as preferred by IV&V vendors/SDLC best practices.

- Scheduling:
    - Project phases were not scheduled appropriately; therefore, project managers experienced contention as limited resources were stretched across all projects, as follows:
        - The MAGI project initiation was approved at the same time the contract was finalized.
        - The MAGI project was started while the automation of the child-care benefits project was still in process.
        - Conversion and Migration projects both started prior to completion of the MAGI project.

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- Planning:
  - Project planning was in compliance with Commonwealth and federal requirements, but did not align with SDLC best practices, as follows:
    - MAGI, Conversion and Migration project plans did not include all key details for requirements and scope (i.e., the project plans did not include activities for post-implementation corrective actions) to appropriately carry out project activities.
    - Plan schedules had aggressive timelines.
  - VITA was aware of risks and approved project documentation at various points with warnings, as noted throughout CIO and PMD approvals.

- Testing:
  - Testing performed on all the projects was not adequate, specifically:
    - MAGI and Migration project test plans did not include all requirements and criteria to perform testing.
    - Conversion and Migration project test results did not document all requirements that were satisfied.
  - During the MAGI project, the critical October 1, 2013 deadline was met, but not all functionalities were properly working or still required revision at that time.
  - Results of system integration testing were not completed prior to initiating user acceptance testing (UAT) for the projects.
- Training:
  - Deficiencies in training existed as discussed in **Risk Area #6.**

Impact on VaCMS Implementation

Throughout the procedures previously described, the following was noted:
- Projects were not adequately staffed, resulting in difficulty achieving project goals on time and on budget. This further resulted in staff working significant overtime, increasing burnout and decreasing employee morale.
- While VDSS achieved the October 1, 2013, deadline and obtained 90 percent FFP funding, the project had significant flaws that resulted in frequent complaints (i.e., calls, emails, help-desk tickets) and user dissatisfaction.
- Since requirements were not sufficiently documented during planning, test teams could not adequately and timely complete testing and were unable to determine if all system requirements were met.
- MAGI was released with significant flaws, resulting in VDSS having to perform in break-fix mode until the system became more user-friendly and complete. This led to user dissatisfaction, increased complaints and decreased productivity.

Lesson Learned

8. Agencies should assign adequate resources to ensure project planning and testing documentation is accurate, detailed, timely and complete.

9. When VITA's guidance does not go to the level of detail needed for a specific project,[22] agencies should partner with VITA to ensure adequate documentation. In addition, when VITA recognizes that documentation submitted may be lacking or insufficient to meet best practices (i.e., but is considered in compliance with VITA standards), it should encourage agencies to improve/update documentation to increase the project's likelihood of success.

10. Agencies should pilot programs where appropriate and use feedback to make improvements before programs are placed into full production. Fixing flaws prior to release reduces costs; however, this was not an option for VDSS due to federally established deadlines for enhanced funding.

RISK AREA 5 – PROJECT CHANGES[23]

Due to multiple baseline changes, the MAGI, Conversion and Migration projects each required additional budget and time to complete. Many changes were initiated and required by CMS to achieve enhanced FFP funding. Additionally, during the MAGI project authentication, the Commonwealth Authentication System (CAS)[24] eventually had to be replaced by a no-cost authentication solution provided by CMS as CAS did not have all the capabilities required by CMS.

Impact on VaCMS Implementation

Throughout the procedures previously described, the following was noted:

- The VaCMS implementation experienced multiple baseline changes, increasing the total project budget by $47.8 million (44 percent) and estimated completion date by 15 months.
  - Frequent project changes required by CMS compressed an already aggressive timeline and disrupted the project's progress and VDSS resources.
- Failures associated with the shared services CAS technology caused delays and additional costs, as the contractor and VDSS wasted valuable time, effort and resources at no benefit to the project.
  - VDSS had to make a change from CAS to the free authentication option offered by CMS, compressing an already aggressive timeline.

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[22] VITA PM standards do not go to the level of detail to address the quality of adequacy test scripts or other lower-level documentation.
[23] Management Comment #5
[24] CAS was mandated by the eHHR program.

- VDSS was responding to and adjusting the system to meet changing requirements in order to achieve approval to go-live from CMS, while dealing with various flaws/fixes (mentioned in **Risk Area #4** above).
  - o CMS was changing requirements throughout the MAGI project, right up until the October 1, 2013 deadline.
  - o VDSS was therefore unable to train LDSS offices adequately (see **Risk Area #6** below), as the system and rules were regularly changing, resulting in frustrated and confused LDSS system users when MAGI went live.

Lesson Learned

11. Having a more detailed, consistent process and guidance for managing change during project execution would be beneficial to the agency and VITA. However, project changes are inevitable and in this special case, with enhanced FFP funding at a 75 to 90 percent match, it was advantageous for VDSS to obtain this funding while available.
12. Applying new technologies should have a sound risk management plan, a change management system with strict controls, buy-in from the project team and support of management. While understanding VITA's vision of shared services, high-risk/high-complexity projects should not be required to utilize systems and software that have not yet been proven.

RISK AREA 6 – TRAINING[25]

As mentioned above, CMS was constantly making changes to system requirements throughout the implementation process. As the system was not stable, VDSS was not able to provide adequate training or policy and procedures documentation to LDSSs prior to VaCMS going live in October 2013. This was further exacerbated by:

- Constraints, as resources were dedicated to achieving CMS's October 1, 2013, deadline.
- Changes to multiple attributes of the business process, causing LDSSs to manage those business-process changes along with major changes in systems they used to process applications.

Early on, agencies were informed that major changes were imminent, but VDSS was not able to provide clear, consistent guidance to LDSSs due to tight deadlines and frequently changing requirements from CMS. Beginning in January 2014, VDSS dedicated substantial effort to providing training to LDSSs once the system's flaws had been addressed. This training effort continued throughout the remaining Conversion and Migration projects.

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[25] Management Comment #7

However, as more aid categories were input into VaCMS for electronic processing, the LDSSs continued to struggle with the changes post 2013. For example, ABD and LTC programs had traditionally been processed only in paper form. As VDSS was pressed to meet its deadline to receive continued and enhanced funding (i.e., the December 31, 2015, deadline, which was eventually extended to December 31, 2018), programs subsequent to MAGI also experienced issues with user dissatisfaction, as VDSS was not able to pilot this program as intended.

<u>Impact on VaCMS Implementation</u>

- LDSSs were not properly trained, resulting in increased complaints, help-desk tickets and early dissatisfaction with the system.
- Insufficient training potentially led to decreased productivity until users were able to self-learn or be trained on the new system.
- All involved experienced a hectic few months, from VDSS to LDSSs, to citizens applying for benefits.
- Enhanced federal funding was achieved.

<u>Lessons Learned</u>

13. A training plan should be developed during the planning stage of system implementation.
14. When training users on a new or enhanced system, agencies should allocate specific, additional resources to fulfill training needs and strategies. In this case, VDSS may have benefitted from dedicating more resources to assist/train LDSSs early on.
15. The ability for VDSS to pilot each program and perform releases by region would have made for a much smoother transition. However, this was not an option due to CMS's established deadlines for enhanced funding.

RECOMMENDATIONS

As a result of this review, OSIG, through work performed by SC&H, has identified overall recommendations that should be considered to ensure future Commonwealth IT projects are efficiently and effectively implemented. OSIG noted that many factors impacting this project were outside of VDSS and/or VITA's control, such as CMS deadlines and sufficient resources not being approved through the Commonwealth's budget approval process. Additionally, changes in VITA's processes have occurred since the conception of the VaCMS project more than six years ago. Therefore, OSIG did not provide a recommendation for each observation/risk area noted above. The recommendations below represent suggested improvements to current processes that could minimize negative impacts on major IT projects facing similar challenges noted in the **Review Results** section above.

RECOMMENDATION 1 – STRENGTHEN RFP CREATION AND APPROVAL PROCESS

Strengthening the RFP creation and approval process will assist Commonwealth agencies in effectively procuring complex information technology services. Agencies of the Commonwealth should ensure that proper resources, including but not limited to personnel, subject-matter experts, lawyers, etc., are involved in preparing the RFP. An effectively written RFP will provide insight on suitable vendors to hire for the project, determine the relative cost of the project, accurately identify and communicate project requirements and determine project management milestones and realistic dates. When completed effectively, an RFP can serve as a foundation for a successful project. Commonwealth agencies should seek the support of VITA to ensure that VITA's expertise can be leveraged to improve the RFP; however, agencies should seek additional training, hire contractors with expertise, seek advice from other agencies, and/or assign additional staff internally to ensure an RFP has been adequately developed.

As the Commonwealth's technology expert, VITA should provide more assistance and enhance its partnership with agencies struggling to develop a quality IT RFP, especially those that are as complex and high risk as the VaCMS project.

Management Response – VDSS:
VDSS accepts this recommendation.

Management Response – VITA:
VITA accepts this recommendation.

RECOMMENDATION 2 – ASSIGN ADEQUATE RESOURCES TO MAJOR IT PROJECTS

When project timelines and/or deadlines are known to be tight, agencies should ensure adequate resources are available to alleviate timing constraints. When identifying resources needed for a project, agencies should consider the potential need for additional resources to ensure:

- Early and frequent communication of upcoming changes to users;
- Training needs can be adequately planned and delivered;
- Appropriate channels are set up to handle user questions, complaints, etc.;
- Testing plans can be completed timely and effectively;
- Pilot programs can be developed and executed when necessary;
- Late or last-minute changes in requirements can be addressed efficiently; and
- Regulatory/oversight can be coordinated appropriately to decrease disruptions.

In the event that agencies do not receive adequate resources (funding and approved positions) in the Commonwealth's budget, agencies should build a business case, including the current impact of inadequate resources for obtaining additional resources through the Department of Planning and Budget's (DPB) Non-Technical Decision Package process. This package is a proposal to modify the agency's budget or language in the Appropriations Act. Further, VITA, as the

Commonwealth's technology expert, should be able to affirm an agency's request for additional resources based on its experience overseeing projects. If a critical decision package is not approved that presents a significant risk to the success of a major system development, the agency should notify the Secretary of Administration and the Governor of the situation.

Management Response – VDSS:
VDSS accepts this recommendation.

Management Response – VITA:
VITA accepts this recommendation.

RECOMMENDATION 3 – STREAMLINE EFFORTS TO MEET REGULATORY AND OVERSIGHT AGENCY REQUIREMENTS

As large-scale, highly complex application development projects require increased regulation and oversight, it is important to consider whether the regulation and oversight are excessive and ultimately detrimental to desired objectives. For future application development projects of similar size and complexity, agencies should work with entities administering regulation and oversight to ensure objectives are understood by all and identify ways to combine and streamline efforts.

VITA should evaluate opportunities to work with federal agencies and other authoritative bodies to ensure oversight is not duplicative, excessive, and is adding value. Further, VITA should evaluate the value of requiring IV&V reviews for projects that are already experiencing significant oversight.

Management Response – VDSS:
VDSS accepts this recommendation and additionally requests that VITA partner with cognizant state agencies to coordinate this activity with their federal partner(s).

Management Response – VITA:
VITA agrees with this recommendation, with the following exceptions:
- The IV&V requirement for federally funded projects (such as the DMAS Medicaid Enterprise System Program [MES Program]) is often a federal (CMS) requirement, and the VITA IV&V requirement is satisfied by the federal IV&V, thus avoiding any duplication.
- VITA is unconvinced about the assertion questioning the "value of requiring IV&V reviews for projects that are already experiencing significant oversight." Often, dedicated IV&V analyses reveal insights unseen by the VITA PMD consultant, who is

split between several projects under their oversight. Value is difficult to determine in the instances of potential failures caught before the point of no return.

OSIG Response:
The IV&V process must require that the responsible agency address concerns. OSIG and SC&H were told that response to and implementation of the IV&V results were optional. In the case of VaCMS, multiple IV&V reports were issued containing the same unaddressed findings. Little value can be attained from a costly IV&V in those circumstances.

RECOMMENDATION 4 – USE AGILE SDLC METHODOLOGY AS AN ALTERNATIVE

In situations similar to the VaCMS implementation where unpredictability and changes are unavoidable during the SDLC process, VITA and the responsible agency should consider an agile development methodology as an alternative to waterfall or traditional sequential project development. This methodology approach develops software incrementally from the start of the project, rather than trying to deliver it all at once near the end. It works by breaking down the project into smaller pieces, prioritizing them, and then continuously delivering them in iterations. This approach enhances visibility and continuous feedback, which helps the project team react quickly to unpredictability and changes. This approach also provides opportunities to assess the direction of the project throughout the development life cycle with consideration that time, resources and budget are the biggest constraints.

Management Response – VITA:
VITA has included Agile in the Commonwealth's Project Management (CPM) methodology and has documented it in the Project Management Guideline and referenced it in the PM Standard. However, VITA does not believe that the Agile Methodology is right for every situation. Agile is a complex methodology that requires trained Agile staff to successfully implement. It remains VITA's position that Agile methodology is most appropriate in software development; VaCMS was not intended to be traditional development but implementation of a configured solution. Additionally, at the time these projects were executed, none of the project or program leadership were certified in Agile development.

Further, VITA never prescribes a specific SDLC and never prescribed the waterfall process. VITA provides a project framework. The Agile process supports our recommendation that VDSS should have broken the project up into smaller more manageable parts and centralized much of the project documentation requirements at the ESDP program level to allow the projects to be more agile.

OSIG Response:
OSIG recognizes the limitations that prevented an agile development of VaCMS; however, the recommendation looks forward to future projects.

FUTURE SUCCESS OF THE PROJECT

OSIG conducted interviews with VDSS staff to determine how they measure success of VaCMS. Two indicators utilized by VDSS to measure the system's success are Applications Processed and Overdue Renewals. When applying for Medicaid benefits, citizen's applications are classified as either a renewal or an application. If the citizen did not receive Medicaid benefits in the previous year, his or her application would be recorded under "Applications Received" in Table 1, below. If the citizen is currently receiving Medicaid benefits, his or her application is considered a renewal and will be recorded under "Overdue Renewals" in Table 2. Applications processed represents the count of applications processed for Medicaid – MAGI benefits for that 12-month period. Overdue renewals represent the cumulative total of renewals that have not been processed as of that date. For the base year, this will include both paper and system-processed applications. Beginning in September 2014, all Medicaid – MAGI benefits were processed in VaCMS.

In *Table 1 – Applications Received and Disposed,* and *Table 2 – Overdue Renewals* (below), the base year is identified as the year ending September 30, 2013, the last year processed on the previous system. Figures for the following years, each ending on September 30, represent each year applications were processed on the new system.
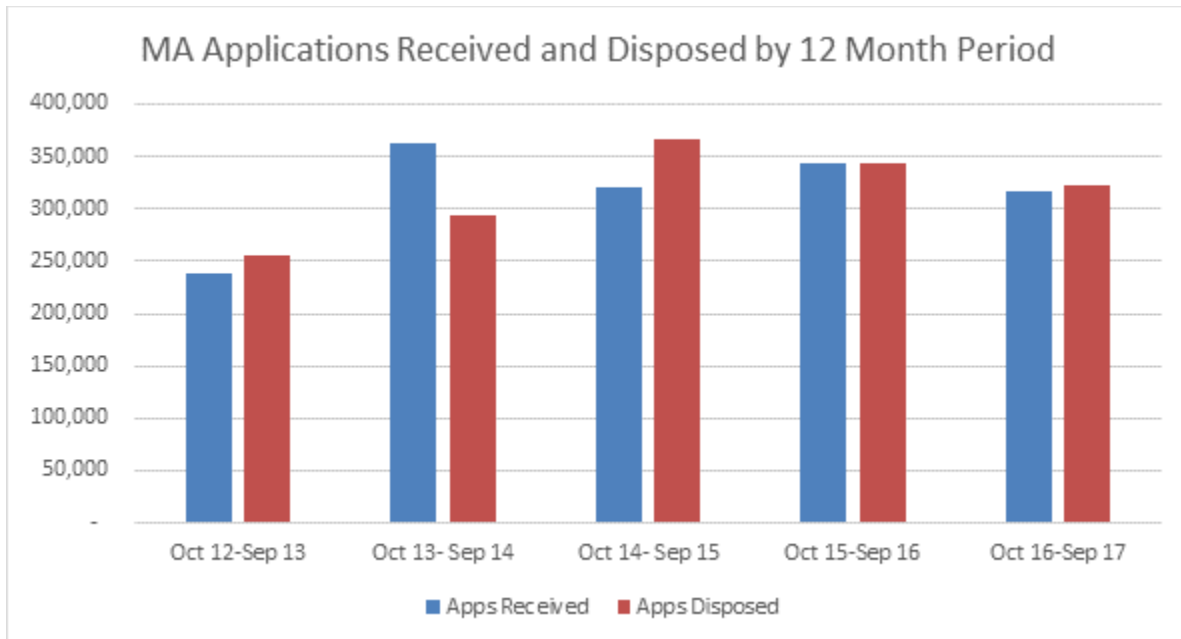
Table 1: Applications Received and Disposed[26]

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[26] Table provided by VDSS. For October 2012 – September 2013, the source of information within the table is ADAPT. For subsequent years beginning in October 2013, the source of the information within the table is VaCMS. These numbers were not audited by OSIG.
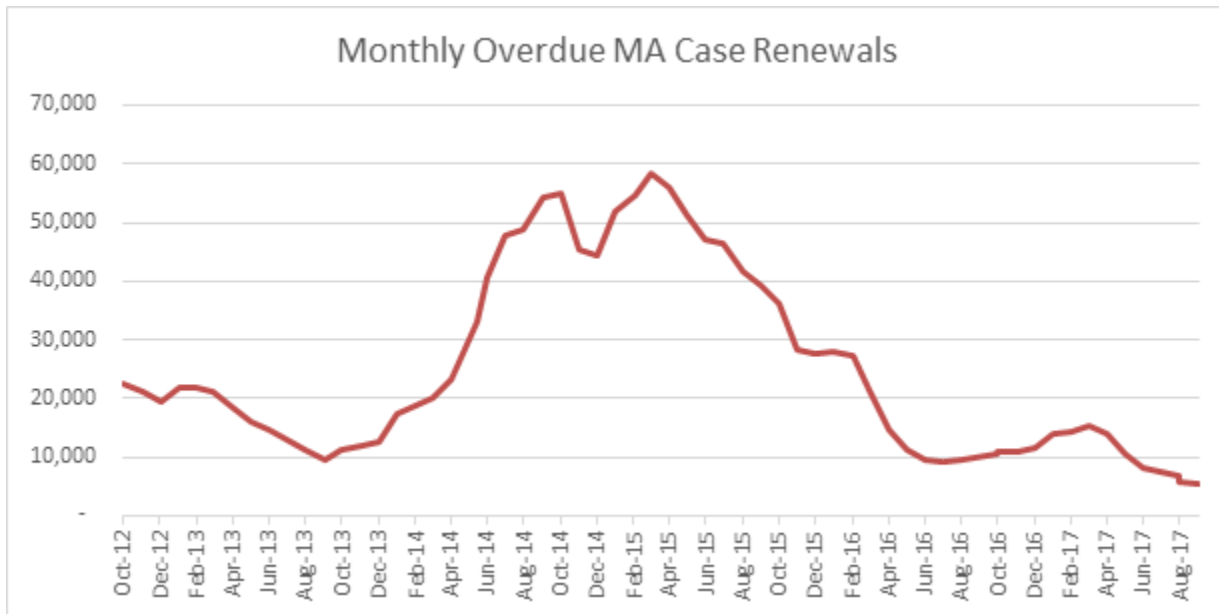
Table 2: Overdue Renewals[27]

As shown above, the applications processed have continued to grow since inception of the Affordable Care Act and VaCMS, while overdue renewals have continued to decrease. This data shows more citizens have access to apply for benefits, the system is able to process the increased workload, and overdue renewals continue to trend downward, representing a significant decrease in the backlog.

Deloitte Transition:

As Deloitte continues to provide operational support of VaCMS, a smooth transition of responsibilities back to VDSS will be a key factor in ensuring ongoing success of the system. VDSS is currently working to determine when and how that transition will occur. The objective is to minimize potential disruption of ongoing operations and ensure VDSS has adequate staff in place to assure an effective turnover of Deloitte's duties.

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[27] Table provided by VDSS. The source of the information within the table is ADAPT, for renewals processed prior to October 1, 2013, and VaCMS for renewals processed after October 1, 2013. These numbers were not audited by OSIG.

APPENDIX I – VACMS PROJECT TIMELINE

Timeline of VaCMS Eligibility Modernization Projects

October, 2010 through March, 2017

Acronyms
APA – Auditors of Public Accountants
CMS – Centers for Medicare and Medicaid Services
eHHR – electronic Health and Human Resources
JLARC – Joint Legislative Audit and Review Commission
MAGI – Modified Adjusted Gross Income
VaCMS – Virginia Case Management System
VDSS – Virginia Department of Social Services
VITA – Virginia Information Technologies Agency

3/15/2013
Migration project initiation
Est. project $75.2 mill.
Est. completion date February, 2016

12/5/2012
MAGI project Initiation
Est. project $22.5 mill.
Est. completion date December, 2013

4/25/2013
Conversion Project initiation
Est. project $10.6 mill.
Est completion date July, 2015

10/1/2013
Critical federal deadline was successfully met for MAGI project

10/1/2010 — 1/1/2011 — 4/1/2011 — 7/1/2011 — 10/1/2011 — 1/1/2012 — 4/1/2012 — 7/1/2012 — 10/1/2012 — 1/1/2013 — 4/1/2013 — 7/1/2013 — 10/1/2013 — 12/31/2013

10/23/2010
Federal Patient Protection and Affordable Care Act (ACA) was signed into law

1/1/2011
Changes to Medicaid to meet Federal Patient Protection and ACA requirements

4/11/2011
CMS issued standards that must be met by the states in order for Medicaid technology investments to be eligible for enhanced Federal Financial Participation funding

3/28/2012
VDSS submits RFP to VITA for approval

5/25/2012
VITA approved the RFP and it is posted on eVA

6/20/2012
eHHR APA report

8/1/2012
CMS Architecture Review and Project Baseline Gate Review

12/18/2012
Deloitte contract approved

3/1/2013
CMS Design Review Consult Gate Review

8/1/2013
eHHR MAGI and Conversion In-Progress IV&V

8/13/2013
eHHR APA report

8/15/2013
CMS Day One and Detailed Design Gate Review

7/30/2014
MAGI closed out $26.3 mill.

10/8/2014
Conversion closed out $12.6 mill

3/31/2017
Migration closed out est. $117.2 mill.

1/1/2014 — 1/1/2015 — 1/1/2016 — 1/1/2017 — 3/31/2017

8/1/2014
eHHR MAGI Close Out IV&V

eHHR Conversion In-progress IV&V

eHHR Migration In-progress IV&V

11/30/2015
JLARC report

6/14/2016
Ernst & Young Migration In-Progress IV&V

2/26/2017
Shutdown of UNISYS Mainframe completed